

Catalogue 2023-2024





Solé S.A. seeks to constantly improve its final products, and so the design, description, dimensions, configuration and other technical specifications given herein appear only for informational purposes and should not be taken as a binding offer with respect to the final product.

Technical specifications and presentation are subject to variations and modifications without previous notice.

Carretera C-243 b. Km 2
08760 Martorell
Barcelona. Spain
T +34 93 775 14 00
F +34 93 775 30 13
www.solediesel.com
info@solediesel.com



© Copyright 2022 Solé Diesel. All rights reserved. Solé Diesel reserves the right to change product designs or specifications without prior notice and cannot be held liable for typographical errors, layout errors or misinformation contained herein.



Enrique Solé



Marieli Solé

During our 110 years of history, we have always been committed to innovation, improvement, and quick effective sales services, able to provide peace-of-mind to any client regardless of the navigated waters.

Nowadays, our business is consolidated in the engine manufacturing, marine gensets, propellers and accessories and we are well known as specialists in designing tailored complete solutions.

Solé products are entirely manufactured in our factory of Barcelona and one of the brand hallmarks is the marinization of the engines, totally designed and developed at our facilities.

We work with world known brands like Kubota, Deutz or Mitsubishi, with whom we have been collaborating for more than 40 years.

In addition, we are present in more than 60 countries as our commitment is focused on providing the best service, wherever the customer is. And this is possible thanks to our distribution and service network, with more than 2000 points of sales and workshops.

Our mission is to achieve the highest quality in both manufacturing processes and products. The most demanding certifiers such as Bureau Veritas or DNV support us.

At Solé Diesel, we work every day to guarantee personalized and close customer care, adapting our solutions to its necessities and offering the best advice in each case, for both leisure and professional use.

If you already do not know us, please, consult without obligation and discover everything we can do for you.



A BIT OF OUR HISTORY



1912

Solé's foundation by Mr. Enrique Solé Jorba. First activity was focused on the carriage construction and repair.

1929

First car work shop and petrol station opening.

1936

Mr. Enrique Solé Jorba (the founder). Passed away during the Civil War.

1940

Company change the name to Vda. de Enrique Solé. Mr. Enrique and Ramón Solé (the founder's sons), take the company chart.

1949

The Company initiates its activity producing marine engines.

1960

The subsidiary company; Solsuc, initiates its activity producing tractors.

1962

Production for industrial dishwashers.

1965

All production is moved to the new facilities.

1970

Launching the first MINI series engine. 5 HP engine on one cylinder.

1972

Agreement with Perkins Hispania, to marinize the engine range up to 115 HP.

1977

Agreement with MERCEDES BENZ.

1978

Launching the first marine engine with MITSUBISHI base engine.

1979

Expansion of the current facilities with a new warehouse.

1988

First unit from one of the most emblematic model; MINI-17.

1989

First units on HINO base engine.

1990

First units on MAZDA base engine.


1992

Enrique Solé Matas, founder's grandson, takes the company control.

1995

10.000 MITSUBISHI units sold.

1996

First units on VM and NEW HOLLAND base engine.

2003

First units on NISSAN base engine.

2009

First units on DEUTZ base engine.

2009

Solé achieves the 25.000 Mitsubishi units sold.

2012

100th Solé Diesel anniversary.

2012

The company introduce in the market the new gen sets range GT and GTC (canopy version).

2014

Marieli Solé Toledano, the 4th generation incorporates into the chart.

2016

SDAMET (Solé Diesel Applied Marine Engineering Program). This program is signed with the Barcelona Maritime University (UPC). It will be focus on the talent detection and getting closer the brand to the new generations.

2018

Solé Diesel and Mitsubishi have been cooperating for 40 years.

2020

We complete the renovation process of our workshop with new machining equipment.

2021

Solé SA creates the brand Solé Iberia to promote the distribution strategy in Spain

2021

Full range of generators GT/GTC obtains Type Approval Certification by DNV (IACS)

WHY SOLÉ DIESEL?

WE ARE MANUFACTURERS

One of our hallmarks is the marinization of our engines. More than 70 years of experience in marine components manufacturing speak for themselves. Hence, and thanks to the constant effort of our engineering team, our products meet the highest quality and performance standards.

SERVICE NEAR YOU

Our distribution and service network offers a global coverage providing you support in response to an incident anywhere in the world. Thanks to our integrated logistics, we supply the spare parts you need in a minimum time.

INNOVATION AND SYSTEMS

Our Engineering Department constantly works in the innovation of our products to adapt them to current market demands. We truly believe in listening to our customers providing them with reliable products, easy installation and maintenance, and also offering an efficient customer service.

Because of this, we have adapted our production plant and our know-how over the years to achieve efficiency thanks to innovation and search of continuous improvement.

We are specialized in designing customized equipment and offering the best personal advice throughout the product lifetime. Therefore, we do not offer only products. Sole Diesel is service and relief.



COMPLETE PROPULSION AND ELECTRIC POWER GENERATION SOLUTIONS FOR YOUR BOAT

Solé Diesel **marine engines** are characterized by their durability, robustness and reliability. We work with industry leader suppliers such as Deutz, Kubota and Mitsubishi, with whom we maintain a 40 years business relationship.

Our range is designed for both leisure and commercial boats.

Besides, we produce a wide range of **marine gensets for boats**, known by its compact design and low noise performance. Solé Diesel marine gensets are adaptable to multiple settings and applications. They can be customized depending on the customer's needs. Available also with synchronization system for parallel operation.

Do not hesitate to consult the available models with Type Approval certification manufactured to work under the most demanding conditions.

But Solé Diesel is not just engines and marine gensets. We provide a wide range of accessories, from the engine to the propulsion line, which completes your equipment transforming it into a complete solution for your needs.

OUR COMMITMENT

We work to achieve the highest quality in both manufacturing processes and products. The most demanding certifiers support us.



ENGINES.....14

DIESEL MARINE ENGINES	16
MINI-17	17
MINI-29	18
MINI-33	19
MINI-44	20
MINI-55	21
MINI-62	22
SK-60	23
MINI-74	24
SM-82	25
SM-94	26
SM-103	27
SDZ-165	28
SDZ-205	29
SDZ-280	30
SSG CONTROL PANELS	31
SGC 2000 CONVERTER	32
WELCOME PACK	33
ON BOARD PACK	34
MAINTENANCE PACK 50 H	35
MAINTENANCE PACK 1600 H	36
MAINTENANCE PACK 3000 H	37

HYBRID PROPULSION.....38

SH RANGE	40
----------------	----

MARINE GENERATOR SETS.....42

MARINE GENERATORS	44
7 GS/GSC	45
8 GT/GTC	46
10 GS/GSC	47
11 GT/GTC	48
14 GS/GSC	49
17 GT/GTC	50
20 GS/GSC	51
25 GT/GTC	52
29 GS/GSC	53
35 GT/GTC	54
45 GT/GTC	55
50 GT/GTC	56
68 GT/GTC	57
85 GT/GTC	58
115 GT/GTC	59
165 GT/GTC	60
4 GSCH V3	61
G-8M-3	62
G-8T-3	63
G-15M-3	64
G-15T-3	65
G-25M-3	66
G-25T-3	67
SCO 11 PANEL	68
SCO 5 PANEL	69
GENERATORS SYNCHRONIZED FOR PARALLEL OPERATION	70
TYPE APPROVAL GENERATOR SETS	72

INSTALLATION KITS.....74

CUSTOMISATION TO OTHER TRANSMISSIONS, SAILDRIVE OR STERN DRIVE	76
EXHAUST SYSTEM	76
POWER TAKE-OFF	76
INSTRUMENT PANEL	77
ELECTRICAL SYSTEM	77
OTHERS	77
BELT PROTECTION	78
DOUBLE-WALL INJECTION PIPES AND LEAKAGE ALARM	78
INTERCHANGEABLE DUAL GAS-OIL FILTER KIT	78
MINI-17/29 FRONT SEA WATER PUMP	78
REMOTE OIL FILTER KIT	78
ENGINE BRACKET PACKS	79
ELECTRICAL KITS FOR GENERATORS	81

TRANSMISSIONS.....84

TMC-40P TECHNODRIVE	86
TMC-60P TECHNODRIVE	87
TMC-60A TECHNODRIVE	88
TMC-260 TECHNODRIVE	89
TM-345 TECHNODRIVE	90
TM-345A TECHNODRIVE	91
TM-93 TECHNODRIVE	92
TM-93A TECHNODRIVE	93
TM-485A1 TECHNODRIVE	94
TM-170 TECHNODRIVE	95
TM-880A TECHNODRIVE	96
TM-265 TECHNODRIVE	97
TM-265A TECHNODRIVE	98
TM-200B TECHNODRIVE	99
TM-1200A TECHNODRIVE	100
TM-360 TECHNODRIVE	101
SAIL DRIVE SP60 TECHNODRIVE	102
ACCESSORIES FOR SAIL DRIVE SP60 TECHNODRIVE	102
TRANSOM ADAPTOR PLATE VOLVO TO MCM	103
FLEXIBLE COUPLING TYPE A	104
FLEXIBLE COUPLING TYPE B	104
FLEXIBLE COUPLING TYPE C	105
FLEXIBLE COUPLING TYPE D	105
FLEXIBLE COUPLING TYPE E	106
FLEXIBLE COUPLING TYPE F	106
VOLVO Z DRIVE ADAPTER	107
DMT-25AL	108
DMT-90A	109
DMT-100IV	110
DMT-100HL	111
ZF 15 MIV	112
ZF 68 IV	112

SHAFT LINES114

SHAFT PACKS

DIAMETER FROM 25 TO 50 MM SHAFT PACK	116
DIAMETER FROM 60 TO 100 MM SHAFT PACK	118
DIAMETER FROM 25 TO 50 MM DOUBLE TAPERED SHAFT PACK	120

DIAMETER FROM 60 TO 100 MM DOUBLE TAPERED SHAFT PACK	121
--	-----

SHAFTS AND PROPELLERS ACCESSORIES

CENTAFLEX FLEXIBLE COUPLING	122
R&D FLEXIBLE COUPLING	122
PROPELLER SHAFT ZINC ANODES	123
SAILDRIVE ZINC ANODE	123
ZINC ANODE SHAFT NUT	124
SHAFT BRACKET	124
FLOATING STERNTUBE WITH STUFFING BOX	125
FLOATING STERNTUBE WITH RUBBER STUFFING BOX	126
FLOATING STERNTUBE WITH COOLED STUF. BOX	127
RIGID STERNTUBE	128
RUBBER STUFFING BOX IN INCHES	128
RUBBER STUFFING BOX IN METRIC SYSTEM	129
COOLED RUBBER STUFFING BOX IN INCHES	129
COOLED RUBBER STUFFING BOX IN METRIC S	129
RUBBER BEARING MM (INT.) – IN (EXT.)	130
RUBBER BEARING MM (INT.) – MM (EXT.)	130
ROPE CUTTER IN INCHES	131
ROPE CUTTER IN METRIC SYSTEM	131
ROPE CUTTER FOR SAIL DRIVE	132
BLEED WATER LINE KIT	132
BRAIDED STUFFING PACKING	133
FLOATING BOX TOOL	133
KIT RUBBER BEARING FOR STRUT	133
CLAMP-ON COUPLINGS PACK	134
CONICAL CLAMP-ON COUPLINGS PACK	137
BEARING BUSHING ASSEMBLY	143
STUFFING BOX WITH FIX STUDS	144
THREADED STUFFING BOX	144
PROPELLER NUT FASTENER	144
ZINC ANODE NUTS	145

PROPELLERS146

FIXED PROPELLERS FOR SHAFT

2 BLADES SHAFT FIXED PROPELLERS	148
3 BLADES PROPELLERS	148
3 BLADES PROPELLERS PR	149
4 BLADES PROPELLERS	150
4 BLADES PROPELLERS PR	151
4 BLADES HIGH SKEW PROPELLERS	152
5 BLADES PROPELLERS PR	153

FOLDING PROPELLERS FOR SHAFT

2 BLADES SHAFT FOLDING PROPELLERS	154
2 BLADES SHAFT VARIFOLD PROPELLERS	154
3 BLADES SHAFT VARIFOLD PROPELLERS	155
4 BLADES SHAFT VARIFOLD PROPELLERS	155

FEATHERING PROPELLERS FOR SHAFT

2 BLADES SHAFT VARIPROP GP PROPELLERS	156
3 BLADES SHAFT VARIPROP GP PROPELLERS	156
4 BLADES SHAFT VARIPROP GP PROPELLERS	157

FIXED PROPELLERS FOR SAILDRIVE

2 BLADES SP60 FIXED PROPELLERS	158
3 BLADES SP60 FIXED PROPELLERS	158

FOLDING PROPELLERS FOR SAILDRIVE

2 BLADES SP60 FOLDING PROPELLERS	159
2 BLADES SELVA FOLDING PROPELLERS	159
2 BLADES SAILDRIVE VARIFOLD PROPELLERS	160
3 BLADES SAILDRIVE VARIFOLD PROPELLERS	160
4 BLADES SAILDRIVE VARIFOLD PROPELLERS	161

**FEATHERING PROPELLERS
FOR SAILDRIVE**

2 BLADES SAILDRIVE VARIPROP GP PROPELLERS	161
3 BLADES SAILDRIVE VARIPROP GP PROPELLERS	162
4 BLADES SAILDRIVE VARIPROP GP PROPELLERS	162

ACCESSORIES.....164**MARINE ACCESSORIES****• CLAMPS**

FIXING CLAMP	166
HIGH PRESSURE CLAMP	166
ENDLESS CLAMP	167

• SOUND INSULATOR

SOUND INSULATOR S1.....	167
SOUND INSULATOR S2.....	168
SOUND INSULATOR S2PRO	168
SOUND INSULATOR S3.....	168
SOUND INSULATOR S4.....	169
SOUND INSULATOR S5.....	169
SOUND INSULATOR S6.....	169
SOUND INSULATOR SHM.....	170
SOUND INSULATOR ACCESSORIES	170

• CONTROL CABLES

PUSH-PULL CABLES.....	171
PUSH-PULL XTREME CABLES.....	171
SHUT-DOWN CABLE	172
THREADLESS TERMINAL SHUT-DOWN CABLE	172
VARIABLE SHUT-DOWN CABLES	173
SHUT-DOWN CABLE ACCESSORIES	173

• WATER BOILERS

ZINC ANODE FOR WATER BOILER	174
CYLINDRICAL BOILER KIT	174
RECTANGULAR BOILER KIT	175
OTHER SPARE PARTS FOR WATER BOILER	175
WATER BOILER HEATER.....	175

• GAUGES

INDICATOR HOUR METER	176
REVOLUTION COUNTER MT.....	176
REVOLUTION COUNTER TF.....	177
REVOLUTION COUNTER VT	177
FUEL GAUGE.....	178
PRESSURE GAUGE MT	178
PRESSURE GAUGE TF.....	178

PRESSURE GAUGE VT

THERMOMETER MT

THERMOMETER TF

THERMOMETER VT

VOLTMETER MT

VOLTMETER TF

VOLTMETER VT

GAUGE ACCESSORIES

• ELECTRICAL ENGINE CONTROL

ULTRAFLEX	
ELECTRONIC CONTROL	182
ELECTRONIC CONTROL ACCESSORIES	183

• MECHANICAL ENGINE CONTROL

TOP MOUNTING CONTROL FOR TWIN ENGINES ...	184
TOP MOUNTING CONTROL TRIM	184
TOP MOUNTING CONTROL	184
OUTBOARD ENGINE CONTROL	185
SIDE MOUNTING CONTROL	185
STAINLESS SIDE CONTROL SAILBOAT	185
MANDO MONTAJE LATERAL	185
SIDE CONTROL FOR TROLLING VALVE	186
SIDE CONTROL FOR SAILING BOAT	186
MECHANICAL CONTROL ACCESSORIES	186

• HOSES

REINFORCED FUEL HOSE ISO 7840	187
AIR ASPIRATION HOSE	187
FUEL HOSE DIN 73379	187
FUEL HOSE ISO 7840	188
SANITARY WATER HOSE	188
EXHAUST HOSE	189
CABLE PROTECTION HOSE	189
HIGH QUALITY REFRIGERATION HOSE	190
TRANSPARENT WATER HOSE STEEL	190
REINFORCEMENT	190
WATER ASPIRATION HOSE	191

• SILENTBLOCKS

SILENTBLOCKS A	191
SILENTBLOCKS B	192
SILENTBLOCKS C	192
SILENTBLOCKS D	193
SILENTBLOCKS E	193
SILENTBLOCKS F	194
SILENTBLOCKS G	194
SHIMS	195

• ANTI SYPHON SYSTEM

PLASTIC SYPHON BREAKER	195
METALLIC SYPHON BREAKER	196
ACCESSORIES FOR METALLIC ANTI SYPHON SYSTEMS	197

• WATER ASPIRATION SYSTEMS

WATER INOX STRAINER ELEMENT	197
WATER PLASTIC STRAINER ELEMENT	197
HOSE CONNECTION FITTINGS WATER STRAINER	198
WATER STRAINER GASKET	198
PLASTIC WATER STRAINER	199
METALLIC WATER STRAINER	199
SEA WATER COCK	200
HOSE REDUCTION FOR WATER STRAINER	200

• WATER EXHAUST SYSTEMS

PLASTIC WATERLOCK	201
GOOSE NECK	201
WATERLOCK	202
(STRAIGHT INLET-INCLIN.OUTLET)	202
WATERLOCK (STRAIGHT INLET & OUTLET)	202
SEA COCK WATER OUTFLOW	203
PROFESSIONAL WATER/GAS SEPARATOR	203
WATER/GAS SEPARATOR	204
EXHAUST SILENCER	204
TRANSOM EXHAUST	205
CONNECTION CHECK VALVE	205

• FUEL SYSTEMS

WATER SEPARATOR FUEL FILTER	205
ACCESSORIES	205
GAS-OIL FILTER ELEMENT	206
WATER SEPARATOR FUEL FILTER DELPHI	206
WATER SEPARATOR FUEL FILTER SPARE PARTS	207

SOLÉ DIESEL ORIGINAL CONSUMABLES**• OIL AND GASOIL FILTERS**

SOLÉ DIESEL OIL FILTER	207
SOLÉ DIESEL GASOIL FILTER	208

• AIR FILTERS

AIR FILTER ELEMENT	208
AIR FILTER	209

• ENGINE OIL AND COOLANT

ORIGINAL ENGINE OIL SOLÉ DIESEL	209
ATF MECHANICAL GEAR OIL	210
ENGINE COOLANT SOLÉ DIESEL	210
DIELECTRIC PROTECTOR	211

• GENUINE PAINT

SOLÉ DIESEL PAINT CAN	211
SOLÉ DIESEL SPRAY PAINT	211

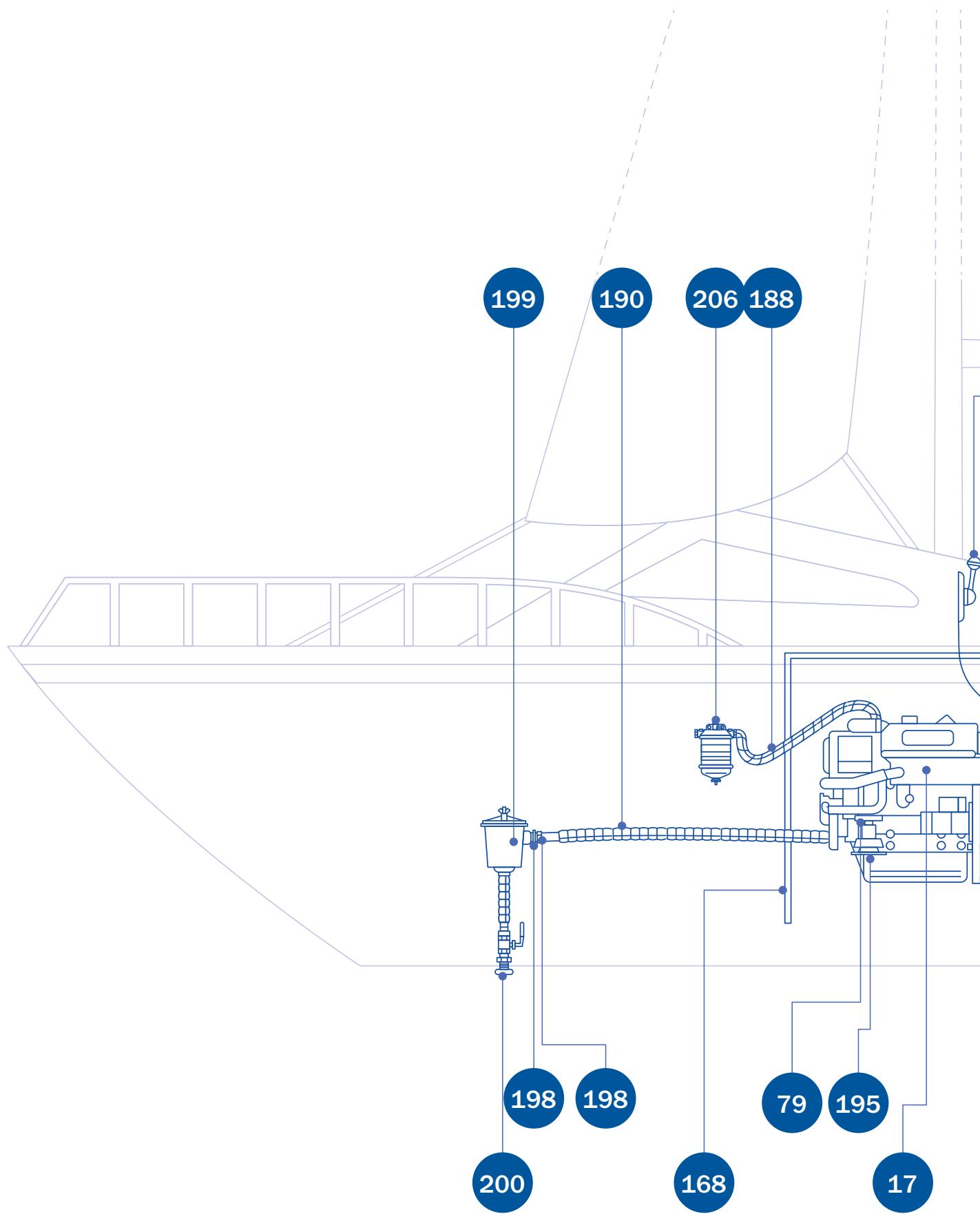
• ZINC ANODES FOR ENGINES

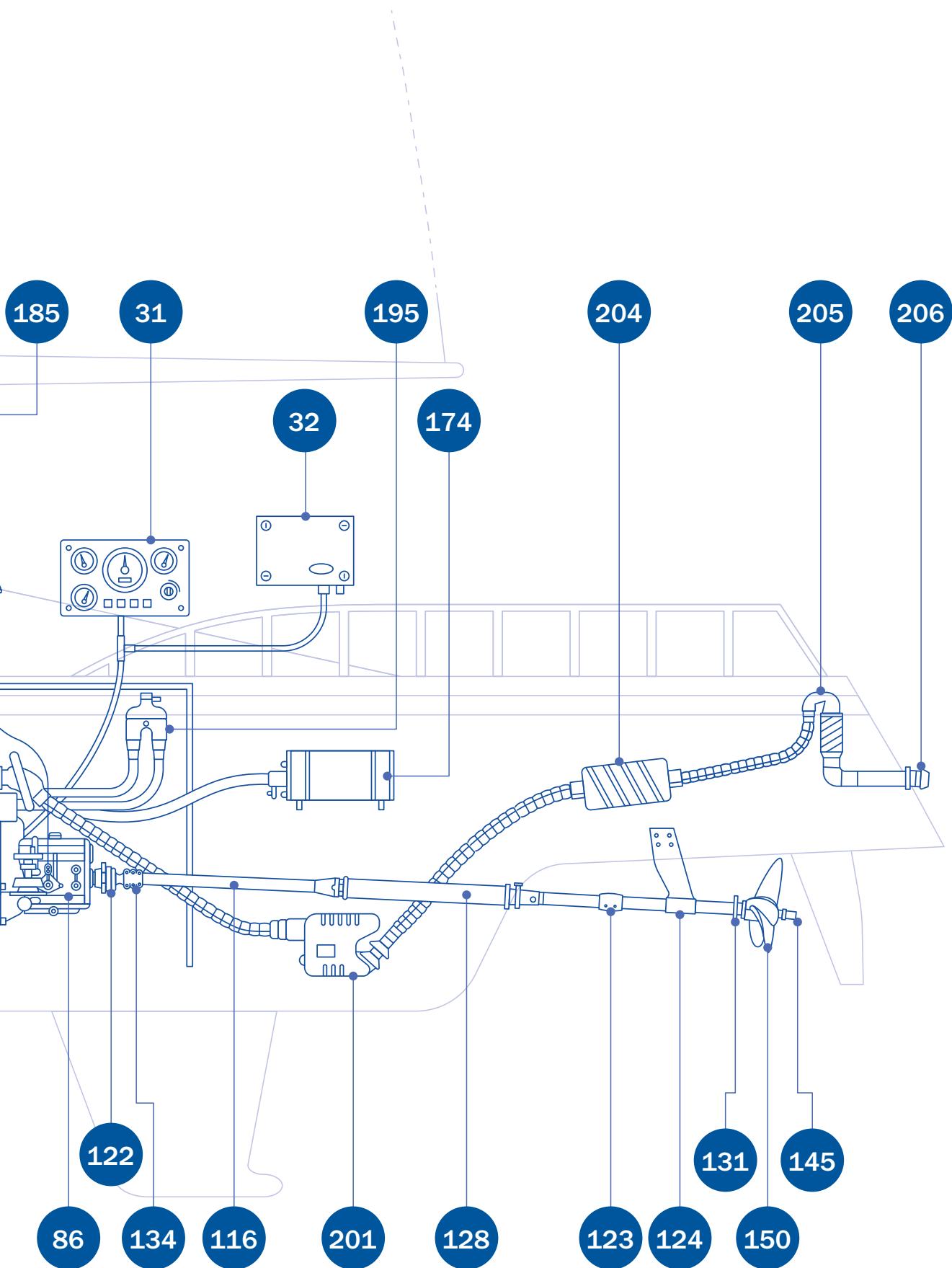
SOLÉ DIESEL ENGINES ANODES	212
----------------------------------	-----

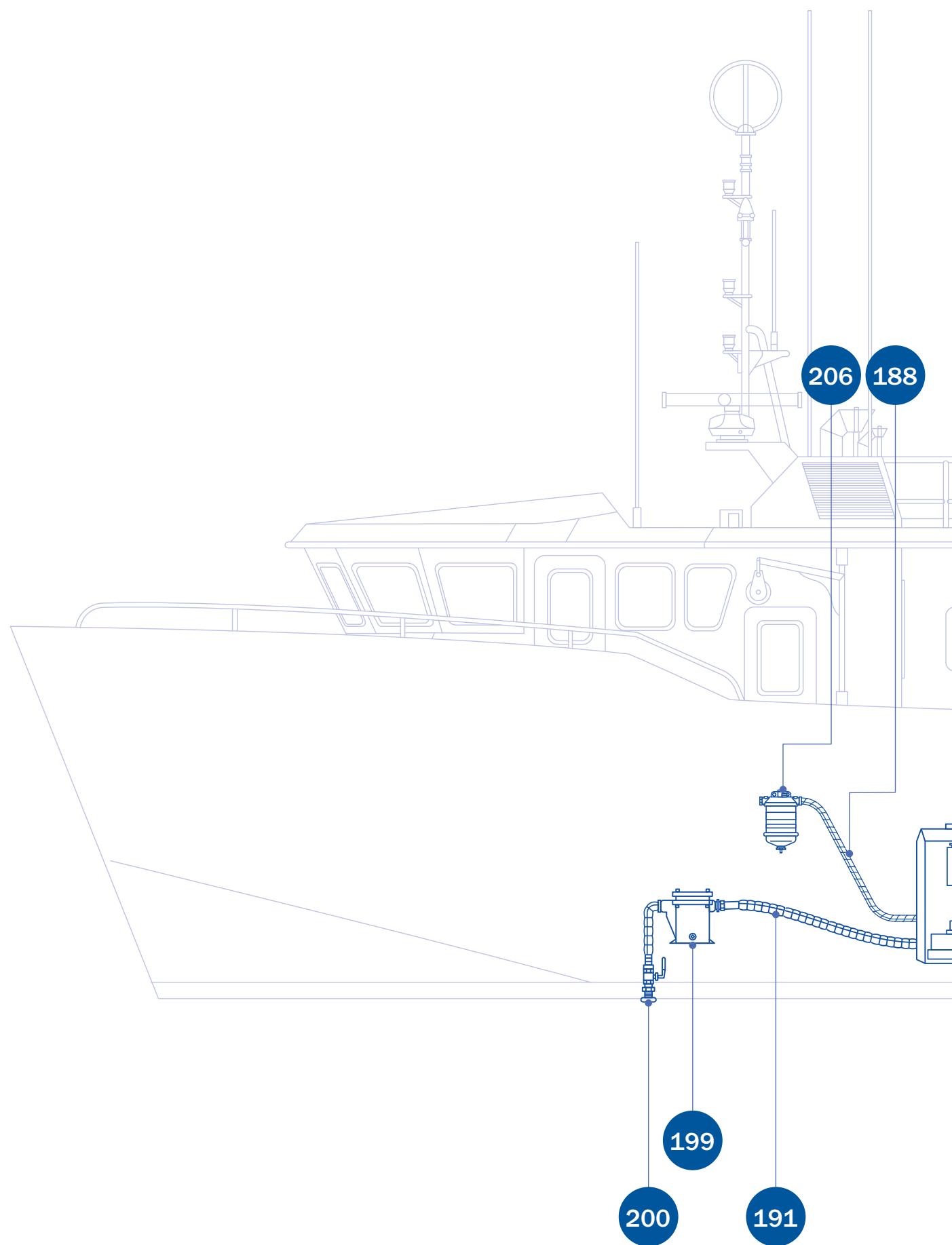
ACCESSORIES PACKS

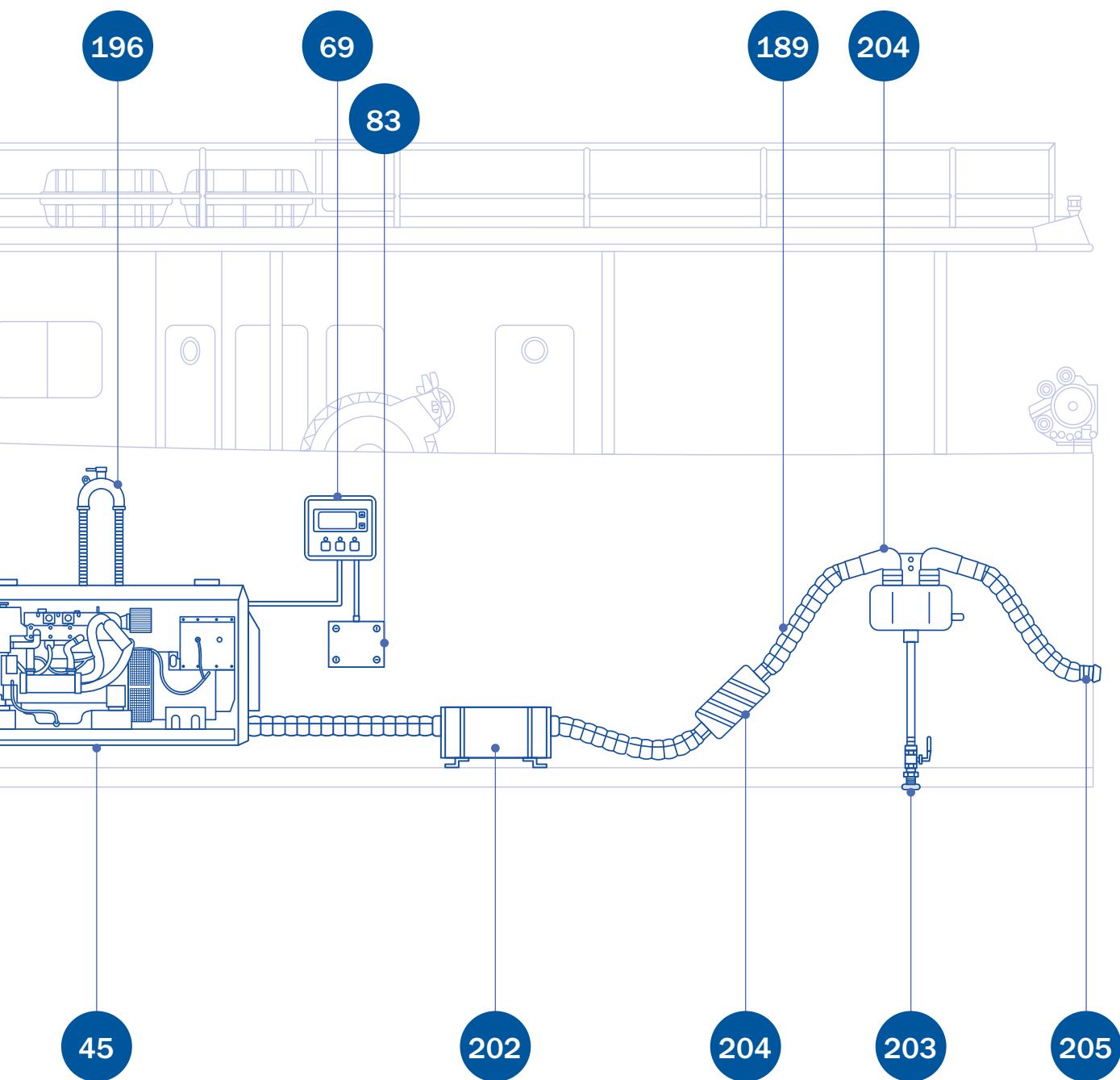
PROFESSIONAL FUEL SYSTEM	212
ACCESSORY PACK	212
FUEL SYSTEM ACCESSORIES PACK	213
SHYPON BREAKER PACK	213
METALLIC SYPHON BREAKER PACK	214
EXHAUST PACK ACCESSORIES	214
PROFESSIONAL WATERLOCK PACK I-STR 0-INC	215
PROFESSIONAL WATERLOCK PACK I-STR 0-STR	215
PROFESSIONAL WATER/GAS SEPARATOR PACK	216
WATER/GAS SEPARATOR PACK	216
METALLIC WATER ASPIRATION SYSTEM PACK	216
WATER ASPIRATION PACK	217
OIL EXTRACTION PUMP	217

APPENDIX.....218













ENGINES

DIESEL MARINE ENGINES

from 16 hp to 272 hp



MITSUBISHI

Solé Diesel has been working with Mitsubishi for over 40 years, gaining experience that stands behind its products. It offers a complete line of Mitsubishi-based Solé Diesel engines ranging from 16 up to 103 hp, meaning they can be used with a wide range of commercial vessels and pleasure craft. These engines are synonymous of reliability, robustness, and durability.

MODEL	POWER	RPM	NO. OF CYLINDERS	CYLINDER CAPACITY
MINI-17	11,8 kW	16,0 hp	3600	2
MINI-29	20 kW	27,2 hp	3600	3
MINI-33	23,1 kW	31,4 hp	3000	3
MINI-44	30,9 kW	42 hp	3000	4
MINI-55	36,8 kW	50 hp	3000	4
MINI-62	43,4 kW	59 hp	3000	4
MINI-74	47 kW	63,9 hp	2500	4
SM-82	60,3 kW	82 hp	2500	4
SM-94	69 kW	93,8 hp	2500	4
SM-103	75,8 kW	103 hp	2500	6
				4996 cc



KUBOTA

KUBOTA is the largest producer of industrial diesel engines, so the KUBOTA-based Solé Diesel is designed to offer reliability and long-lasting durability. This engine is especially suited for vessels with displacement hulls, sailboats, and small fishing vessels.

MODEL	POWER	RPM	NO. OF CYLINDERS	CYLINDER CAPACITY
SK-60	44 kW	59,8 hp	2700	4
				2434 cc



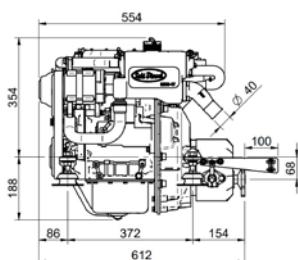
DEUTZ

DEUTZ-based marine-quality Solé Diesel engines come with powers ranging from 165 to 272 hp. These engines are specially designed for continuous service, getting more for less thanks to their low RPM scheme: a high level of engine torque with lower fuel consumption. They are perfect for vessels with displacement hulls that require engines that can generate high power for long periods of time.

MODEL	POWER	RPM	NO. OF CYLINDERS	CYLINDER CAPACITY
SDZ-165	118 kW	160,3 hp	2300	4
SDZ-205	143,9 kW	195,5 hp	2300	6
SDZ-280	200 kW	271,7 hp	2300	6
				7146 cc

MINI-17

2 cylinders 16 hp (11,8 kW) at 3600 RPM



Equipment

Standard equipment

- SSG 20 Control panel
- 3 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- SSG 30 Control Panel
- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

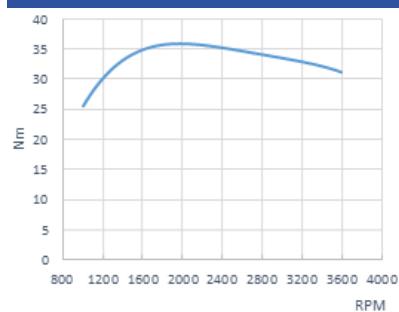
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	2
Intake system	Naturally aspirated
Bore x stroke (mm)	76 x 70
Total displacement (cc)	635
Compression ratio	23:1
Intermittent power rating (per ISO 3046/1)	16 hp (m) (11,8 kW)
Continuous output	14,4 hp (m) (10,6 kW)
Fuel injection system	Mechanical and indirect
Alternator	12 V - 75 A
Engine Max. installation angle	25°
ID. Ø Salt water hose	20 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	5 mm
Emission compliance	EU: RCD II, BSO II
Rating	Intermittent power: S3 Continuous power: S2

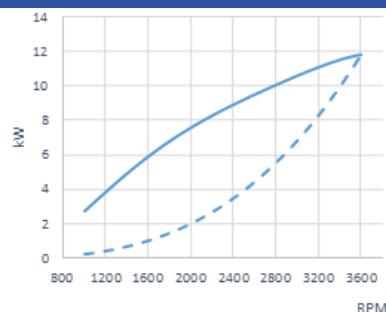
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
SP 60	Sail drive M.	0°	2.15:1 - 2.38:1	-	138 kg (304 lb)
TMC-40P	Mechanical	0°	1.45:1 - 2.00:1 - 2.60:1	1.45:1 - 2.00:1 - 2.60:1	104 kg (229 lb)
TMC-60A	Mechanical	7°	2.00:1 - 2.45:1	2.00:1 - 2.45:1	109 kg (240 lb)
TMC-60P	Mechanical	0°	2.00:1 - 2.45:1	2.00:1 - 2.45:1	109 kg (240 lb)
ZF 15 MIV	V-Drive M.	15°	2.13:1	2.13:1	115 kg (254 lb)

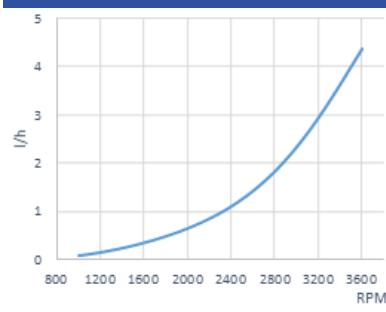
Engine Torque



Power*



Fuel consumption

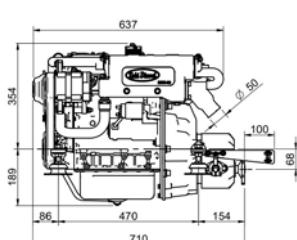


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

MINI-29

3 cylinders 27,2 hp (20 kW) at 3600 RPM



Equipment

Standard equipment

- SSG 20 Control panel
- 3 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- SSG 30 Control panel
- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

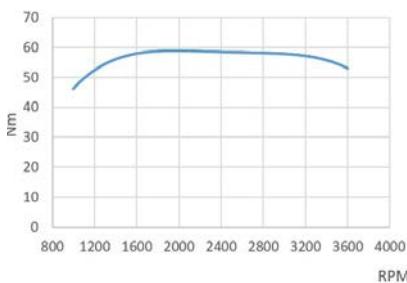
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	3
Intake system	Naturally aspirated
Bore x stroke (mm)	76 x 70
Total displacement (cc)	952
Compression ratio	22:1
Intermittent power rating (per ISO 3046/1)	27 hp (m) (20 kW)
Continuous output	24,5 hp (m) (18 kW)
Fuel injection system	Mechanical and indirect
Alternator	12 V - 75 A
Engine Max. installation angle	25°
ID. Ø Salt water hose	20 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	5 mm
Emission compliance	EU: RCD II, BSO II
Rating	Intermittent power: S3 Continuous power: S2

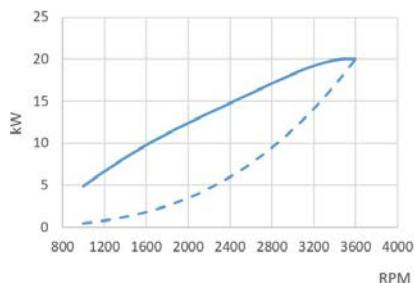
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
SP 60	Sail drive M.	0°	2.15:1	-	161 kg (355 lb)
TM-345	Hydraulic	0°	2.00:1 - 2.47:1	2.00:1 - 2.47:1	143 kg (315 lb)
TM-345A	Hydraulic	8°	2.00:1 - 2.47:1	2.00:1 - 2.47:1	143 kg (315 lb)
TMC-40P	Mechanical	0°	2.00:1 - 2.60:1	2.00:1	127 kg (280 lb)
TMC-60A	Mechanical	7°	2.00:1 - 2.45:1	2.00:1 - 2.45:1	132 kg (291 lb)
TMC-60P	Mechanical	0°	2.00:1 - 2.45:1	2.00:1 - 2.45:1	132 kg (291 lb)
ZF 15 MIV	V-Drive M.	15°	2.13:1	2.13:1	138 kg (304 lb)

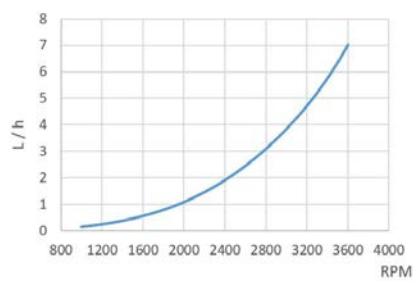
Engine Torque



Power*



Fuel consumption

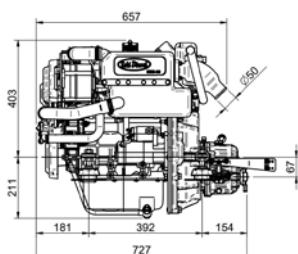


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

MINI-33

3 cylinders 31,4 hp (23,1 kW) at 3000 RPM



Equipment

Standard equipment

- SSG 20 Control panel
- 3 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- SSG 30 Control Panel
- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

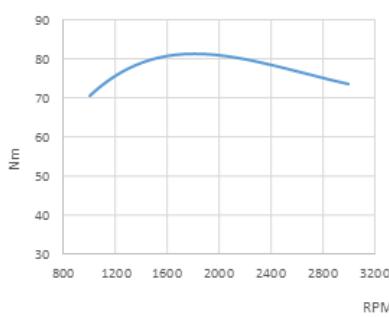
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	3
Intake system	Naturally aspirated
Bore x stroke (mm)	78 x 92
Total displacement (cc)	1318
Compression ratio	22:1
Intermittent power rating (per ISO 3046/1)	31 hp (m) (23,1 kW)
Continuous output	28,3 hp (m) (20,8 kW)
Fuel injection system	Mechanical and indirect
Alternator	12 V - 120 A
Engine Max. installation angle	15°
ID. Ø Salt water hose	20 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	5 mm
Emission compliance	EU: RCD II, BSO II
Certifications	SOLAS
Rating	Intermittent power: S3 Continuous power: S2

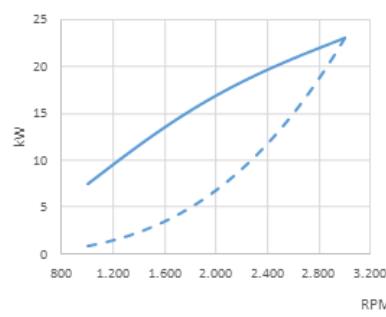
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
SP 60	Sail Drive M.	0°	2.15:1	-	200 kg (441 lb)
TM-345	Hydraulic	0°	2.00:1 - 2.47:1	2.00:1 - 2.47:1	182 kg (401 lb)
TM-345A	Hydraulic	8°	2.00:1 - 2.47:1	2.00:1 - 2.47:1	182 kg (401 lb)
TMC-260	Mechanical	0°	2.88:1	2.88:1	175 kg (386 lb)
TMC-40P	Mechanical	0°	1.45:1 - 2.00:1	1.45:1	166 kg (366 lb)
TMC-60A	Mechanical	7°	2.00:1 - 2.45:1	2.00:1 - 2.45:1	171 kg (377 lb)
TMC-60P	Mechanical	0°	2.00:1 - 2.45:1 - 2.83:1	2.00:1 - 2.45:1 - 2.83:1	171 kg (377 lb)
ZF 15 MIV	V-Drive M.	15°	2.13:1	2.13:1	177 kg (390 lb)

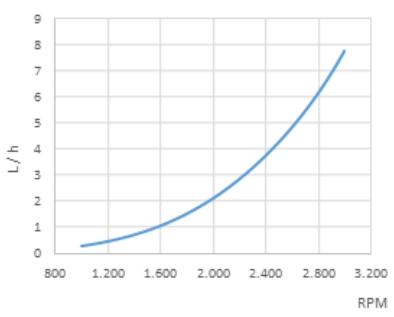
Engine Torque



Power*



Fuel consumption

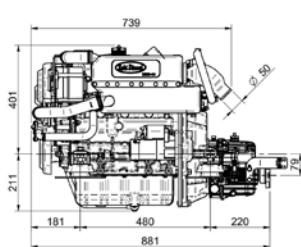


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

MINI-44

4 cylinders 42 hp (30,9 kW) at 3000 RPM



Equipment

Standard equipment

- SSG 20 Control panel
- 3 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- SSG 30 Control Panel
- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

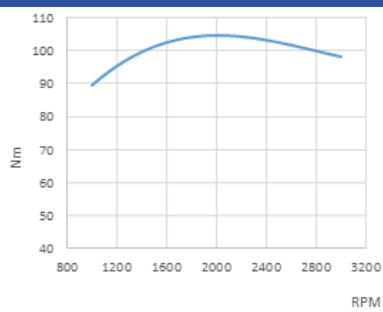
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	4
Intake system	Naturally aspirated
Bore x stroke (mm)	78 x 92
Total displacement (cc)	1758
Compression ratio	22:1
Intermittent power rating (per ISO 3046/1)	42 hp (m) (30,9 kW)
Continuous output	37,8 hp (m) (27,8 kW)
Fuel injection system	Mechanical and indirect
Alternator	12 V - 120 A
Engine Max. installation angle	15°
ID. Ø Salt water hose	20 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	5 mm
Emission compliance	EU: RCD II, BSO II
Rating	Intermittent power: S3 Continuous power: S2

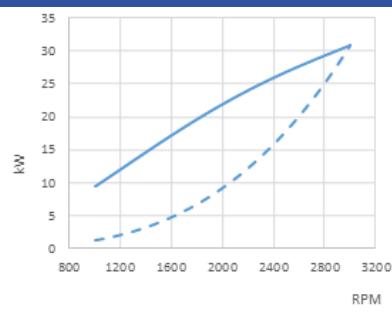
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
SP 60	Sail drive M.	0°	2.15:1	-	218 kg (481 lb)
TM-345	Hydraulic	0°	2.00:1 - 2.47:1	2.00:1 - 2.47:1	200 kg (441 lb)
TM-345A	Hydraulic	8°	2.00:1 - 2.47:1	2.00:1 - 2.47:1	200 kg (441 lb)
TM-93	Hydraulic	0°	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	228 kg (503 lb)
TMC-260	Mechanical	0°	2.47:1 - 2.88:1	2.47:1 - 2.88:1	193 kg (425 lb)
TMC-60A	Mechanical	7°	2.00:1 - 2.45:1	-	189 kg (417 lb)
TMC-60P	Mechanical	0°	1.55:1 - 2.00:1 - 2.45:1 - 2.83:1	1.55:1 - 2.00:1	189 kg (417 lb)
ZF 15 MIV	V-Drive M.	15°	2.13:1	2.13:1	195 kg (430 lb)

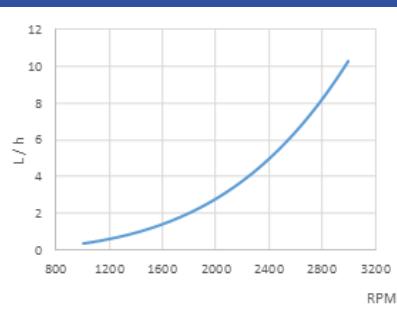
Engine Torque



Power*



Fuel consumption

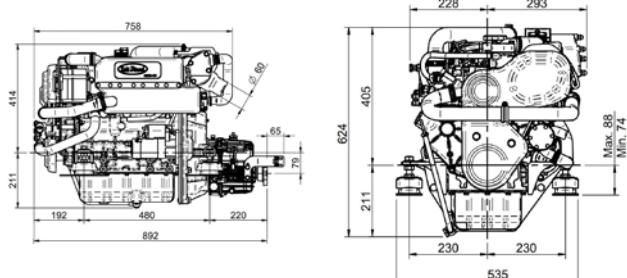


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

MINI-55

4 cylinders 50 hp (36,8 kW) at 3000 RPM



Equipment

Standard equipment

- SSG 20 Control panel
- 3 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- SSG 30 Control Panel
- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

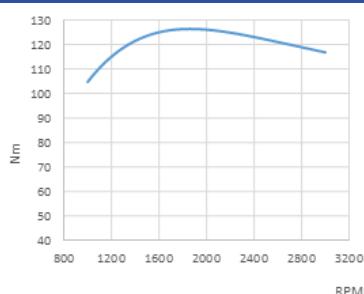
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	4
Intake system	Turbocharged
Bore x stroke (mm)	78 x 92
Total displacement (cc)	1758
Compression ratio	22:1
Intermittent power rating (per ISO 3046/1)	50 hp (m) (36,8 kW)
Continuous output	45 hp (m) (33,1 kW)
Fuel injection system	Mechanical and indirect
Alternator	12 V - 120 A
Engine Max. installation angle	15°
ID. Ø Salt water hose	26 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	5 mm
Emission compliance	EU: RCD II
Rating	Intermittent power: S3 Continuous power: S2

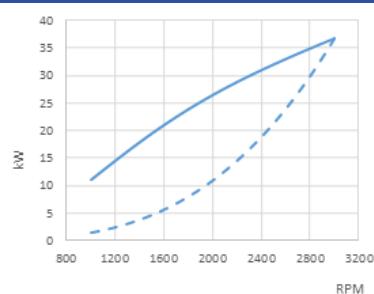
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
SP 60	Sail drive M.	0°	2.15:1	-	227 kg (500 lb)
TM-345	Hydraulic	0°	1.54:1 - 2.00:1 - 2.47:1	1.54:1 - 2.00:1 - 2.47:1	209 kg (461 lb)
TM-345A	Hydraulic	8°	2.00:1 - 2.47:1	2.00:1 - 2.47:1	209 kg (461 lb)
TM-93	Hydraulic	0°	2.09:1 - 2.40:1 - 2.77:1	2.09:1 - 2.40:1 - 2.77:1	237 kg (522 lb)
TMC-260	Mechanical	0°	2.00:1 - 2.47:1	2.00:1 - 2.47:1	202 kg (445 lb)
TMC-60A	Mechanical	7°	2.00:1 - 2.45:1	-	198 kg (437 lb)
TMC-60P	Mechanical	0°	1.55:1 - 2.00:1 - 2.45:1	1.55:1	198 kg (437 lb)
ZF 15 MIV	V-Drive M.	15°	2.13:1	-	204 kg (450 lb)

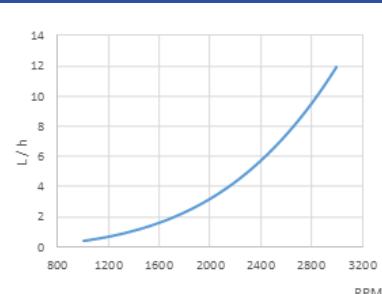
Engine Torque



Power*



Fuel consumption

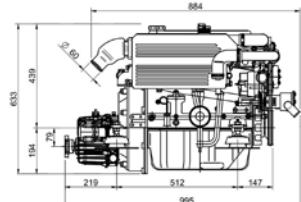
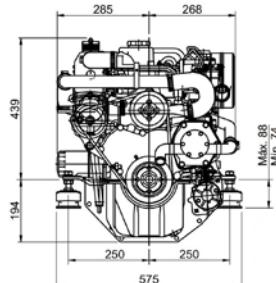


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

MINI-62

4 cylinders 59 hp (43,4 kW) at 3000 RPM



Equipment

Standard equipment

- SSG 20 Control panel
- 4 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- SSG 30 Control Panel
- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

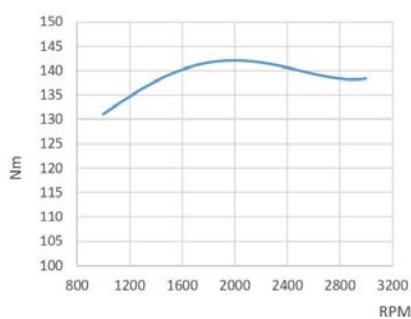
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	4
Intake system	Naturally aspirated
Bore x stroke (mm)	88 x 95
Total displacement (cc)	2311
Compression ratio	22:1
Intermittent power rating (per ISO 3046/1)	59 hp (m) (43,4 kW)
Continuous output	53,2 hp (m) (39,1 kW)
Fuel injection system	Mechanical and indirect
Alternator	12 V - 95 A
Engine Max. installation angle	15°
ID. Ø Salt water hose	32 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	6 mm
Emission compliance	-
Certifications	SOLAS
Rating	Intermittent power: S3 Continuous power: S2

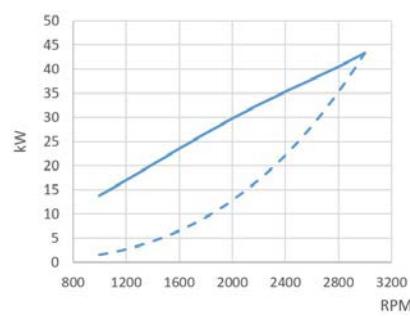
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
SP 60	Sail drive M.	0°	2.15:1	-	266 kg (586 lb)
TM-345	Hydraulic	0°	1.54:1 - 2.00:1 - 2.47:1	1.54:1 - 2.00:1 - 2.47:1	248 kg (547 lb)
TM-345A	Hydraulic	8°	1.54:1 - 2.00:1 - 2.47:1	1.54:1 - 2.00:1 - 2.47:1	248 kg (547 lb)
TM-93	Hydraulic	0°	2.09:1 - 2.40:1 - 2.77:1	2.09:1 - 2.40:1 - 2.77:1	276 kg (608 lb)
TM-93A	Hydraulic	8°	2.09:1 - 2.40:1	2.09:1 - 2.40:1	276 kg (608 lb)
TMC-260	Mechanical	0°	2.00:1 - 2.47:1	2.00:1 - 2.47:1	241 kg (531 lb)
TMC-60P	Mechanical	0°	2.00:1	-	237 kg (522 lb)
ZF 15 MIV	V-Drive M.	15°	2.13:1	-	243 kg (536 lb)

Engine Torque

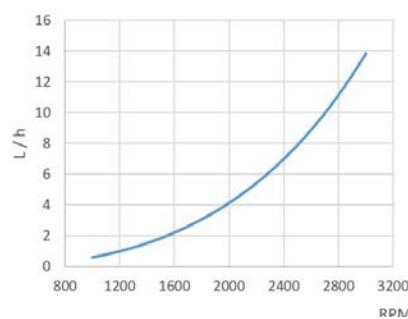


Power*



*Power rating per ISO 3046/1

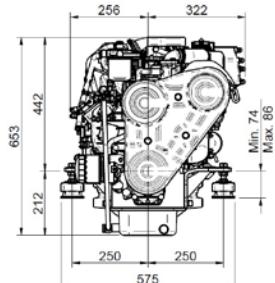
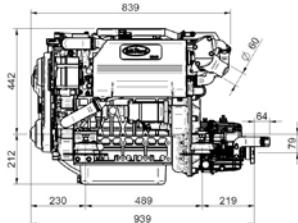
Fuel consumption



1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

SK-60

4 cylinders 59,8 hp (44 kW) at 2700 RPM



Equipment

Standard equipment

- SSG 20 Control panel
- 4 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- SSG 30 Control Panel
- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

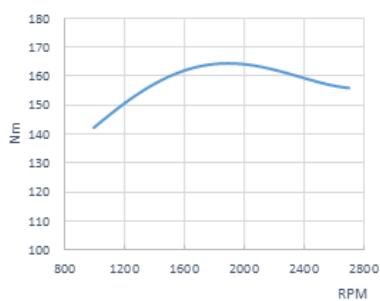
Technical specifications

Base	Kubota
Type	Diesel, 4 stroke
Cylinders	4
Intake system	Turbocharged
Bore x stroke (mm)	87 x 102,4
Total displacement (cc)	2434
Compression ratio	22,5:1
Intermittent power rating (per ISO 3046/1)	60 hp (m) (44 kW)
Continuous output	53,9 hp (m) (39,6 kW)
Fuel injection system	Mechanical and indirect
Alternator	12 V - 120 A
Engine Max. installation angle	20°
ID. Ø Salt water hose	32 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	5 mm
Emission compliance	EU: RCD II
Rating	Intermittent power: S3 Continuous power: S2

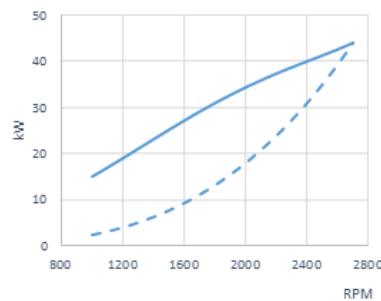
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
TM-345	Hydraulic	0°	1.54:1 - 2.00:1 - 2.47:1	1.54:1 - 2.00:1	243 kg (536 lb)
TM-345A	Hydraulic	8°	1.54:1 - 2.00:1 - 2.47:1	1.54:1 - 2.00:1	243 kg (536 lb)
TM-93	Hydraulic	0°	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	271 kg (597 lb)
TM-93A	Hydraulic	8°	1.51:1 - 2.09:1 - 2.40:1	1.51:1 - 2.09:1 - 2.40:1	271 kg (597 lb)
TMC-260	Mechanical	0°	1.54:1 - 2.00:1 - 2.47:1 - 2.88:1	1.54:1 - 2.00:1	236 kg (520 lb)
TMC-60P	Mechanical	0°	1.55:1	-	232 kg (511 lb)
ZF 68 IV	Hydraulic	12°	1.56:1 - 1.99:1	1.56:1 - 1.99:1	280 kg (617 lb)

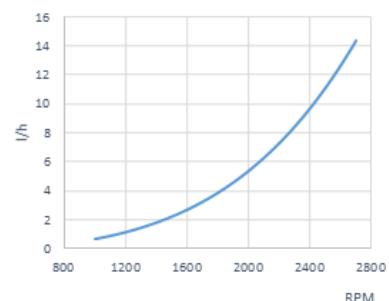
Engine Torque



Power*



Fuel consumption

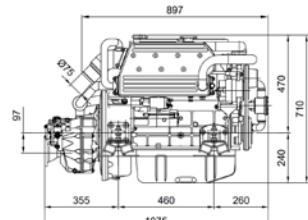
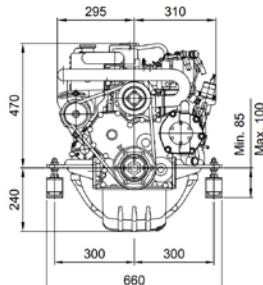


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

MINI-74

4 cylinders 63,9 hp (47 kW) at 2500 RPM



Equipment

Standard equipment

- SSG 30 Control panel
- 4 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

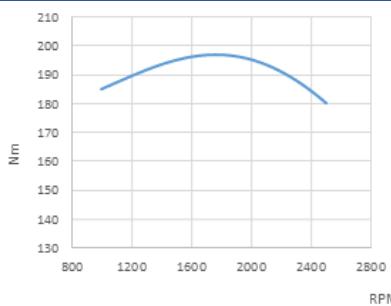
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	4
Intake system	Naturally aspirated
Bore x stroke (mm)	94 x 120
Total displacement (cc)	3331
Compression ratio	22:1
Intermittent power rating (per ISO 3046/1)	64 hp (m) (47 kW)
Continuous output	57,5 hp (m) (42,3 kW)
Fuel injection system	Mechanical and indirect
Alternator	12 V - 95 A
Engine Max. installation angle	15°
ID. Ø Salt water hose	32 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	-
Emission compliance	EU: RCD II
Certifications	RRR
Rating	Intermittent power: S2 Continuous power: S1

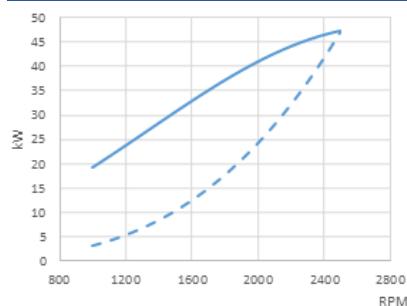
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
DMT-25AL	Hydraulic	0°	-	3.32:1	399 kg (880 lb)
DMT-50A	Hydraulic	0°	-	3.46:1	465 kg (1025 lb)
TM-345	Hydraulic	0°	2.00:1 - 2.47:1	2.00:1	347 kg (765 lb)
TM-345A	Hydraulic	8°	2.00:1 - 2.47:1	2.00:1	347 kg (765 lb)
TM-880A	Hydraulic	10°	2.60:1	2.60:1	376 kg (829 lb)
TM-93	Hydraulic	0°	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	375 kg (827 lb)
TM-93A	Hydraulic	8°	1.51:1 - 2.09:1 - 2.40:1	1.51:1 - 2.09:1 - 2.40:1	375 kg (827 lb)
ZF 68 IV	Hydraulic	12°	1.29:1 - 1.56:1 - 1.99:1	1.29:1 - 1.56:1 - 1.99:1	384 kg (847 lb)

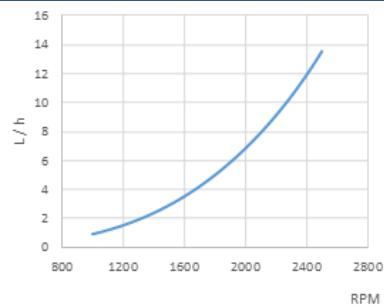
Engine Torque



Power*



Fuel consumption

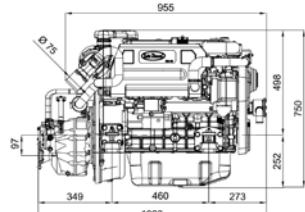
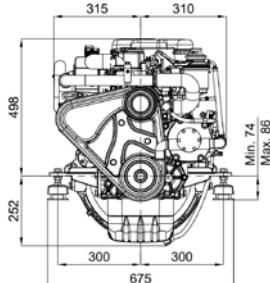


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

SM-82

4 cylinders 82 hp (60,3 kW) at 2500 RPM



Equipment

Standard equipment

- SSG 30 Control panel
- 4 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

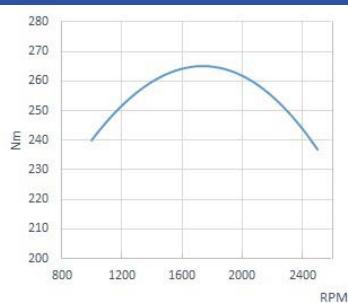
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	4
Intake system	Turbocharged
Bore x stroke (mm)	94 x 120
Total displacement (cc)	3331
Compression ratio	19.5:1
Intermittent power rating (per ISO 3046/1)	82 hp (m) (60,3 kW)
Continuous output	73,8 hp (m) (54,3 kW)
Fuel injection system	Mechanical and direct
Alternator	12 V - 95 A
Engine Max. installation angle	15°
ID. Ø Salt water hose	32 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	8 mm
Emission compliance	EU: RCD II
Rating	Intermittent power: S2 Continuous power: S1

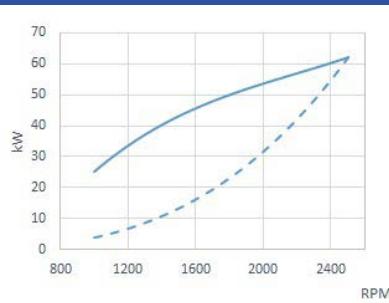
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
TM-170	Hydraulic	0°	1.50:1 - 2.04:1 - 2.50:1 - 2.94:1	1.50:1 - 2.04:1 - 2.50:1 - 2.94:1	390 kg (860 lb)
TM-345	Hydraulic	0°	1.54:1 - 2.00:1	-	340 kg (750 lb)
TM-345A	Hydraulic	8°	1.54:1 - 2.00:1	-	340 kg (750 lb)
TM-880A	Hydraulic	10°	1.53:1 - 2.08:1 - 2.60:1	1.53:1 - 2.08:1 - 2.60:1	369 kg (814 lb)
TM-93	Hydraulic	0°	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	368 kg (811 lb)
TM-93A	Hydraulic	8°	1.51:1 - 2.09:1 - 2.40:1	1.51:1	368 kg (811 lb)
ZF 68 IV	Hydraulic	12°	1.29:1 - 1.56:1 - 1.99:1 - 2.48:1	1.29:1 - 1.56:1 - 1.99:1 - 2.48:1	377 kg (831 lb)
ZF 25A	Hydraulic	8°	1.55:1 - 1.93:1 - 2.29:1 - 2.71:1	-	339 kg (747 lb)

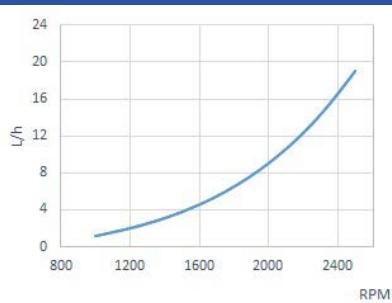
Engine Torque



Power*



Fuel consumption

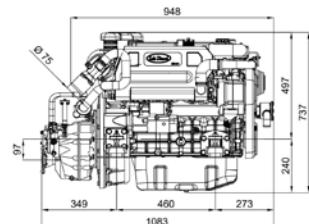
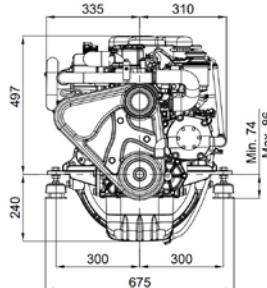


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

SM-94

4 cylinders 94 hp (69 kW) at 2500 RPM



Equipment

Standard equipment

- SSG 30 Control panel
- 4 m electrical extension lead
- Silentblocks
- Oil extraction pump
- Owner's Manual

Optional equipment

- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

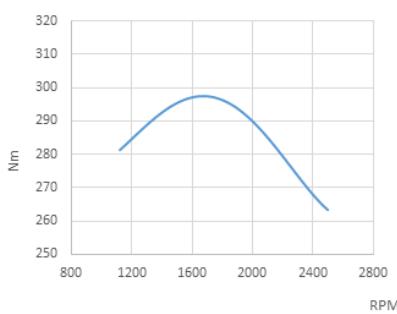
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	4
Intake system	Turbocharged
Bore x stroke (mm)	94 x 120
Total displacement (cc)	3331
Compression ratio	19:1
Intermittent power rating (per ISO 3046/1)	94 hp (m) (69 kW)
Continuous output	84,5 hp (m) (62,1 kW)
Fuel injection system	Mechanical and direct
Alternator	12 V - 95 A
Engine Max. installation angle	15°
ID. Ø Salt water hose	32 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	8 mm
Emission compliance	EU: RCD II
Rating	Intermittent power: S2 Continuous power: S1

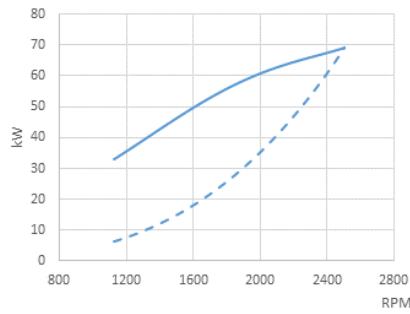
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
TM-170	Hydraulic	0°	1.50:1 - 2.04:1 - 2.50:1 - 2.94:1	1.50:1 - 2.04:1 - 2.50:1 - 2.94:1	383 kg (844 lb)
TM-345	Hydraulic	0°	2.00:1	-	333 kg (734 lb)
TM-345A	Hydraulic	8°	1.54:1 - 2.00:1	-	333 kg (734 lb)
TM-880A	Hydraulic	10°	1.53:1 - 2.08:1 - 2.60:1	1.53:1 - 2.08:1 - 2.60:1	362 kg (798 lb)
TM-93	Hydraulic	0°	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	361 kg (796 lb)
TM-93A	Hydraulic	8°	1.51:1 - 2.09:1 - 2.40:1	-	361 kg (796 lb)
ZF 68 IV	Hydraulic	12°	1.29:1 - 1.56:1 - 1.99:1 - 2.48:1	1.29:1 - 1.56:1 - 1.99:1 - 2.48:1	370 kg (816 lb)
ZF 25A	Hydraulic	8°	1.55:1 - 1.93:1	-	332 kg (732 lb)

Engine Torque

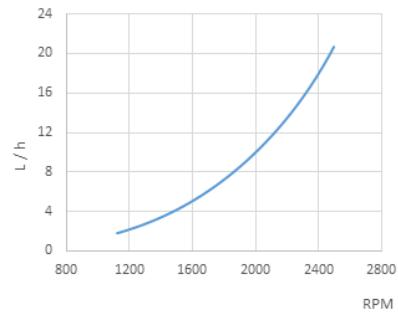


Power*



*Power rating per ISO 3046/1

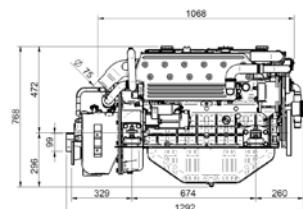
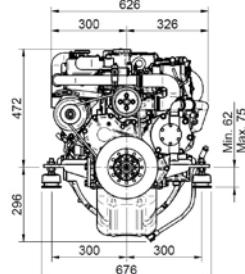
Fuel consumption



1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

SM-103

6 cylinders 103 hp (75,8 kW) at 2500 RPM



Equipment

Standard equipment

- SSG 30 Control panel
- 4 m electrical extension lead
- Oil extraction pump
- Owner's Manual

Optional equipment

- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

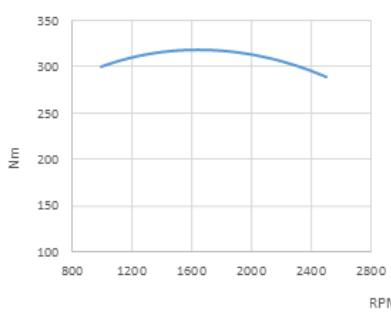
Technical specifications

Base	Mitsubishi
Type	Diesel, 4 stroke
Cylinders	6
Intake system	Naturally aspirated
Bore x stroke (mm)	94 x 120
Total displacement (cc)	4996
Compression ratio	22:1
Intermittent power rating (per ISO 3046/1)	103 hp (m) (75,8 kW)
Continuous output	92,8 hp (m) (68,2 kW)
Fuel injection system	Mechanical and indirect
Alternator	12 V - 95 A
Engine Max. installation angle	15°
ID. Ø Salt water hose	32 mm
ID. Ø Diesel fuel intake hose	8 mm
ID. Ø Diesel fuel return hose	-
Emission compliance	-
Certifications	RRR
Rating	Intermittent power: S2 Continuous power: S1

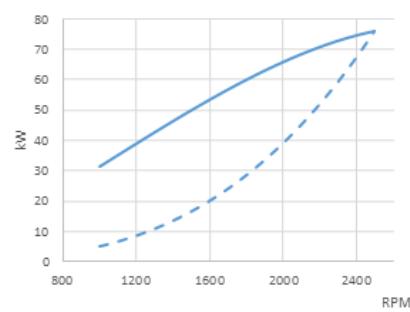
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
DMT-50A	Hydraulic	0°	-	3.46:1	551 kg (1215 lb)
PRM 500D	Hydraulic	0°	2.90:1	2.90:1	480 kg (1058 lb)
PRM 750C	Hydraulic	0°	2.57:1 - 2.90:1	2.57:1 - 2.90:1	501 kg (1105 lb)
TM-170	Hydraulic	0°	1.50:1 - 2.04:1 - 2.50:1 - 2.94:1	1.50:1 - 2.04:1 - 2.50:1 - 2.94:1	483 kg (1065 lb)
TM-880A	Hydraulic	10°	1.53:1 - 2.08:1 - 2.60:1	1.53:1 - 2.08:1 - 2.60:1	462 kg (1019 lb)
TM-93	Hydraulic	0°	1.51:1 - 2.09:1 - 2.40:1 - 2.77:1	1.51:1 - 2.09:1 - 2.40:1	461 kg (1016 lb)
TM-93A	Hydraulic	8°	1.51:1 - 2.09:1 - 2.40:1	-	461 kg (1016 lb)
ZF 68 IV	Hydraulic	12°	1.99:1 - 2.48:1	1.99:1 - 2.48:1	470 kg (1036 lb)

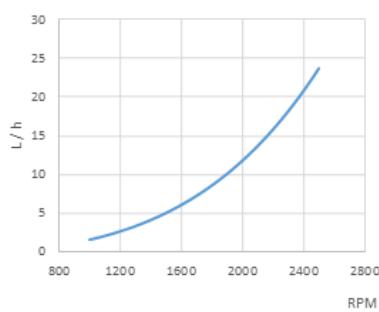
Engine Torque



Power*



Fuel consumption

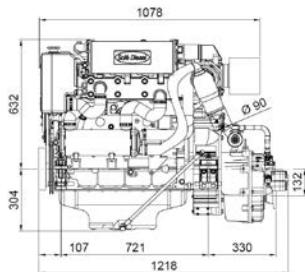


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

SDZ-165

4 cylinders 160,4 hp (118 kW) at 2300 RPM



Equipment

Standard equipment

- SSG 30 Control panel
- 4 m electrical extension lead
- Oil extraction pump
- Owner's Manual

Optional equipment

- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

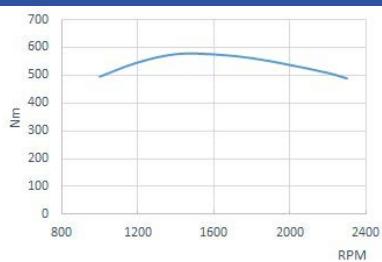
Technical specifications

Base	Deutz
Type	Diesel, 4 stroke
Cylinders	4
Intake system	Turbocharged with intercooler
Bore x stroke (mm)	108 x 130
Total displacement (cc)	4764
Compression ratio	17.5:1
Intermittent power rating (per ISO 3046/1)	160 hp (m) (118 kW)
Continuous output	144,4 hp (m) (106,2 kW)
Fuel injection system	Mechanical and direct
Alternator	24 V - 55 A
Engine Max. installation angle	10°
ID. Ø Salt water hose	42 mm
ID. Ø Diesel fuel intake hose	12 mm
ID. Ø Diesel fuel return hose	12 mm
Emission compliance	-
Rating	Intermittent power: S2 Continuous power: S1

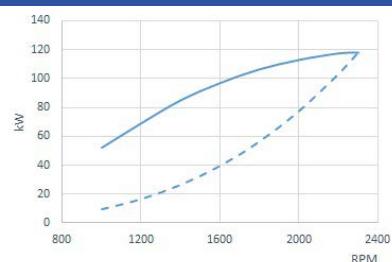
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
DMT-100HL	Hydraulic	0°	-	5.95:1	818 kg (1803 lb)
DMT-100IV	Hydraulic	14°	-	2.12:1	705 kg (1554 lb)
TM-170	Hydraulic	0°	1.50:1 - 2.04:1 - 2.50:1 - 2.94:1	1.50:1 - 2.04:1	630 kg (1389 lb)
TM-200B	Hydraulic	0°	-	3.60:1 - 4.48:1	790 kg (1742 lb)
TM-265	Hydraulic	0°	2.09:1 - 2.82:1	2.09:1 - 2.82:1	609 kg (1343 lb)
TM-265A	Hydraulic	7°	2.09:1 - 2.30:1	2.09:1	617 kg (1360 lb)
TM-880A	Hydraulic	10°	1.53:1 - 2.08:1 - 2.60:1	1.53:1 - 2.08:1	720 kg (1587 lb)
ZF 68 IV	Hydraulic	12°	1.56:1 - 1.99:1	-	720 kg (1587 lb)

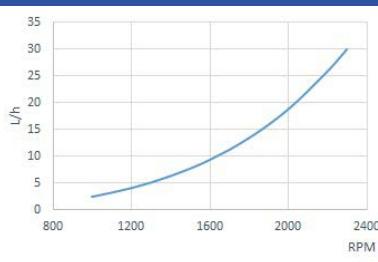
Engine Torque



Power*



Fuel consumption

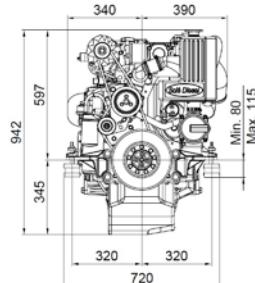
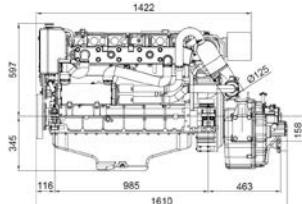


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

SDZ-205

6 cylinders 195,7 hp (143,9 kW) at 2300 RPM



Equipment

Standard equipment

- SSG 30 Control panel
- 4 m electrical extension lead
- Oil extraction pump
- Owner's Manual

Optional equipment

- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

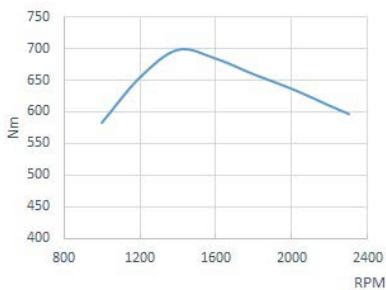
Technical specifications

Base	Deutz
Type	Diesel, 4 stroke
Cylinders	6
Intake system	Turbocharged
Bore x stroke (mm)	108 x 130
Total displacement (cc)	7146
Compression ratio	17.5:1
Intermittent power rating (per ISO 3046/1)	196 hp (143,9 kW)
Continuous output	176,1 hp (m) (129,5 kW)
Fuel injection system	Mechanical and direct
Alternator	24 V - 55 A
Engine Max. installation angle	10°
ID. Ø Salt water hose	42 mm
ID. Ø Diesel fuel intake hose	12 mm
ID. Ø Diesel fuel return hose	12 mm
Emission compliance	-
Rating	Intermittent power: S2 Continuous power: S1

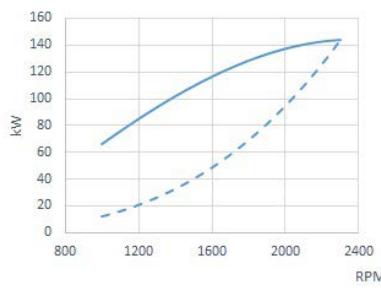
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
DMT-100HL	Hydraulic	0°	-	4.07:1 - 4.50:1 - 4.95:1 - 5.29:1	951 kg (2097 lb)
MG-5061SC	Mechanical	0°	3.00:1	3.00:1	791 kg (1744 lb)
TM-1200A	Hydraulic	7°	2.30:1	2.30:1	803 kg (1770 lb)
TM-170	Hydraulic	0°	1.50:1 - 2.04:1	1.50:1 - 2.04:1	763 kg (1682 lb)
TM-200B	Hydraulic	0°	-	3.60:1 - 4.48:1	923 kg (2035 lb)
TM-265	Hydraulic	0°	1.50:1 - 2.09:1 - 2.82:1	1.50:1 - 2.09:1 - 2.82:1	853 kg (1881 lb)
TM-265A	Hydraulic	7°	2.09:1 - 2.30:1	-	853 kg (1881 lb)
TM-880A	Hydraulic	10°	1.53:1 - 2.08:1	-	742 kg (1636 lb)

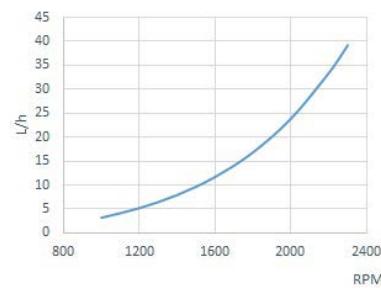
Engine Torque



Power*



Fuel consumption

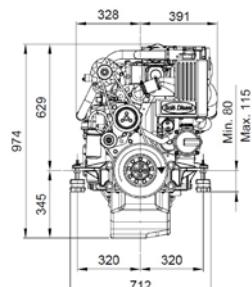
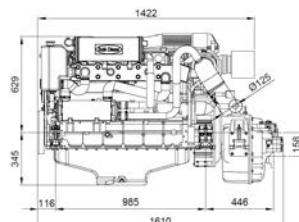


*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

SDZ-280

6 cylinders 272 hp (200 kW) at 2300 RPM



Equipment

Standard equipment

- SSG 30 Control panel
- 4 m electrical extension lead
- Oil extraction pump
- Owner's Manual

Optional equipment

- Twin instrument panel installation
- Twin alternator
- Earth isolated installation
- Dry exhaust system
- Keel cooling
- Power take-off shaft or pulley
- Heater inlet
- Drivetrain: Propeller, shaft, sterntube
- Water and diesel fuel filters
- Water, exhaust, and diesel fuel hoses

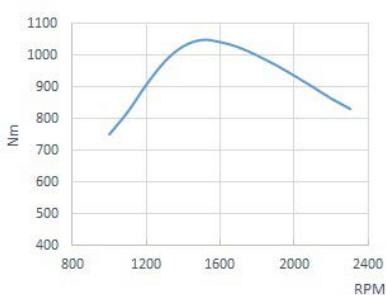
Technical specifications

Base	Deutz
Type	Diesel, 4 stroke
Cylinders	6
Intake system	Turbocharged with intercooler
Bore x stroke (mm)	108 x 130
Total displacement (cc)	7146
Compression ratio	17.5:1
Intermittent power rating (per ISO 3046/1)	272 hp (m) (200 kW)
Continuous output	244.8 hp (m) (180 kW)
Fuel injection system	Mechanical and direct
Alternator	24 V - 55 A
Engine Max. installation angle	10°
ID. Ø Salt water hose	42 mm
ID. Ø Diesel fuel intake hose	12 mm
ID. Ø Diesel fuel return hose	12 mm
Emission compliance	IMO MARPOL TIER II
Rating	Intermittent power: S2 Continuous power: S1

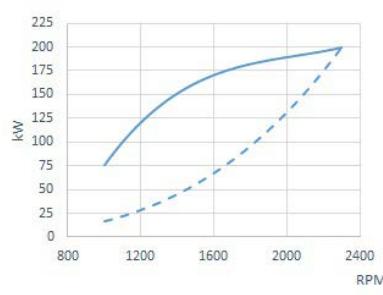
Transmissions

Model	Type	Down angle	Reduction (Light Duty)	Reduction (Cont. Duty)	Engine weight with gearbox
DMT-100HL	Hydraulic	0°	-	4.07:1 - 4.50:1 - 4.95:1 - 5.29:1	943 kg (2079 lb)
DMT-100IV	Hydraulic	14°	-	2.12:1	830 kg (1830 lb)
DMT-90A	Hydraulic	0°	-	3.12:1 - 3.46:1	839 kg (1850 lb)
TM-1200A	Hydraulic	7°	1.44:1 - 2.00:1 - 2.30:1	1.44:1 - 2.00:1	795 kg (1753 lb)
TM-265	Hydraulic	0°	1.50:1 - 2.09:1 - 2.82:1	-	845 kg (1863 lb)
TM-265A	Hydraulic	7°	1.44:1 - 2.09:1 - 2.30:1	-	845 kg (1863 lb)
TM-360	Hydraulic	0°	-	3.50:1 - 4.00:1	1095 kg (2414 lb)
TM-880A	Hydraulic	10°	1.53:1 - 2.08:1	-	734 kg (1618 lb)

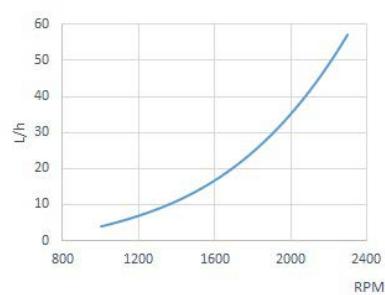
Engine Torque



Power*



Fuel consumption



*Power rating per ISO 3046/1

1 kW ≈ 1,36 CV 1 kW ≈ 1,36 HP (metric) 1 kW ≈ 1,36 CH

SSG CONTROL PANELS

The new SSG range consists of a set of control and protection panels for use with propulsion motors. These units allow the motor to be started and display the most important operating parameters on a multifunction LCD display integrated into the main tachometer. The information is displayed in an easy and intuitive way, including acoustic and visual indicators.

GENERAL CHARACTERISTICS

1. Plug and play connections compatible with previous models and IP67 waterproof protection.
2. Sealed with neoprene gasket.
3. Plastic back for good electrical insulation.
4. No unprotected electronic components.
5. Backlit LCD display with motor information
6. IP65 waterproof front panel protection.
7. Starter motor protection, to prevent a start signal from being sent when the motor is running.
8. Luminescent dial hands.
9. New panel and dial design.
10. Dual panel option

- All panels include a 5-position key:
- Stop motor
 - Shut down panel assembly
 - Turn on panel assembly
 - Engin ePreheating
 - Motor starter



SSG 20



SSG 30

LCD screen		
Battery voltage reading		
Temperature reading		
Pressure reading		
RPM signal		
Preheat icon		
Low battery alarm		
High temperature alarm		
Low oil pressure alarm		
5-position key		
Stop motor		
Shut down panel assembly		
Turn on panel assembly		
Engin ePreheating		
Motor starter		
Dials	SSG 20	SSG 30
Tachometer and multifunction display	X	✓
Thermometer dial	X	✓
Pressure gauge dial	X	✓
Dimensions (mm)	175 x 65	205 x 155

SGC 2000 CONVERTER

The new SGC Converter is a digital signal converter from the SSG panel to the NMEA2000 protocol. It provides engine operating information and other sensor-collected parameters via a central console or display.

CHARACTERISTICS

- Designed for quick and easy installation.
- Compact design with IP67 protection
- Compatible with the entire range of Solé motors in use since 2008.
- Compatible with Dual Panel Kit.
- Possibility of integrating up to 2 engines to NMEA 2000 network
- Converts the following signals, rpm, oil pressure, coolant temperature and battery voltage, to NMEA 2000 signals.

SCOPE OF DELIVERY

- NMEA2000 converter
- Connection SSG panel to NMEA2000 converter.

ELECTRICAL SPECIFICATIONS

- Voltage: 9-18V DC from NMEA2000 network bus
- Consumption: <500mA

ENGINE INFORMATION

- RPM indicator
- Coolant temperature
- Oil pressure gauge
- Battery voltage
- Audible and visual alarms for low oil pressure and high temperature.



MAINTENANCE PACKS

WELCOME PACK

The start-up pack is a packet of accessories including everything necessary for the initial start-up of a Solé Diesel engine: oil filter, diesel filter, impeller pack (impeller and gasket), belt, anode, fuse, air filter and all the necessary fluids to start the engine. Additionally, it contains three spray cans of primer, paint and dielectric protector, to keep the engine like new. It is an essential pack to have on board before any journey and allows basic maintenance to keep the boat's engine in good working condition. Available in the necessary variations for all our marine engine ranges.



Description	Part Number
Welcome Pack 4 GSCH V3	GD040300
Welcome Pack MINI-17 Genset	13840103G
Welcome Pack MINI-17 Mec. Gbox	13840103
Welcome Pack MINI-17/29 v6 Mec. Gbox	13840303
Welcome Pack MINI-26 Genset	13940103
Welcome Pack MINI-29 Hydr. Gbox	17640111
Welcome Pack MINI-33 Genset	17240303G
Welcome Pack MINI-33 Group TAC	17240115
Welcome Pack MINI-33 v6 Hydraul. Gbox	17240311
Welcome Pack MINI-33 v6 Mec. Gbox	17240304
Welcome Pack MINI-44 Genset	17340303G
Welcome Pack MINI-44 Group TAC	17340114
Welcome Pack MINI-44 v6 Hydr. Gbox	17340311
Welcome Pack MINI-44 v6 Mec. Gbox	17340305
Welcome Pack MINI-55 v6 Hydr. Gbox	17740304
Welcome Pack MINI-55 v6 Mec. Gbox	17740305
Welcome Pack MINI-62 Hydr. Gbox	17140303
Welcome Pack MINI-62 Mec. Gbox.	17140104
Welcome Pack MINI-63 Genset	17140105
Welcome Pack MINI-63 Group TAC	17140118
Welcome Pack MINI-74 Genset	17440303G
Welcome Pack MINI-74 Group TAC	17440115
Welcome Pack MINI-74 Hydr. Gbox	17440303
Welcome Pack MINI-74 Mec. Gbox	17440104
Welcome Pack SDZ-109	19440104G
Welcome Pack SDZ-109E Group TAC	19440120
Welcome Pack SDZ-165 Genset	19440115
Welcome Pack SDZ-165 Hydr. Gbox	19440104
Welcome Pack SDZ-165E Group TAC	19440125
Welcome Pack SDZ-190E Genset	19640303G
Welcome Pack SDZ-205 Hydr. Gbox	19540104
Welcome Pack SDZ-280 Hydr. Gbox	19640303
Welcome Pack SK-60 Hydr. Gbox	1A040303
Welcome Pack SK-60 Mec. Gbox	1A040302
Welcome Pack SM-103	17540310
Welcome Pack SM-105 Genset	17540303G
Welcome Pack SM-105 Group TAC	17540116
Welcome Pack SM-56 Genset	17B40303G
Welcome Pack SM-56 Group TAC	17B40115
Welcome Pack SM-81 Genset	17A40303G
Welcome Pack SM-81 Group TAC	17A40115
Welcome Pack SM-82 Hydr. Gbox	17840303
Welcome Pack SM-82 Mec. Gbox	17840302
Welcome Pack SM-94 Hydr. Gbox	17940303
Welcome Pack SM-94 Mec. Gbox	17940310

MAINTENANCE PACKS
ON BOARD PACK

The cruise parts pack for marine engines enables the elemental maintenance of the boat engine and it is essential to have it on board for any journey. So as to be able to replace defective parts, it has an oil filter, diesel filter, air filter main element, anode with cap, belt and impeller pack (impeller and gasket).



Description	Part Number
On Board Pack 4 GSCH V3	GD040200
On Board Pack MINI-17 Genset	13840210G
On Board Pack MINI-17/29 v6	17640110
On Board Pack MINI-26 Genset	13940210G
On Board Pack MINI-33/44 Genset	17240210G
On Board Pack MINI-33/44 v6	17240110
On Board Pack MINI-55 v6	17740211
On Board Pack MINI-62	17140210
On Board Pack MINI-63 Genset	17140210G
On Board Pack MINI-74	17440210
On Board Pack SDZ-109 Genset	19440210G
On Board Pack SDZ-109 Genset	19440114
On Board Pack SDZ-165	19440210
On Board Pack SDZ-190E Genset	19640210G
On Board Pack SDZ-205	19540210
On Board Pack SDZ-280	19640210
On Board Pack SK-60	1A040110
On Board Pack SM-103	17540210
On Board Pack SM-105 Genset	17540210G
On Board Pack SM-56 Genset	17B40210G
On Board Pack SM-81 Genset	17A40300
On Board Pack SM-82	17840110
On Board Pack SM-94	17940110
Respect Pack MINI-33 Group TAC	17240112
Respect Pack MINI-44 Group TAC	17340111
Respect Pack MINI-63 Group TAC	17140115
Respect Pack MINI-74 Group TAC	17440113
Respect Pack SDZ-109E Group TAC	19440117
Respect Pack SDZ-165E Group TAC	19440122
Respect Pack SM-105 Group TAC	17540113
Respect Pack SM-56 Group TAC	17B40112
Respect Pack SM-81 Group TAC	17A40112

MAINTENANCE PACKS

MAINTENANCE PACK 50 H

The 50-hour pack includes an oil filter, a diesel filter and an impeller pack (impeller and gasket) with a toolbox. It is an essential pack to have on board before any journey since it enables us to carry out basic engine maintenance. Available for all marine engine ranges.



Description	Part Number
4 GSCH V3 50 Hours Pack	GD040100
MINI-17/29/33/44 50 Hours Pack Engine & Genset	13840110
MINI-55 50 Hours Pack	17740110
MINI-62 50 Hours Pack	17140110
MINI-63 50 Hours Pack Genset	17140110G
MINI-74 50 Hours Pack Engine & Genset	17440110
Pack 50 Hours MINI-33 Group TAC	17240111
Pack 50 Hours MINI-44 Group TAC	17340110
Pack 50 Hours MINI-56 Group TAC	17B40111
Pack 50 Hours MINI-63 Group TAC	17140114
Pack 50 Hours MINI-74 Group TAC	17440112
Pack 50 Hours SDZ-109E Group TAC	19440116
Pack 50 Hours SDZ-165E Group TAC	19440121
Pack 50 Hours SM-105 Group TAC	17540112
Pack 50 Hours SM-81 Group TAC	17A40111
SDZ-165/205/280 and SDZ-109/165/280/190E Genset 50 Hours Pack	19440110
SK-60 50 Hours Pack	1A040112
SM-105/103 50 Hours Pack Engine & Genset	17540110
SM-56 50 Hours Pack	17B40110
SM-81 50 Hours Pack Genset	17A40200
SM-82/94 50 Hours Pack	17840112

MAINTENANCE PACKS

MAINTENANCE PACK 1600 H

The 1600-hour pack is an accessory pack for carrying out the 1600 working hour's maintenance of marine engines and generators. It includes all the elements necessary for carrying out the servicing of the boat engine or generator such as oil, diesel and air filters, washers belts and gaskets.



Description	Part Number
Maint. Kit SK-60 1600 Hours	1A040100
Maint. Pack 4 GSCH V3 1600 Hours	GD040101
Maint. Pack L500 (Until 9/14)/600/700 1600 Hours	13840104G
Maint. Pack MINI-17v6 1600 Hours	13840104
Maint. Pack MINI-26 1600 Hours Genset	13940104G
Maint. Pack MINI-29v6 1600 Hours	17640102
Maint. Pack MINI-33 Group 1600 Hours TAC	17240113
Maint. Pack MINI-33v6 1600 Hours	17240105
Maint. Pack MINI-44 Group 1600 Hours TAC	17340112
Maint. Pack MINI-44v6 1600 Hours	17340106
Maint. Pack MINI-55v6 1600 Hours	17740102
Maint. Pack MINI-62 1600 Hours	17140112
Maint. Pack MINI-63 Group 1600 Hours TAC	17140116
Maint. Pack MINI-74 1600 Hours	17440102
Maint. Pack MINI-74 Group 1600 Hours TAC	17440114
Maint. Pack SDZ-109 1600 Hours Genset	19440108G
Maint. Pack SDZ-109E Group 1600 Hours TAC	19440118
Maint. Pack SDZ-165 1600 Hours	19440106
Maint. Pack SDZ-165 1600 Hours Genset	19540109G
Maint. Pack SDZ-165E Group 1600 Hours TAC	19440123
Maint. Pack SDZ-190E 1600 Hours Genset	19640101G
Maint. Pack SDZ-205/280 1600 Hours	19540105
Maint. Pack SDZ-280 1600 Hours	19640101
Maint. Pack SM-103 1600 Hours	17540105
Maint. Pack SM-105 Group 1600 Hours TAC	17540114
Maint. Pack SM-56 1600 Hours Genset	17B41600
Maint. Pack SM-56 Group 1600 Hours TAC	17B40113
Maint. Pack SM-81 1600 Hours Genset	17A41600
Maint. Pack SM-81 Group 1600 Hours TAC	17A40113
Maint. Pack SM-82 1600 Hours	17840100
Maint. Pack SM-94 1600 Hours	17940100
Maint. Pack MINI-33 1600 Hours Genset	17240103G
Maint. Pack MINI-44 1600 Hours Genset	17340104G
Maint. Pack MINI-63 1600 Hours Genset	17140112G
Maint. Pack MINI-74 1600 Hours Genset	17440102G
Maint. Pack SM-105 1600 Hours Genset	17540104G

MAINTENANCE PACKS

MAINTENANCE PACK 3000 H

The 3000-hour pack is an accessory pack for carrying out the 3000 working hour's maintenance of marine engines and generators. This pack has different elements depending on the engine or generator that is going to be serviced. The user manual specifies the elements contained in each. Some of the elements included are: diesel filters, air filter, gaskets, injector washers, oil filters and impellers.



Description	Part Number
Maint. Kit SK-60 3000 Hours	1A040101
Maint. Pack 4 GSCH V3 3000 Hours	GD040102
Maint. Pack L500 (Until 9/14)/600/700 3000 Hours	13840105G
Maint. Pack MINI-17v6 3000 Hours	13840105
Maint. Pack MINI-26 3000 Hours Genset	13940105G
Maint. Pack MINI-29v6 3000 Hours	17640103
Maint. Pack MINI-33 Group 3000 Hours TAC	17240114
Maint. Pack MINI-33v6 3000 Hours	17240106
Maint. Pack MINI-44 Group 3000 Hours TAC	17340113
Maint. Pack MINI-44v6 3000 Hours	17340107
Maint. Pack MINI-55v6 3000 Hours	17740103
Maint. Pack MINI-62 3000 Hours	17140113
Maint. Pack MINI-63 Group 3000 Hours TAC	17140117
Maint. Pack MINI-74 3000 Hours	17440103
Maint. Pack MINI-74 3000 Hours Genset	17440103G
Maint. Pack MINI-74 Group 3000 Hours TAC	17440116
Maint. Pack SDZ-109 3000 Hours Genset	19440109G
Maint. Pack SDZ-109 Group 3000 Hours TAC	19440119
Maint. Pack SDZ-165 3000 Hours	19440107
Maint. Pack SDZ-165 3000 Hours Genset	19540110G
Maint. Pack SDZ-165E Group 3000 Hours TAC	19440124
Maint. Pack SDZ-190E 3000 Hours Genset	19640102G
Maint. Pack SDZ-205/280 3000 Hours	19540106
Maint. Pack SDZ-280 3000 Hours	19640102
Maint. Pack SM-103 3000 Hours	17540106
Maint. Pack SM-105 3000 Hours Genset	17540103G
Maint. Pack SM-105 Group 3000 Hours TAC	17540115
Maint. Pack SM-56 3000 Hours Genset	17B43000
Maint. Pack SM-56 Group 3000 Hours TAC	17B40114
Maint. Pack SM-81 3000 Hours Genset	17A43000
Maint. Pack SM-81 Group 3000 Hours TAC	17A40114
Maint. Pack SM-82 3000 Hours	17840101
Maint. Pack SM-94 3000 Hours	17940101
Maint. Pack MINI-33 3000 Hours Genset	17240104G
Maint. Pack MINI-44 3000 Hours Genset	17340105G
Maint. Pack MINI-63 3000 Hours Genset	17140113G





HYBRID PROPULSION

SH RANGE

HM450

The HM450 module, with 8 kW of electric power, has been designed to easily adapt to any type of heat engine and transmission.

The mounted electric engine has a double function: it can work as an electric engine in electric propulsion mode, and as a generator in thermal propulsion or standard mode. As a result, a zero-emissions navigation is possible when needed.

Operating modes

This hybrid module combines three use modes differentiated between them:

- Electric propulsion, to navigate with zero emissions and without the noise of the main engine.
- Main engine propulsion which uses the electric engine to charge the batteries.
- Booster function which adds an extra torque to the transmission line when an increase of acceleration is required.



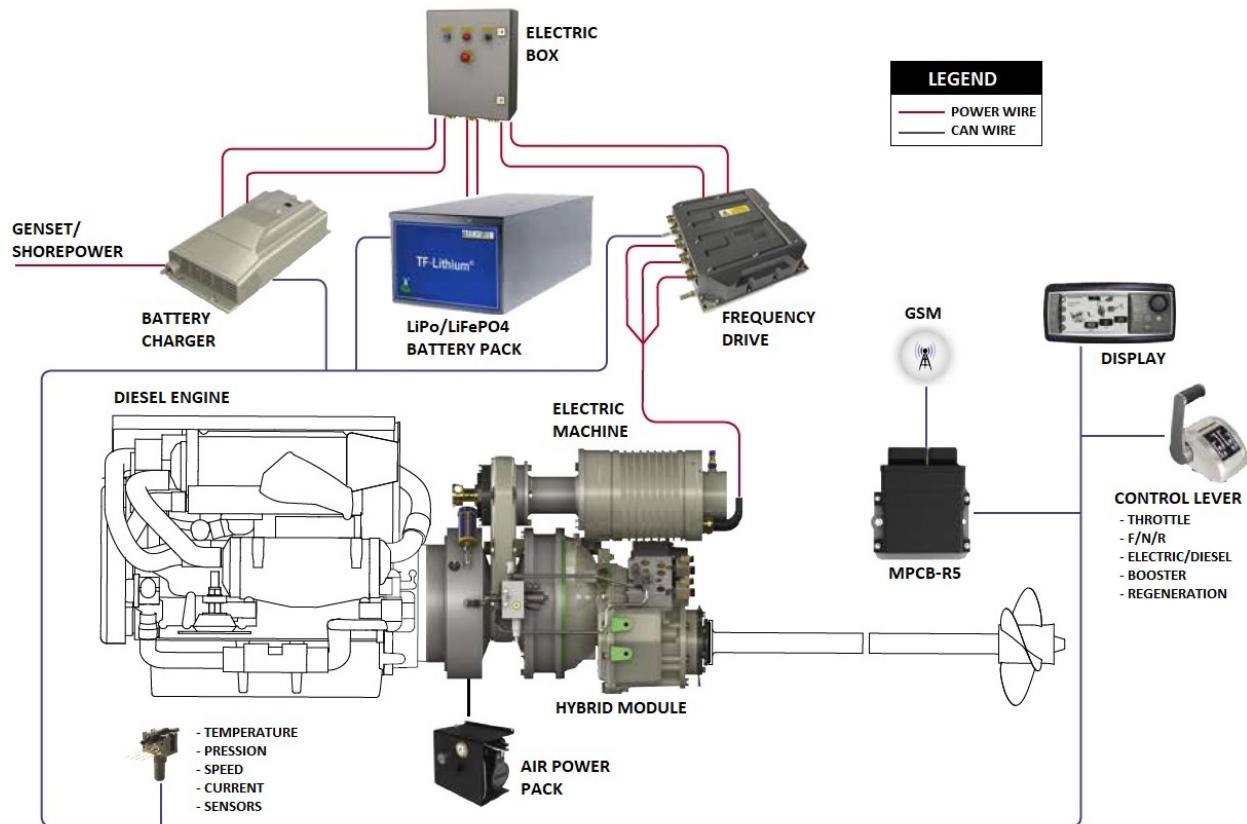
Functioning

The connection between the module and the engine is controlled by a pneumatic system which acts on an integrated clutch. When the engine is uncoupled, it disconnects from the transmission line and enables to operate the vessel through the electric engine in the module. When the vessel is operated through the heat engine (the clutch is coupled to the hybrid module) the electric engine of the module becomes the generator and charges the batteries.

The third use of this module allows to operate the main engine along with the electric engine, obtaining an increase of the available total power (booster function).

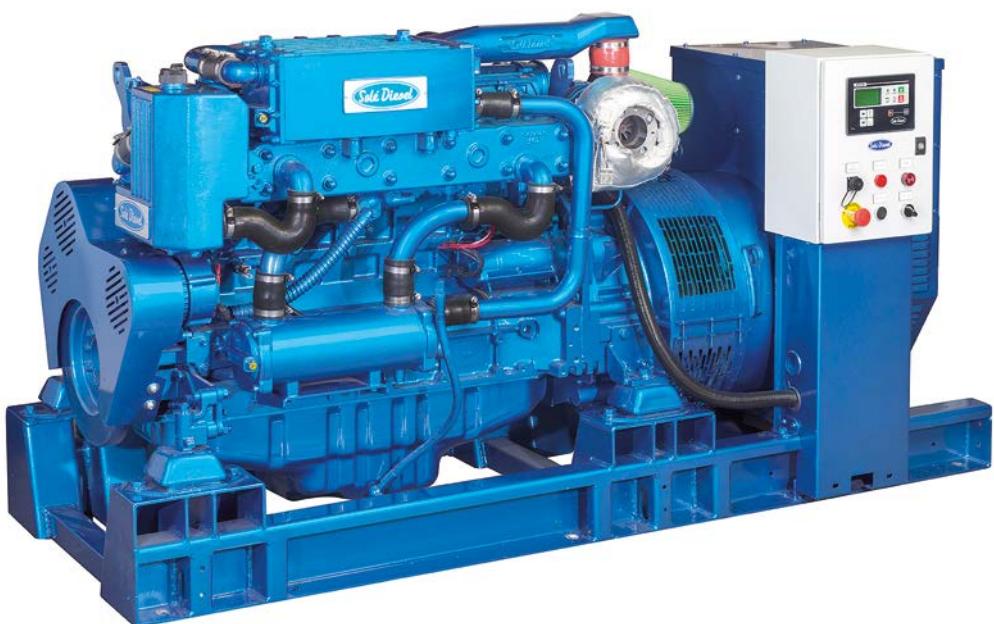
Full equipment

- HM450 module
- EM180-08 (PM) electric engine
- Cooling fan for electric machine
- Air power pack to operate the clutch
- Air power pack to "come home" function
- MPCB-R5 controller which is the communication element among all components
- Power control lever and mode selection
- Display
- Frequency drive
- Electric box for the components and emergency devices
- CANbus cables (5 m)
- LiFePO4 battery
- CB NG3 battery charger



Technical data

HM450 entrance	SAE 5 - 7,5"/8" (BW 6 - 5" available)
HM450 exit	SAE 5 - 7,5"/8" (BW 6 - 5" available)
Maximum input torque	450 Nm
Maximum input power	100 kW (marine use)
Maximum input speed	3800 rpm
Maximum allowable electrical power	35 kW (3000 rpm)
Nominal electrical power EM180-08 (PM)	8 kW (3000 rpm)
Generator electrical power EM180-08 (PM)	7 kW (3000 rpm)
Weight	95 kg





MARINE GENERATORS

MARINE GENERATORS



Solé Diesel manufactures marine generator sets at 50 and 60 hz and power range from 3 kVA (3 kW) up to 180 kVA (144 kW). Solé Diesel generator sets feature a compact size, low sound level, and are built with the most reliable bases in the market: Mitsubishi and Deutz.

RANGE 50 HZ AT 1,500 RPM					
MODEL	BASE ENGINE	POWER*	PHASES	FREQUENCY	RPM
7 GS/GSC	MINI-26	6,6 KVA - 6,6 kW	1	50 Hz	1.500 rpm
8 GT/GTC	MINI-26	7,8 KVA - 6,3 kW	3	50 Hz	1.500 rpm
10 GS/GSC	MINI-33	9,4 KVA - 9,4 kW	1	50 Hz	1.500 rpm
11 GT/GTC	MINI-33	10,5 KVA - 8,4 kW	3	50 Hz	1.500 rpm
14 GS/GSC	MINI-44	13,9 KVA - 13,9 kW	1	50 Hz	1.500 rpm
17 GT/GTC	MINI-44	16,4 KVA - 13,2 kW	3	50 Hz	1.500 rpm
20 GS/GSC	MINI-63	20,1 KVA - 20,1 kW	1	50 Hz	1.500 rpm
25 GT/GTC	MINI-63	24,3 KVA - 19,5 kW	3	50 Hz	1.500 rpm
29 GS/GSC	MINI-74	28,4 KVA - 28,4 kW	1	50 Hz	1.500 rpm
35 GT/GTC	MINI-74	35,0 KVA - 28,0 kW	3	50 Hz	1.500 rpm
45 GT/GTC	SM-56	45,0 KVA - 36,0 kW	3	50 Hz	1.500 rpm
50 GT/GTC	SM-103	48,9 KVA - 39,2 kW	3	50 Hz	1.500 rpm
68 GT/GTC	SM-81	68,3 KVA - 54,7 kW	3	50 Hz	1.500 rpm
85 GT/GTC	SDZ-109	85,0 KVA - 68,0 kW	3	50 Hz	1.500 rpm
115 GT/GTC	SDZ-165	112,4 KVA - 90,0 kW	3	50 Hz	1.500 rpm
165 GT/GTC	SDZ-190E	165 KVA - 132 kW	3	50 Hz	1.500 rpm

RANGE 50 HZ AT 3,000 RPM					
MODEL	BASE ENGINE	POWER	PHASES	FREQUENCY	RPM
4 GSCH v3	YANMAR	3 KVA - 3 kW	1	50 Hz	3.000 rpm
G-8M-3	MINI-17	8 KVA - 8 kW	1	50 Hz	3.000 rpm
G-8T-3	MINI-17	8 KVA - 6,4 kW	3	50 Hz	3.000 rpm
G-15M-3	MINI-26	15 KVA - 15 kW	1	50 Hz	3.000 rpm
G-15T-3	MINI-26	15 KVA - 12 kW	3	50 Hz	3.000 rpm
G-25M-3	MINI-44	25 KVA - 25 kW	1	50 Hz	3.000 rpm
G-25T-3	MINI-44	25 KVA - 20KW	3	50 Hz	3.000 rpm

RANGE 60 HZ AT 1,800 RPM					
MODEL	BASE ENGINE	POWER	PHASES	FREQUENCY	RPM
8 GSA/GSAC	MINI-26	8,0 KVA - 8,0 kW	1	60 Hz	1.800 rpm
10 GTA/GTAC	MINI-26	9,4 KVA - 7,6 kW	3	60 Hz	1.800 rpm
12 GSA/GSAC	MINI-33	12,0 KVA - 12,0 kW	1	60 Hz	1.800 rpm
14 GTA/GTAC	MINI-33	13,6 KVA - 10,9 kW	3	60 Hz	1.800 rpm
17 GSA/GSAC	MINI-44	16,4 KVA - 16,4 kW	1	60 Hz	1.800 rpm
20 GTA/GTAC	MINI-44	19,5 KVA - 15,6 kW	3	60 Hz	1.800 rpm
25 GSA/GSAC	MINI-63	25,1 KVA - 25,1 kW	1	60 Hz	1.800 rpm
30 GTA/GTAC	MINI-63	30,0 KVA - 24,0 kW	3	60 Hz	1.800 rpm
32 GSA/GSAC	MINI-74	31,6 KVA - 31,6 kW	1	60 Hz	1.800 rpm
40 GTA/GTAC	MINI-74	39,0 KVA - 31,2 kW	3	60 Hz	1.800 rpm
60 GTA/GTAC	SM-103	58,3 KVA - 46,7 kW	3	60 Hz	1.800 rpm
84 GTA/GTAC	SM-81	83,60 KVA - 66,88 kW	3	60 Hz	1.800 rpm
100 GTA/GTAC	SDZ-109	97,3 KVA - 77,9 kW	3	60 Hz	1.800 rpm
120 GTA/GTAC	SDZ-165	120,0 KVA - 96,0 kW	3	60 Hz	1.800 rpm
180 GTA/GTAC	SDZ-280	180 KVA - 144 kW	3	60 Hz	1.800 rpm

Models available with parallel operation. For more information consult with the sales department.

* Maximum power: Power supplied at maximum capacity. See each data sheet for more information.

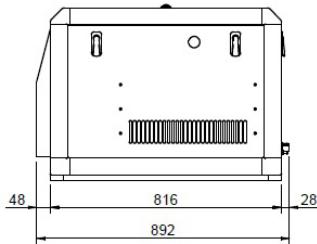
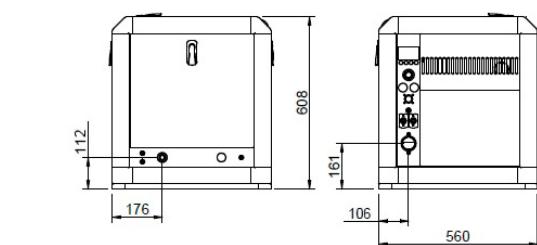
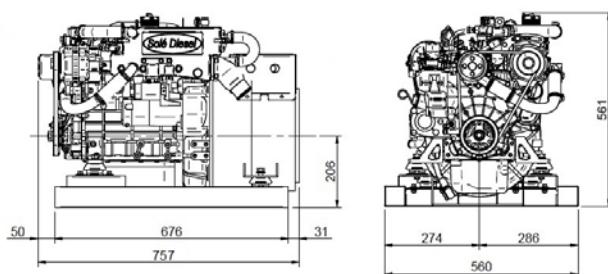
50 HZ MODEL

7 GS/GSC
6,6 kVA (6,6 kW) 50 Hz



60 HZ MODEL

8 GSA/GSAC
8 kVA (8 kW) 60 Hz

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual



50 Hz MODEL	60 Hz MODEL
-------------	-------------

Model and ratings

kW *	6,6	8
kVA*	6,6	8
Voltage (V)	230	240
Amps (A)	28,7	33,3
Phases	1	1
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	220
Standard version (Dry)	198

ALTERNATOR

Brand	SINCRO
Model	SK160S21
Regulator type	Electronic AVR BL4
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	1
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3

ENGINE specification

Base	Mitsubishi
Sole Diesel Engine Model	MINI-26
Type	4 stroke
Cylinders	3
Displacement	952
Bore x Stroke	76 x 70 mm
Compression ratio	23:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	4
Oil Type	SAE 15W40
Coolant capacity (L)	3
Housing	SAE 5
Flywheel	SAE 6 1/2

50 Hz	60 Hz
-------	-------

RPM	1500	1800
Power (HP/kW)	10,1 hp (7,5 kW)	13,4 hp (10 kW)
Coolant flow rate (L/min)	24	27
Raw water rate (L/min)	12,33	17,24

Fuel consumption

25%	0,8	1,1
50%	1,3	1,8
75%	1,7	2,4
100%	2,1	3

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	1,2
Alternator (A)	40
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

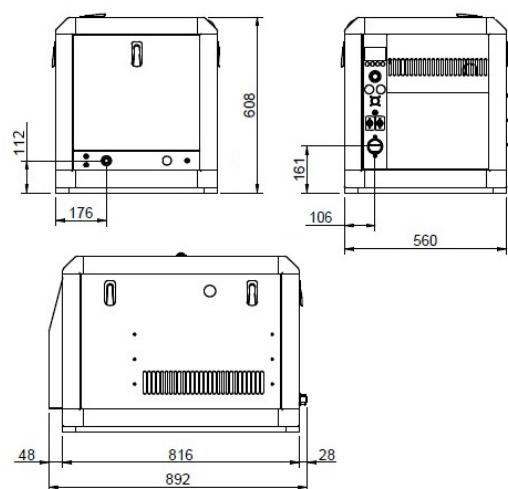
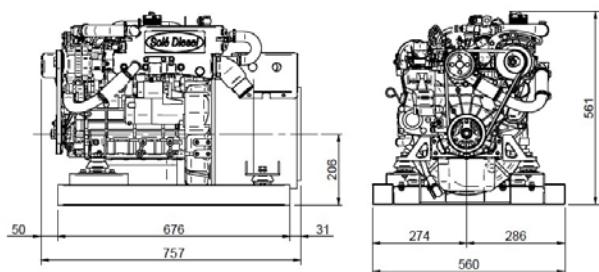
*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

8 GT/GTC
7,8 kVA (6,3 kW) 50 Hz


60 HZ MODEL

10 GTA/GTAC
9,4 kVA (7,5 kW) 60 Hz


Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual


50 Hz MODEL 60 Hz MODEL
Model and ratings

kW *	6,3	7,5
kVA*	7,8	9,4
Voltage (V)	400/230	480/277
Amps (A)	11,3	11,3
Phases	3	3
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	224
Standard version (Dry)	201

ALTERNATOR

Brand	SINCRO
Model	SK160SA
Regulator type	Electronic AVR BL4
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Sí
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3

ENGINE specification

Base	Mitsubishi
Sole Diesel Engine Model	MINI-26
Type	4 stroke
Cylinders	3
Displacement	952
Bore x Stroke	76 x 70 mm
Compression ratio	23:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	4
Oil Type	SAE 15W40
Coolant capacity (L)	3
Housing	SAE 5
Flywheel	SAE 6 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	10,1 hp (7,5 kW)	13,4 hp (10 kW)
Coolant flow rate (L/min)	24	27
Raw water rate (L/min)	12,33	17,24

Fuel consumption

25%	0,8	1,1
50%	1,3	1,8
75%	1,7	2,4
100%	2,1	3

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	1,2
Alternator (A)	40
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com.

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

10 GS/GSC

9,4 kVA (9,4 kW) 50 Hz

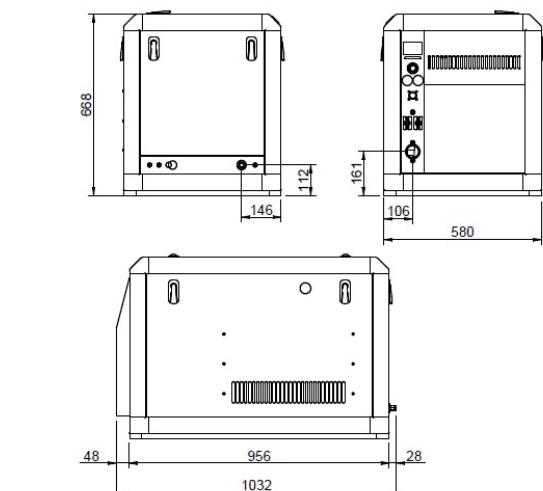
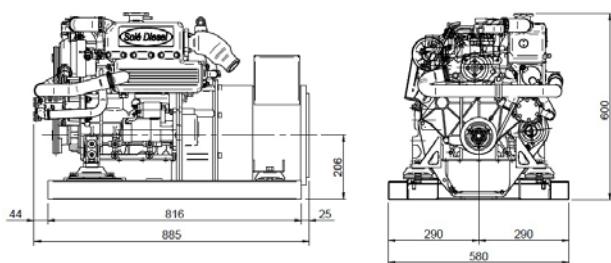
AVAILABLE WITH TYPE APPROVAL CERTIFICATE



60 HZ MODEL

12 GSA/GSAC

12 kVA (12 kW) 60 Hz

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual

**50 Hz MODEL 60 Hz MODEL****Model and ratings**

kW *	9,4	12
kVA*	9,4	12
Voltage (V)	230	240
Amps (A)	40,9	50
Phases	1	1
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	308
Standard version (Dry)	271

ALTERNATOR

Brand	SINCRO
Model	SK160CA1
Regulator type	Electronic AVR BL4
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	1
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3

ENGINE specification

Base	Mitsubishi
Sole Diesel Engine Model	MINI-33
Type	4 stroke
Cylinders	3
Displacement	1318
Bore x Stroke	78 x 92 mm
Compression ratio	22:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	4
Oil Type	SAE 15W40
Coolant capacity (L)	5,7
Housing	SAE 5
Flywheel	SAE 7 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	14,3 hp (10,7 kW)	18,5 hp (13,8 kW)
Coolant flow rate (L/min)	40	47
Raw water rate (L/min)	16,5	19,83

Fuel consumption

25%	1,2	1,4
50%	1,8	2,2
75%	2,5	2
100%	3,1	2,6

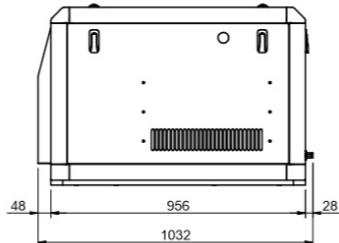
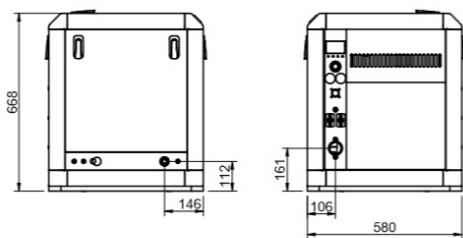
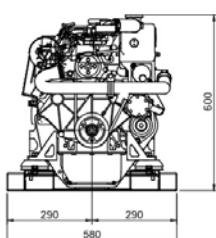
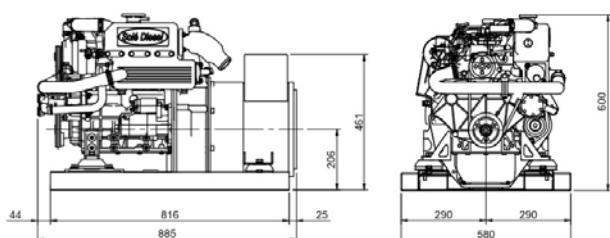
Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	1,7
Alternator (A)	50
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL
11 GT/GTC
10,5 kVA (8,4 kW) 50 Hz
AVAILABLE WITH TYPE APPROVAL CERTIFICATE

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual


60 HZ MODEL
14 GTA/GTAC
13,6 kVA (10,9 kW) 60 Hz

	50 Hz MODEL	60 Hz MODEL
Model and ratings		
kW *	8,4	10,9
kVA*	10,5	13,6
Voltage (V)	400/230	480/277
Amps (A)	15,2	16,4
Phases	3	3
Hz	50	60
Engine RPM	1500	1800
Weight (Kg)		
Canopy version (Dry)	300	
Standard version (Dry)	264	
ALTERNATOR		
Brand	SINCRO	
Model	SK160CA	
Regulator type	Electronic AVR BL4	
Nr. of poles	4	
Insulation Type	H	
IP protection	23	
Cos phi	0,8	
Tropicalized	Sí	
Excitation system	Brushless	
Voltage regulation Accuracy	±1%	
Frequency Regulation	Synchronous	
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3	
ENGINE specification		
Base	Mitsubishi	
Sole Diesel Engine Model	MINI-33	
Type	4 stroke	
Cylinders	3	
Displacement	1318	
Bore x Stroke	78 x 92 mm	
Compression ratio	22:1	
Injection	Mechanical and indirect	
Aspiration type	Natural aspiration	
Lube Oil capacity (L)	4	
Oil Type	SAE 15W40	
Coolant capacity (L)	5,7	
Housing	SAE 5	
Flywheel	SAE 7 1/2	
50 Hz		60 Hz
RPM	1500	1800
Power (HP/kW)	14,3 hp (10,7 kW)	18,5 hp (13,8 kW)
Coolant flow rate (L/min)	40	47
Raw water rate (L/min)	16,5	19,83
Fuel consumption		
25%	1,2	1,3
50%	1,8	2
75%	2,5	2,4
100%	3,1	2,9
Diesel Liters/h at % load		
Electrical system		
Electrical System (V)	12	
Starter Motor (kW)	1,7	
Alternator (A)	50	
Stop Solenoid Type	ETR	

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

14 GS/GSC

13,9 kVA (13,9 kW) 50 Hz

AVAILABLE WITH TYPE APPROVAL CERTIFICATE

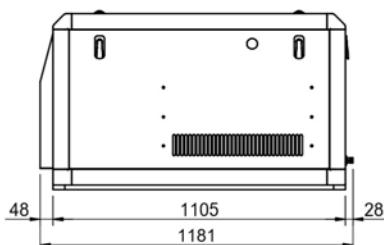
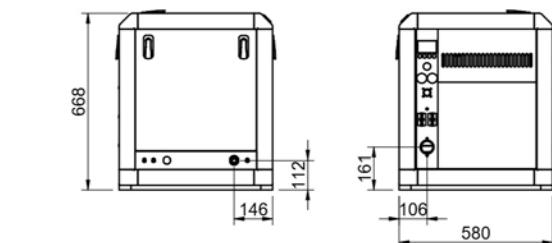
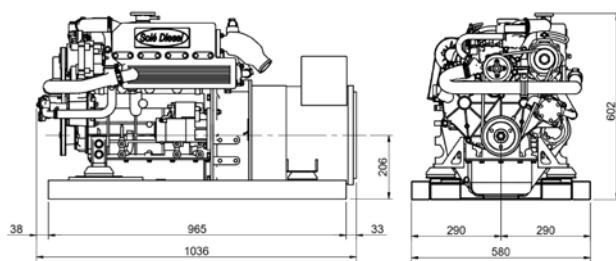
AVAILABLE PREPARED FOR PARALLEL OPERATION



60 HZ MODEL

17 GSA/GSAC

16,4 kVA (16,4 kW) 60 Hz

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual



50 Hz MODEL 60 Hz MODEL

Model and ratings

kW *	13,9	16,4
kVA*	13,9	16,4
Voltage (V)	230	240
Amps (A)	60,4	68,3
Phases	1	1
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	344
Standard version (Dry)	294

ALTERNATOR

Brand	SINCRO
Model	SK160MA1
Regulator type	Electronic AVR BL4
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	1
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	MINI-44
Type	4 stroke
Cylinders	4
Displacement	1758
Bore x Stroke	78 x 92 mm
Compression ratio	22:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	6
Oil Type	SAE 15W40
Coolant capacity (L)	8
Housing	SAE 5
Flywheel	SAE 7 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	20,1 hp (15 kW)	26,1 hp (19,5 kW)
Coolant flow rate (L/min)	55	66
Raw water rate (L/min)	16,5	20

Fuel consumption

25%	1,8	1,8
50%	2,7	2,7
75%	3,5	3,3
100%	4,3	4

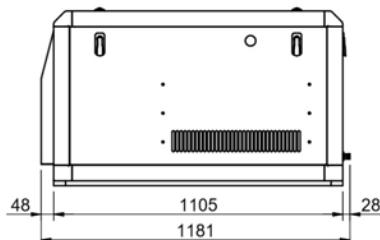
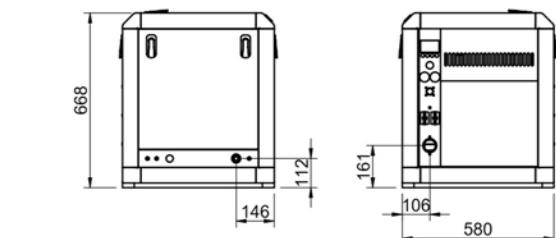
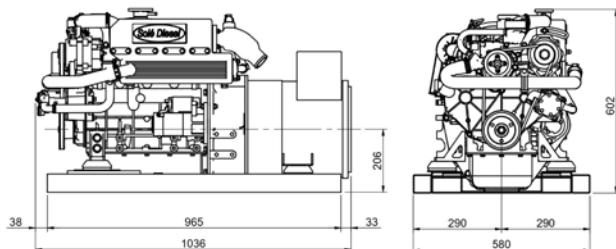
Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	2
Alternator (A)	50
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL
17 GT/GTC
16,4 kVA (13,2 kW) 50 Hz
AVAILABLE WITH TYPE APPROVAL CERTIFICATE
AVAILABLE PREPARED FOR PARALLEL OPERATION

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual


60 HZ MODEL
20 GTA/GTAC
19,5 kVA (15,6 kW) 60 Hz
50 Hz Model 60 Hz Model
Model and ratings

kW *	13,2	15,6
kVA*	16,4	19,5
Voltage (V)	400/230	480/277
Amps (A)	23,7	23,5
Phases	3	3
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	344
Standard version (Dry)	282

ALTERNATOR

Brand	SINCRO
Model	SK160MA
Regulator type	Electronic AVR BL4
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3

ENGINE specification

Base	Mitsubishi
Sole Diesel Engine Model	MINI-44
Type	4 stroke
Cylinders	4
Displacement	1758
Bore x Stroke	78 x 92 mm
Compression ratio	22:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	6
Oil Type	SAE 15W40
Coolant capacity (L)	8
Housing	SAE 5
Flywheel	SAE 7 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	20,1 hp (15 kW)	26,1 hp (19,5 kW)
Coolant flow rate (L/min)	55	66
Raw water rate (L/min)	16,5	20

Fuel consumption

25%	1,8	1,8
50%	2,7	2,7
75%	3,5	3,3
100%	4,3	4

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	2
Alternator (A)	50
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

20 GS/GSC

20,1 kVA (20,1 kW) 50 Hz

AVAILABLE WITH TYPE APPROVAL CERTIFICATE

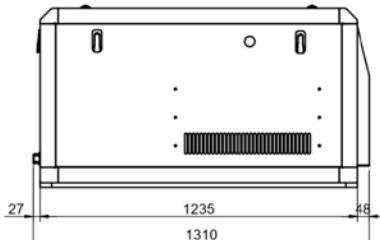
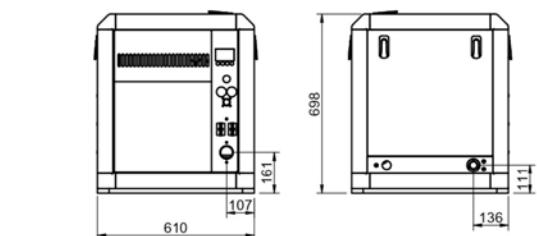
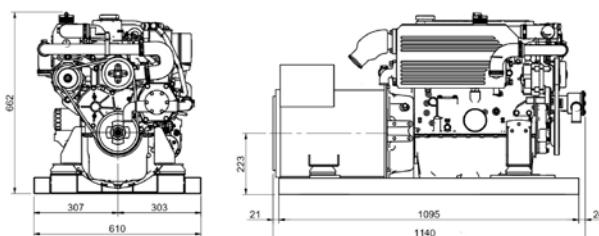


60 HZ MODEL

25 GSA/GSAC

25,1 kVA (25,1 kW) 60 Hz

AVAILABLE PREPARED FOR PARALLEL OPERATION

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual

**50 Hz MODEL 60 Hz MODEL****Model and ratings**

kW *	20,1	25,1
kVA*	20,1	25,1
Voltage (V)	230	240
Amps (A)	87,4	104,6
Phases	1	1
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	426
Standard version (Dry)	402

ALTERNATOR

Brand	SINCRO
Model	SK160LA1
Regulator type	Electronic AVR BL4
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	1
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	MINI-63
Type	4 stroke
Cylinders	4
Displacement	2505
Bore x Stroke	88 x 103 mm
Compression ratio	22:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	6,5
Oil Type	SAE 15W40
Coolant capacity (L)	9,5
Housing	SAE 4
Flywheel	SAE 7 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	28,8 hp (21,5 kW)	36,5 hp (27,2 kW)
Coolant flow rate (L/min)	52	65
Raw water rate (L/min)	38	45

Fuel consumption

25%	2,4	2,9
50%	3,5	4,2
75%	4,75	5,5
100%	6,4	7,6

Diesel Liters/h at % load

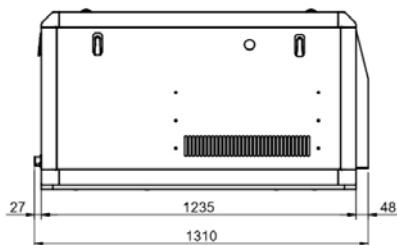
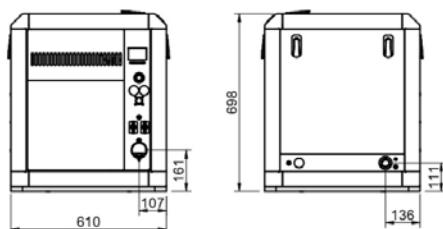
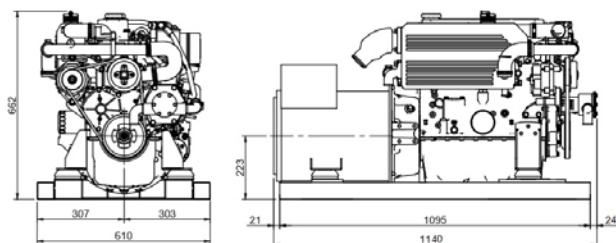
Electrical system

Electrical System (V)	12
Starter Motor (kW)	2
Alternator (A)	50
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL
25 GT/GTC
24,3 kVA (19,5 kW) 50 Hz
AVAILABLE WITH TYPE APPROVAL CERTIFICATE

60 HZ MODEL
30 GTA/GTAC
30 kVA (24 kW) 60 Hz
AVAILABLE PREPARED FOR PARALLEL OPERATION

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual


50 Hz MODEL 60 Hz MODEL
Model and ratings

kW *	19,5	24
kVA*	24,3	30
Voltage (V)	400/230	480/277
Amps (A)	35,1	36,1
Phases	3	3
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	412
Standard version (Dry)	351

ALTERNATOR

Brand	SINCRO
Model	SK160LA
Regulator type	Electronic AVR BL4
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3

ENGINE specification

Base	Mitsubishi
Sole Diesel Engine Model	MINI-63
Type	4 stroke
Cylinders	4
Displacement	2505
Bore x Stroke	88 x 103 mm
Compression ratio	22:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	6,5
Oil Type	SAE 15W40
Coolant capacity (L)	9,5
Housing	SAE 4
Flywheel	SAE 7 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	28,8 hp (21,5 kW)	36,5 hp (27,2 kW)
Coolant flow rate (L/min)	52	65
Raw water rate (L/min)	38	45

Fuel consumption

25%	2,4	2,9
50%	3,5	4,2
75%	4,75	5,5
100%	6,4	7,6

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	2
Alternator (A)	50
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

29 GS/GSC

28,4 kVA (28,4 kW) 50 Hz

AVAILABLE WITH TYPE APPROVAL CERTIFICATE

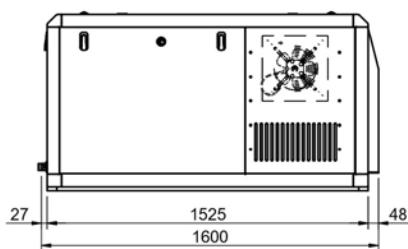
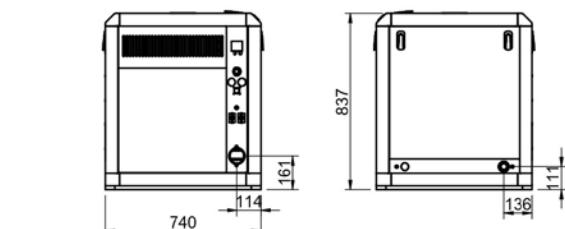
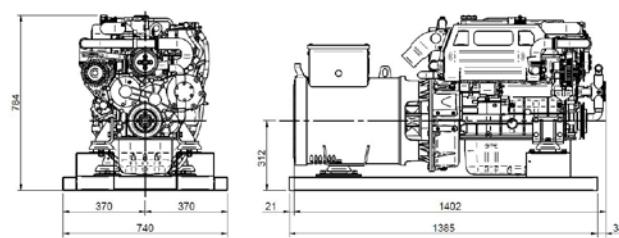


60 HZ MODEL

32 GSA/GSAC

31,6 kVA (31,6 kW) 60 Hz

AVAILABLE PREPARED FOR PARALLEL OPERATION

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 11 Panel
- Owner's and alternator manual

**50 Hz MODEL 60 Hz MODEL****Model and ratings**

kW *	28,4	31,6
kVA*	28,4	31,6
Voltage (V)	230	240
Amps (A)	123,5	131,7
Phases	1	1
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	714
Standard version (Dry)	680

ALTERNATOR

Brand	MECCALTE
Model**	ECP32-1M/4C
Regulator type	Electronic AVR DSR
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	MINI-74
Type	4 stroke
Cylinders	4
Displacement	3331
Bore x Stroke	94 x 120 mm
Compression ratio	22:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	10
Oil Type	SAE 15W40
Coolant capacity (L)	13
Housing	SAE 3
Flywheel	SAE 11 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	41,3 hp (30,8 kW)	47,9 hp (35,7 kW)
Coolant flow rate (L/min)	105	140
Raw water rate (L/min)	37,5	44

Fuel consumption

25%	2,9	3,1
50%	4,3	4,8
75%	6,1	6,8
100%	8,2	9,6

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	2,2
Alternator (A)	50
Stop Solenoid Type	ETR

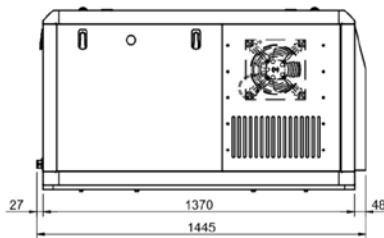
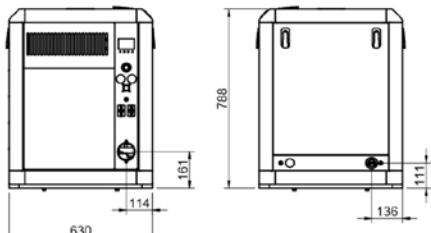
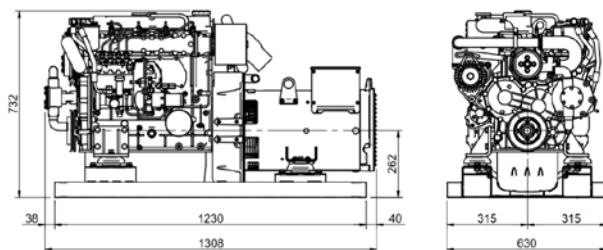
Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

** For the canopy models (29 GSC and 32 GSAC) the alternator model used is:
ECP32-1M/4B.

50 Hz MODEL
35 GT/GTC

35 kVA (28 kW) 50 Hz

AVAILABLE WITH TYPE APPROVAL CERTIFICATE
AVAILABLE PREPARED FOR PARALLEL OPERATION

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 11 Panel
- Owner's and alternator manual


60 Hz MODEL
40 GTA/GTAC

39 kVA (31,2 kW) 60 Hz

	50 Hz MODEL	60 Hz MODEL
Model and ratings		
kW *	28	31,2
kVA*	35	39
Voltage (V)	400/230	480/277
Amps (A)	50,5	46,9
Phases	3	3
Hz	50	60
Engine RPM	1500	1800
Weight (Kg)		
Canopy version (Dry)	545	
Standard version (Dry)	494	
ALTERNATOR		
Brand	SINCRO	
Model	SK160WA	
Regulator type	Electronic AVR BL4	
Nr. of poles	4	
Insulation Type	H	
IP protection	23	
Cos phi	0,8	
Tropicalized	Yes	
Excitation system	Brushless	
Voltage regulation Accuracy	±1%	
Frequency Regulation	Synchronous	
Standards	EN 60034-1, IEC 60034-1, ISO 8528-3	
ENGINE specification		
Base	Mitsubishi	
Sole Diesel Engine Model	MINI-74	
Type	4 stroke	
Cylinders	4	
Displacement	3331	
Bore x Stroke	94 x 120 mm	
Compression ratio	22:1	
Injection	Mechanical and indirect	
Aspiration type	Natural aspiration	
Lube Oil capacity (L)	10	
Oil Type	SAE 15W40	
Coolant capacity (L)	13	
Housing	SAE 3	
Flywheel	SAE 11 1/2	
50 Hz		60 Hz
RPM	1500	1800
Power (HP/kW)	41,3 hp (30,8 kW)	47,9 hp (35,7 kW)
Coolant flow rate (L/min)	105	140
Raw water rate (L/min)	37,5	44
Fuel consumption		
25%	2,4	3,1
50%	4,1	4,8
75%	6	6,8
100%	8,3	9,6
Diesel Liters/h at % load		
Electrical system		
Electrical System (V)	12	
Starter Motor (kW)	2,2	
Alternator (A)	50	
Stop Solenoid Type	ETR	

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

45 GT/GTC

45 kVA (36 kW) 50 Hz

AVAILABLE WITH TYPE APPROVAL CERTIFICATE

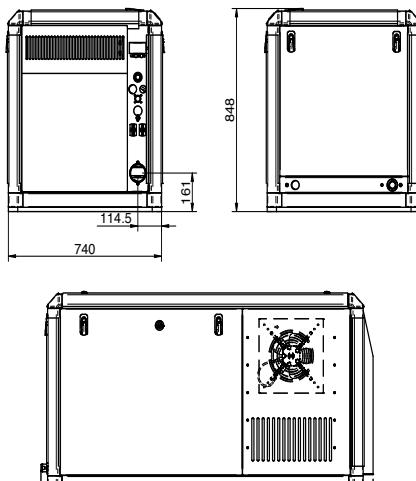
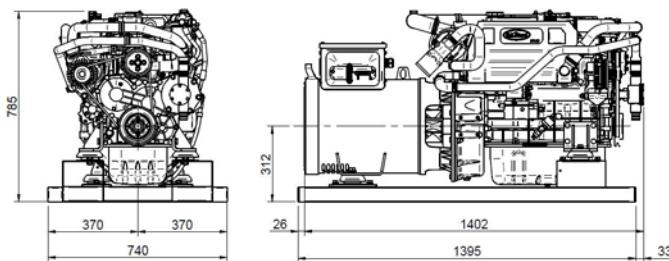


60 HZ MODEL

54 GTA/GTAC

53,5 kVA (42,8 kW) 60 Hz

AVAILABLE PREPARED FOR PARALLEL OPERATION

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 11 Panel
- Owner's and alternator manual



50 Hz MODEL	60 Hz MODEL
-------------	-------------

Model and ratings

kW	36	42,8
kVA*	45	53,5
Voltage (V)	400/230	480/277
Amps (A)	65	64,4
Phases	3	3
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	598
Standard version (Dry)	560

ALTERNATOR

Brand	MECCALTE
Model**	ECP32-1M/4C
Regulator type	Electronic AVR DSR
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Sí
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	SM-56
Type	4 stroke
Cylinders	4
Displacement	3331
Bore 4 Stroke	94 x 120 mm
Compression ratio	17:1
Injection	Mechanical and direct
Aspiration type	Turbocharged
Lube Oil capacity (L)	10
Oil Type	SAE 15W40
Coolant capacity (L)	13
Housing	SAE 3
Flywheel	SAE 11 1/2

50 Hz	60 Hz
-------	-------

RPM	1500	1800
Power (HP/kW)	55,1 hp (40,5 kW)	66,1 hp (48,6 kW)
Coolant flow rate (L/min)	105	140
Raw water rate (L/min)	38	45

Fuel consumption

25%	3,2	4,1
50%	5,2	6,2
75%	7,4	8,9
100%	9,7	12,1

Diesel Liters/h at % load

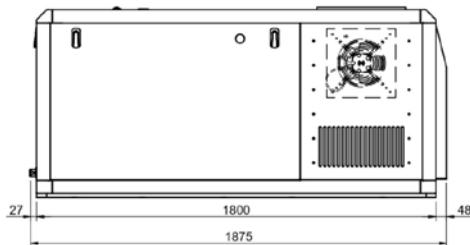
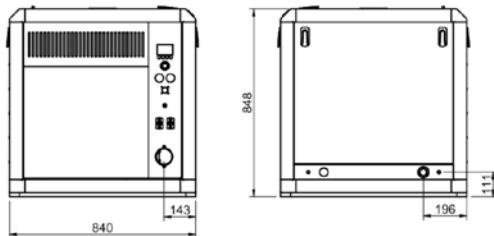
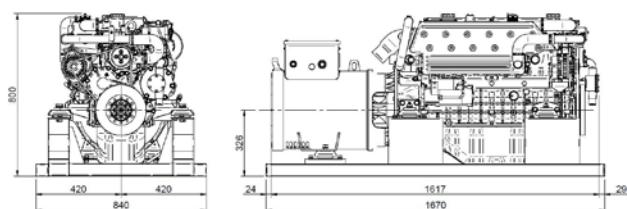
Electrical system

Electrical System (V)	12
Starter Motor (kW)	2,2
Alternator (A)	50
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

** For the canopy models (45 GTC and 54 GTAC) the alternator model used is:
ECP32-1M/4B.)

50 HZ MODEL
50 GT/GTC
48,9 kVA (39,2 kW) 50 Hz
AVAILABLE WITH TYPE APPROVAL CERTIFICATE

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 11 Panel
- Owner's and alternator manual


60 HZ MODEL
60 GTA/GTAC
58,3 kVA (46,6 kW) 60 Hz
AVAILABLE PREPARED FOR PARALLEL OPERATION
50 Hz Model 60 Hz Model
Model and ratings

kW *	39,2	46,6
kVA*	48,9	58,3
Voltage (V)	400/230	480/277
Amps (A)	70,6	70,1
Phases	3	3
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	795
Standard version (Dry)	690

ALTERNATOR

Brand	MECCALTE
Model**	ECP32-1M/4C
Regulator type	Electronic AVR DSR
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Sole Diesel Engine Model	SM-103
Type	4 stroke
Cylinders	6
Displacement	4996
Bore x Stroke	94 x 120 mm
Compression ratio	22:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	12
Oil Type	SAE 15W40
Coolant capacity (L)	21
Housing	SAE 3
Flywheel	SAE 11 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	58,2 hp (43,4 kW)	68,9 hp (51,4 kW)
Coolant flow rate (L/min)	80	110
Raw water rate (L/min)	38	45

Fuel consumption

25%	4	5
50%	6,2	7,8
75%	9	11,2
100%	12,2	15,9

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	3
Alternator (A)	50
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

** For the canopy models (50 GTC and 60 GTAC) the alternator model used is:
ECP32-1M/4B.

50 HZ MODEL

68 GT/GTC

68,3 kVA (54,7 kW) 50 Hz

AVAILABLE WITH TYPE APPROVAL CERTIFICATE

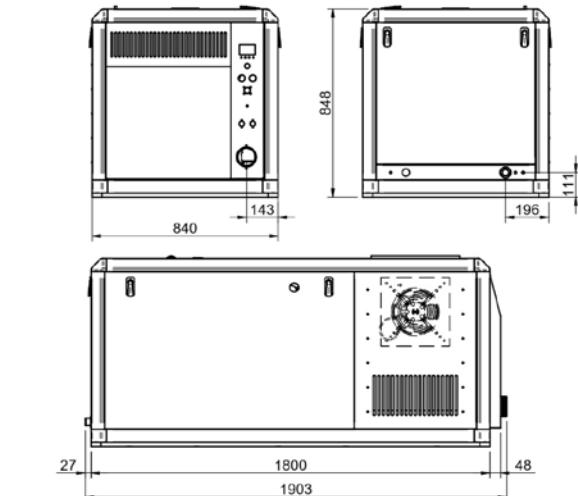
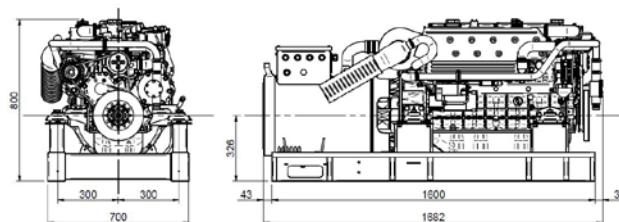


60 HZ MODEL

84 GTA/GTAC

83,6 kVA (66,9 kW) 60 Hz

AVAILABLE PREPARED FOR PARALLEL OPERATION

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 11 Panel
- Owner's and alternator manual

**50 Hz MODEL 60 Hz MODEL****Model and ratings**

kW *	54,7	66,9
kVA*	68,3	83,6
Voltage (V)	400/230	480/277
Amps (A)	98,7	100,6
Phases	3	3
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	869
Standard version (Dry)	759

ALTERNATOR

Brand	MECCALTE
Model**	ECP32-1L/4C
Regulator type	Electronic AVR DSR
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	SM-81
Type	4 stroke
Cylinders	6
Displacement	4996
Bore x Stroke	94 x 120 mm
Compression ratio	17:1
Injection	Mechanical and indirect
Aspiration type	Turbocharged
Lube Oil capacity (L)	12
Oil Type	SAE 15W40
Coolant capacity (L)	21
Housing	SAE 3
Flywheel	SAE 11 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	79,9 hp (59,6 kW)	93,9 hp (70 kW)
Coolant flow rate (L/min)	70	96
Raw water rate (L/min)	38	45

Fuel consumption

25%	4,8	6,2
50%	7,8	9,7
75%	11	13,2
100%	14,5	17,4

Diesel Liters/h at % load

Electrical system

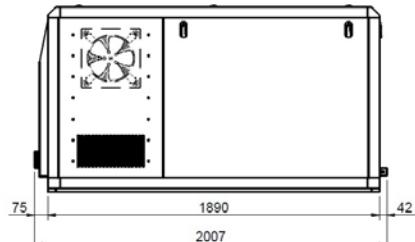
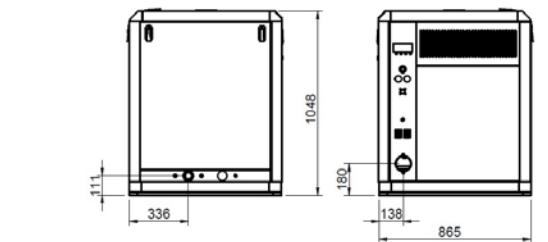
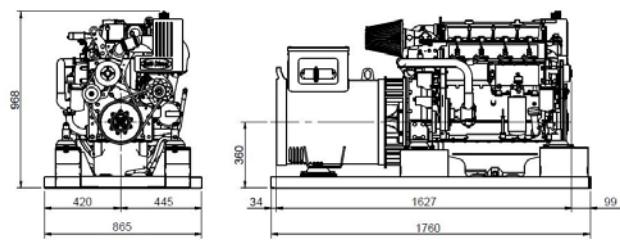
Electrical System (V)	12
Starter Motor (kW)	3
Alternator (A)	50
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

** For the canopy models (68 GTC and 84 GTAC) the alternator model used is:
ECP32-3L/4B.

50 Hz MODEL
85 GT/GTC
85 kVA (68 kW) 50 Hz
AVAILABLE WITH TYPE APPROVAL CERTIFICATE

60 Hz MODEL
100 GTA/GTAC
97,3 kVA (77,8 kW) 60 Hz
AVAILABLE PREPARED FOR PARALLEL OPERATION

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 11 Panel
- Owner's and alternator manual


50 Hz MODEL 60 Hz MODEL
Model and ratings

kW *	68	77,8
kVA*	85	97,3
Voltage (V)	400/230	480/277
Amps (A)	122,7	117
Phases	3	3
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	1100
Standard version (Dry)	988

ALTERNATOR

Brand	MECCALTE
Model**	ECP34-1S/4C
Regulator type	Electronic AVR DSR
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Deutz
Sole Diesel Engine Model	SDZ109
Type	4 stroke
Cylinders	4
Displacement	4764
Bore x Stroke	108 x 130 mm
Compression ratio	19:1
Injection	Mechanical and direct
Aspiration type	Turbocharged
Lube Oil capacity (L)	11
Oil Type	SAE 15W40
Coolant capacity (L)	17,5
Housing	SAE 2
Flywheel	SAE 11 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	108,6 hp (81 kW)	114 hp (85 kW)
Coolant flow rate (L/min)	141,45	162,13
Raw water rate (L/min)	107,43	130,38

Fuel consumption

25%	5,5	5,8
50%	10,2	11,2
75%	15	16,1
100%	19,9	20,9

Diesel Liters/h at % load

Electrical system

Electrical System (V)	24
Starter Motor (kW)	4
Alternator (A)	35
Stop Solenoid Type	ETS

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

** For the canopy models (85 GTC and 100 GTAC) the alternator model used is:
ECP34-1S/4A.

50 HZ MODEL

115 GT/GTC

112,4 kVA (90 kW) 50 Hz

AVAILABLE WITH TYPE APPROVAL CERTIFICATE

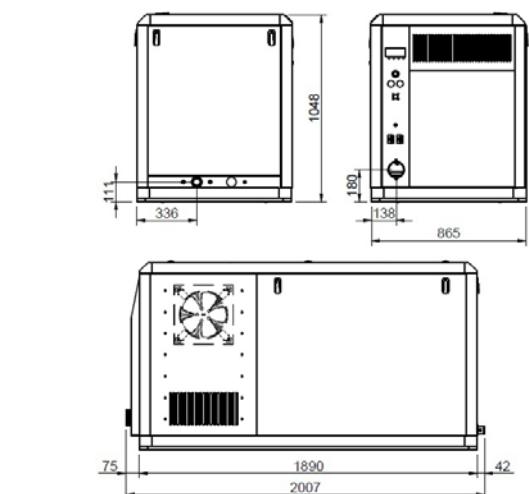
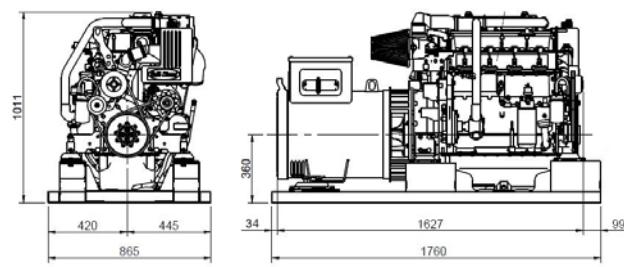


60 HZ MODEL

120 GTA/GTAC

120 kVA (96 kW) 60 Hz

AVAILABLE PREPARED FOR PARALLEL OPERATION

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 11 Panel
- Owner's and alternator manual

**50 Hz MODEL 60 Hz MODEL****Model and ratings**

kW *	90	96
kVA*	112,4	120
Voltage (V)	400/230	480/277
Amps (A)	162,2	144,3
Phases	3	3
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	1117
Standard version (Dry)	1010

ALTERNATOR

Brand	MECCALTE
Model**	ECP34-1M/4C
Regulator type	Electronic AVR DSR
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Deutz
Solé Diesel Engine Model	SDZ165
Type	4 stroke
Cylinders	4
Displacement	4764
Bore x Stroke	108 x 130 mm
Compression ratio	19:1
Injection	Mechanical and direct
Aspiration type	Turbocharged with intercooler
Lube Oil capacity (L)	11
Oil Type	SAE 15W40
Coolant capacity (L)	17,5
Housing	SAE 2
Flywheel	SAE 11 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	130,1 hp (97 kW)	140,8 hp (105 kW)
Coolant flow rate (L/min)	141,45	162,13
Raw water rate (L/min)	107,43	130,38

Fuel consumption

25%	6,3	8,3
50%	11,1	14,5
75%	16,2	21,1
100%	21,5	28

Diesel Liters/h at % load

Electrical system

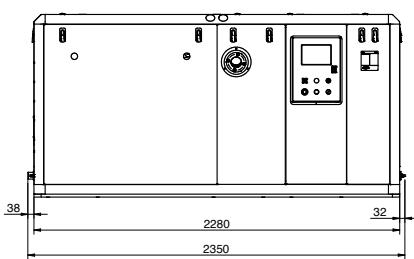
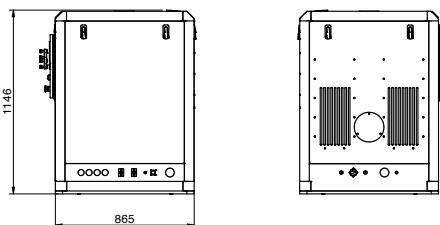
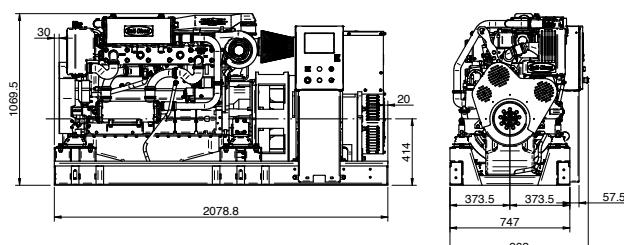
Electrical System (V)	24
Starter Motor (kW)	4
Alternator (A)	35
Stop Solenoid Type	ETS

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

** For the canopy models (115 GTC and 120 GTAC) the alternator model used is:
ECP34-1L/4A.

50 HZ MODEL
165 GT/GTC
165 kVA (132 kW) 50 Hz
AVAILABLE PREPARED FOR PARALLEL OPERATION

60 HZ MODEL
180 GTA/GTAC
180 kVA (144 kW) 60 Hz

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 11 Panel
- Owner's and alternator manual


50 Hz MODEL 60 Hz MODEL
Model and ratings

kW *	132	144
kVA*	165	180
Voltage (V)	400/230	480/277
Amps (A)	238,2	216,7
Phases	3	3
Hz	50	60
Engine RPM	1500	1800

Weight (Kg)

Canopy version (Dry)	1630
Standard version (Dry)	1410

ALTERNATOR

Brand	MECCALTE
Model	ECO38-1S/4A
Regulator type	Electronic AVR DSR
Nr. of poles	4
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Deutz
Solé Diesel Engine Model	SDZ190E
Type	4 stroke
Cylinders	6
Displacement	7146
Bore x Stroke	108 x 130 mm
Compression ratio	17.5:1
Injection	Mechanical and direct
Aspiration type	Turbocharged with intercooler
Lube Oil capacity (L)	23
Oil Type	SAE 15W40
Coolant capacity (L)	23
Housing	SAE 3
Flywheel	SAE 11 1/2

50 Hz 60 Hz

RPM	1500	1800
Power (HP/kW)	186,4 hp (139 kW)	198,5 hp (148 kW)
Coolant flow rate (L/min)	141,45	162,13
Raw water rate (L/min)	107,43	130,38

Fuel consumption

25%	10,4	14
50%	20	27
75%	28,5	38,4
100%	36,7	49,5

Diesel Liters/h at % load

Electrical system

Electrical System (V)	24
Starter Motor (kW)	4
Alternator (A)	55
Stop Solenoid Type	ETS

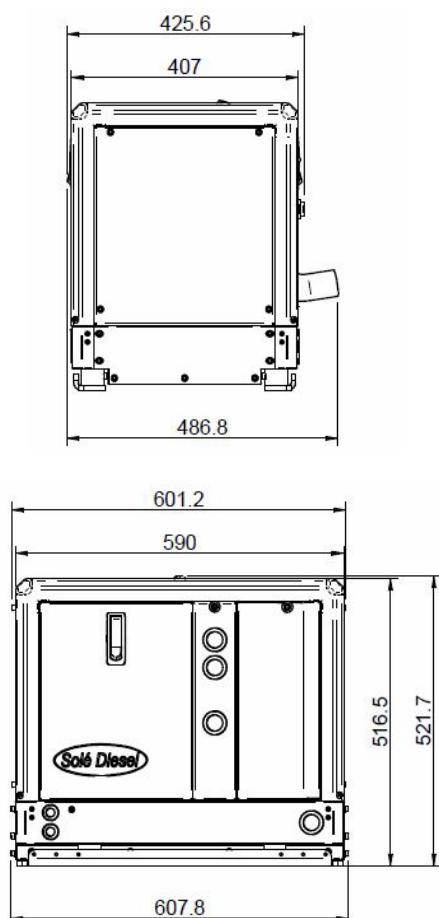
Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

4 GSCH V3

3 kVA (3 kW) 50 Hz

**Standard equipment:**

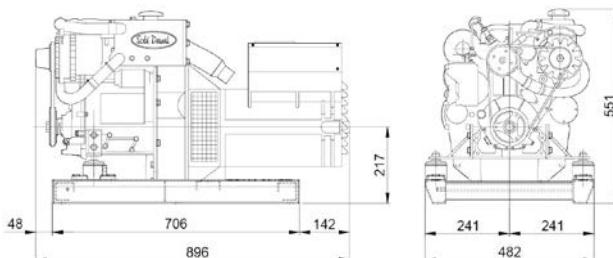
- 10 m electrical extension lead
- Oil extraction pump
- Base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual



50 Hz MODEL	
Model and ratings	
kW *	3
kVA*	3
Voltage (V)	230
Amps (A)	13
Phases	1
Hz	50
Engine RPM	3000
Weight (Kg)	
Canopy version (Dry)	96
Standard version (Dry)	-
ALTERNATOR	
Brand	V.T.E
Model	VO90
Regulator type	Capacitor
Nr. of poles	2
Insulation Type	-
IP protection	-
Cos phi	1
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1, ISO 8528-3
ENGINE specification	
Base	Yanmar
Engine Model	YANMAR
Type	4 stroke
Cylinders	1
Displacement	320
Bore x Stroke	78 x 67 mm
Compression ratio	20:1
Injection	Mechanical and direct
Aspiration type	Natural aspiration
Lube Oil capacity (L)	1,1
Oil Type	SAE 15W40
Coolant capacity (L)	1,2
Housing	-
Flywheel	-
50 Hz	
RPM	3000
Power (HP/kW)	6,12 hp (4,5 kW)
Coolant flow rate (L/min)	-
Raw water rate (L/min)	-
Fuel consumption	
25%	0,4
50%	0,7
75%	1,1
100%	1,3
Diesel Liters/h at % load	
Electrical system	
Electrical System (V)	12
Starter Motor (kW)	1,2
Alternator (A)	-
Stop Solenoid Type	ETS

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL
G-8M-3
8 kVA (8 kW) 50 Hz

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual


50 Hz MODEL
Model and ratings

kW *	8
kVA*	8
Voltage (V)	230
Amps (A)	34,8
Phases	1
Hz	50
Engine RPM	3000

Weight (Kg)

Canopy version (Dry)	-
Standard version (Dry)	165

ALTERNATOR

Brand	MECCALTE
Model	ES20FS-130
Regulator type	AVR ASR
Nr. of poles	2
Insulation Type	H
IP protection	23
Cos phi	1
Tropicalized	Yes
Excitation system	Brush
Voltage regulation Accuracy	±2,5%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	MINI-17
Type	4 stroke
Cylinders	2
Displacement	952
Bore x Stroke	76 x 70 mm
Compression ratio	23:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	2,8
Oil Type	SAE 15W40
Coolant capacity (L)	2,7
Housing	SAE 5
Flywheel	SAE 6 1/2

50 Hz

RPM	3000
Power (HP/kW)	13,5 hp (10,1 kW)
Coolant flow rate (L/min)	28
Raw water rate (L/min)	29

Fuel consumption

25%	1,3
50%	1,9
75%	2,6
100%	3,4

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	1,2
Alternator (A)	40
Stop Solenoid Type	ETR

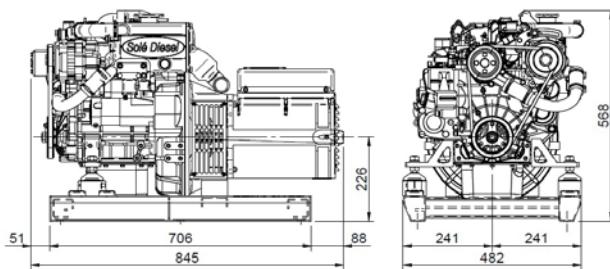
Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

G-8T-3

8 kVA (6,4 kW) 50 Hz

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual

**50 Hz MODEL****Model and ratings**

kW *	6,4
KVA*	8
Voltage (V)	400/230
Amps (A)	11,5
Phases	3
Hz	50
Engine RPM	3000

Weight (Kg)

Canopy version (Dry)	-
Standard version (Dry)	175

ALTERNATOR

Brand	MECCALTE
Model	ET20FS-130
Regulator type	AVR ASR
Nr. of poles	2
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brush
Voltage regulation Accuracy	±2,5%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Sole Diesel Engine Model	MINI-17
Type	4 stroke
Cylinders	2
Displacement	952
Bore x Stroke	76 x 70 mm
Compression ratio	23:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	2,8
Oil Type	SAE 15W40
Coolant capacity (L)	2,7
Housing	SAE 5
Flywheel	SAE 6 1/2

50 Hz

RPM	3000
Power (HP/kW)	13,5 hp (10,1 kW)
Coolant flow rate (L/min)	28
Raw water rate (L/min)	29

Fuel consumption

25%	1,3
50%	1,9
75%	2,6
100%	3,4

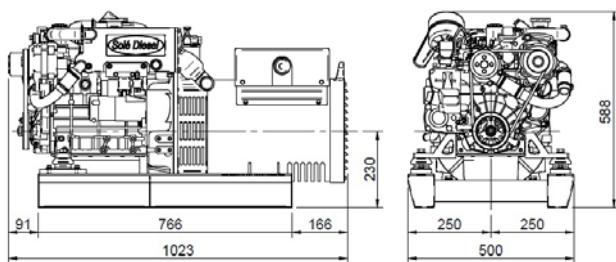
Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	1,2
Alternator (A)	40
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com.

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL
G-15M-3
15 kVA (15 kW) 50 Hz

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual


50 Hz MODEL
Model and ratings

kW *	15
kVA*	15
Voltage (V)	230
Amps (A)	65,2
Phases	1
Hz	50
Engine RPM	3000

Weight (Kg)

Canopy version (Dry)	-
Standard version (Dry)	225

ALTERNATOR

Brand	MECCALTE
Model	ECP-28 2L/2
Regulator type	Electronic AVR DSR
Nr. of poles	2
Insulation Type	H
IP protection	23
Cos phi	1
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	MINI-26
Type	4 stroke
Cylinders	3
Displacement	952
Bore x Stroke	76 x 70 mm
Compression ratio	23:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	4
Oil Type	SAE 15W40
Coolant capacity (L)	3
Housing	SAE 5
Flywheel	SAE 6 1/2

50 Hz

RPM	3000
Power (HP/kW)	21,9 hp (16,3 kW)
Coolant flow rate (L/min)	43
Raw water rate (L/min)	29,5

Fuel consumption

25%	1,7
50%	3
75%	4,1
100%	5

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	1,2
Alternator (A)	40
Stop Solenoid Type	ETR

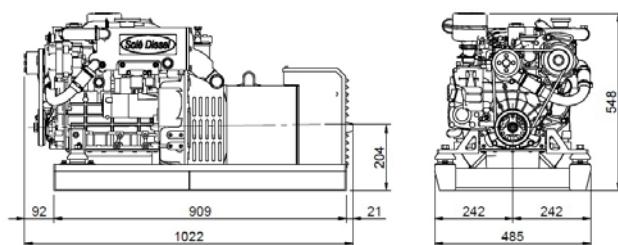
Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

G-15T-3

15 kVA (12 kW) 50 Hz

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual

**50 Hz MODEL****Model and ratings**

kW *	12
kVA*	15
Voltage (V)	400/230
Amps (A)	21,7
Phases	3
Hz	50
Engine RPM	3000

Weight (Kg)

Canopy version (Dry)	-
Standard version (Dry)	225

ALTERNATOR

Brand	MECCALTE
Model	ECP3-1L/2
Regulator type	Electronic AVR DSR
Nr. of poles	2
Insulation Type	H
IP protection	23
Cos phi	0,8
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	MINI-26
Type	4 stroke
Cylinders	3
Displacement	952
Bore x Stroke	76 x 70 mm
Compression ratio	23:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	4
Oil Type	SAE 15W40
Coolant capacity (L)	3
Housing	SAE 5
Flywheel	SAE 6 1/2

50 Hz

RPM	3000
Power (HP/kW)	21,9 hp (16,3 kW)
Coolant flow rate (L/min)	43
Raw water rate (L/min)	29,5

Fuel consumption

25%	1,7
50%	3
75%	4,1
100%	5

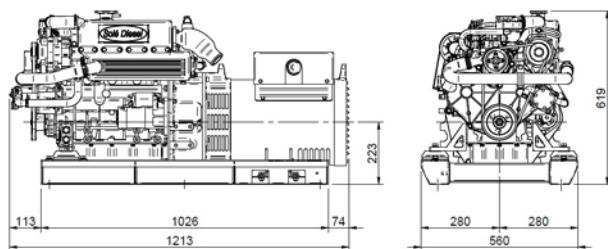
Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	1,2
Alternator (A)	40
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL
G-25M-3
25 kVA (25 kW) 50 Hz

Standard equipment:

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual


50 Hz MODEL
Model and ratings

kW *	25
kVA*	25
Voltage (V)	230
Amps (A)	108,7
Phases	1
Hz	50
Engine RPM	3000

Weight (Kg)

Canopy version (Dry)	-
Standard version (Dry)	335

ALTERNATOR

Brand	MECCALTE
Model	ECP 28-VL/2
Regulator type	Electronic AVR DSR
Nr. of poles	2
Insulation Type	H
IP protection	23
Cos phi	1
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	MINI-44
Type	4 stroke
Cylinders	4
Displacement	1758
Bore x Stroke	78 x 92 mm
Compression ratio	22:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	6
Oil Type	SAE 15W40
Coolant capacity (L)	8
Housing	SAE 5
Flywheel	SAE 7 1/2

50 Hz

RPM	3000
Power (HP/kW)	41,4 hp (30,9 kW)
Coolant flow rate (L/min)	100
Raw water rate (L/min)	33

Fuel consumption

25%	3,6
50%	5,1
75%	6,5
100%	7,8

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	2
Alternator (A)	50
Stop Solenoid Type	ETR

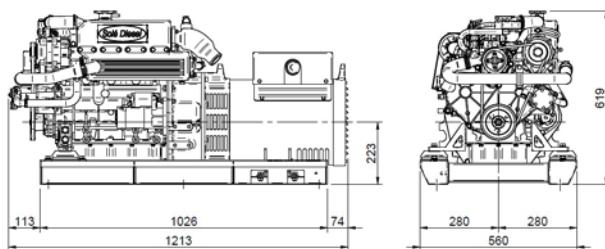
Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

50 HZ MODEL

G-25T-3

25 kVA (20 kW) 50 Hz

**Standard equipment:**

- 4 m electrical extension lead
- Oil extraction pump
- Welded steel base frame with silentblocks vibration attenuation
- SCO 5 Panel
- Owner's and alternator manual

**50 Hz MODEL****Model and ratings**

kW *	20
kVA*	25
Voltage (V)	400/230
Amps (A)	36,1
Phases	3
Hz	50
Engine RPM	3000

Weight (Kg)

Canopy version (Dry)	-
Standard version (Dry)	335

ALTERNATOR

Brand	MECCALTE
Model	ECP-28 2L/2
Regulator type	Electronic AVR DSR
Nr. of poles	2
Insulation Type	H
IP protection	23
Cos phi	1
Tropicalized	Yes
Excitation system	Brushless
Voltage regulation Accuracy	±1%
Frequency Regulation	Synchronous
Standards	EN60034-1, IEC 60034-1

ENGINE specification

Base	Mitsubishi
Solé Diesel Engine Model	MINI-44
Type	4 stroke
Cylinders	4
Displacement	1758
Bore x Stroke	78 x 92 mm
Compression ratio	22:1
Injection	Mechanical and indirect
Aspiration type	Natural aspiration
Lube Oil capacity (L)	6
Oil Type	SAE 15W40
Coolant capacity (L)	8
Housing	SAE 5
Flywheel	SAE 7 1/2

50 Hz

RPM	3000
Power (HP/kW)	41,4 hp (30,9 kW)
Coolant flow rate (L/min)	100
Raw water rate (L/min)	33

Fuel consumption

25%	3,6
50%	5,1
75%	6,5
100%	7,8

Diesel Liters/h at % load

Electrical system

Electrical System (V)	12
Starter Motor (kW)	2
Alternator (A)	50
Stop Solenoid Type	ETR

Dimensions in millimetres. This drawing is provided for reference only.
For further information, please visit our website www.solediesel.com

*Maximum power: Power supplied at maximum capacity of the genset.
For further information see the technical data sheet.

SCO 11 PANEL

TECHNICAL SPECIFICATIONS

GENERAL DESCRIPTION

Graphic LCD display with 128 x 64 pixel backlight

6 binary outputs to positive

6 binary inputs to positive

Dual protection E.stop terminal

Generator measurements (see Screen Information)

Configuration protected by password levels

Operating hours indicator

Multilingual up to 5 languages

Remote Start/Stop

Dual panel

Generator protections (see Alarm Management)

Preheating function

D+ pre-excitation terminal

CAN bus inf. output with J1939 SAE protocol

USB type B for configuration

Low power mode

Integrated PLC

Detailed history

Supply voltage: 12/24V DC with protection fuse Consumption: <200mA

DIMENSIONS AND WEIGHT

Dimensions: 195 x 135 x 47 mm

Cut dimensions: 170 x 110 x 44

Weight: 450 g"

OPERATING CONDITIONS

Operating temperature: -20 +70°C

Humidity: 95% Without condensation

Front panel protection: IP65

STANDARD CONFORMITY

Low Voltage Directive EN 61010-1

Electromagnetic Compatibility EN 61000-6-2, EN 61000-6-4

Safety Requirements for Electrical Equipment EN 61010-1

SCREEN INFORMATION

Measurement:

Voltage L1-L3 (V)

Frequency (Hz)

Oil pressure (bar)

Coolant temperature (°C)

Battery voltage (V DC)

rpm

Active power* (kW)

Apparent power* (kVA)

Current* (A)

PF*

History log

ALARM MANAGEMENT

Shutdowns (SD)

High coolant temperature

Low oil pressure

Overspeed

Overload*

Short circuit*

Over/Under current*

Over/Under voltage

Over/Under frequency

Emergency shutdown

Alarms (WRN)

High coolant temperature

Low oil pressure

High/low battery voltage

Maintenance request

Sensor fails (FLS)



FUNCTION DESCRIPTION

OFF mode

MAN mode (manual start/stop of generator)

AUT mode (automatic start/stop of generator)

OPTIONAL EQUIPMENT

SCO 11 Double panel:

- SCO 11 Double panel allows the same operation and functionality as Main SCO 11. They are connected by RS485 port with a communication wire, available in 12/24/36 m.

SCO 11 dual panel:

- The SCO 11 dual panel offers the same options and functionalities as the main SCO 11 panel. They are connected via the RS485 port of the dual panel communication module by means of a cable, available in 12/24/36 m.

Current transformers:

- Measurements of current (A), active power (kW), apparent power (kVA) and PF of the generator.

Extension module Binary inputs/outputs

IG-IB internet communication module for or Ethernet/Internet communication



* The specific function requires the current transformer (optional equipment), in order to display the info on SCO10 panel.

SCO 5 PANEL

TECHNICAL SPECIFICATIONS

GENERAL DESCRIPTION

Graphic LCD with light Display, 128 x 64 pixels
 3 LED indicators
 Marine genset measures (see display information)
 Marine genset protections (see alarm management)
 Running hour indicator
 Type B USB for programming
 Programming from the same panel
 Universal Interface
 Preheating function
 D+ preexcitation terminal
 CAN bus output with SAEJ1939 protocol
 2 multipurpose timers

DIMENSIONS AND WEIGHT

Dimensions: 118 x 108 x 43 mm

Weight: 256g

OPERATING CONDITIONS

Operating temperature: -20 +70°C

Humidity: 95% Without condensation

Protection front panel: IP65

STANDARD CONFORMITY

Low Voltage Directive: EN 61010-1:95 +A1:97

Electromagnetic Compatibility: EN 50081-1:94, EN 50081-2:96,
 EN 50082-1:99, EN 50082-2:97

DISPLAY INFORMATION

Measurement:

L1-L3 Voltage (V)

Frequency (Hz)

Oil Pressure (bar)

Coolant Temperature (°C)

Battery Voltage (V DC)

rpm

Active Power* (kW)

Apparent Power* (kVA)

Current* (A)

PF*

History log

ALARM MANAGEMENT

Shut Downs (SD)

High coolant temperature

Low oil pressure

Overspeed

Overload*

Short circuit*

Overcurrent*

Over/Under voltage

Over/Under frequency

Emergency stop

Warnings (WRN)

High coolant temperature

Low oil pressure

High/Low battery voltage

Maintenance request

Sensor Fails (FLS)

FUNCTION DESCRIPTION

OFF Mode

MAN Mode (manual start/stop engine)

AUT Mode (auto start/stop engine)



OPTIONAL EQUIPMENT

Current transformers:

- Current (A), Active Power (kW), Apparent Power (kVA) and PF genset measures.

Isolated transformers:

- Voltage transformer unit to separate mains voltage and controller with voltage ratio 1:1.

* The specific function requires the current transformer (optional equipment), in order to display the info on SCO5 panel.

GENERATORS SYNCHRONIZED FOR PARALLEL OPERATION

WHAT IS PARALLEL OPERATION OF GENERATOR SETS?

The configuration for parallel operation consists of synchronizing two or more generator sets that are coupled together with the same frequency and voltage. They then operate jointly, supplying power to the same network. In this way, energy can be generated in large quantities, which could never be supplied by a single generator set with the same specifications.

The parallel operation system keeps one main generator set switched on and connected to the network at all times. The main generator set may be a different unit from time to time. By alternating the operation of the generator sets in this way, their working hours are distributed across the generator sets, staggering their maintenance.

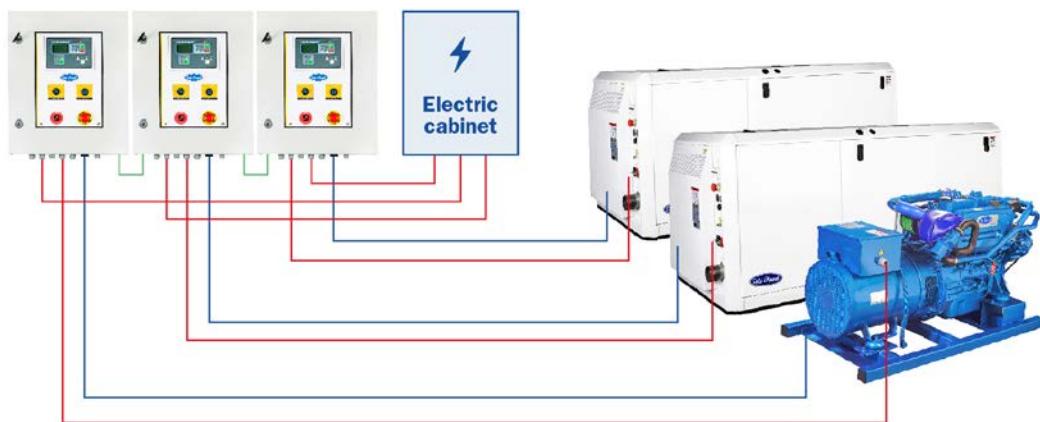
As soon as the demand for electricity increases beyond a pre-set limit, the system starts up the next generator set and automatically connects it to the network.

The load is then distributed equally among all the generator sets that are connected. When the load falls below the pre-set limit, the appropriate generator sets are automatically switched off and stopped.

For maintenance purposes, it is possible to keep providing the power supply even if one of the generator sets is out of use. The system detects this, and will disregard this equipment.

SOME OF THE MOST IMPORTANT ADVANTAGES OF USING PARALLEL OPERATION SYSTEMS ARE:

- The possibility of supplying quantities of energy in a way that is **more efficient and consumes less fuel**. This is due to the fact that parallel operation systems are better able to adapt to the current energy needs. They are able to use one unit when there is low consumption, and connect or disconnect more units depending on the level of network load.
- The **reliability** provided by the fact that more than one generator set is operating at the same time. This avoids failures, and guarantees that there is a power supply at all times.
- The **safety** provided by a system that allows maintenance tasks to be carried out on one of the units while the other units continue to operate, maintaining the power supply at all times, under any circumstances. This power supply would be guaranteed if the main unit fails, or is undergoing maintenance.
- The **reduction in maintenance** required for each generator set, as the operating hours for each unit are decreased.



WHY IS PARALLEL OPERATION WITH SÓLÉ DIESEL GENERATOR SETS THE BEST OPTION?

At Solé Diesel, we want to make things convenient for our customers, facilitating the start up of this complex equipment. As a result, we have set ourselves apart from the other solutions that are on the market, by offering a **Plug & Play** system. This consists of a generator set that is ready for parallel operation, as well as an electrical cabinet that includes a power switching system and a controller which are fully configured for this application.

Technological advances have made it possible for these operations to be carried out automatically, using a specific controller for the parallel operation of generator sets. Each generator set has a controller that regulates the frequency and voltage. These parameters must be maintained in the same proportion in all the generators to ensure optimum performance. In addition, these controllers succeed in delivering a significant reduction in time, complications and costs incurred during start-up.

WHAT OPTIONS DO WE OFFER?

At Solé Diesel, we offer two supply levels for the parallel operation generator set system. The combination of both levels provides an easy to install experience that is 100% safe and effective.

OPTION 1

The Parallel Operation Ready Generator Set is ideal for replacing one or more generator sets that are integrated within an existing parallel operation system.

It includes the Generator set, the electronic controller and the Engine Control Unit ECU. The scope of this supply would not include any control panels, or synchronizing or switching equipment.

EQUIPMENT

Parallel Operation Ready Generator Set

- Generator Set that is ready for parallel operation.
The panel and the control and power cabinet are not included.
- ECU
- Electronic Actuator Control wiring



OPTION 2

Parallel Operation Ready Generator Set (Option 1) + Parallel Operation Control and Power Kit. This complements the Parallel Operation Ready Generator Sets level, including all the equipment needed to set up a functional parallel operation system.

This is our Full Equip option, which is highly recommended for boats where a parallel operation system is being installed for the first time. As it is **Plug&Play**, there is no need to carry out any complex configuration or installation of the parallel operation system. Simply connect the Cabinet Kit to the generator set, and to the network. This is the option that is recommended by Solé Diesel, as it saves the user money on engineering and installation costs.

EQUIPMENT

Parallel Operation Ready Generator Set

(Option 1) + Parallel Operation Control and Power Kit

- Generator Set that is ready for parallel operation.
The panel and the control and power cabinet are not included.
- ECU
- Electronic Actuator
- Control wiring
- IntelliGen2000 Control Panel
- Control and Power Cabinet For parallel operation Communication wiring
- Control wiring
- Load break switch
- Amperometric transformers
- Electrical protections



TYPE APPROVAL GENERATOR SETS

STANDARD OPERATION

Our DNV Type Approval certified generator sets are ideal for maximum performance especially in professional applications. All certified groups are accompanied by the corresponding documentation confirming international regulatory compliance.

WHAT DO WE OFFER?

Unlike other manufacturers, Solé Diesel is certified not only for the generation set but also for the auxiliary version engine. Solé Diesel has a wide range of models both in standard and ready to work in parallel. All of them offer a comfortable user experience, easy installation and maintenance.

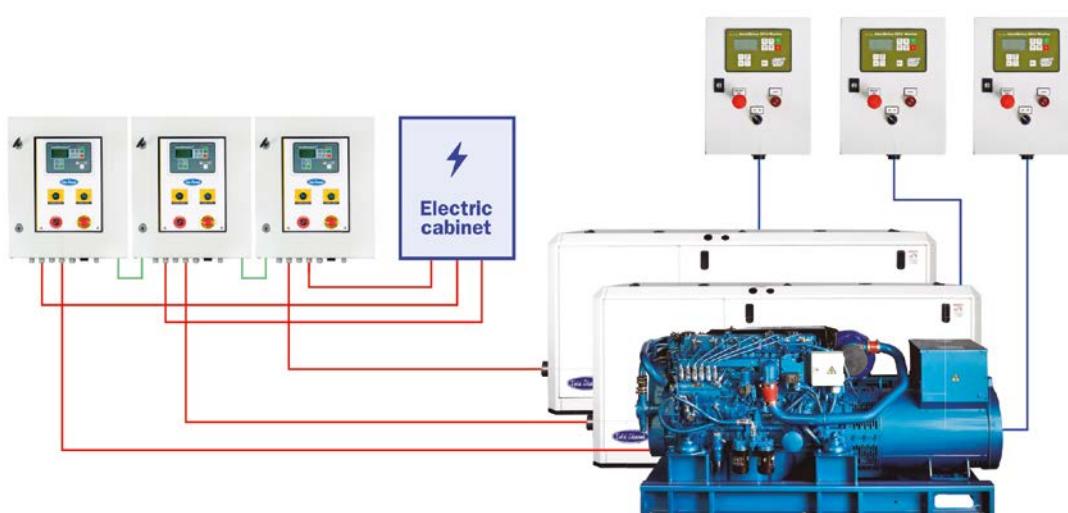
STANDARD EQUIPMENT AND CHARACTERISTICS OF APPROVED GENSETS

- TAC-certified alternator for generator sets
- TAC engine monitoring and control system
- Maximum power: can run with overload (110% over rated power)
- Insulation of hot surfaces according to TAC regulations
- Belt protection
- Spray stop on pipe connections containing flammable liquids
- Double-walled diesel tubes
- Double diesel filter
- Rubber hoses with inner textile reinforcement and equipped with double clamp
- Mechanical connections and screw joints
- Earth isolated

PREPARED TO WORK IN PARALLEL

The configuration for working in parallel consists of synchronize two or more generator sets, coupled with the same frequency and voltage, so they offer a combined operation which allows power to be supplied to the same grid. Thereby, energy is generated in a large amount, which is impossible to supply with a single generator set of the same characteristics.

- Efficiency and lower fuel consumption due to parallel systems can adapt to the energy needs of the moment.
- The reliability of having more than one generator set operating at the same time, which prevents breakdowns and always ensures power supply.
- Security. Power supply is guaranteed in case of maintenance on the main unit.
- Maintenance reduction by reducing individual working hours on each genset.



OPTION 1

The generator set is prepared to operate in parallel and is ideal for replacing one or more generator sets which are integrated into an existing parallel system.

It includes the generator set certified with the above-mentioned TAC requirements and characteristics, and additionally the electronic actuator and the ECU engine control unit.

EQUIPMENT

TAC generator set prepared to operate in parallel

- TAC Generator set prepared for parallel system
- ECU
- Electronic actuator
- Control wiring
- AC engine monitoring and control system



OPTION 2

TAC generator set prepared to operate in parallel (Option 1) + **TAC Power and Control Parallel Kit**

It complements the level of the generator set ready to operate in parallel with all necessary equipment to have a functional parallel system.

This is our Full Equip option, which is highly recommended for boats where a parallel operation system is being installed for the first time.

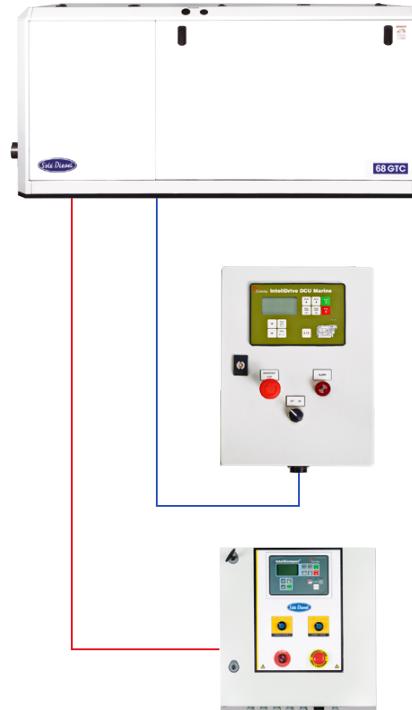
There is no complex configuration or installation of the system in parallel because it is Plug&Play. Simply connect the Box Kit to the group and the grid.

This is the option recommended by Solé Diesel as it saves the user engineering and installation costs.

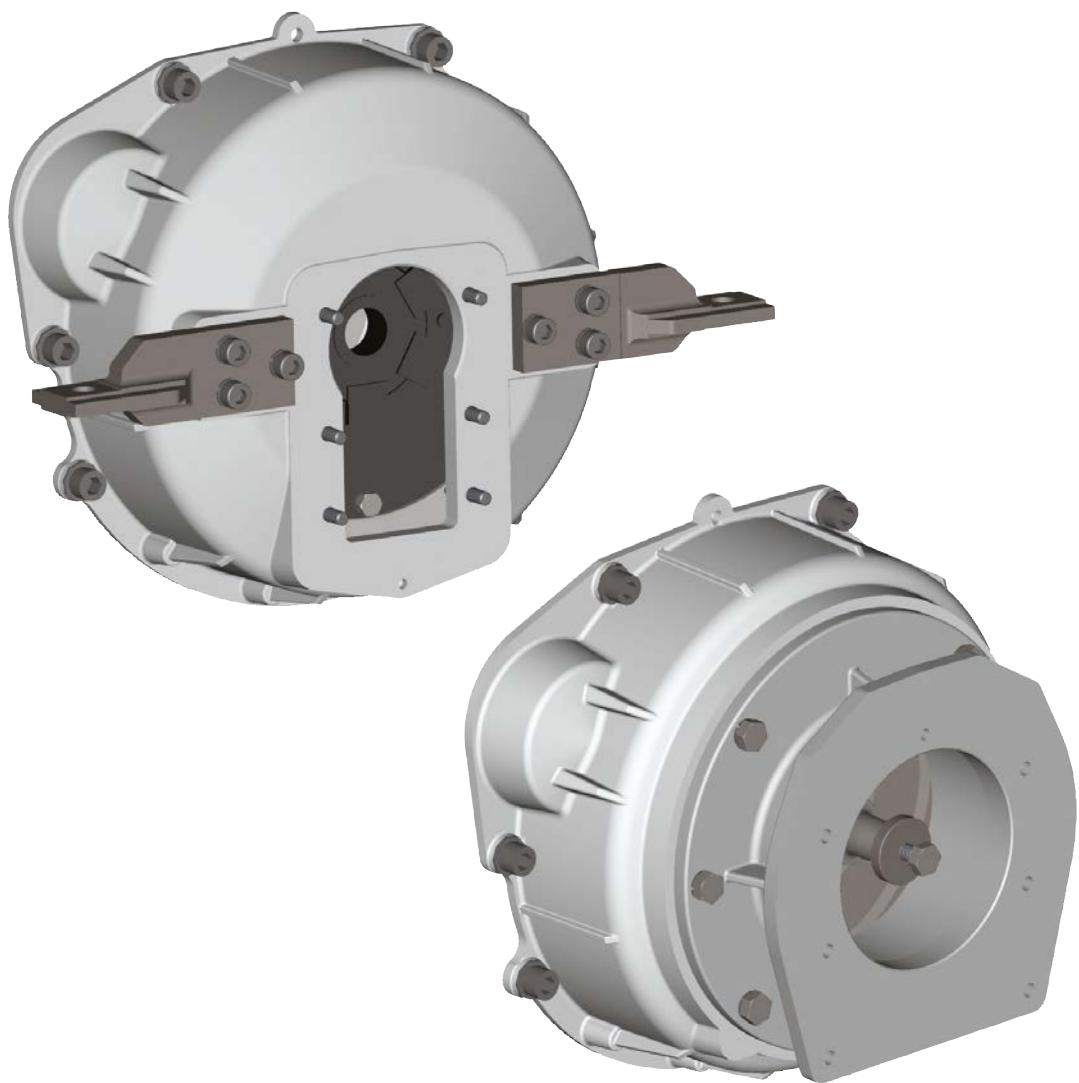
EQUIPMENT

TAC generator set ready to operate in parallel (Option 1) + TAC Power and Control Parallel Kit

- TAC generator set prepared to operate in parallel
TAC engine monitoring and control system
- ECU
- Electronic regulator
- Control wiring
- TAC switching and synchronization system Communication and control wiring Amperometric transformers
- Electrical protections which ensure safety of people and equipment



Solé Diesel's recommended option





INSTALLATION KITS

CUSTOMISATION TO OTHER TRANSMISSIONS, SAILDRIVE OR STERN DRIVE

Solution to adapt other transmissions not supplied by Solé Diesel using an adaptive housing and elastic coupling.

COMPATIBLE TRANSMISSIONS:

- VOLVO Saildrive 100S/110S/120SB/120S/130S
- VOLVO Saildrive 270/280/290
- YANMAR Saildrive SD 20
- BUCK Saildrive DV10/DV20
- BORG WARNER
- HURTH 150A
- TECHNODRIVE



EXHAUST SYSTEM

DRY EXHAUST

Solé Diesel standard engines include a wet exhaust system. This implies that the sea water from the cooling circuit is mixed with the exhaust gases.

The water injection point in the exhaust line is located on the exhaust elbow.

Nevertheless, we offer the possibility to install a dry exhaust system in which the sea water of the cooling circuit is not mixed with the exhaust gases. In this case, the exhaust line is totally independent. Since there is no water inside, the risk is prevented from getting it in the engine through the exhaust manifold.

When you request an engine with a dry exhaust system, we supply the engine without a wet exhaust elbow + one of the following available dry exhaust kits, the one you choose depending on your needs:

- Dry exhaust outlet plate kit
Adaptation plate is included.
- Flexible and dry exhaust kit
A flexible elbow and the previous plate kit are supplied.
- Quiet and dry exhaust kit
The above flexible and dry exhaust kit is included along with a muffler.



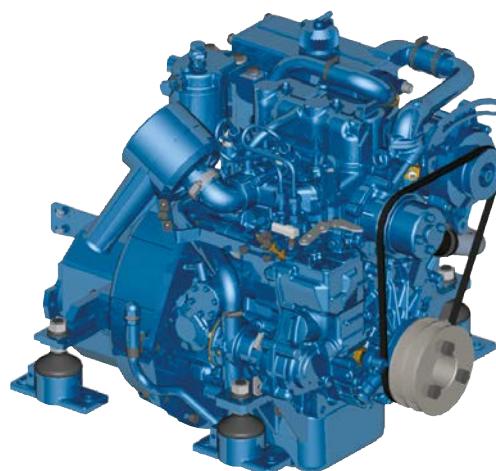
POWER TAKE-OFF

PULLEY / SHAFT

Axial pulley/shaft directly connected to the engine crankshaft able to supply power to other equipment on board.

TYPES AVAILABLE:

- 2 A groove pulley
- 2 B groove pulley
- 4 A groove pulley
- 4 B groove pulley
- Shaft



INSTRUMENT PANEL



- SSG 20 + SSG 20
- SSG 20 + SSG 30
- SSG 30 + SSG 20
- SSG 30 + SSG 30

ELECTRICAL SYSTEM

All engines (except DEUTZ) are at 12v. However, depending on customer, we can change it at 24v.

SECOND ALTERNATOR (FOR 12 OR 24V INSTALLATIONS)

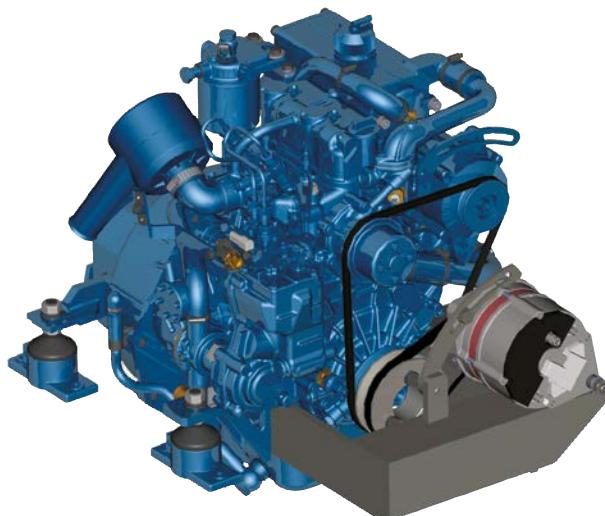
Consists of assembling a second alternator connected to the crankshaft outlet via a pulley and a support. It can thus provide an electrical supply to other systems that need it, either at 12V or 24V.

AVAILABLE ALTERNATORS:

- 12V/70A Alternator
- 14V/90A Alternator
- 14V/110A Alternator
- 24V/55A Alternator
- 24V/140A Alternator

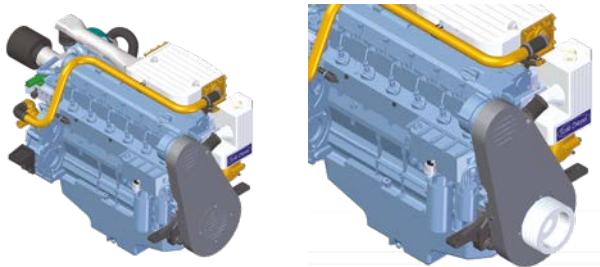
OTHERS

- Boiling kit
- Trolling valve
- Keel cooling



BELT PROTECTION

Belt protection element made from metal plate, compatible with power take-off installations.
It meets the requirements of the strictest classification societies (RRR, RMRS, DNV, B&V)*
Available for propulsion engines and generator sets.



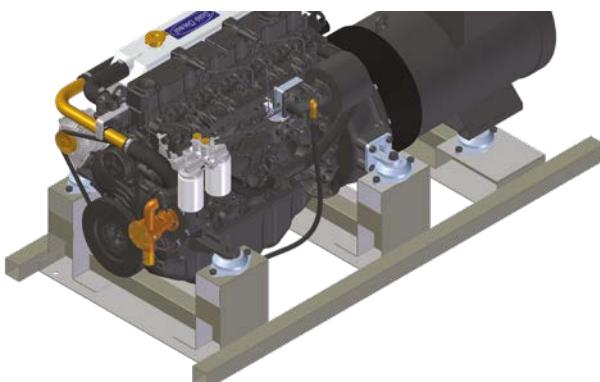
DOUBLE-WALL INJECTION PIPES AND LEAKAGE ALARM

System of double-wall injection pipes with alarm to detect possible fuel leaks and prevent spills.
It meets the requirements of the strictest classification societies (RRR, RMRS, DNV, B&V)*
Available for propulsion engines and generator sets.



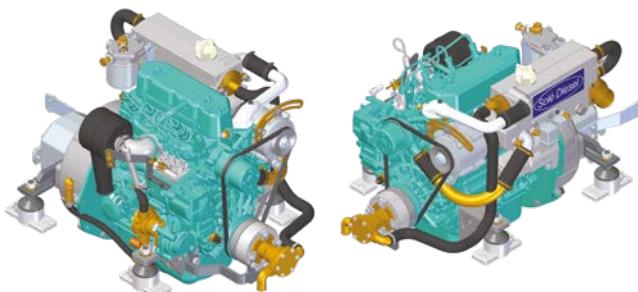
INTERCHANGEABLE DUAL GAS-OIL FILTER KIT

It consists of a system of two fuel filters with a three-position selector dial. This allows each filter to be replaced without having to stop the engine, improving safety.
It meets the requirements of the strictest classification societies (RRR, RMRS, DNV, B&V)*
Available for propulsion engines and generator sets.



MINI-17/29 FRONT SEA WATER PUMP

This facilitates maintenance tasks, especially in sailboats, connecting the salt water pump to the crankshaft pulley.
Available for MINI-17 and MINI-29 engines.



REMOTE OIL FILTER KIT

Assembly that allows to install the engine oil filter in a more accessible location, facilitating maintenance tasks.



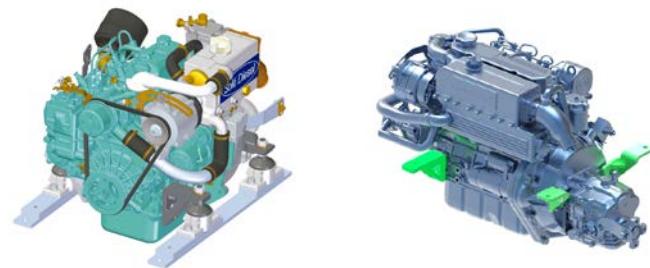
**

* According to SOLAS agreement.

** The remote oil filter kit is not painted and it doesn't include the filter element.

ENGINE BRACKET PACKS

These replace the original supports of the new engine with others that are built to size. The width and height measurements are matched in order to avoid having to modify the baseplate and making it easier to install the new engine.



Repowering of Solé Diesel to Solé Diesel					
	MINI-17	MINI-29	MINI-33	MINI-44	MINI-55
MINI-1-2-3	13810050.6	17610050.6			
MINI-10	13810085	13910005			
MINI-11	13810084	13910006			
MINI-14					
MINI-17 V0_V1_V2_V3	13810084	13910006			
MINI-17 V4	13810086	13910007			
MINI-18	13810089				
MINI-23		13910008	17210038		
MINI-26		13910009	17210039		
MINI-28					
MINI-29 V0_V2_V3		13910009	17210039		
MINI-29 V4_V5		13910009	17210040		
MINI-32			17210045	17310013	
MINI-33 V0_V1_V3			17210046	17310014	
MINI-34			17210045	17310013	
MINI-44 V0_V1_V2					
MINI-48				17310015	1A010009
MINI-50				17710024	17710024
PERKINS-4107 (SP)			17210058		
PERKINS-4108				17710022	17710022
PERKINS-4203					
SM-615				17710023	17710023

Repowering of Volvo Penta to Solé Diesel					
	MINI-17	MINI-29	MINI-33	MINI-44	MINI-55
2001	13810094				
2002	13810093	13910031			
2003		13910030	17210047	17310022	17310022
2003 Turbo		13910030	17210047	17310022	17310022
D1-13		13910023			
D1-20			17210048		
D1-30			17210053		
D2-40				17310022	17310022
MD 11C		13910034	17210054		
MD 2010		13910012			
MD 2020		13910023	17210048		
MD 2030		13910023	17210048		
MD 2040				17310023	
MD 7A/B	13810096				
MD 1					
MD 2					
MD 2B					
MD 6A	13810096				
MD 5A					
MD11		13910034	17210054		
MD 17/C (LARGO 533)				17310024	
MD 17/C (LARGO 608)				17310033	
MD3B				17310036	

ENGINE BRACKET PACKS

Repowering of Yanmar to Solé Diesel						
	MINI-17	MINI-29	MINI-33	MINI-44	MINI-55	SK-60
1GM	13810097					
1GM10	13810097					
1GM10V	13810099					
2GM20	13810098	13910033				
2GM20F	13810098	13910033				
2GM20 SD20	13810122					
2GM20FV	13810109					
2GMY						
2QM15						
2QM20						
2QM20H			17210055			
2YM15		13910022				
3YM20						
3GM30		13910029				
3GM30F		13910029				
3GM 30 SD20		13910035				
3GM30FV		13910024				
3GMD						
3HM		13910028				
3HM 35		13910028				
3HMF		13910028				
3JH2-E			17210056			
3JH2-TE				17310028		
3JH4E SD40			17210059			
4JHE				17310019	17310019	
4JH3CE SD40				17310037	17310037	
4JH2-E						1A010047
SB12/SB12G	13810112					
SB8/SB8G	13810110					
YSM12						
YSM8						

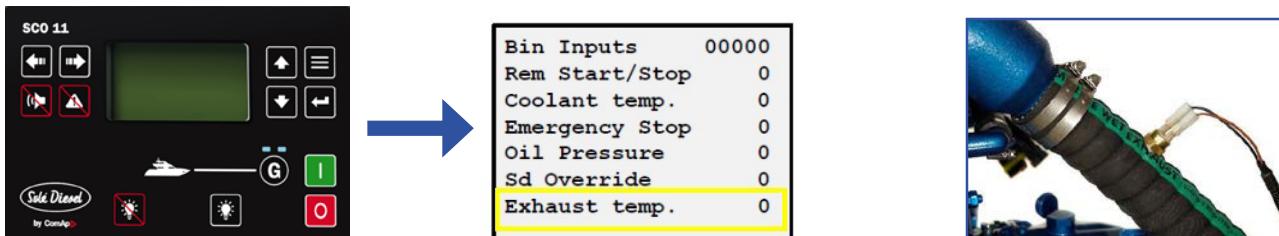
Repowering of Vetus to Solé Diesel						
	MINI-17	MINI-29	MINI-33	MINI-44	MINI-55	SK-60
M2.06	13810120					

Repowering of Renault to Solé Diesel						
	MINI-17	MINI-29	MINI-33	MINI-44	MINI-55	SK-60
RC 12 D	13810123					

ELECTRICAL KITS FOR GENERATORS

EXHAUST TEMPERATURE ALARM

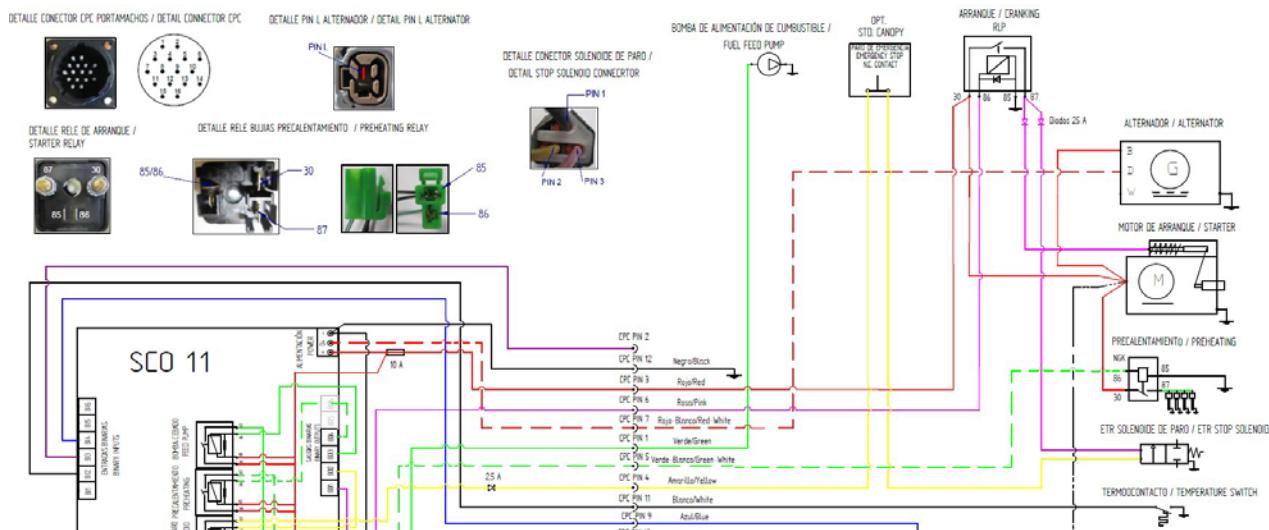
All standard SCO 11 panels are provided with an activated alarm so you only will need to connect the alarm cable to the appropriate PIN. With this kit, you will receive the corresponding wiring for the panel and a contact sensor for the exhaust hose.



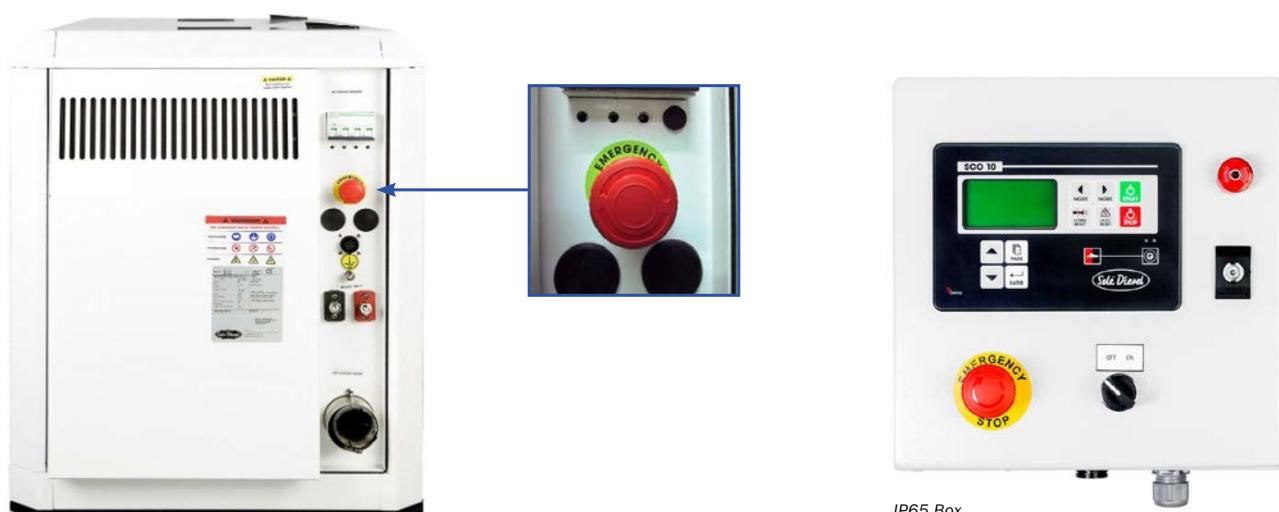
EMERGENCY STOP BUTTON

As it is called, with this kit you will be able to stop the genset performance in case of emergency. On most generators models, as many stop buttons as required may be installed.

This kit consists of a switch which opens the circuit. It ceases to supply power to the stop solenoid.



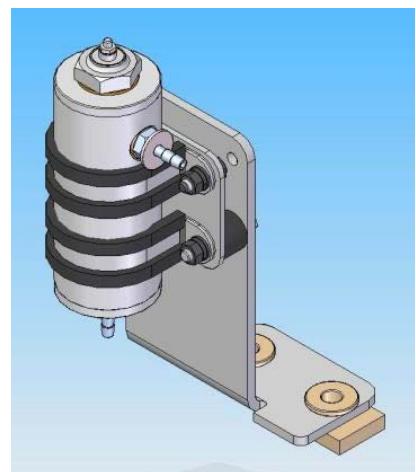
It can be installed in the canopy as well as in IP65 box.



FUEL LEAK ALARM

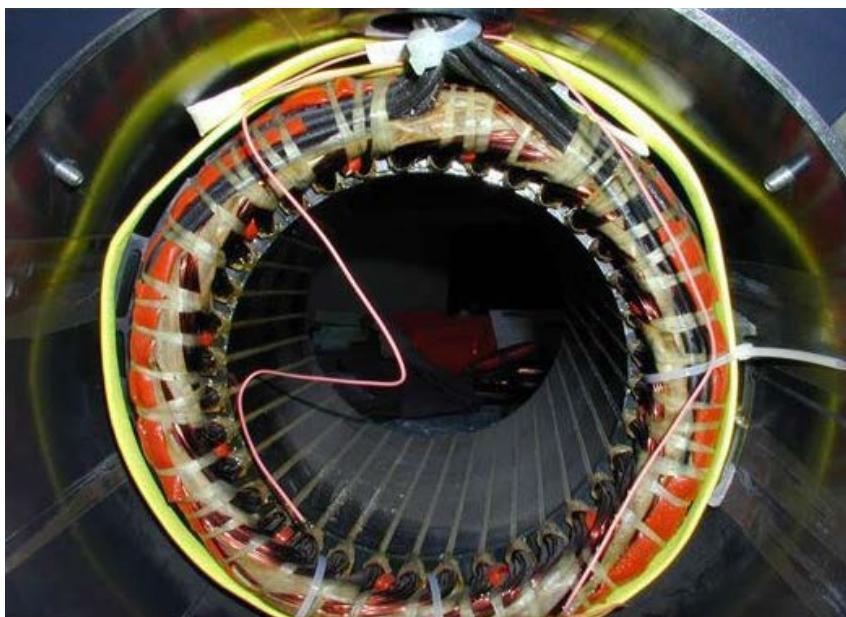
This kit is designed to detect high pressure fuel leaks, between the injection pump and injectors. It consists of double-walled pipes and a leak detector.

It is provided with a detailed installation manual in order to facilitate the mounting process.



ANTI-CONDENSATION KIT

The function of this new kit is to remove condensation from the alternator after a long period of inactivity, in order to avoid electrical problems caused by humidity, such as short circuits, at the time of switching on. This is to prevent serious damage to the winding of the alternators.



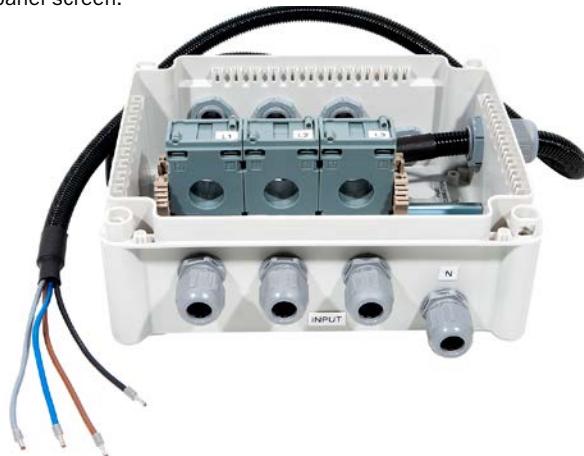
The new kit consists of a resistor and the corresponding wiring.

CURRENT TRANSFORMER KIT

The current transformer kit allows to measure the current flow and the generated power and provides this information to the SCO 11 panel. This way we obtain a current (A) and power (kW) measurement that will be displayed On the SCO 11 and SCO 5 panel screen.

- The amperometric transformer Kit allows measuring the intensity and power generated by the marine genset.
- Once the Current Transformer Kit is installed, the previous information will be available in the SCO 11 and SCO 5 display.
- Prevent damages or faults caused by short circuit and Overload. Supplementing the circuit breaker.
- Phase imbalance protection.
- The renewed version is arranged in an electrical box so that the installation is carried out in a simpler way.
- With this box all cables are protected and sorted.
- Its installation is carried out in a safer way by directly passing the cables through the holes that make up the box.

Kits for single phase comes with 1 current transformer and 3-phases kits comes with 3 current transformers.



SINGLE PHASE					
Genset model 50 HZ	Genset model 60 HZ	Transformer current	Lenght (m)	Kit current transformer part number	
7 GS	8 GSA	40/5	4 meters	60972161CMB.4	
			12 meters	60972161CMB.12	
10GS	12GSA	60/5	4 meters	60972162CMB.4	
			12 meters	60972162CMB.12	
14GS, 20GS	17 GSA	100/5	4 meters	60972163CMB.4	
			12 meters	60972163CMB.12	
29GS	25GSA, 32GSA	150/5	4 meters	60972164CMB.4	
			12 meters	60972164CMB.12	



3-PHASES					
Genset model 50 HZ	Genset model 60 HZ	Transformer current	Lenght (m)	Kit current transformer part number	
8 GT-Y-Δ, 11 GT-Y-Δ, 17 GT-Y	10 GTA-Y-Δ, 14 GTA-Y-Δ, 20 GTA-Y	40/5	4 meters	60972161CTB.4	
			12 meters	60972161CTB.12	
17 GT-Δ, 25 GT-Y, 35 GT-Y,	20 GTA-Δ, 30 GTA-Y, 40 GTA-Y,	60/5	4 meters	60972162CTB.4	
			12 meters	60972162CTB.12	
25 GT-Δ, 35GT-Δ, 50GT-Y	30 GTA-Δ, 40 GTA-Δ, 60 GTA-Y,	100/6	4 meters	60972163CTB.4	
			12 meters	60972163CTB.12	
50 GT-Δ, 85GT-Y	60 GTA-Δ, 100 GTA-Y,	150/6	4 meters	60972164CTB.4	
			12 meters	60972164CTB.12	
115 GT-Y	120 GTA-Y	200/6	4 meters	60994164CTB.4	
			12 meters	60994164CTB.12	



Note:

Δ = Delta connection = 230V at 50 Hz or 277V at 60z.

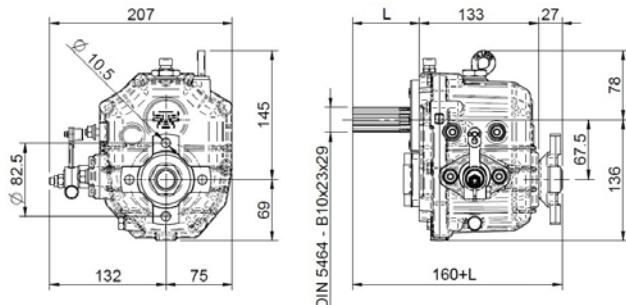
Y = Star connection = 400/230V at 50 Hz or 480/277V at 60 Hz.





TRANSMISSIONS

TMC-40P TECHNODRIVE

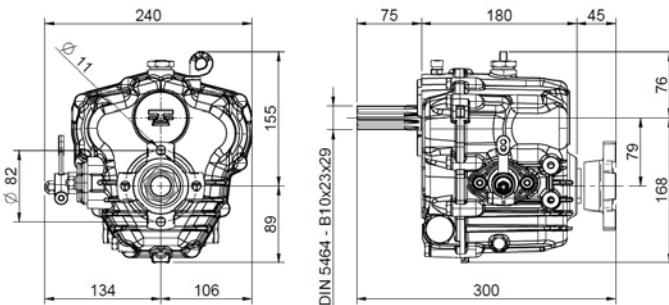


Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. °	L (mm)	Part Number
1.45:1	2.13:1	Mechanical	Technical appendix	9	0,2	ATF	95	15	75	24862000P
1.45:1	2.13:1	Mechanical	Technical appendix	9	0,2	ATF	95	15	45	24862000PC
2.00:1	2.13:1	Mechanical	Technical appendix	9	0,2	ATF	95	15	75	24863000P
2.00:1	2.13:1	Mechanical	Technical appendix	9	0,2	ATF	95	15	45	24863000PC
2.60:1	2.13:1	Mechanical	Technical appendix	9	0,2	ATF	95	15	75	24864000P
2.60:1	2.13:1	Mechanical	Technical appendix	9	0,2	ATF	95	15	45	24864000PC

ACCESSORIES

Equipment	Description	Part Number
Included	Bracket engine control	24800401
Optional	BW housing coupling TMC	24890021
Optional	Adaptor Flange SAE 5 TMC	24880021
Optional	Flexible coupling type A D. 155	13110040
Optional	Flexible coupling type A D. 185	14710070
Optional	Flexible coupling type A SAE 6"1/2	13810046

TMC-60P TECHNODRIVE

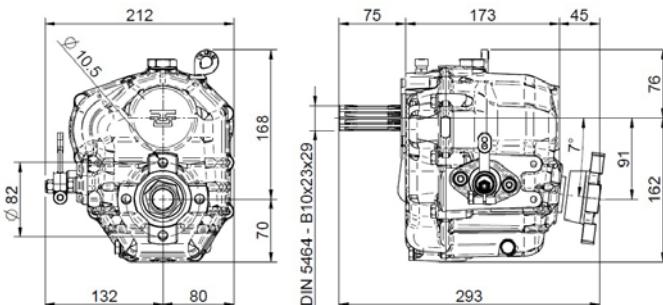


Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. ° (°)	Part Number
1.55:1	2.00:1	Mechanical	Technical appendix	14	0,65	ATF	95	15	24882000P
2.00:1	2.00:1	Mechanical	Technical appendix	14	0,65	ATF	95	15	24883000P
2.45:1	2.45:1	Mechanical	Technical appendix	14	0,65	ATF	95	15	24884000P
2.83:1	2.45:1	Mechanical	Technical appendix	14	0,65	ATF	95	15	24885000P

ACCESSORIES

Equipment	Description	Part Number
Included	Bracket engine control	24800401
Optional	BW housing coupling TMC	24890021
Optional	Adaptor Flange SAE 5 TMC	24880021
Optional	Flexible coupling type A D. 155	13110040
Optional	Flexible coupling type A D. 185	14710070
Optional	Flexible coupling type A SAE 6"1/2	13810046
Optional	Heat exchanger kit TMC-60P D. 20	24880106

TMC-60A TECHNODRIVE

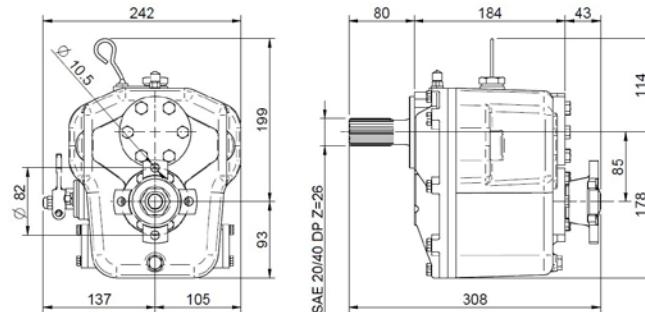


Forward	Reverse	Type	Output ° (°)	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. ° (°)	Part Number
2.00:1	2.17:1	Mechanical	7	Technical appendix	14	0,65	ATF	95	15	24883100
2.45:1	2.17:1	Mechanical	7	Technical appendix	14	0,65	ATF	95	15	24884100

ACCESSORIES

Equipment	Description	Part Number
Included	Bracket engine control	24800401
Optional	BW housing coupling TMC	24890021
Optional	Adaptor Flange SAE 5 TMC	24880021
Optional	Flexible coupling type A D. 155	13110040
Optional	Flexible coupling type A D. 185	14710070
Optional	Flexible coupling type A SAE 6"1/2	13810046

TMC-260 TECHNODRIVE

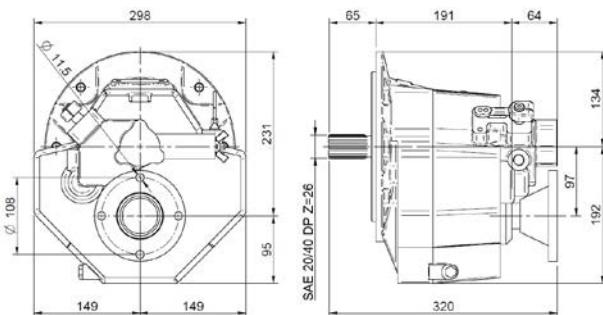


Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil (°C)	Max. Temp (°)	Max. Oper. °	Part Number
1.54:1	2.00:1	Mechanical	Technical appendix	18	1,2	ATF	95	15	24892000
2.00:1	2.00:1	Mechanical	Technical appendix	18	1,2	ATF	95	15	24893000
2.47:1	2.47:1	Mechanical	Technical appendix	18	1,2	ATF	95	15	24894000
2.88:1	2.47:1	Mechanical	Technical appendix	18	1,2	ATF	95	15	24895000

ACCESSORIES

Equipment	Description	Part Number
Included	Bracket engine control	24800401
Optional	BW Coupling with TMC	24890021
Optional	Adaptor Flange SAE 5 TMC	24880021
Optional	Flexible coupling DS22 SAE 6" 1/2	T4648004
Optional	Flexible coupling Type B SAE 8"	17110071
Optional	Flexible coupling type C SAE 11"1/2	16510170
Optional	Oil cooler TMC-260	T1023045

TM-345 TECHNODRIVE

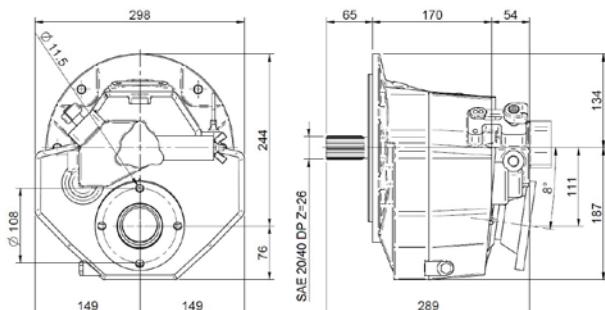


Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. °	Part Number
1.54:1	1.54:1	Hydraulic	Technical appendix	25	1,6	SAE 15W40	95	15	24852000
2.00:1	2.00:1	Hydraulic	Technical appendix	25	1,6	SAE 15W40	95	15	24853000
2.47:1	2.47:1	Hydraulic	Technical appendix	25	1,6	SAE 15W40	95	15	24854000

ACCESSORIES

Equipment	Description	Part Number
Included	BW Housing	24850207
Optional	SAE 5 housing (H=12,5 mm)	T1070142
Optional	SAE 5 housing Y3,4 JH3 (H=63 mm)	T1070142Y
Optional	SAE 4 housing TM-345/A (H=12,5 mm)	24810033
Optional	SAE 4 housing Y4JH3 (H=15,5 mm)	T1070143
Optional	SAE 3 housing gearbox	14910012
Optional	Flexible coupling DS22 SAE 6" 1/2	T4648004
Optional	Flexible coupling Type B SAE 8"	17110071
Optional	Flexible coupling type C SAE 11"1/2	16510170
Optional	Flexible coupling DS22 SAE 7" 1/2	T4648005
Optional	Flexible coupling DS Y3,4 JH3	T4648053
Optional	Flexible coupling DS IVECO	T4648007
Optional	Trolling valve kit TM-345/A	17012345
Optional	Heat exchanger pack TM-345/A	24850601
Optional	Yanmar heat exchanger kit 4JH	T1023042
Optional	Gearbox cable bracket pack	24800400

TM-345A TECHNODRIVE

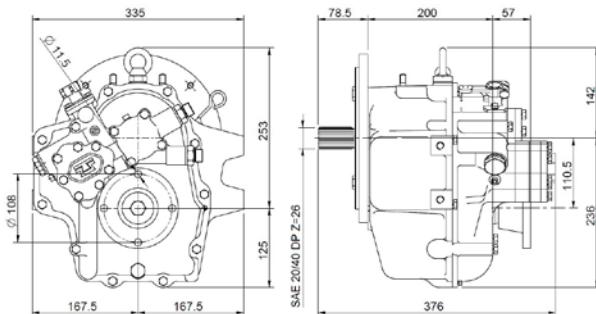


Forward	Reverse	Type	Output °	Max. power and speed	Weight	Oil cap.	Oil	Max. Temp	Max. Oper. °	Part Number
			(°)		(Kg)	(L)	(°C)	(°)		
1.54:1	1.54:1	Hydraulic	8	Technical appendix	25	1,6	SAE 15W40	95	15	24852100
2.00:1	2.00:1	Hydraulic	8	Technical appendix	25	1,6	SAE 15W40	95	15	24853100
2.47:1	2.47:1	Hydraulic	8	Technical appendix	25	1,6	SAE 15W40	95	15	24854100

ACCESSORIES

Equipment	Description	Part number
Included	BW housing	24850207A
Optional	SAE 5 housing (H=12,5 mm)	T1070142
Optional	SAE 5 housing Y3,4 JH3 (H=63 mm)	T1070142Y
Optional	SAE 4 housing TM-345/A (H=12,5 mm)	24810033
Optional	SAE 4 housing Y4JH3 (H=15,5 mm)	T1070143
Optional	SAE 3 housing gearbox	14910012
Optional	Flexible coupling DS22 SAE 6" 1/2	T4648004
Optional	Flexible coupling Type B SAE 8"	17110071
Optional	Flexible coupling type C SAE 11"1/2	16510170
Optional	Flexible coupling DS22 SAE 7" 1/2	T4648005
Optional	Flexible coupling DS Y3,4 JH3	T4648053
Optional	Flexible coupling DS IVECO	T4648007
Optional	Trolling valve kit TM-345/A	17012345
Optional	Heat exchanger pack TM-345/A	24850601
Optional	Yanmar heat exchanger kit 4JH	T1023042
Optional	Gearbox cable bracket pack	24800400

TM-93 TECHNODRIVE

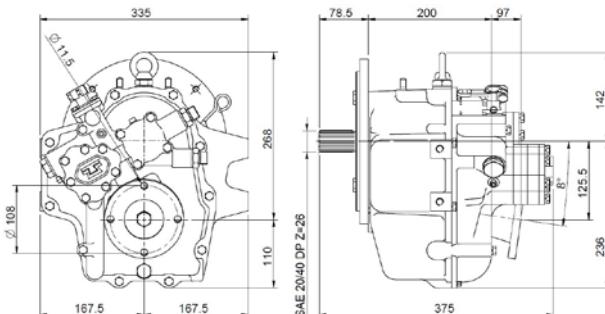


Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. °	Part Number
1.51:1	1.51:1	Hydraulic	Technical appendix	53	2,4	SAE 15W40	95	15	24812000
2.09:1	2.09:1	Hydraulic	Technical appendix	53	2,4	SAE 15W40	95	15	24813000
2.40:1	2.40:1	Hydraulic	Technical appendix	53	2,4	SAE 15W40	95	15	24814000
2.77:1	2.77:1	Hydraulic	Technical appendix	53	2,4	SAE 15W40	95	15	24815000

ACCESSORIES

Equipment	Description	Part Number
Optional	SAE 3 housing TM-93/A/170/880A (H=12,5 mm)	24810021
Optional	SAE 3 housing TM-93/A/170/880A (H=33 mm)	24820021
Optional	SAE 4 housing (H=12,5 mm)	T1070156
Optional	SAE 4 housing TM-93/A/170/880A (H=33 mm)	24810021.3
Optional	BW housing TM-93/170/485/545/880A (H=13,5 mm)	24870021
Optional	BW housing TM-93/A/170/880A (H=30 mm)	24810022
Optional	Flexible coupling DS25 10"	24810010.1
Optional	Flexible coupling type C SAE 11"1/2	16510170
Optional	Flexible coupling DS IVECO	T4648007
Optional	Flexible coupling RBD 10"	T1054028
Optional	Flexible coupling RBD 11"1/2 TM-93/880A	19410072
Optional	Trolling valve kit TM-93/A	17012093
Optional	Heat exchanger pack TM-93/A/170/880A	24810600
Optional	Gearbox cable bracket pack	24800400
Optional	Valve control electrical selector 24 V	24890056
Optional	Trolling Valve TM-93	24890055
Optional	Flexible coupling type B SAE 6"1/2	17210071
Optional	Trolling Valve TM-93	24810050

TM-93A TECHNODRIVE

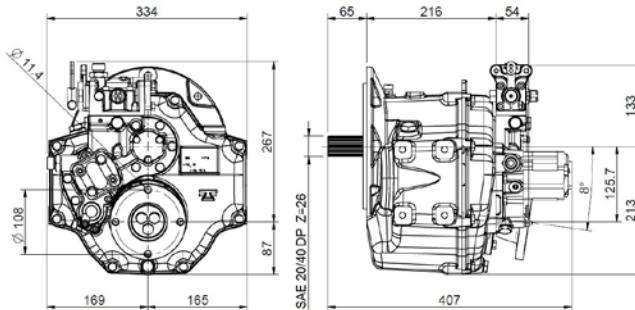


Forward	Reverse	Type	Output ° (°)	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. ° (°)	Part Number
1.51:1	1.51:1	Hydraulic	8	Technical appendix	53	2,4	SAE 15W40	95	15	24812100
2.09:1	2.09:1	Hydraulic	8	Technical appendix	53	2,4	SAE 15W40	95	15	24813100
2.40:1	2.40:1	Hydraulic	8	Technical appendix	53	2,4	SAE 15W40	95	15	24814100

ACCESSORIES

Equipment	Description	Part Number
Optional	SAE 3 housing TM-93/A/170/880A (H=12,5 mm)	24810021
Optional	SAE 3 housing TM-93/A/170/880A (H=33 mm)	24820021
Optional	SAE 4 housing (H=12,5 mm)	T1070156
Optional	SAE 4 housing TM-93/A/170/880A (H=33 mm)	24810021.3
Optional	BW housing TM-93/170/485/545/880A (H=13,5 mm)	24870021
Optional	BW housing TM-93/A/170/880A (H=30 mm)	24810022
Optional	Flexible coupling DS25 10"	24810010.1
Optional	Flexible coupling type C SAE 11"1/2	16510170
Optional	Flexible coupling DS IVECO	T4648007
Optional	Flexible coupling RBD 10"	T1054028
Optional	Flexible coupling RBD 11"1/2 TM-93/880A	19410072
Optional	Trolling valve kit TM-93/A	17012093
Optional	Heat exchanger pack TM-93/A/170/880A	24810600
Optional	Gearbox cable bracket pack	24800400
Optional	Electric control valve 12 V	24890055
Optional	Valve control electrical selector 24 V	24890056

TM-485A1 TECHNODRIVE

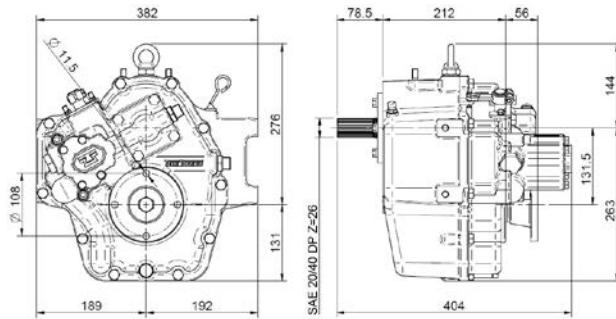


Forward	Reverse	Type	Output ° (°)	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. ° (°)	Part Number
1.51:1	1.51:1	Hydraulic	8	Technical appendix	36	2,7	SAE 15W40	95	15	24872200.1
2.09:1	2.09:1	Hydraulic	8	Technical appendix	36	2,7	SAE 15W40	95	15	24873200.1
2.40:1	2.40:1	Hydraulic	8	Technical appendix	36	2,7	SAE 15W40	95	15	24874200.1

ACCESSORIES

Equipment	Description	Part Number
Included	BW housing	24873001.1
Optional	SAE 5 housing TM-485A1	T2011333
Optional	SAE 4 housing TM-485A1	24870022
Optional	SAE 3 housing gearbox	14910012
Optional	Flexible coupling DS25 10"	24810010.1
Optional	Flexible coupling DS25 8"	T4648017
Optional	Flexible coupling type C SAE 11"1/2	16510170
Optional	Flexible coupling CF-DS-22 Yanmar	24810019
Optional	Trolling valve kit TM-485A1	18712485
Optional	Heat exchanger pack TM-485A1	24870600
Optional	Electric control valve 12 V	T1026012
Optional	Gearbox cable bracket pack	24800400

TM-170 TECHNODRIVE

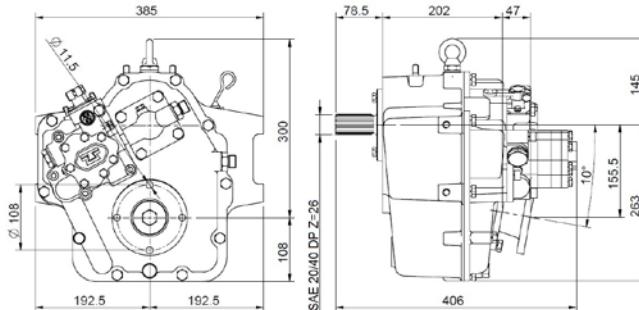


Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. °	Part Number
1.50:1	1.50:1	Hydraulic	Technical appendix	75	2,8	SAE 15W40	95	15	24822000
2.04:1	2.04:1	Hydraulic	Technical appendix	75	2,8	SAE 15W40	95	15	24823000
2.50:1	2.50:1	Hydraulic	Technical appendix	75	2,8	SAE 15W40	95	15	24824100
2.94:1	2.94:1	Hydraulic	Technical appendix	75	2,8	SAE 15W40	95	15	24825000

ACCESSORIES

Equipment	Description	Part Number
Optional	SAE 3 housing TM-93/A/170/880A (H=12,5 mm)	24810021
Optional	SAE 3 housing TM-93/A/170/880A (H=33 mm)	24820021
Optional	SAE 4 housing (H=12,5 mm)	T1070156
Optional	SAE 4 housing TM-93/A/170/880A (H=33 mm)	24810021.3
Optional	SAE 4 housing TM-93/170/880A (H=50 mm) Yanmar	24810021.4
Optional	BW housing TM-93/170/485/545/880A (H=13,5 mm)	24870021
Optional	BW housing TM-93/A/170/880A (H=30 mm)	24810022
Optional	Flexible coupling type C SAE 11"1/2	16510170
Optional	Flexible coupling CF-DS-22 Yanmar	24810019
Optional	Flexible coupling RBD 10"	T1054028
Optional	Flexible coupling RBD 11"1/2 TM-93/880A	19410072
Optional	Trolling valve kit TM-170	19012170
Optional	Heat exchanger pack TM-93/A/170/880A	24810600
Optional	Yanmar heat exchanger kit	T1023043
Optional	Gearbox cable bracket pack	24800400
Optional	Electric control valve 12 V	24890055
Optional	Valve control electrical selector 24 V	24890056

TM-880A TECHNODRIVE

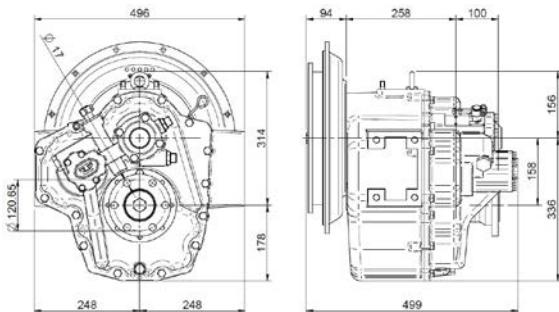


Forward	Reverse	Type	Output ° (°)	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. ° (°)	Part Number
1.53:1	1.53:1	Hydraulic	10	Technical appendix	54	3,7	SAE 15W40	95	15	24816000
2.08:1	2.08:1	Hydraulic	10	Technical appendix	54	3,7	SAE 15W40	95	15	24817000
2.60:1	2.60:1	Hydraulic	10	Technical appendix	54	3,7	SAE 15W40	95	15	24818000

ACCESSORIES

Equipment	Description	Part Number
Optional	SAE 3 housing TM-93/A/170/880A (H=12,5 mm)	24810021
Optional	SAE 3 housing TM-93/A/170/880A (H=33 mm)	24820021
Optional	SAE 4 housing (H=12,5 mm)	T1070156
Optional	SAE 4 housing TM-93/A/170/880A (H=33 mm)	24810021.3
Optional	SAE 4 housing TM-93/170/880A (H=50 mm) Yanmar	24810021.4
Optional	BW housing TM-93/170/485/545/880A (H=13,5 mm)	24870021
Optional	BW housing TM-93/A/170/880A (H=30 mm)	24810022
Optional	Flexible coupling type C SAE 11"1/2	16510170
Optional	Flexible coupling RBD 10"	T1054028
Optional	Flexible coupling RBD 11"1/2 TM-93/880A	19410072
Optional	Trolling valve kit TM-880A	19612880
Optional	Heat exchanger pack TM-93/A/170/880A	24810600
Optional	Yanmar heat exchanger kit	T1023043
Optional	Gearbox cable bracket pack	24800400
Optional	Electric control valve 12 V	24890055
Optional	Valve control electrical selector 24 V	24890056
Optional	Flexible coupling type C SAE 11"1/2 BW	16710070

TM-265 TECHNODRIVE

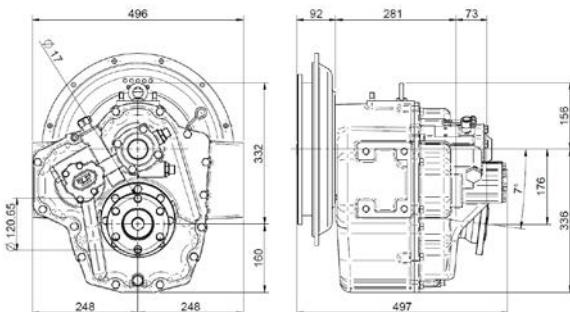


Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. ° (°)	Part Number
1.50:1	1.50:1	Hydraulic	Technical appendix	165	6,6	SAE 15W40	95	15	24842000
2.09:1	2.09:1	Hydraulic	Technical appendix	165	6,6	SAE 15W40	95	15	24843000
2.82:1	2.82:1	Hydraulic	Technical appendix	165	6,6	SAE 15W40	95	15	24845000

ACCESSORIES

Equipment	Description	Part Number
Included	SAE 3 Housing	T1070150
Included	Flexible Coupling RBD 11"1/2	24840013
Optional	SAE 2 housing	24840010.1A
Optional	SAE 1 housing	24840010.1AA
Optional	Flexible coupling DS40 11"1/2 TM-265/A	24840020
Optional	Flexible coupling CFR 136 11"1/2 TM-265/A	19410070
Optional	Flexible coupling Centa CF-DS40 14"	24840005
Optional	Trolling valve kit TM-265/A	19112265
Optional	Companion flange pack TM-265/A	24840006K
Optional	Heat exchanger pack TM-265/A	24840600
Optional	gearbox bracket TM-265/A	T1052002
Optional	Gearbox cable bracket pack	24800400
Optional	Power take off hydraulic pump TM-265/A	24845250
Optional	Electric control valve 12 V	24890055
Optional	Valve control electrical selector 24 V	24890056

TM-265A TECHNODRIVE

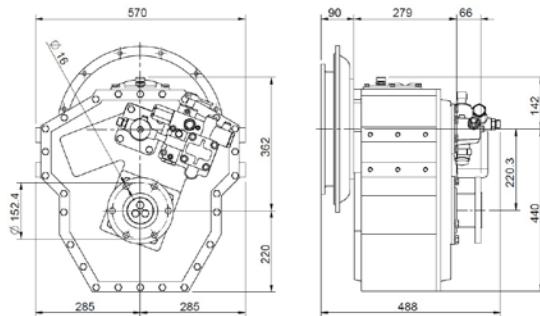
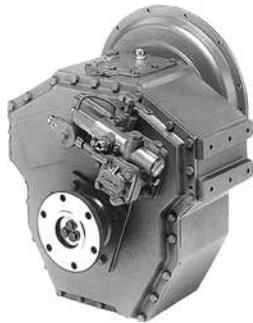


Forward	Reverse	Type	Output ° (°)	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. ° (°)	Part Number
1.44:1	1.44:1	Hydraulic	7	Technical appendix	165	6,6	SAE 15W40	95	15	24842100
2.00:1	2.00:1	Hydraulic	7	Technical appendix	165	6,6	SAE 15W40	95	15	24843100
2.30:1	2.30:1	Hydraulic	7	Technical appendix	165	6,6	SAE 15W40	95	15	24844000

ACCESSORIES

Equipment	Description	Part Number
Included	SAE 3 Housing	T1070150
Included	Flexible Coupling RBD 11"1/2	24840013
Optional	SAE 2 housing	24840010.1A
Optional	SAE 1 housing	24840010.1AA
Optional	Flexible coupling DS40 11"1/2 TM-265/A	24840020
Optional	Flexible coupling CFR 136 11"1/2 TM-265/A	19410070
Optional	Flexible coupling Centa CF-DS40 14"	24840005
Optional	Trolling valve kit TM-265/A	19112265
Optional	Companion flange pack TM-265/A	24840006K
Optional	Heat exchanger pack TM-265/A	24840600
Optional	Gearbox bracket TM-265/A	T1052002
Optional	Gearbox cable bracket pack	24800400
Optional	Power take off hydraulic pump TM-265/A	24845250
Optional	Electric control valve 12 V	24890055
Optional	Valve control electrical selector 24 V	24890056

TM-200B TECHNODRIVE

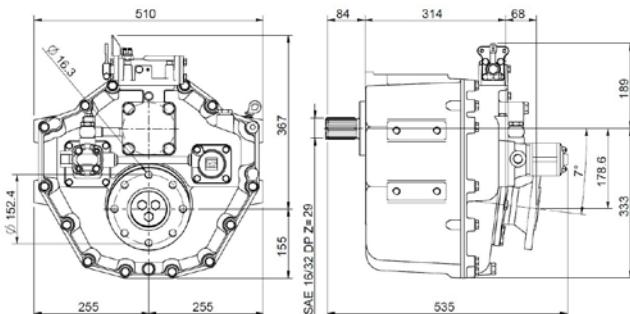


Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. °	Part Number
3.60:1	3.60:1	Hydraulic	Technical appendix	235	13,1	SAE 15W40	95	15	24836100
4.48:1	4.48:1	Hydraulic	Technical appendix	235	13,1	SAE 15W40	95	15	24837000

ACCESSORIES

Equipment	Description	Part Number
Included	SAE 3 Housing	24836010.1
Included	Flexible Coupling RBD 11"1/2	24836010.2
Optional	SAE 3 housing and 11" 1/2 RBD coupling	T1070002
Optional	SAE 1 housing and 11" 1/2 RBD coupling	T1070001
Optional	Heat exchanger pack TM-200B	24830600
Optional	gearbox cable bracket pack TM-200B	24830404

TM-1200A TECHNODRIVE

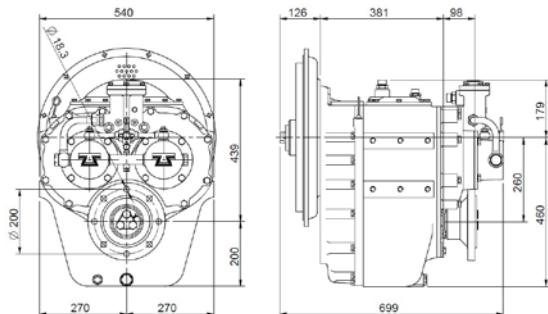


Forward	Reverse	Type	Output °	Max. power and speed	Weight	Oil cap.	Oil	Max. Temp	Max. Oper. °	Part Number
				(°)	(Kg)	(L)		(°C)	(°)	
1.44:1	1.44:1	Hydraulic	7	Technical appendix	115	6,5	SAE 15W40	95	15	24846000
2.00:1	2.00:1	Hydraulic	7	Technical appendix	115	6,5	SAE 15W40	95	15	24847000
2.30:1	2.30:1	Hydraulic	7	Technical appendix	115	6,5	SAE 15W40	95	15	24848000

ACCESSORIES

Equipment	Description	Part Number
Optional	Electric control valve 12 V	24846051
Optional	SAE 3 housing TM-1200A	24846021
Optional	SAE 2 housing TM-1200A	T1070179
Optional	SAE 1 housing TM-1200A	24840003
Optional	Flexible coupling CFR 136 11" 1/2	24846010
Optional	Flexible coupling Vulkan 2K 341 11" 1/2	TP10956A
Optional	Flexible coupling Centa CF-R 138 14"	24840004
Optional	Trolling valve kit TM-1200A	24846050
Optional	Power take off TM-1200A	T1068030
Optional	Heat exchanger kit	24846043
Optional	Gearbox support TM-1200A	T1052004
Optional	SAE A power take off 2 bolts 9T TM-1200A	T1051030
Optional	SAE B power take off 2 bolts 13T TM-1200A	T1051031
Optional	Electric control valve 12 V TM-1200A	T1026004
Optional	Electric control valve 24 V TM-1200A	T1026005
Optional	Gearbox cable bracket pack	24800400

TM-360 TECHNODRIVE



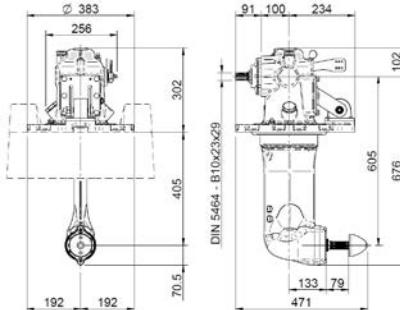
Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. °	Part Number
3.00:1	3.00:1	Hydraulic	Technical appendix	415	14	SAE 15W40	95	15	24826000
3.50:1	3.50:1	Hydraulic	Technical appendix	415	14	SAE 15W40	95	15	24827000
4.00:1	4.00:1	Hydraulic	Technical appendix	415	14	SAE 15W40	95	15	24828000
5.00:1	5.00:1	Hydraulic	Technical appendix	415	14	SAE 15W40	95	15	24829000

ACCESSORIES

Equipment	Description	Part Number
Optional	SAE 3 housing RBD 11" 1/2 TM-360 (TKN 860 Nm)	24826010
Optional	SAE 3 housing Vulkan 11" 1/2	T1070195
Optional	SAE 2 housing RBD 11" 1/2 TM-360 (TKN 860 Nm)	24826011
Optional	SAE 2 housing RBD 11" 1/2 (TKN 1700 Nm)	T1070134
Optional	SAE 1 housing RBD 14" (TKN 1400 Nm)	T1070104
Optional	SAE 1 housing Vulkan 14"	T1070139
Optional	SAE 1 housing TM-360	24820003
Optional	SAE 2 housing TM-360	T2011267
Optional	Flexible coupling DS45 14"	T4648057
Optional	Companion flange TM-360	24826013
Optional	Oil cooler kit TM-200B	24826020
Optional	Gearbox cable bracket pack	24800400
Optional	Gearbox support	24826007

SAIL DRIVE SP60 TECHNODRIVE

The SEAPROP 60 transmission is intended for use on recreational craft (displacement-hull craft used for recreation or amateur sail boats) or work craft (sail boats with a heavily-used displacement hull, intended for hire and professional activities). The body of the sail drive can be turned 180°. Refer to engines on which it can be mounted. The transmission is equipped with: 1)Case 2)Anti Vibration Mounts support 3)Retaining flange and water-tight membranes for applications over the hull.4)Water intake for cooling the engine.



Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil (°C)	Max. Temp (°)	Max. Oper. °	Part Number
2.15:1	2.15:1	Mechanical	Technical appendix	43	2,8	ATF	95	15	24813500A
2.38:1	2.38:1	Mechanical	Technical appendix	43	2,8	ATF	95	15	24813500A.2

ACCESSORIES FOR SAIL DRIVE SP60 TECHNODRIVE

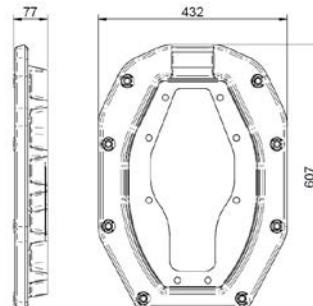
Additional accessories for optimum installation in order to get better performance from the Technodrive Sail Drive SP60 transmission.



Description	Part Number
External Rubber Gasket for SP60	24813508
Fiber Glass Bed SP60 (MINI-62/SK-60)	24813507
Fiber Glass Bed SPROP60 (MINI-17/26/29)	24813509
Fiber Glass Bed SPROP60 (MINI-33/44/55)	24813506
Kit Water Leak Sensor & Alarm SP60 12V	24813510
SP60 fixed propeller's ogive	24813502

TRANSOM ADAPTOR PLATE VOLVO TO MCM

Stern Drive adaptive plate, for vessels equipped with VOLVO inboard-outboard engines to be refurbished with Hyundai Seasall with MerCruiser transmission. This plate facilitates the VOLVO to MerCruiser installation work, avoiding the need to do fibreglassing with possible imperfections.



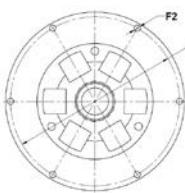
Description	Part Number
Stern Volvo Adaptation Carcase	27101001

FLEXIBLE COUPLING TYPE A

Type A Flexible Couplings allows the torque transmission from the marine engine to the gearbox cushioning the heavy torsional vibrations produced at a low engine speeds.



TYPE A



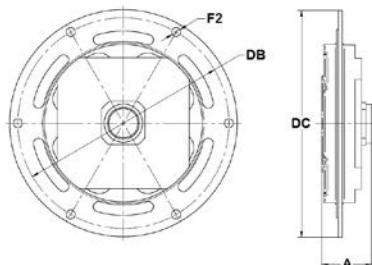
Ribbed type	DC (mm)	DB (mm)	F2 (mm)	A (mm)	SAE	Max. Torque (Nm)	Part Number
10X23X29 DIN 5464	155	142	8X6,5	23	-	100	13110040
10x23x29 DIN 5464	215,9	200	6x8,5	23	6"1/2	100	13810046
10X23X29 DIN 5464	185	175	6X6,5	23	-	130	14710070
10X23X29 DIN 5464	185	175	6X6,5	28	-	100	17010070
10x23x29 DIN 5464	263,5	244,5	6x10,5	23	8"	150	17110070
10X23X29 DIN 5464	185	175	6X6,5	23	-	100	17310070
10x23x29 DIN 5464	352,4	333,4	6x10,5	23	11"1/2	115	17410070
10X23X29 DIN 5464	352,4	333,4	8X10,5	35	11"1/2	-	17410074
10X23X29 DIN 5464	263,5	244,5	6X10,5	23	8"	210	18210070
10X23X29 DIN 5464	220	185	6X10,5	31	-	200	1A010070
SAE 1"3/4 Z=10	155	142	8X8,5	23	-	100	13112004
SAE 1"3/4 Z=10	155	142	8X6,5	17,5	-	100	13510010
SAE 1"3/4 Z=10	155	142	8X10,5	13	-	100	13710010
SAE 20/40 DP Z=26	300	262	6X8,5	22,5	-	75	14910010
SAE 20/40 DP Z=26	263,5	244,5	6x10,5	25	8"	75	14910010.1
SAE 20/40 DP Z=26	270	248	6X8,5	22,5	-	75	15310050
SAE 20/40 DP Z=26	352,4	333,4	8X11	25	11"1/2	-	17410040
SAE 20/40 DP Z=26	310	290	6X8	28	-	PARA HYUNDAI S250P	H001065S301
SAE 20/40 DP Z=26	280	256	6X8	28	-	PARA HYUNDAI D170P	H001067D301

FLEXIBLE COUPLING TYPE B

Type B elastic couplings are installed between the engine and the reducing valve to buffer unexpected load variations that cause high torsional vibrations.



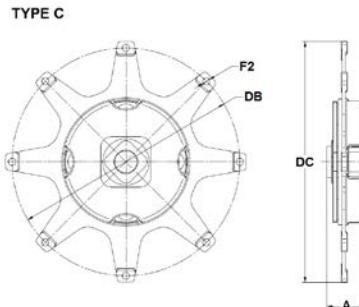
TYPE B



Ribbed type	DC (mm)	DB (mm)	F2 (mm)	A (mm)	SAE	Max. Pleasure tor. (Nm)	Max. Mid tor. (Nm)	Max. Heavy duty tor. (Nm)	Part Number
SAE 1" Z=10	284	268	6x9	45	10"	650	500	400	18010170
SAE 1" Z=10	263,5	244,5	6x11	44	8"	650	500	400	18310170
SAE 20/40 DP Z=26	280	256	6X8,5	57	-	PARA HYUNDAI D170P	PARA HYUNDAI D170P	PARA HYUNDAI D170P	10010170
SAE 20/40 DP Z=26	306	290	6X8,5	60	-	PARA HYUNDAI S250P	PARA HYUNDAI S250P	PARA HYUNDAI S250P	10110170
SAE 20/40 DP Z=26	263,5	244,5	6x10,5	39	8"	258	200	150	17110071
SAE 20/40 DP Z=26	215,9	200	6x9	39	6,5"	258	200	150	17110079
SAE 20/40 DP Z=26	215,9	200	6x9	32	6"1/2	150	120	100	17210071
SAE 20/40 DP Z=26	216	200	6X9	36	-	258	200	150	17310071
SAE 20/40 DP Z=26	284	268	6x9	44	10"	350	500	400	18010171
SAE 20/40 DP Z=26	263,5	244,5	6x11	44	8"	650	500	400	18310171
SAE 20/40 DP Z=26	263,5	244,5	6x10,5	58	8"	700	520	420	18510170

FLEXIBLE COUPLING TYPE C

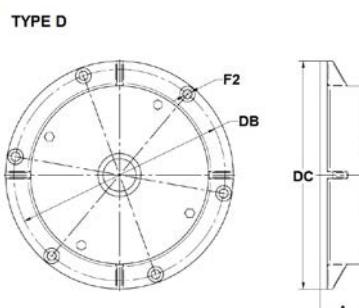
Type C Flexible Couplings allows the torque transmission from the engine to the gearbox's variations.



Ribbed type	DC (mm)	DB (mm)	F2 (mm)	A (mm)	SAE	Max. Pleasure tor. (Nm)	Max. Mid tor. (Nm)	Max. Heavy duty tor. (Nm)	Part Number
SAE 1" Z=10	352,4	333,4	8x11	50,5	11"1/2	700	520	420	16510172
SAE 12/24 DP Z=14	352,4	333,4	8x11	48,7	11"1/2	400	400	400	17510243.2
SAE 12/24 DP Z=26	352,4	333,4	8x11	60	11"1/2	1000	800	600	16710070
SAE 20/40 DP Z=26	352,4	333,4	8x10,5	57	11"1/2	700	520	420	16510170
SAE 24/48 DP Z=17	352,4	333,4	8x11	57	11"1/2	700	520	420	16510171

FLEXIBLE COUPLING TYPE D

Type D Flexible Couplings are installed between the marine engine flywheel and the gearbox it allows the torque's variations.



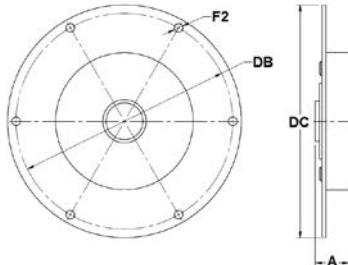
Ribbed type	DC (mm)	DB (mm)	F2 (mm)	A (mm)	SAE	Max. Pleasure tor. (Nm)	Max. Mid tor. (Nm)	Max. Heavy duty tor. (Nm)	Part Number
SAE 20/40 DP Z=26	263,5	244,5	6x10,5	51,5	8"	700	560	490	18310172

FLEXIBLE COUPLING TYPE E

Type B Flexible Couplings allows the torque transmission from the engine to the gearbox's variations.



TYPE E



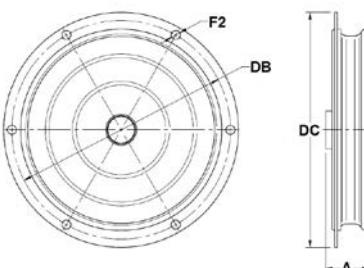
Ribbed type	DC (mm)	DB (mm)	F2 (mm)	A (mm)	SAE	Max. Torque (Nm)	Part Number
10x23x29 DIN 5464	215,9	200	6x9	32	6"1/2	135	17210076
10X23X29 DIN 5464	185	175	6X6,3	30,7	-	135	17210077
10x23x29 DIN 5464	215,9	200	6x9	32	6"1/2	135	17210079
SAE 1" Z=10	215,9	200	6x8	32	6"1/2	135	17010075
SAE 1" Z=10	263,5	244,5	6x9,5	35	8"	135	17110073
SAE 20/40 DP Z=26	215,9	200	6x8	31	6"1/2	135	17010074
SAE 24/48 DP Z=17	215,9	200	6x9	32	6"1/2	135	17210072
SAE 24/48 DP Z=17	215,9	200	6x9	32	6"1/2	135	17210078

FLEXIBLE COUPLING TYPE F

Type F Flexible Couplings allows the torque transmission and cushion is variationsn between the engine flywheeland the gearbox.



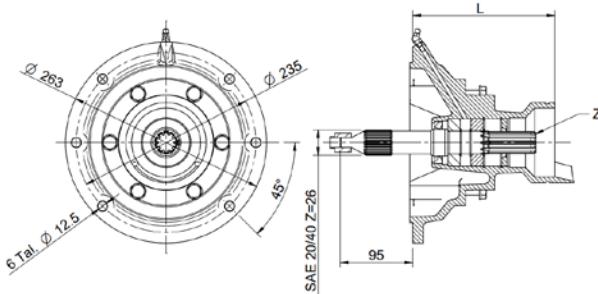
TYPE F



Ribbed type	DC (mm)	DB (mm)	F2 (mm)	A (mm)	SAE	Max. Torque (Nm)	Part Number
SAE 24/48 DP Z=20	175	163	6X6,8	33	-	240	13810042

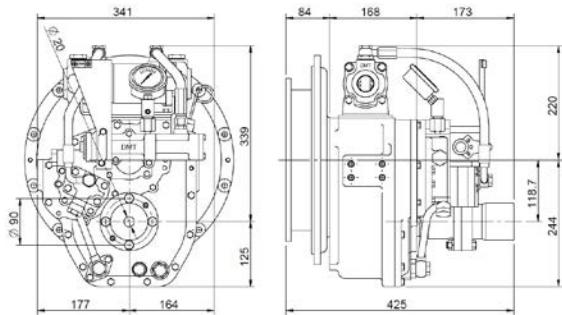
VOLVO Z DRIVE ADAPTER

This kit has been specially designed to adapt Hyundai SeaSall engines to Volvo 270, 280 and 290 stern-drives.



Engine	Tooth num.	Kit	L (mm)	Part Number
D170P	10	ZDRIVE VOLVO 270/280/290 SHORT	186	10010100.1R
R200P	10	ZDRIVE VOLVO 270/280/290 SHORT	186	10610100R
R200P	26	ZDRIVE VOLVO 280/290 SHORT	186	10610110.1R
R200P	26	ZDRIVE VOLVO 280/290 LONG	286	10610113.1R
S250P/S270P	26	ZDRIVE VOLVO 280/290 SHORT	186	10110110.1R
S250P/S270P	10	ZDRIVE VOLVO 280/290 SHORT	186	10110110.3R
S250P/S270P	26	ZDRIVE VOLVO 280/290 LONG	286	10110113.1R
U125P	10	ZDRIVE VOLVO 270/280/290 SHORT	186	10310100R
U125P	26	ZDRIVE VOLVO 280/290 SHORT	186	10310110.1R
U125P	26	ZDRIVE VOLVO 280/290 LONG	286	10310113.1R

DMT-25AL



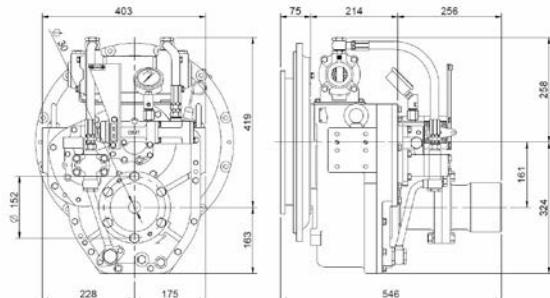
Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Part Number
1.64:1	1.64:1	Hydraulic	Technical appendix	77	2	SAE 30	90	243D2000
2.07:1	2.07:1	Hydraulic	Technical appendix	77	2	SAE 30	90	243D3000
2.52:1	2.52:1	Hydraulic	Technical appendix	77	2	SAE 30	90	243D4000
2.96:1	2.96:1	Hydraulic	Technical appendix	77	2	SAE 30	90	243D5000
3.32:1	3.32:1	Hydraulic	Technical appendix	77	2	SAE 30	90	243DA000

ACCESSORIES

Equipment	Description	Part Number
Included	Heat exchanger kit	243D5058
Included	Companion flange transmission	T025307L
Included	Bracket engine control	243B0567
Included	SAE 5 bell housing and 7" 1/2 rubber block coupling	D575RC
Included	SAE 4 bell housing and 10" rubber block coupling	D410RC
Included	SAE 4 bell housing and 7" 1/2 rubber block coupling	D475RC
Included	SAE 3 bell housing and 11" 1/2 rubber block coupling	D3115RC
Optional	Mechanical trolling valve	D140500T
Optional	Electric selector valve 12 V	D200570G
Optional	Electric selector valve 24 V	D200560G
Optional	Electric valve 12 V and trolling	D140590G
Optional	Electric valve 24 V and trolling	D140580G

Note: The type of bell housing and coupling has to be ordered with the transmission.
Only one of them is included.

DMT-90A



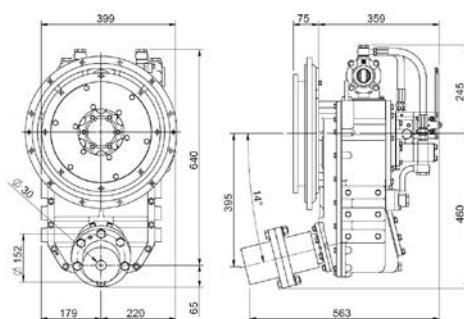
Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Part Number
1.61:1	1.61:1	Hydraulic	Technical appendix	159	3,5	SAE 30	90	243L2000
2.06:1	2.06:1	Hydraulic	Technical appendix	159	3,5	SAE 30	90	243L3000
2.45:1	2.45:1	Hydraulic	Technical appendix	159	3,5	SAE 30	90	243L4000
2.82:1	2.82:1	Hydraulic	Technical appendix	159	3,5	SAE 30	90	243LF000
3.12:1	3.12:1	Hydraulic	Technical appendix	159	3,5	SAE 30	90	243L5000
3.46:1	3.46:1	Hydraulic	Technical appendix	159	3,5	SAE 30	90	243LA000

ACCESSORIES

Equipment	Description	Part Number
Included	Heat exchanger kit	43306020
Included	Companion flange transmission	D11317D
Included	Bracket engine control	243B0567
Included	SAE 4 bell housing and 10" rubber block coupling	D410RC
Included	SAE 3 bell housing and 11" 1/2 dual stage coupling	D3115DC
Included	SAE 2 bell housing and 11" 1/2 dual stage coupling	D2115DC
Included	SAE 1 bell housing and 14" dual stage coupling	D114DC
Optional	Mechanical trolling valve	D140500T
Optional	Electric selector valve 12 V	D200570G
Optional	Electric selector valve 24 V	D200560G
Optional	Electric valve 12 V and trolling	D140590G
Optional	Electric valve 24 V and trolling	D140580G

Note: The type of bell housing and coupling has to be ordered with the transmission.
Only one of them is included.

DMT-100IV



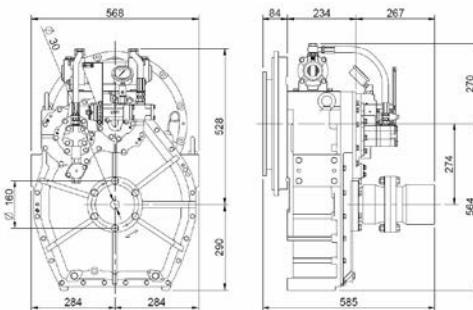
Forward	Reverse	Type	Output °	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Part Number
1.21:1	1.21:1	Hydraulic	14	Technical appendix	150	7	SAE 30	90	24331000
1.54:1	1.54:1	Hydraulic	14	Technical appendix	150	7	SAE 30	90	24332000
1.84:1	1.84:1	Hydraulic	14	Technical appendix	150	7	SAE 30	90	2433E000
2.12:1	2.12:1	Hydraulic	14	Technical appendix	150	7	SAE 30	90	24302005
2.12:1	2.12:1	Hydraulic	14	Technical appendix	150	7	SAE 30	90	24333000
2.52:1	2.52:1	Hydraulic	14	Technical appendix	150	7	SAE 30	90	24334000

ACCESSORIES

Equipment	Description	Part Number
Included	Heat exchanger kit	43306020
Included	Companion flange transmission	43300049
Included	Bracket engine control	243B0567
Included	SAE 3 bell housing and 11" 1/2 dual stage coupling	D3115DC
Included	SAE 2 bell housing and 11" 1/2 dual stage coupling	D2115DC
Optional	Mechanical trolling valve	D140500T
Optional	Electric selector valve 12 V	D200570G
Optional	Electric selector valve 24 V	D200560G
Optional	Electric valve 12 V and trolling	D140590G
Optional	Electric valve 24 V and trolling	D140580G

Note: The type of bell housing and coupling has to be ordered with the transmission.
Only one of them is included.

DMT-100HL



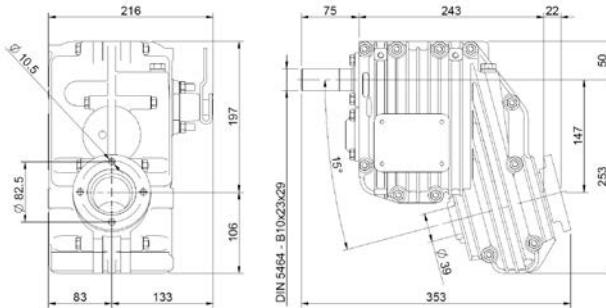
Forward	Reverse	Type	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Part Number
4.07:1	4.07:1	Hydraulic	Technical appendix	263	9,5	SAE 30	90	24336000
4.50:1	4.50:1	Hydraulic	Technical appendix	263	9,5	SAE 30	90	24337000
4.95:1	4.95:1	Hydraulic	Technical appendix	263	9,5	SAE 30	90	24338000
5.29:1	5.29:1	Hydraulic	Technical appendix	263	9,5	SAE 30	90	24339000
5.95:1	5.95:1	Hydraulic	Technical appendix	263	9,5	SAE 30	90	2433B000

ACCESSORIES

Equipment	Description	Part Number
Included	Heat exchanger kit	43306020
Included	Companion flange transmission	D100310
Included	Bracket engine control	243B0567
Included	SAE 3 bell housing and 11" 1/2 dual stage coupling	D3115DC
Included	SAE 2 bell housing and 11" 1/2 dual stage coupling	D2115DC
Included	SAE 1 bell housing and 14" dual stage coupling	D114DC
Optional	Mechanical trolling valve	D140500T
Optional	Electric selector valve 12 V	D200570G
Optional	Electric selector valve 24 V	D200560G
Optional	Electric valve 12 V and trolling	D140590G
Optional	Electric valve 24 V and trolling	D140580G

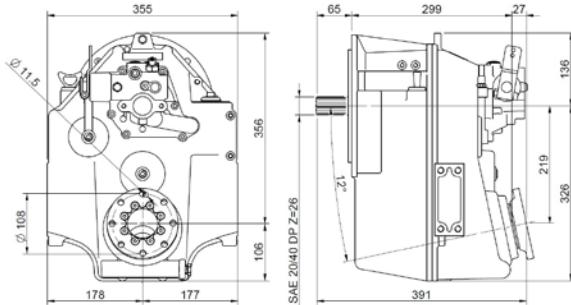
Note: The type of bell housing and coupling has to be ordered with the transmission.
Only one of them is included.

ZF 15 MIV



Forward	Reverse	Type	Output ° (°)	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. ° (°)	Part Number
2.13:1	2.22:1	Mechanical	15	Technical appendix	20	1	ATF	80	15	24613400

ZF 68 IV



Forward	Reverse	Type	Output ° (°)	Max. power and speed	Weight (Kg)	Oil cap. (L)	Oil	Max. Temp (°C)	Max. Oper. ° (°)	Part Number
1.29:1	1.29:1	Hydraulic	12	Technical appendix	62	4,4	ATF	80	20	24651000
1.56:1	1.57:1	Hydraulic	12	Technical appendix	62	4,4	ATF	80	20	24652400
2.00:1	2.00:1	Hydraulic	12	Technical appendix	62	4,4	ATF	80	20	24653400
2.48:1	2.53:1	Hydraulic	12	Technical appendix	62	4,4	ATF	80	20	24654400



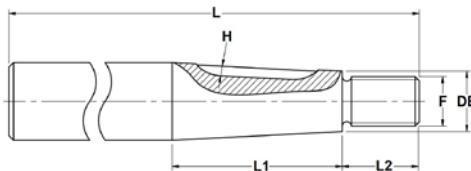


SHAFT LINES

SHAFT PACKS

DIAMETER FROM 25 TO 50 MM SHAFT PACK

AISI-329 H9 stainless steel marine shafts, thanks to their high quality material, have high durability and good resistance. Shafts are machined on the end of the propeller and include, propeller key, nut with anode and safety washer. Shafts are available in diameters from 25 up to 50 mm and 1:10 taper. AISI 329 steel offers mechanical properties that are superior to those of standard steel, allowing a smaller-diameter shaft capable of withstanding greater stresses. This is an advantage for ships that requires a bigger engine with more power without sacrificing the existing stern tube and propeller strut. This is a major saving for the repowering of the boat.

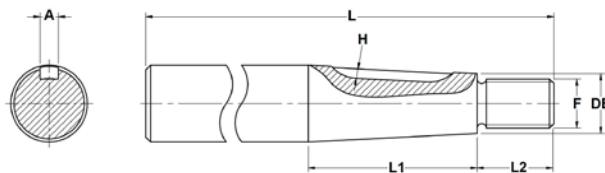


Ø Shaft (mm)	DB (mm)	A (mm)	F (mm)	H (mm)	L1 (mm)	L2 (mm)	Thread type	Part Number
25	19,5	6	M16X1,5	3,5	55	25	LH	40325120AM
25	19,5	6	M16X1,5	3,5	55	25	LH	40325160AM
25	19,5	6	M16X1,5	3,5	55	25	LH	40325200AM
25	19,5	6	M16X1,5	3,5	55	25	LH	40325240AM
25	19,5	6	M16X1,5	3,5	55	25	LH	40325300AM
25	19,5	6	M16X1,5	3,5	55	25	LH	40325400AM
25	19,5	6	M16X1,5	3,5	55	25	LH	40325600AM
25	19,5	6	M16X1,5	3,5	55	25	RH	40425120AM
25	19,5	6	M16X1,5	4	55	25	RH	40425160AM
25	19,5	6	M16X1,5	4	55	25	RH	40425200AM
25	19,5	14	M16X1,5	4	55	25	RH	40425240AM
25	19,5	14	M16X1,5	4	55	25	RH	40425300AM
25	19,5	14	M16X1,5	4	55	25	RH	40425400AM
25	19,5	14	M16X1,5	4	55	25	RH	40425600AM
30	22,7	8	M20X1,5	4	73	25	LH	40330120AM
30	22,7	8	M20X1,5	4	73	25	LH	40330160AM
30	22,7	8	M20X1,5	4	73	25	LH	40330200AM
30	22,7	8	M20X1,5	4	73	25	LH	40330240AM
30	22,7	8	M20X1,5	4	73	25	LH	40330300AM
30	22,7	8	M20X1,5	4	73	25	LH	40330400AM
30	22,7	8	M20X1,5	4	73	25	LH	40330600AM
30	22,7	8	M20X1,5	4	73	25	RH	40430120AM
30	22,7	8	M20X1,5	4	73	25	RH	40430160AM
30	22,7	8	M20X1,5	4	73	25	RH	40430200AM
30	22,7	8	M20X1,5	4	73	25	RH	40430240AM
30	22,7	8	M20X1,5	4	73	25	RH	40430300AM
30	22,7	8	M20X1,5	4	73	25	RH	40430400AM
30	22,7	8	M20X1,5	4	73	25	RH	40430600AM
35	26,6	10	M24X2	5	84	32	LH	40335120AM
35	26,6	10	M24X2	5	84	32	LH	40335160AM
35	26,6	10	M24X2	5	84	32	LH	40335200AM
35	26,6	10	M24X2	5	84	32	LH	40335240AM
35	26,6	10	M24X2	5	84	32	LH	40335300AM
35	26,6	10	M24X2	5	84	32	LH	40335400AM
35	26,6	10	M24X2	5	84	32	LH	40335600AM
35	26,6	10	M24X2	5	84	32	RH	40435120AM
35	26,6	10	M24X2	5	84	32	RH	40435160AM
35	26,6	10	M24X2	5	84	32	RH	40435200AM
35	26,6	10	M24X2	5	84	32	RH	40435240AM
35	26,6	10	M24X2	5	84	32	RH	40435300AM
35	26,6	10	M24X2	5	84	32	RH	40435400AM
35	26,6	10	M24X2	5	84	32	RH	40435600AM

Ø Shaft (mm)	DB (mm)	A (mm)	F	H (mm)	L1 (mm)	L2 (mm)	Thread type	Part Number
40	30,6	12	M24X2	5	94	32	LH	40340160AM
40	30,6	12	M24X2	5	94	32	LH	40340200AM
40	30,6	12	M24X2	5	94	32	LH	40340240AM
40	30,6	12	M24X2	5	94	32	LH	40340300AM
40	30,6	12	M24X2	5	94	32	LH	40340400AM
40	30,6	12	M24X2	5	94	32	LH	40340600AM
40	30,6	12	M24X2	5	94	32	RH	40440160AM
40	30,6	12	M24X2	5	94	32	RH	40440200AM
40	30,6	12	M24X2	5	94	32	RH	40440240AM
40	30,6	12	M24X2	5	94	32	RH	40440300AM
40	30,6	12	M24X2	5	94	32	RH	40440400AM
40	30,6	12	M24X2	5	94	32	RH	40440600AM
45	34,6	14	M30X2	5,5	104	40	LH	40345160AM
45	34,6	14	M30X2	5,5	104	40	LH	40345200AM
45	34,6	14	M30X2	5,5	104	40	LH	40345240AM
45	34,6	14	M30X2	5,5	104	40	LH	40345300AM
45	34,6	14	M30X2	5,5	104	40	LH	40345400AM
45	34,6	14	M30X2	5,5	104	40	LH	40345600AM
45	34,6	14	M30X2	6	104	40	RH	40445160AM
45	34,6	14	M30X2	6	104	40	RH	40445200AM
45	34,6	14	M30X2	6	104	40	RH	40445240AM
45	34,6	14	M30X2	5,5	104	40	RH	40445300AM
45	34,6	14	M30X2	5,5	104	40	RH	40445400AM
45	34,6	14	M30X2	5,5	104	40	RH	40445600AM
50	39	14	M36X3	5,5	110	40	LH	40350200AM
50	39	14	M36X3	5,5	110	40	LH	40350300AM
50	39	14	M36X3	5,5	110	40	LH	40350400AM
50	39	14	M36X3	5,5	110	40	LH	40350600AM
50	39	14	M36X3	5,5	110	40	RH	40450200AM
50	39	14	M36X3	5,5	110	40	RH	40450300AM
50	39	14	M36X3	5,5	110	40	RH	40450400AM
50	39	14	M36X3	5,5	110	40	RH	40450600AM

DIAMETER FROM 60 TO 100 MM SHAFT PACK

The AISI-329 stainless steel machine shafts are machined at both ends and include a cotter pin, nut and washer, with a 1:10 conicity and available in diameters of 60 to 100 mm. The good properties of AISI-329 stainless steel enables the marine shafts to withstand extremely high stresses with small diameters. These features make them a great option if you want to keep the old stern tube and shaft brackets when increasing the power of the marine engine, with significant economic savings.

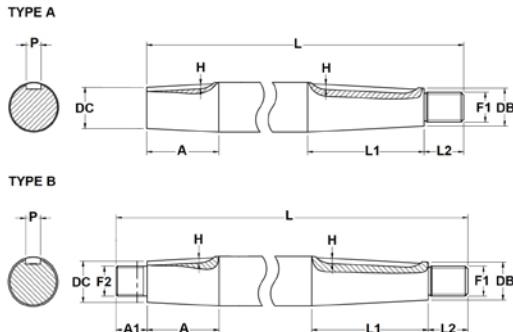


Ø Shaft (mm)	DB (mm)	A (mm)	F (mm)	H (mm)	L1 (mm)	L2 (mm)	Thread type	Part Number
60	47	18	M42X3	7	130	50	LH	40360200AM
60	47	18	M42X3	7	130	50	LH	40360300AM
60	47	18	M42X3	7	130	50	LH	40360400AM
60	47	18	M42X3	7	130	50	LH	40360600AM
60	47	18	M42X3	7	130	50	RH	40460200AM
60	47	18	M42X3	7	130	50	RH	40460300AM
60	47	18	M42X3	7	130	50	RH	40460400AM
60	47	18	M42X3	7	130	50	RH	40460600AM
65	51	18	M42X3	7	140	50	LH	40365200AM
65	51	18	M42X3	7	140	50	LH	40365300AM
65	51	18	M42X3	7	140	50	LH	40365400AM
65	51	18	M42X3	7	140	50	LH	40365600AM
65	51	18	M42X3	7	140	50	RH	40465200AM
65	51	18	M42X3	7	140	50	RH	40465300AM
65	51	18	M42X3	7	140	50	RH	40465400AM
65	51	18	M42X3	7	140	50	RH	40465600AM
70	55	20	M45X3	7,5	150	60	LH	40370200AM
70	55	20	M45X3	7,5	150	60	LH	40370300AM
70	55	20	M45X3	7,5	150	60	LH	40370400AM
70	55	20	M45X3	7,5	150	60	LH	40370600AM
70	55	20	M45X3	7,5	150	60	RH	40470200AM
70	55	20	M45X3	7,5	150	60	RH	40470300AM
70	55	20	M45X3	7,5	150	60	RH	40470400AM
70	55	20	M45X3	7,5	150	60	RH	40470600AM
75	58,5	20	M45X3	7,5	165	60	LH	40375200AM
75	58,5	20	M45X3	7,5	165	60	LH	40375300AM
75	58,5	20	M45X3	7,5	165	60	LH	40375400AM
75	58,5	20	M45X3	7,5	165	60	LH	40375600AM
75	58,5	20	M45X3	7,5	165	60	RH	40475200AM
75	58,5	20	M45X3	7,5	165	60	RH	40475300AM
75	58,5	20	M45X3	7,5	165	60	RH	40475400AM
75	58,5	20	M45X3	7,5	165	60	RH	40475600AM

Ø Shaft (mm)	DB (mm)	A (mm)	F (mm)	H (mm)	L1 (mm)	L2 (mm)	Thread type	Part Number
80	62,5	22	M56X4	9	175	70	LH	40380200AM
80	62,5	22	M56X4	9	175	70	LH	40380300AM
80	62,5	22	M56X4	9	175	70	LH	40380400AM
80	62,5	22	M56X4	9	175	70	LH	40380600AM
80	62,5	22	M56X4	9	175	70	RH	40480200AM
80	62,5	22	M56X4	9	175	70	RH	40480300AM
80	62,5	22	M56X4	9	175	70	RH	40480400AM
80	62,5	22	M56X4	9	175	70	RH	40480600AM
85	66,5	22	M56X4	9	185	70	LH	40385200AM
85	66,5	22	M56X4	9	185	70	LH	40385300AM
85	66,5	22	M56X4	9	185	70	LH	40385400AM
85	66,5	22	M56X4	9	185	70	LH	40385600AM
85	66,5	22	M56X4	9	185	70	RH	40485200AM
85	66,5	22	M56X4	9	185	70	RH	40485300AM
85	66,5	22	M56X4	9	185	70	RH	40485400AM
85	66,5	22	M56X4	9	185	70	RH	40485600AM
90	71	25	M64X4	9	190	75	LH	40390200AM
90	71	25	M64X4	9	190	75	LH	40390300AM
90	71	25	M64X4	9	190	75	LH	40390400AM
90	71	25	M64X4	9	190	75	LH	40390600AM
90	71	25	M64X4	9	190	75	RH	40490200AM
90	71	25	M64X4	9	190	75	RH	40490300AM
90	71	25	M64X4	9	190	75	RH	40490400AM
90	71	25	M64X4	9	190	75	RH	40490600AM
100	78,5	28	M64X4	10	215	85	LH	40399200AM
100	78,5	28	M64X4	10	215	85	LH	40399300AM
100	78,5	28	M64X4	10	215	85	LH	40399400AM
100	78,5	28	M64X4	10	215	85	LH	40399600AM
100	78,5	28	M64X4	10	215	85	RH	40499200AM
100	78,5	28	M64X4	10	215	85	RH	40499300AM
100	78,5	28	M64X4	10	215	85	RH	40499400AM
100	78,5	28	M64X4	10	215	85	RH	40499600AM

DIAMETER FROM 25 TO 50 MM DOUBLE TAPERED SHAFT PACK

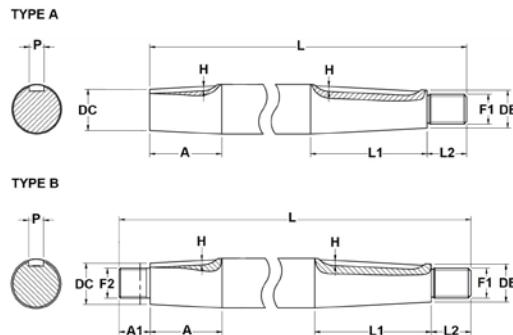
Ground standard or AISI-329 stainless steel shafts machined on both ends, with key, nut and safety washer. Taper 1:10 available in diameters from 25 up to 50 mm. AISI 329 stainless steel is capable of withstanding greater stresses allowing smaller diameter shaft thanks to its mechanical properties. This can be translated into a major saving for shipbuilders when they want to install powerful engines maintaining the original Sterntube and propeller strut.



Ø Shaft (mm)	Type	L (mm)	F1 (mm)	L2 (mm)	L1 (mm)	A (mm)	P (mm)	H (mm)	DB (mm)	DC (mm)	F2 (mm)	A1 (mm)	Part Number
25	B	2000	M16X1,5	25	55	43	6	3,5	19,5	20,7	M16X1,5	25	40925200AM
25	B	3000	M16X1,5	25	55	43	6	3,5	19,5	20,7	M16X1,5	25	40925300AM
25	B	4000	M16X1,5	25	55	43	6	3,5	19,5	20,7	M16X1,5	25	40925400AM
25	B	6000	M16X1,5	25	55	43	6	3,5	19,5	20,7	M16X1,5	25	40925600AM
30	B	2000	M20X1,5	25	73	43	8	4	22,7	25,7	M20X1,5	25	40930200AM
30	B	3000	M20X1,5	25	73	43	8	4	22,7	25,7	M20X1,5	25	40930300AM
30	B	4000	M20X1,5	25	73	43	8	4	22,7	25,7	M20X1,5	25	40930400AM
30	B	6000	M20X1,5	25	73	43	8	4	22,7	25,7	M20X1,5	25	40930600AM
35	B	2000	M24X2	32	84	58	10	5	26,6	29,2	M24X2	25	40935200AM
35	B	3000	M24X2	32	84	58	10	5	26,6	29,2	M24X2	25	40935300AM
35	B	4000	M24X2	32	84	58	10	5	26,6	29,2	M24X2	25	40935400AM
35	B	6000	M24X2	32	84	58	10	5	26,6	29,2	M24X2	25	40935600AM
40	B	2000	M24X2	32	94	58	12	5	30,6	34,2	M24X2	25	40940200AM
40	B	3000	M24X2	32	94	58	12	5	30,6	34,2	M24X2	25	40940300AM
40	B	4000	M24X2	32	94	58	12	5	30,6	34,2	M24X2	25	40940400AM
40	B	6000	M24X2	32	94	58	12	5	30,6	34,2	M24X2	25	40940600AM
45	B	2000	M30X2	40	104	58	14	5,5	34,6	39,2	M27X2	27	40945200AM
45	B	3000	M30X2	40	104	58	14	5,5	34,6	39,2	M27X2	27	40945300AM
45	B	4000	M30X2	40	104	58	14	5,5	34,6	39,2	M27X2	27	40945400AM
45	B	6000	M30X2		58	14	5,5	34,6	39,2	M27X2	27	40945600AM	
50	A	2000	M36X3	40	110	58	14	5,5	39	44,2	-	0	40950200AM
50	A	3000	M36X3	40	110	58	14	5,5	39	44,2	-	0	40950300AM
50	A	4000	M36X3	40	110	58	14	5,5	39	44,2	-	0	40950400AM
50	A	6000	M36X3	40	110	58	14	5,5	39	44,2	-	0	40950600AM

DIAMETER FROM 60 TO 100 MM DOUBLE TAPARED SHAFT PACK

The AISI-329 stainless steel machine shafts are machined at both ends and include a cotter pin, nut and washer, with a 1:10 conicity and available in diameters of 60 to 100 mm. The good properties of AISI-329 stainless steel enables the marine shafts to withstand extremely high stresses with small diameters. These features make them a great option if you want to keep the old stern tube and shaft brackets when increasing the power of the marine engine, with significant economic savings.

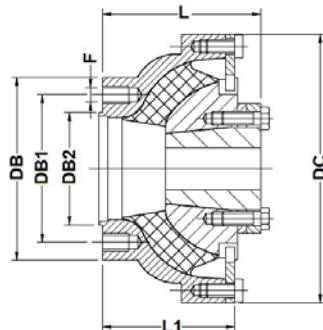


Ø Shaft (mm)	Type	L (mm)	F1 (mm)	L2 (mm)	L1 (mm)	A (mm)	P (mm)	H (mm)	DB (mm)	DC (mm)	F2 (mm)	A1 (mm)	Part Number
60	A	2000	M42X3	50	130	65	18	7	47	53,5	-	-	40960200AM
60	A	3000	M42X3	50	130	65	18	7	47	53,5	-	-	40960300AM
60	A	4000	M42X3	50	130	65	18	7	47	53,5	-	-	40960400AM
60	A	6000	M42X3	50	130	65	18	7	47	53,5	-	-	40960600AM
65	A	2000	M42X3	50	140	72	18	7	51	57,5	-	-	40965200AM
65	A	3000	M42X3	50	140	72	18	7	51	57,5	-	-	40965300AM
65	A	4000	M42X3	50	140	72	18	7	51	57,5	-	-	40965400AM
65	A	6000	M42X3	50	140	72	18	7	51	57,5	-	-	40965600AM
70	A	2000	M45X3	60	150	80	20	7,5	55	62	-	-	40970200AM
70	A	3000	M45X3	60	150	80	20	7,5	55	62	-	-	40970300AM
70	A	4000	M45X3	60	150	80	20	7,5	55	62	-	-	40970400AM
70	A	6000	M45X3	60	150	80	20	7,5	55	62	-	-	40970600AM
75	A	2000	M45X3	60	165	85	20	7,5	58,5	66,5	-	-	40975200AM
75	A	3000	M45X3	60	165	85	20	7,5	58,5	66,5	-	-	40975300AM
75	A	4000	M45X3	60	165	85	20	7,5	58,5	66,5	-	-	40975400AM
75	A	6000	M45X3	60	165	85	20	7,5	58,5	66,5	-	-	40975600AM
80	A	2000	M56X4	70	175	95	22	9	62,5	70,5	-	-	40980200AM
80	A	3000	M56X4	70	175	95	22	9	62,5	70,5	-	-	40980300AM
80	A	4000	M56X4	70	175	95	22	9	62,5	70,5	-	-	40980400AM
80	A	6000	M56X4	70	175	95	22	9	62,5	70,5	-	-	40980600AM
85	A	2000	M56X4	70	185	105	22	9	66,5	74,5	-	-	40985200AM
85	A	3000	M56X4	70	185	105	22	9	66,5	74,5	-	-	40985300AM
85	A	4000	M56X4	70	185	105	22	9	66,5	74,5	-	-	40985400AM
85	A	6000	M56X4	70	185	105	22	9	66,5	74,5	-	-	40985600AM
90	A	2000	M64X4	75	190	135	25	9	71	76,5	-	-	40990200AM
90	A	3000	M64X4	75	190	135	25	9	71	76,5	-	-	40990300AM
90	A	4000	M64X4	75	190	135	25	9	71	76,5	-	-	40990400AM
90	A	6000	M64X4	75	190	135	25	9	71	76,5	-	-	40990600AM
100	A	2000	M64X4	85	215	165	28	10	78,5	83,5	-	-	40999200AM
100	A	3000	M64X4	85	215	165	28	10	78,5	83,5	-	-	40999300AM
100	A	4000	M64X4	85	215	165	28	10	78,5	83,5	-	-	40999400AM
100	A	6000	M64X4	85	215	165	28	10	78,5	83,5	-	-	40999600AM

SHAFTS AND PROPELLERS ACCESSORIES

CENTAFLEX FLEXIBLE COUPLING

Flexible couplings solve problems due to alignment and centring of shafts. Moreover, flexible couplings facilitate assembly by providing a tolerance of 2° when aligning and centring the shaft over the gearbox fixing plate. (FC = power hp x 100 rpm on shaft).



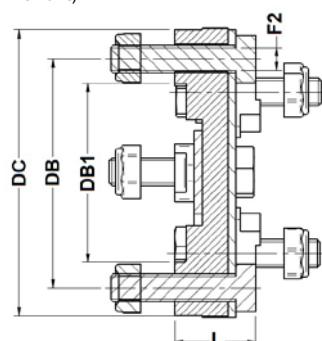
SELECTION EXAMPLE

$P = \text{ENGINE POWER} = 40 \text{ HP}$
 $N = \text{maximum engine rpm} = 3000 \text{ rpm}$
 $R = \text{Gearbox Reduction Ratio} = 2:1 = 2$
 $N' = \text{Shaft Revolutions} = N / R = 3000 / 2 = 1500 \text{ rpm}$
 $P = \text{Coupling - Permissible Power} P = \frac{N}{100} \times f \rightarrow P_c > P$
 Our engine has an SMI-R3 (ØD=63,5) gearbox, so we look in the catalogue for a coupling that fits the gearbox's flange. We choose the 400.25.200 and determine its admissible power P_c .
 $P_c = (1500 \times 100) \times 2,8 = 42 \text{ CV} \geq 40 \text{ CV} \rightarrow \text{correct}$

Ø Shaft (mm)	DB (mm)	F (mm)	DB1 (mm)	DB2 (mm)	L1 (mm)	L (mm)	DC (mm)	FC	Part Number
25	102	M10	82,5	63,5	75	95	150	2,8	40025200
30	102	M10	82,5	63,5	75	95	150	2,8	40030200
30	127	M10	82,5	63,5	97	125	195	5,6	40030210
35	127	M10	82,5	63,5	97	125	195	5,6	40035200

R&D FLEXIBLE COUPLING

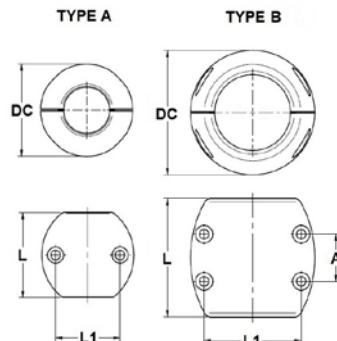
Flexible couplings are made of hard but elastic polyurethane and are able to withstand any temporary engine/shaft misalignment. It is provided with the bolts and nuts needed for installation. (FC= power hp x 100 rpm on shaft).



DC (mm)	F2 (mm)	DB (mm)	DB1 (mm)	L (mm)	FC	Part Number
102	4x9,9	82,55	63,5	28	3	40025100
102	4x9,9	82,55	63,5	31	8	40030100
142	4x11,2	108	63,5	41	13	40040100
142	4x11,2	108	63,5	52	20	40045100
155	6x16	120,6	76,2	50	28	40050100
223	10x18	170	140	124	75	40050101
152,4	6x12	120,6	102	55,4	37	40050102

PROPELLER SHAFT ZINC ANODES

Cathodic protection with zinc anodes is essential for any metal ship parts below the waterline. Solé Diesel anodes are placed at the end of the shaft line and are manufactured under the most rigorous standards. They are aerodynamic and fit perfectly to the shaft. Replacement of anode collar.



Ø Shaft (mm)	DC (mm)	L (mm)	L1 (mm)	A (mm)	Type	Part Number
25	55	55	40	-	A	40025091
30	60	55	42	-	A	40030091
35	69	63	50	-	A	40035091
40	70	64	53	-	A	40040091
45	81	73	60	32	B	40045091
50	82	78	64	31	B	40050091
55	-	-	-	-	B	40055091
60	107	95	76	36	B	40060091

SAILDRIVE ZINC ANODE

Cathodic protection by zinc anodes is essential to all the metal parts of any vessel which remain below the waterline. The Solé Diesel anodes are placed at the end of the shaft line and are manufactured with the highest standards. They are aerodynamic and fit perfectly at the shaft. Spare parts of the zinc anode for saildrive.



Description	Part Number
Aluminum Anode (Fresh Water) SP60	T2050044
Anode	26113096
Anode SDrive, VOLVO 120S	40039092.2
Anode SP60	24813500.84
Anode, SDrive to YANMAR SD20/SD31	40039092.1

ZINC ANODE SHAFT NUT

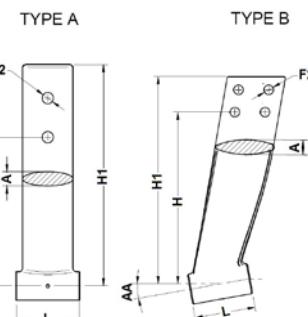
Cathodic protection by zinc anodes is essential to all the metal parts of any vessel which remain below the waterline. The Solé Diesel anodes are placed at the end of the shaft line and are manufactured with the highest standards. They are aerodynamic and fit perfectly at the shaft. Spare parts of the zinc anode integrated at the shaft.



Description	Part Number
Zinc Nut Anode Ø 25	40025092
Zinc Nut Anode Ø 30	40030092
Zinc Nut Anode Ø 35-40	40035092
Zinc Nut Anode Ø 45-50	40045092
Zinc Nut Anode Ø 60-65	40060092
Zinc Nut Anode Ø 70-75	40070092
Zinc Nut Anode Ø 80-85-90-100	40080092

SHAFT BRACKET

Bronze atruts. Includes the self lubricating rubber bearing.



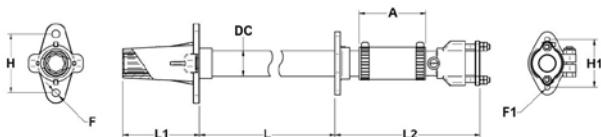
Ø Shaft (mm)	F2 (mm)	A (mm)	AA (°)	H (mm)	H1 (mm)	L (mm)	Type	Part Number
25	16	22	8	208	400	103	B	40025581.1
30	18	28	10	323	400	115	B	40030581.1
35	25	30	10	360	450	142	B	40035581.1
40	25	32	10	362	450	165	B	40040581.1
45	25	36	10	460	530	182	B	40045581
45	25	36	9	460	530	182	B	40045581.1
50	25	39	10	460	540	205	B	40050581
50	25	39	10	460	540	205	B	40050581.1

FLOATING STERNTUBE WITH STUFFING BOX

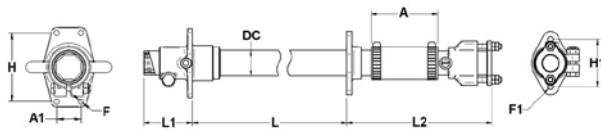
Sterntube assembly with rubber bearing at stern support, stuffing box with fix studs (prepared for additional cooling) and stainlesssteel pipe.



TYPE A1



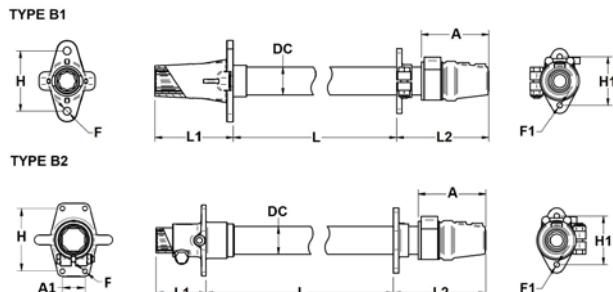
TYPE A2



Ø Shaft (mm)	Type	DC (mm)	L (mm)	L1 (mm)	L2 (mm)	F	H (mm)	A1 (mm)	A (mm)	F1 (mm)	H1 (mm)	Part Number
25	A1	40	500	120	262	2X12	92	-	104	2X8,5	74	49025050
25	A1	40	1000	120	362	2X12	92	-	104	2X8,5	74	49025100
25	A1	40	1500	120	262	2X12	92	-	104	2X8,5	74	49025150
25	A2	40	500	81	262	2X8,5	86	-	104	2X8,5	74	49125050
25	A2	40	1000	81	362	2X8,5	86	-	104	2X8,5	74	49125100
25	A2	40	1500	81	262	2X8,5	86	-	104	2X8,5	74	49125150
30	A1	44,5	500	120	263	2X12	98	-	105	2X8,5	78	49030050
30	A1	44,5	1000	120	363	2X12	98	-	105	2X8,5	78	49030100
30	A1	44,5	1500	120	263	2X12	98	-	105	2X8,5	78	49030150
30	A2	44,5	500	75	263	2X8,5	94	-	105	2X8,5	78	49130050
30	A2	44,5	1000	75	363	2X8,5	94	-	105	2X8,5	78	49130100
30	A2	44,5	1500	75	263	2X8,5	94	-	105	2X8,5	78	49130150
35	A1	48,3	500	160	265	2X12	120	-	100	2X8,5	80	49035050
35	A1	48,3	1000	160	365	2X12	120	-	100	2X8,5	80	49035100
35	A1	48,3	1500	160	265	2X12	120	-	100	2X8,5	80	49035150
35	A2	48,3	500	105	265	2X10,5	98	-	100	2X8,5	80	49135050
35	A2	48,3	1000	105	365	2X10,5	98	-	100	2X8,5	80	49135100
35	A2	48,3	1500	105	265	2X10,5	98	-	100	2X8,5	80	49135150
40	A2	60,3	500	115	256	4X8,5	112	40	100	4X8,5	112	49140050
40	A2	60,3	1000	115	356	4X8,5	112	40	100	4X8,5	112	49140100
40	A2	60,3	1500	115	256	4X8,5	112	40	100	4X8,5	112	49140150
45	A2	60,3	500	123	275	4X8	112	40	125	4X8,5	112	49145050
45	A2	60,3	1000	123	375	4X8	112	40	125	4X8,5	112	49145100
45	A2	60,3	1500	123	275	4X8	112	40	125	4X8,5	112	49145150
50	A2	76	500	136	260	4X9	130	50	105	4X9	130	49150050
50	A2	76	1000	136	360	4X9	130	50	105	4X9	130	49150100
50	A2	76	1500	136	260	4X9	130	50	105	4X9	130	49150150

FLOATING STERNTUBE WITH RUBBER STUFFING BOX

A-316 C. Sterntube is a hollow structure at the stern of the ship that contains the propeller shaft. It is made of AISI 316 stainless steel tube of high performance, a bearing bushing and a dry stuffing box of rubber. Thanks to the elastic element it can be adapted easily to the engine deflections giving great versatility, easiest installation and needs very little maintenance.



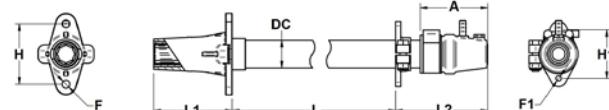
Ø Shaft (mm)	Type	DC (mm)	L (mm)	L1 (mm)	L2 (mm)	F (mm)	H (mm)	A1 (mm)	A (mm)	F1 (mm)	H1 (mm)	Part Number
25	B1	42,4	500	120	166	2X12	92	-	102	2X8,5	74	49225050
25	B1	42,4	1000	120	266	2X12	92	-	102	2X8,5	74	49225100
25	B1	42,4	1500	120	166	2X12	92	-	102	2X8,5	74	49225150
25	B2	42,4	500	81	166	2X8,5	86	-	102	2X8,5	74	49325050
25	B2	42,4	1000	81	266	2X8,5	86	-	102	2X8,5	74	49325100
25	B2	42,4	1500	81	166	2X8,5	86	-	102	2X8,5	74	49325150
30	B1	48,3	500	120	172	2X12	98	-	108	2X8,5	80	49230050
30	B1	48,3	1000	120	272	2X12	98	-	108	2X8,5	80	49230100
30	B1	48,3	1500	120	172	2X12	98	-	108	2X8,5	80	49230150
30	B2	48,3	500	75	172	2X8,5	94	-	108	2X8,5	80	49330050
30	B2	48,3	1000	75	272	2X8,5	94	-	108	2X8,5	80	49330100
30	B2	48,3	1500	75	172	2X8,5	94	-	108	2X8,5	80	49330150
35	B1	53	500	160	182	2X12	120	-	118	2X8,5	86	49235050
35	B1	53	1000	160	282	2X12	120	-	118	2X8,5	86	49235100
35	B1	53	1500	160	182	2X12	120	-	118	2X8,5	86	49235150
35	B2	53	500	105	182	2X10,5	98	-	118	2X8,5	86	49335050
35	B2	53	1000	105	282	2X10,5	98	-	118	2X8,5	86	49335100
35	B2	53	1500	105	182	2X10,5	98	-	118	2X8,5	86	49335150
40	B2	60,3	500	115	182	4X8,5	112	40	118	4X8,5	112	49340050
40	B2	60,3	1000	115	282	4X8,5	112	40	118	4X8,5	112	49340100
40	B2	60,3	1500	115	182	4X8,5	112	40	118	4X8,5	112	49340150
45	B2	63	500	123	192	4X8	112	40	128	4X8,5	112	49345050
45	B2	63	1000	123	292	4X8	112	40	128	4X8,5	112	49345100
45	B2	63	1500	123	192	4X8	112	40	128	4X8,5	112	49345150
50	B2	70	500	136	192	4X9	130	50	128	4X9	130	49350050
50	B2	70	1000	136	292	4X9	130	50	128	4X9	130	49350100
50	B2	70	1500	136	192	4X9	130	50	128	4X9	130	49350150

FLOATING STERTUBE WITH COOLED STUF. BOX

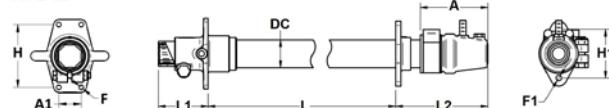
Refrigerated A-316 C. is the structure that contains the shaft, thanks to the elastic element, can be adapted easily to the engine deflections with great versatility, easiest installation and little maintenance. Stertube has an AISI 316 stainless steel tube of high durability, a bearing bushing and a dry stuffing box made of rubber with additional cooling system.



TYPE C1



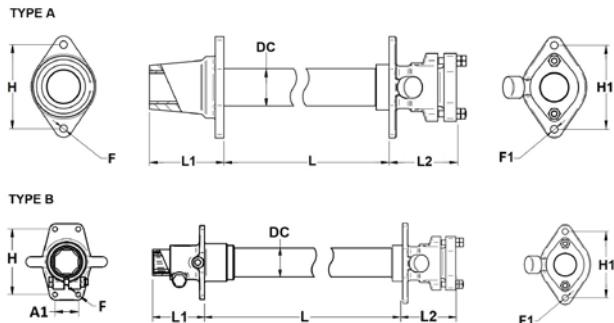
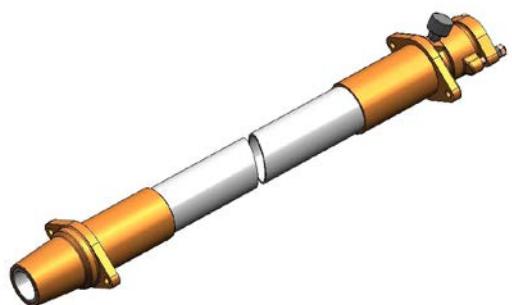
TYPE C2



Ø Shaft (mm)	Type	DC (mm)	L (mm)	L1 (mm)	L2 (mm)	F	H (mm)	A1 (mm)	A (mm)	F1 (mm)	H1 (mm)	Part Number
25	C1	42,4	500	120	166	2X12	92	-	102	2X8,5	74	49425050
25	C1	42,4	1000	120	266	2X12	92	-	102	2X8,5	74	49425100
25	C1	42,4	1500	120	166	2X12	92	-	102	2X8,5	74	49425150
25	C2	42,4	500	81	166	2X8,5	86	-	102	2X8,5	74	49525050
25	C2	42,4	1000	81	266	2X8,5	86	-	102	2X8,5	74	49525100
25	C2	42,4	1500	81	166	2X8,5	86	-	102	2X8,5	74	49525150
30	C1	48,3	500	120	172	2X12	98	-	108	2X8,5	80	49430050
30	C1	48,3	1000	120	272	2X12	98	-	108	2X8,5	80	49430100
30	C1	48,3	1500	120	172	2X12	98	-	108	2X8,5	80	49430150
30	C2	48,3	500	75	172	2X8,5	94	-	108	2X8,5	80	49530050
30	C2	48,3	1000	75	272	2X8,5	94	-	108	2X8,5	80	49530100
30	C2	48,3	1500	75	172	2X8,5	94	-	108	2X8,5	80	49530150
35	C1	53	500	160	182	2X12	120	-	118	2X8,5	86	49435050
35	C1	53	1000	160	282	2X12	98	-	118	2X8,5	86	49435100
35	C1	53	1500	160	182	2X12	120	-	118	2X8,5	86	49435150
35	C2	53	500	105	182	2X10,5	98	-	118	2X8,5	86	49535050
35	C2	53	1000	105	282	2X10,5	98	-	118	2X8,5	86	49535100
35	C2	53	1500	105	182	2X10,5	98	-	118	2X8,5	86	49535150
40	C2	60,3	500	115	182	4X8,5	112	40	118	4X8,5	112	49540050
40	C2	60,3	1000	115	282	4X8,5	112	40	118	4X8,5	112	49540100
40	C2	60,3	1500	115	182	4X8,5	112	40	118	4X8,5	112	49540150
45	C2	63	500	123	192	4X8	112	40	128	4X8,5	112	49545050
45	C2	63	1000	123	292	4X8	112	40	128	4X8,5	112	49545100
45	C2	63	1500	123	192	4X8	112	40	128	4X8,5	112	49545150
50	C2	70	500	136	192	4X9	130	50	128	4X9	130	49550050
50	C2	70	1000	136	292	4X9	130	50	128	4X9	130	49550100
50	C2	70	1500	136	192	4X9	130	50	128	4X9	130	49550150

RIGID STERNTUBE

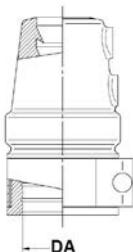
A-316 rigid sterntubes are a hollow structure at the stern of the ship that contains the propeller shaft. With the specific composition of AISI-316 stainless steel, are perfect for shafts up to 70 mm. The rigid stuffing box provides them efficiency, high durability and low maintenance. They need to be installed on engines with rigid to allow sharp movements.



Ø Shaft	Type	DC	L	L1	L2	F	H	A1	F1	H1	Part Number
(mm)		(mm)	(mm)	(mm)	(mm)		(mm)	(mm)	(mm)	(mm)	
50	B	76	500	136	110	4X9	130	50	2X12	135	48250050
50	B	76	1000	136	110	4X9	130	50	2X12	135	48250100
50	B	76	1500	136	110	4X9	130	50	2X12	135	48250150
50	B	76	2000	136	110	4X9	130	50	2X12	135	48250200
50	B	76	2500	136	110	4X9	130	50	2X12	135	48250250
60	A	89	1000	224	173	4X12,5	136	70	4X12,5	136	48260100.1
60	A	89	1500	224	173	4X12,5	136	70	4X12,5	136	48260150.1
60	A	89	2000	224	173	4X12,5	136	70	4X12,5	136	48260200.1
60	A	89	2500	224	173	4X12,5	136	70	4X12,5	136	48260250.1

RUBBER STUFFING BOX IN INCHES

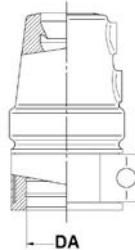
The rubber stuffing box has been proven effective at sealing stern tubes, offering effective functionality with quick and easy installation and without taking up any extra space. The only maintenance required is regular greasing.



Ø SHAFT	DA	Part Number
(in)	(mm)	
1	43	40026130
2	70	40051130
1,5	60	40032130
1,25	49	40038130
1,75	65	40044130

RUBBER STUFFING BOX IN METRIC SYSTEM

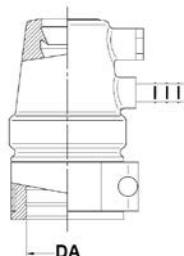
The rubber stuffing box is a well proven product for stern tube sealing that offers and effective functionality through an easy and quick installation without taking up extra space. The maintenance consist only on setting a bit of grease periodically. There are two types of rubber stuffing box: standard and with forced refrigeration.



Ø Shaft (mm)	DA (mm)	Part Number
25	43	40025130
30	49	40030130
35	55	40035130
40	60	40040130
45	65	40045130
50	70	40050130

COOLED RUBBER STUFFING BOX IN INCHES

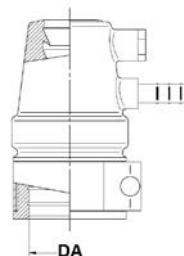
The rubber stuffing box has been proven effective at sealing stern tubes, offering effective functionality with quick and easy installation and without taking up any extra space. The only maintenance required is regular greasing. This model includes forced cooling.



Ø SHAFT (in)	DA (mm)	Part Number
1	43	40026131
2	70	40051131
1,5	60	40032131
1,25	49	40038131
1,75	65	40044131

COOLED RUBBER STUFFING BOX IN METRIC S.

The rubber stuffing box has been proven effective at sealing stern tubes, offering effective functionality with quick and easy installation and without taking up any extra space. The only maintenance required is regular greasing. This model includes forced cooling.



Ø Shaft (mm)	DA (mm)	Part Number
25	43	40025131
30	49	40030131
35	55	40035131
40	60	40040131
45	65	40045131
50	70	40050131

RUBBER BEARING MM (INT.) – IN (EXT.)

Neoprene-bases bearing with brass cover. Water-lubricated.



Ø Shaft (mm)	DD (mm)	DD (in)	L (mm)	Part Number
19	31,75	1,25	76,2	40019070
25	38,1	1,5	100	40025070
30	44,45	1,75	100	40030070
35	47,62	1,875	139,7	40035070.1
40	54	2,125	165	40040070.1
45	60,3	2,375	177,8	40045070
50	66,7	2,625	203,2	40050070
60	82,5	3,25	200	40060070

RUBBER BEARING MM (INT.) – MM (EXT.)

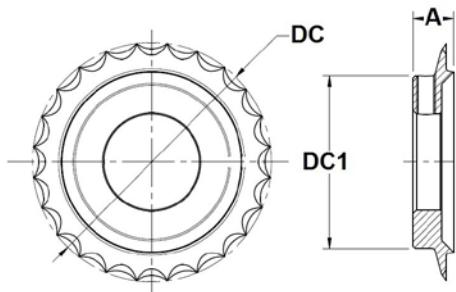
These rubber lined bearings are especially designed for water lubricated sterntubes and rudder stocks. The nitrile rubber bearing material provides the bearing a high resistance to abrasion and wear whilst providing effective noise and vibration insulation.



Ø Shaft (mm)	DD (mm)	L (mm)	Part Number
25	40	100	400025M70
30	45	120	400030M70
35	50	140	400035M70
40	55	160	400040M70
45	65	180	400045M70
50	70	200	400050M70
55	75	220	400055M70
60	80	240	400060M70
65	85	260	400065M70
70	90	280	400070M70
75	95	300	400075M70
80	100	320	400080M70
85	105	340	400085M70
90	110	360	400090M70
95	115	380	400095M70
100	125	400	400100M70
105	130	420	400105M70
110	135	440	400110M70
115	145	460	400115M70
120	155	480	400120M70

ROPE CUTTER IN INCHES

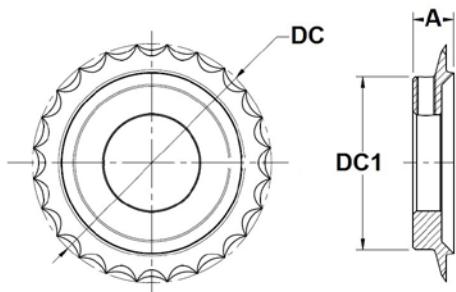
Made in AISI-316L stainless steel. This line cutter sections nylon ends, plastic mesh and flexible cables of up to 7 mm without interfering with the propeller, thus preventing more serious malfunctions. See notes for assembly. Use gloves, sharp edges.



Ø SHAFT (in)	DC (mm)	DC1 (mm)	A (mm)	Part Number
1	80	53	17	40025023
2	120	82	17	40051023
1,5	100	72	17	40038023
1,25	80	53	17	40032023
1,75	120	92	17	40044023
2,25	120	92	17	40057023

ROPE CUTTER IN METRIC SYSTEM

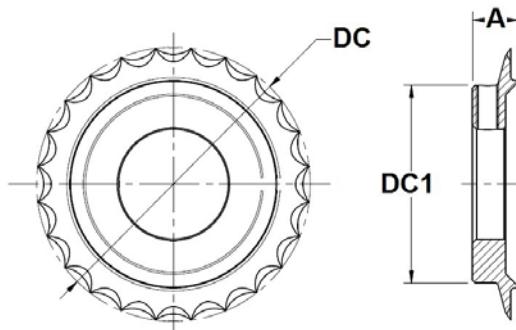
Made in AISI-316L stainless steel. We have several models by shaft diameter, ranging from 22 to 70 mm. This line cutter sections nylon ends, plastic mesh and flexible cable of up to 7 mm without interfering with the propeller, thus preventing more serious malfunctions. See notes for assembly. Use gloves, sharp edges.



Ø Shaft (mm)	DC (mm)	DC1 (mm)	A (mm)	Part Number
20	80	53	17	40020022
22	80	53	17	40022022
25	80	53	17	40025022
30	80	53	17	40030022
35	100	72	17	40035022
40	100	72	17	40040022
45	120	92	17	40045022
50	120	92	17	40050022
60	150	110	30	40060022
70	180	128	31,5	40070022
75	200	128	32,5	40075022
80	200	128	32,5	40080022

ROPE CUTTER FOR SAIL DRIVE

The rope cutter sail drive is a safety element to cut nylon ropes, plastic nets and flexible cables up to 7 mm, freeing the propeller and thus preventing further damage. It is made with the resistant stainless Steel AISI-316L and it is installed forward of the propeller. The rope cutter is a very good option for fishing boats that work with nets, ropes and other elements that can block the propeller.



Ø Shaft	DC1	DC	A	Sail drive type	Part Number
(mm)	(mm)	(mm)	(mm)		
38	76,5	120	11	VOLVO 120S	40039022
32	76,5	140	12	SPROP-60	40039024
38	76,5	120	11	YANMAR SD20/SD31	40039023
38	76,5	120	11	VOLVO 130S	40039025
38	76,5	120	11	VOLVO 120S/130S, YANMAR SD20/SD31	40039025.1

BLEED WATER LINE KIT

Connection kit for sea water cooled rubber stuffing boxes, comes with the necessary parts for these shafts assembly lubrication using refrigeration raw water from the engine's cooling system. This kit includes the "T" brass derivation and connecting records, in addition to 3 meters of 10 mm diameter transparent hose and clamp for complete assembly installation.



Ø int.	Part Number
(mm)	
15	61700001
19	61700002
20	61700003
22	61700004
25	61700005
28	61700006
30	61700007
32	61700008
35	61700009
38	61700010
40	61700011
42	61700012
45	61700013
51	61700014

BRAIDED STUFFING PACKING

Braided packing to achieve sterntube water-tightness. Manufactured with acrylic fibre threads and lubricated with 40% Teflon. Supplied by meters.



Dimensions (mm)	Ø Shaft (mm)	Max. Pressure (bar)	Temperature (°C)	Speed (m/s)	PH	Part Number
6X6	30-40-45-50	100	260	15	3 - 12	M95200060
8X8	60	100	260	15	3 - 12	M95200080
10X10	19-25-35	100	260	15	3 - 12	M95200100

FLOATING BOX TOOL

Tool to tighten and loosen the stuffing box of rigid stern tubes.



Ø Shaft (mm)	Part Number
40	40040020
45	40045020
50	40050020

KIT RUBBER BEARING FOR STRUT

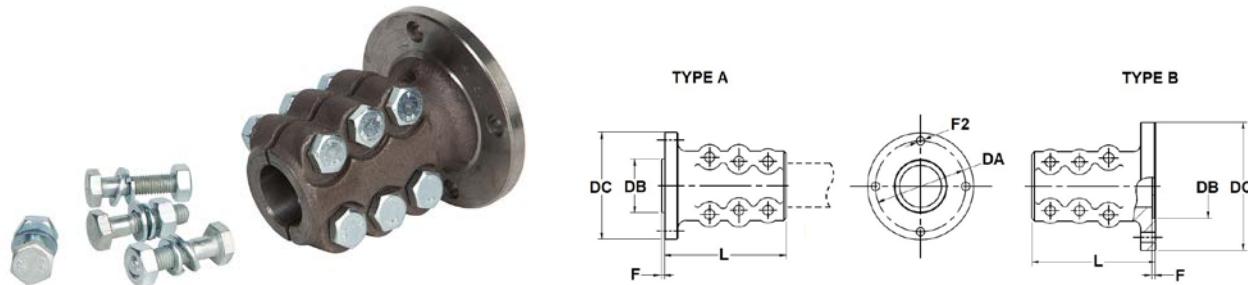
Assembly comprised of a rubber bearing and bearing attachment screw. This assembly is suitable for our shaft brackets and is available for different shaft sizes.



Ø Shaft (mm)	Part Number
25	40025070R
30	40030070R
35	40035070R
40	40040070R
45	40045070R
50	40050070R

CLAMP-ON COUPLINGS PACK

The clamp-on couplings casted in iron don't need a cotter pin. They are supplied with all the necessary screws. Including fixing screws for the gearbox. It is assembled between the gearbox output flange and the shaft. The clamp-on function is to fix the shaft to the gearbox.



TECHNICAL SPECIFICATIONS

Ø Shaft	Type	Nº of holes	F2	DB	L	DA	DC	F	Bore diameter	Part Number
(mm)			(mm)	(mm)	(mm)	(mm)	(mm)			
19	A	3	9	33	64	50	62	3	-	40019106K
22	A	4	10,5	63,5	83	82,50	102	2	-	40022106K
22	A	2	9	53	65	77	93	2	-	40022107K
22	A	4	-	50	94	78	102	2	M10	40022109
25	A	3	9	33	64	50	62	3	-	40025103K
25	A	4	10,5	63,5	81	82,50	102	2	-	40025106K
25	B	4	10,5	60	83	80	102	4	-	40025108K
25	A	4	10,5	50	82	78	100	3	-	40025109K
25	A	2	10	65	63	77	93	2	-	40025117K
30	A	4	10,5	63,5	104	82,50	102	2	-	40030106K
30	B	4	10,5	60	106	80	102	4	-	40030107K
30	A	4	11,5	63,5	105	108	127	2	-	40030108K
30	A	4	10,5	50	105	78	100	2	-	40030109K
30	A	4	10,5	65	105	100	120	2	-	40030112K
35	A	4	11,5	63,5	105	108	127	4	-	40035106K
35	A	4	10,5	63,5	105	82,50	102	2	-	40035107K
35	A	4	10,5	65	105	100	120	4	-	40035108K
35	A	4	12,5	63,5	105	108	130	4	-	40035109K
35	B	4	10,5	60	107	80	102	5	-	40035111K
35	A	8	11,5	63,5	105	108	127	4	-	40035112K
40	B	6	12,5	63,5	126	98,42	121	4	-	40040106.1K
40	A	4	11,5	63,5	126	108	127	4	-	40040106K
40	A	4	10	63,5	126	82,50	102	4	-	40040107K
40	A	4	12,5	63,5	126	108	130	4	-	40040108K
40	A	0	10,5	65	126	100	121	4	-	40040109K
45	A	6	13	76,2	140	120,70	152	4	-	40045107K
45	A	4	11,5	63,5	140	108	127	4	-	40045108K
45	B	6	17	76,2	141	120,60	146	4	-	40045109K
50	A	6	13	76,2	146	120,70	152	4	-	40050107K
50	B	6	17	76,2	148	120,70	146	4	-	40050108K
50	A	4	-	63,5	146	108	127	4	M12	40050109K
50	B	6	12	63,5	148	98,40	121	4	-	40050110K

SHAFT FLANGE BY TYPE OF TRANSMISSION

Ø Shaft	Manufacturer	19	22	25	30	35	40	45	50
Gearbox									
AS-16	BONFIGLIOLI	-	40022107K	40025117K	-	-	-	-	-
BW Vdrive	BORG-WARNER	-	-	-	40030108K	40035106K	40040106K	40045108K	-
BW-71C	BORG-WARNER	-	-	-	40030108K	40035106K	40040106K	40045108K	-
BW-72C	BORG-WARNER	-	-	-	40030108K	40035106K	40040106K	40045108K	-
K45A	KANZAKI	-	-	-	-	40035109K	40040108K	-	-
KBW10E	KANZAKI	-	-	40025109K	40030109K	-	-	-	-
KBW20	KANZAKI	-	-	-	40030112K	40035108K	-	-	-
KBW21	KANZAKI	-	-	-	40030112K	40035108K	-	-	-
KM2P	KANZAKI	-	-	40025109K	40030109K	-	-	-	-
KM3A	KANZAKI	-	-	40025109K	40030109K	-	-	-	-
KM4A	KANZAKI	-	-	-	40030112K	40035108K	-	-	-
KMH4A	KANZAKI	-	-	-	40030112K	40035108K	-	-	-
KMH50A	KANZAKI	-	-	-	-	-	-	40045108K	-
PRM 1000	PRM	-	-	-	-	-	-	40045107K	40050107K
PRM 120	PRM	-	40022106K	40025106K	40030106K	40035107K	-	-	-
PRM 1500	PRM	-	40022106K	40025106K	40030106K	40035107K	-	-	-
PRM 160	PRM	-	-	-	40030108K	40035106K	40040106K	40045108K	-
PRM 260	PRM	-	-	-	40030108K	40035106K	40040106K	40045108K	-
PRM 302	PRM	-	-	-	-	-	-	40045107K	40050107K
PRM 402	PRM	-	-	-	-	-	-	40045107K	40050107K
PRM 601	PRM	-	-	-	-	-	-	40045107K	40050107K
PRM 750	PRM	-	-	-	-	-	-	40045107K	40050107K
PRM Delta	PRM	-	40022106K	40025106K	40030106K	40035107K	-	-	-
Ronim III	SOLÉ DIESEL	40019107K	-	40025107K	-	-	-	-	-
Ronim IV	SOLÉ DIESEL	-	40022106K	40025106K	40030106K	40035107K	-	-	-
SMI-R	SOLÉ DIESEL	-	40022106K	40025106K	40030106K	40035107K	40040107K	-	-
SMI-R2	SOLÉ DIESEL	-	40022106K	40025106K	40030106K	40035107K	40040107K	-	-
SMI-R3	SOLÉ DIESEL	-	40022106K	40025106K	40030106K	40035107K	40040107K	-	-
TM170	TECHNODRIVE	-	-	-	40030108K	40035106K	40040106K	40045108K	-
TM265	TECHNODRIVE	-	-	-	-	-	-	40045109K	40050108K
TM265A	TECHNODRIVE	-	-	-	-	-	-	40045109K	40050108K
TM345A	TECHNODRIVE	-	-	-	40030108K	40035106K	40040106K	40045108K	-
TM485A	TECHNODRIVE	-	-	-	40030108K	40035106K	40040106K	40045108K	-
TM545A	TECHNODRIVE	-	-	-	40030108K	40035106K	40040106K	40045108K	-
TM880A	TECHNODRIVE	-	-	-	40030108K	40035106K	40040106K	40045108K	-
TM93	TECHNODRIVE	-	-	-	40030108K	40035106K	40040106K	40045108K	-

CLAMP-ON COUPLINGS PACK

SHAFT FLANGE BY TYPE OF TRANSMISSION

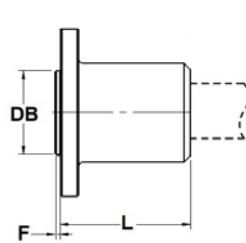
Ø Shaft	Manufacturer	19	22	25	30	35	40	45	50
Gearbox									
TMC40	TECHNODRIVE	-	40022106K	40025106K	40030106K	40035107K	-	-	-
TMC60	TECHNODRIVE	-	40022106K	40025106K	40030106K	40035107K	-	-	-
TTMC35A2	TECHNODRIVE	-	40022106K	40025106K	40030106K	40035107K	-	-	-
TTMC35P	TECHNODRIVE	-	40022106K	40025106K	40030106K	40035107K	-	-	-
M3P	VOLVO	-	-	40025109K	40030109K	-	-	-	-
Volvo HS-1	VOLVO	-	-	-	40030108K	40035106K	40040106K	40045108K	-
Volvo HS-1A	VOLVO	-	-	-	40030108K	-	-	-	-
Volvo HS-25A	VOLVO	-	-	-	-	40035106K	40040106K	40045108K	-
Volvo HS-45-A	VOLVO	-	-	-	-	-	40040106K	-	-
Volvo HS-63AE	VOLVO	-	-	-	-	-	40040106K	40045108K	-
Volvo MS-25-A	VOLVO	-	-	-	40030107K	40035111K	-	-	-
Volvo MS-25-L	VOLVO	-	-	-	40030107K	40035111K	-	-	-
Volvo MS-2A	VOLVO	-	-	40025108K	40030107K	40035111K	-	-	-
Volvo MS-2A-L	VOLVO	-	-	40025108K	40030107K	40035111K	-	-	-
Volvo MS-4	VOLVO	-	-	-	40030108K	40035106K	40040106K	40045108K	-
Volvo MS-45-A	VOLVO	-	-	-	-	40035106K	-	-	-
IRM220A	ZF	-	-	-	-	-	-	-	40050110K
ZF-100	ZF	-	40022106K	40025106K	40030106K	40035107K	-	-	-
ZF-125	ZF	-	40022106K	40025106K	40030106K	40035107K	-	-	-
ZF-150-A	ZF	-	40022106K	40025106K	40030106K	40035107K	-	-	-
ZF-150-V	ZF	-	40022106K	40025106K	40030106K	40035107K	-	-	-
ZF-250	ZF	-	40022106K	40025106K	40030106K	40035107K	-	-	-
ZF-250-A	ZF	-	-	-	40030106K	-	-	-	-
ZF-35	ZF	-	40022106K	40025106K	40030106K	40035107K	-	-	-
ZF-360-H	ZF	-	-	-	40030108K	40035106K	-	40045108K	-
ZF-40	ZF	-	40022106K	40025106K	40030106K	40035107K	-	-	-
ZF-450-A	ZF	-	-	-	40030108K	40035106K	-	40045108K	-
ZF-450-H	ZF	-	-	-	40030108K	-	-	-	-
ZF-450-V	ZF	-	-	-	-	40035106K	-	40045108K	-
ZF-50	ZF	-	40022106K	40025106K	40030106K	40035107K	-	-	-
ZF-630-A	ZF	-	-	-	40030108K	40035106K	-	40045108K	-
ZF-630-H	ZF	-	-	-	40030108K	40035106K	-	40045108K	-
ZF-630-V	ZF	-	-	-	40030108K	40035106K	-	40045108K	-

CONICAL CLAMP-ON COUPLINGS PACK

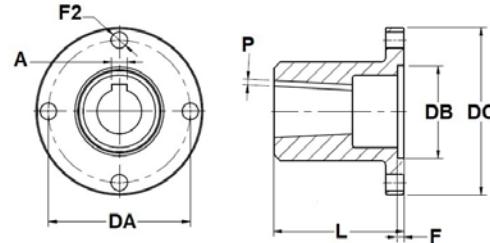
The F-114 conical clamp-on couplings have an easy assembly. They are supplied with all the screws to assemble the conical clamp-on on the gearbox.



TYPE A



TYPE B

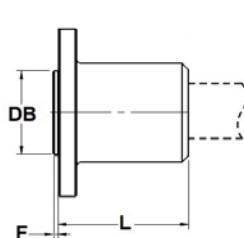


TECHNICAL SPECIFICATIONS

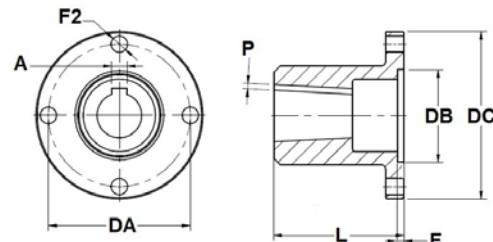
Ø Shaft (mm)	Type	Nº of holes	F2 (mm)	DB (mm)	L (mm)	A (mm)	DA (mm)	DC (mm)	P (mm)	F (mm)	Part Number
35	A	4	11,50	63,50	84	10	108	127	3,7	4	40035005AK
35	A	4	10,50	65	97	10	100	120	3,7	4	40035006AK
40	A	4	11,50	63,50	84	12	108	127	3,7	4	40040005AK
40	B	6	16,50	76,20	90	12	120	146	3,7	5	40040006AK
40	A	4	12	63,50	84	12	120	127	3,7	4	40040008AK
40	B	6	12,50	63,50	86	12	98,4	121	3,7	4	40040009AK
45	A	4	11,50	63,50	86	14	108	127	4,2	4	40045005AK
45	B	6	16,50	76,20	86	14	120	146	4,2	5	40045006AK
45	B	6	19,50	95,25	105	14	152,4	184	4,2	5	40045007AK
45	B	6	16,50	76,20	91	14	120	146	4,2	5	40045009AK
45	B	10	16,20	100	86	14	125	155	4,2	7	40045010AK
45	A	4	11,30	63,50	56	14	108	127	4,2	4	40045011BK
45	B	6	12,50	63,50	86	14	98,4	121	4,2	4	40045013AK
50	A	4	12	63,50	86	14	108	127	4,2	4	40050005AK
50	B	6	16,50	76,20	86	14	120,7	146	4,2	5	40050006AK
50	A	4	12	63,50	76	14	108	127	4,2	4	40050007AK
50	A	4	11,25	63,50	56	14	108	127	4,2	4	40050007BK
50	B	6	12,50	63,50	86	14	98,4	121	4,2	4	40050008AK
50	B	6	13	76,20	80	14	120,7	146	4,2	5	40050009AK
50	B	10	16,20	100	86	14	125	155	4,2	7	40050010AK
50	B	6	19,50	95	105	14	152,4	184	4,2	5	40050011AK
50	B	10	16,20	100	110	14	125	155	4,2	7	40050012AK
50	B	10	18,50	140	105	14	170	205	4,2	7	40050013AK
50	B	12	16,50	115	105	14	140	170	4,5	7	40050014AK
50	A	6	13	76,20	90	14	120,7	152	4,2	4	40050016AK
55	B	6	13	76,20	78	18	146	146	5,3	4	40055015AK
60	A	6	13	76,20	100	18	120	152	5,3	5	40060005K
60	B	6	17	76,20	110	18	120,7	146	5,3	5	40060006AK
60	B	12	16,50	115	165	18	140	170	5,3	6	40060007AK
60	B	6	16,50	95,25	110	18	152,4	184	5,3	4	40060008AK
60	B	8	16,50	95,30	110	18	152,4	184	5,3	5	40060009AK
60	B	10	16,50	100	110	18	125	155	5,3	7	40060013AK
60	A	4	12	63,50	90	18	108	127	5,3	2,5	40060014AK
60	B	12	16,50	115	110	18	140	170	5,3	6	40060016AK
65	B	6	17	76,20	110	18	120,7	146	4,4	5	40065006AK
65	B	6	16,50	95,30	110	18	152,4	184	4,4	5	40065007AK
65	B	12	16,50	115	105	18	140	170	4,4	6	40065008AK
65	B	6	20	95,30	110	18	152,4	184	4,4	5	40065009AK
65	B	10	16,50	100	110	18	125	155	4,4	7	40065013AK

CONICAL CLAMP-ON COUPLINGS PACK

TYPE A



TYPE B



TECHNICAL SPECIFICATIONS

Ø Shaft (mm)	Type	Nº of holes	F2 (mm)	DB (mm)	L (mm)	A (mm)	DA (mm)	DC (mm)	P (mm)	F (mm)	Part Number
70	B	6	17	76,20	110	20	120,7	146	4,9	5	40070006AK
70	B	6	16,30	93,50	110	20	152,4	184	4,9	5	40070007AK
70	B	12	16,50	115	115	20	140	170	4,9	5	40070008AK
70	B	10	18,50	140	115	20	170	205	4,9	6	40070009AK
70	A	6	20	140	113	20	180	218	4,9	5	40070010AK
70	B	6	21	140	113	20	220	257	4,9	7	40070011AK
70	B	6	16,30	95,30	110	20	152,4	184	4,9	5	40070012AK
70	B	8	15,50	110	115	20	160	200	4,9	7	40070013AK
70	B	8	17	80	123	20	196	225	4,9	7	40070014AK
70	A	0	16,30	130	115	20	170	198	4,9	2,5	40070015AK
75	B	6	16,30	95,30	115	20	152,4	184	4,9	5	40075007AK
75	B	12	16,50	115	115	20	140	170	4,9	6	40075008AK
75	B	10	18,50	140	115	20	170	205	4,9	6	40075009AK
75	A	6	20	140	113	20	180	218	4,9	5	40075010AK
75	B	6	21	140	118	20	220	257	4,9	7	40075011AK
75	B	8	17	80	123	20	196	225	4,9	7	40075012AK
75	B	6	20	95,30	115	20	152,4	184	4,9	5	40075013AK
75	B	6	22,50	152,40	123	20	190,5	228	4,9	7	40075014AK
75	B	0	21	140	115	20	156	218	4,9	6	40075016AK
80	B	6	16,30	95,30	130	22	152,4	184	5,4	5	40080007AK
80	B	10	18,50	140	130	22	170	205	5,4	6	40080009AK
80	A	6	20	140	128	22	180	218	5,4	5	40080010AK
80	B	6	21	140	133	22	220	257	5,4	7	40080011AK
80	B	6	17	140	133	22	196	225	5,4	7	40080012AK
80	B	6	21	150	133	22	240	278	5,4	7	40080013AK
80	B	8	22,50	152,40	133	22	190,5	228	5,4	7	40080014AK
80	B	8	20,20	152,40	133	22	190,5	228	5,4	7	40080015AK
80	B	8	15,50	110	130	22	160	200	5,4	7	40080016AK
80	B	8	15,50	140	133	22	190	230	5,4	8	40080017AK
85	B	6	16,50	95,30	140	22	152,4	184	5,4	5	40085007AK
85	B	10	18,30	140	143	22	170	206	5,4	7	40085008AK
85	A	6	21	140	138	22	180	218	5,4	5	40085010AK
85	B	6	21	140	143	22	220	257	5,4	7	40085011AK
85	B	8	17	140	143	22	196	225	5,4	7	40085012AK
85	B	6	21	150	143	22	240	278	5,4	7	40085013AK
85	B	6	25	160	143	22	240	287	5,4	7	40085014AK
85	B	8	22,50	152,40	143	22	190,5	228	5,4	7	40085015AK
85	B	8	20,20	152,40	143	22	190,5	228	5,4	7	40085016AK
85	B	8	15,50	140	143	22	190	230	5,4	8	40085017AK
85	B	10	20,30	140	143	22	218	260	5,4	7	40085018AK

TECHNICAL SPECIFICATIONS

Ø Shaft	Type	Nº of holes	F2	DB	L	A	DA	DC	P	F	Part Number
(mm)			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
90	A	6	20,50	140	178	25	220	254	5,5	5	40090008AK
90	B	8	24,50	200	178	25	260	310	5,5	8	40090013AK
90	B	12	20,50	175	178	25	245	285	5,5	6	40090014AK
90	B	12	22,50	145	178	25	190	225	5,5	6	40090015AK
90	B	12	24,50	250	178	25	345	390	5,5	7	40090016AK
90	B	15	22,50	175	178	25	230	265	5,5	6,5	40090017AK
90	B	16	24,50	230	178	25	280	320	5,5	7	40090018AK
90	B	18	24,50	220	178	25	310	350	5,5	7,5	40090019AK
90	B	8	24,50	152,35	178	25	228,6	279,4	5,5	7,5	40090020AK
90	A	6	24,50	180	178	25	240	285	5,5	5	40090021AK
90	B	6	25	160	178	25	240	287	5,5	7	40090022AK
90	B	6	25	190	178	25	270	318	5,5	6	40090023AK
90	B	6	21	140	178	25	220	257	5,5	7	40090024AK
90	B	6	21	150	178	25	240	278	5,5	7	40090025AK
90	B	6	25	180	178	25	240	285	5,5	7	40090026AK
100	A	6	24,50	160	208	28	240	287	6,5	5	40099008AK
100	A	6	24,50	180	208	28	240	285	6,5	5	40099009AK
100	B	8	24,50	200	208	28	260	310	6,5	8	40099013AK
100	B	12	20,50	175	208	28	245	285	6,5	6	40099014AK
100	B	12	22,50	145	208	28	190	225	6,5	6	40099015AK
100	B	12	24,50	250	208	28	345	390	6,5	7	40099016AK
100	B	15	22,50	175	208	28	230	265	6,5	6,5	40099017AK
100	B	16	24,50	230	208	28	280	320	6,5	7	40099018AK
100	B	18	24,50	220	208	28	310	350	6,5	7,5	40099019AK
100	B	8	24,50	152,35	208	28	228,6	279,4	6,5	7,5	40099020AK
100	B	6	25	160	208	28	240	287	6,5	7	40099021AK
100	B	6	25	190	208	28	270	318	6,5	6	40099022AK
100	B	6	21	150	208	28	240	278	6,5	7	40099023AK
100	B	6	25	180	208	28	240	285	6,5	7	40099024AK
100	A	6	28	150	208	28	260	320	6,5	6	40099025AK

CONICAL CLAMP-ON COUPLINGS PACK

SHAFT FLANGE BY TYPE OF TRANSMISSION

Ø Shaft	Manufacturer	35	40	45	50	60	65	70
Gearbox								
BW Vdrive	BORG-WARNER	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
BW-71C	BORG-WARNER	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
BW-72C	BORG-WARNER	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
KBW20	KANZAKI	40035006AK	-	-	-	-	-	-
KM4A	KANZAKI	40035006AK	-	-	-	-	-	-
KMH40A	KANZAKI	40035005AK	40040005AK	40045005AK	-	-	-	-
KMH4A	KANZAKI	40035006AK	-	-	-	-	-	-
KMH50A	KANZAKI	-	40040005AK	40045005AK	40050005AK	-	-	-
KMH60A	KANZAKI	-	40040006AK	40045006AK	40050006AK	40060006AK	-	-
PRM 500	PRM	-	-	-	40050016AK	-	-	-
PRM 601	PRM	-	-	-	40050016AK	-	-	-
PRM 302	PRM	-	-	-	40050016AK	-	-	-
PRM 1000	PRM	-	-	-	40050016AK	-	-	-
PRM 402	PRM	-	-	-	40050016AK	-	-	-
PRM 750	PRM	-	-	-	40050016AK	-	-	-
PRM 160	PRM	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
PRM 260	PRM	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
TM-170	TECHNODRIVE	40035005AK	40040005AK	40045005AK	40050005AK	40060014AK	-	-
TM-265	TECHNODRIVE	-	40040006AK	40045006AK	40050006AK	40060006AK	40065006AK	40070006AK
TM-265A	TECHNODRIVE	-	40040006AK	40045006AK	40050006AK	40060006AK	40065006AK	-
TM-345	TECHNODRIVE	-	40040005AK	-	40050005AK	40060014AK	-	-
TM-345A	TECHNODRIVE	-	40040005AK	40045005AK	40050005AK	40060014AK	-	-
TM-485A	TECHNODRIVE	-	-	40045005AK	40050005AK	40060014AK	-	-
TM-545	TECHNODRIVE	-	40040005AK	-	40050005AK	-	-	-
TM-545A	TECHNODRIVE	40035005AK	40040005AK	40045005AK	40050005AK	40060014AK	-	-
TM-880A	TECHNODRIVE	40035005AK	40040005AK	40045005AK	40050005AK	40060014AK	-	-
TM-93	TECHNODRIVE	40035005AK	40040005AK	40045005AK	40050005AK	40060014AK	-	-
TM-93A	TECHNODRIVE	40035005AK	40040005AK	40045005AK	40050005AK	40060014AK	-	-
MG-5050A	TWIN DISC	-	40040006AK	40045006AK	40050006AK	40060006AK	-	-
MG-5061A	TWIN DISC	-	40040006AK	40045006AK	40050006AK	40060006AK	-	-
MG-5081A	TWIN DISC	-	-	-	40050011AK	-	-	-
MG-5085A	TWIN DISC	-	-	40045007AK	40050011AK	-	-	-
Volvo HS85IV	VOLVO	-	-	-	40050009AK	-	-	-
Volvo HS1A	VOLVO	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
Volvo HS45A	VOLVO	40035005AK	40040005AK	-	-	-	-	-
Volvo HS63AE	VOLVO	40035005AK	40040005AK	-	-	-	-	-
Volvo HS63IV	VOLVO	40035005AK	40040005AK	-	-	-	-	-
Volvo HS80EA	VOLVO	-	40040006AK	40045009AK	-	-	-	-
Volvo MS1	VOLVO	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
Volvo MS4	VOLVO	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
IRM220A	ZF	-	40040009AK	40045013AK	40050008AK	-	-	-
ZF 220	ZF	-	-	-	40050006AK	-	-	-
ZF 280	ZF	-	40040006AK	-	40050006AK	-	-	-
ZF 280A	ZF	-	-	40045006AK	40050006AK	40060006AK	-	-
ZF 286A	ZF	-	-	-	40050006AK	-	-	-
ZF 305A	ZF	-	-	40045010AK	40050010AK	40060013AK	-	-
ZF 325IV	ZF	-	-	-	40050013AK	-	-	40070008AK
ZF 360H	ZF	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
ZF 450AH	ZF	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
ZF 45A	ZF	40035005AK	-	40045005AK	-	-	-	-
ZF 630AH	ZF	40035005AK	40040005AK	40045005AK	40050005AK	-	-	-
ZF E630V	ZF	-	-	-	40050007AK	-	-	-
ZF 630V	ZF	-	-	-	40050007AK	-	-	-
ZF 63IV	ZF	-	40040008AK	40045011BK	-	-	-	-
ZF 800VI	ZF	-	-	-	40050009AK	-	-	-
ZF 80A	ZF	-	40040006AK	40045009AK	40050006AK	40060006AK	-	-
ZF 80IV	ZF	-	-	-	-	-	-	-

SHAFT FLANGE BY TYPE OF TRANSMISSION

Ø Shaft	Manufacturer	60	65	70	75	80	85	90	100
Gearbox									
DMT-110A	DONG-I			40070015AK					
DMT 150H	DONG-I	-	-	40070010AK	40075010AK	40080010AK	-	-	-
DMT 170HL	DONG-I	-	-	-	-	-	40085014AK	40090022AK	40099021AK
DMT 180HL	DONG-I	-	-	-	-	-	40085014AK	40090022A	40099021A
DMT190HL	DONG-I	-	-	-	-	-	-	40090023AK	40099022AK
DMT 190H	DONG-I	-	-	40070011AK	40075011AK	40080011AK	40085011AK		
DMT220DL	DONG-I	-	-	-	-	-	-	40090022AK	40099021AK
DMT 240H	DONG-I	-	-	-	40075011AK	40080011AK	40085011AK	40090024AK	-
DMT 260H	DONG-I	-	-	-	-	40080013AK	40085013AK	40090025AK	40099023AK
DMT260HL	DONG-I	-	-	-	-	-	-	40090023AK	40099022AK
DMT 280H	DONG-I	-	-	-	-	-	40085013AK	40090025AK	40099023AK
DMT300HL	DONG-I	-	-	-	-	-	-	40090023AK	40099022AK
DMT330DL	DONG-I	-	-	-	-	-	-	40090023AK	40099022AK
DMT400H	DONG-I	-	-	-	-	-	-	40090026AK	40099024AK
DMT430H	DONG-I	-	-	-	-	-	-	-	40099025AK
DMT550H	DONG-I	-	-	-	-	-	-	40090026AK	40099024AK
Masson NE3	MASSON	-	-	40070013AK	-	40080016AK	-	-	-
MASSON NF3	MASSON	-	-	-	-	40080017AK	40085017AK	-	-
ML 180	MASSON	-	-	-	-	-	-	-	40099008AK
ML 225	MASSON	-	-	-	-	-	-	40090008AK	-
ML 415	MASSON	-	-	-	-	-	-	40090021AK	40099009AK
MM W4000	MASSON	-	-	-	-	-	-	40090013AK	40099013AK
PRM 1500	PRM	-	-	40070007AK	40075007AK	40080007AK	40085007AK	-	-
PRM 1750	PRM	-	-	40070007AK	40075007AK	40080007AK	40085007AK	-	-
TM-200	TECHNODRIVE	40060008AK	40065007AK					-	-
TM-1200A	TECHNODRIVE	-	40065007AK	-	-	-	-	-	-
MG 5114 SC	TWIN DISC	-	-	-	-	40080014AK	40085015AK	-	-
MG 5135 SC	TWIN DISC	-	-	-	-	40080015AK	40085016AK	-	-
MG-5065-A	TWIN DISC	-	40065009AK	-	-	-	-	-	-
MG-5065-SC	TWIN DISC	-	40065009AK	-	-	-	-	-	-
MG-5082-A	TWIN DISC	-	-	40070012AK	-	-	-	-	-
MG-5082-SC	TWIN DISC	-	-	40070012AK	-	-	-	-	-
MG-5095-A	TWIN DISC	-	-	40070012AK	40075013AK	-	-	-	-
MG-5095-SC	TWIN DISC	-	-	40070012AK	40075013AK	-	-	-	-
MG-5114-A	TWIN DISC	-	-	-	40075014AK	-	-	-	-
MG-5114-SC	TWIN DISC	-	-	-	40075014AK	-	-	-	-
IRM325A	ZF	40060007AK	-	-	-	-	-	-	-
ZF 63A	ZF	40060014AK	-	-	-	-	-	-	-
ZF 305	ZF	-	40065013AK	-	-	-	-	-	-
ZF 311A	ZF	40060009AK	-	-	-	-	-	-	-
ZF 325	ZF	-	-	40070008AK	-	-	-	-	-
ZF 325-1	ZF	-	40065008AK	40070008AK	40075008AK	-	-	-	-
ZF 325-1A	ZF	-	40065008AK	40070008AK	40075008AK	-	-	-	-
ZF 325A	ZF	-	-	40070008AK	-	-	-	-	-
ZF 335A	ZF	-	-	40070009AK	40075009AK	-	-	-	-
ZF 360	ZF	-	40065008AK	40070009AK	40075009AK	40080009AK	-	-	-
ZF 360A	ZF	-	40065008AK	40070009AK	40075009AK	40080009AK	-	-	-
ZF 360IV	ZF	-	-	40070009AK	40075009AK	-	-	-	-
ZF W320	ZF	-	-	-	40075012AK	40080012AK	40085012AK	-	-
ZF W350-1	ZF	-	-	-	-	40085018AK	-	-	-

CONICAL CLAMP-ON COUPLINGS PACK

SHAFT FLANGE BY TYPE OF TRANSMISSION

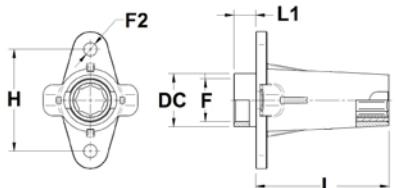
Ø Shaft	Manufacturer	60	65	70	75	80	85	90	100
Gearbox									
ZF 2200	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 2250	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 2260	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 2270	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 2275	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 2300	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 2350	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 2360	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 2370	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 2375	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF 3000	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3000 A	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3050	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3050 A	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3055	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3055 A	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3060	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3060 A	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3070	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3070 A	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3150 A	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3160 A	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3170 A	ZF	-	-	-	-	-	-	40090015AK	40099015AK
ZF 3310	ZF	-	-	-	-	-	-	40090016AK	40099016AK
ZF 3350	ZF	-	-	-	-	-	-	40090016AK	40099016AK
ZF 3360	ZF	-	-	-	-	-	-	40090016AK	40099016AK
ZF 3370	ZF	-	-	-	-	-	-	40090016AK	40099016AK
ZF 5000	ZF	-	-	-	-	-	-	40090017AK	40099017AK
ZF 5000 A	ZF	-	-	-	-	-	-	40090017AK	40099017AK
ZF 5050	ZF	-	-	-	-	-	-	40090017AK	40099017AK
ZF 5050 A	ZF	-	-	-	-	-	-	40090017AK	40099017AK
ZF 5055	ZF	-	-	-	-	-	-	40090017AK	40099017AK
ZF 5055 A	ZF	-	-	-	-	-	-	40090017AK	40099017AK
ZF 5060	ZF	-	-	-	-	-	-	40090017AK	40099017AK
ZF 5060 A	ZF	-	-	-	-	-	-	40090017AK	40099017AK
ZF 5200 A	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF 5250 A	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF 5260 A	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF 5300	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF 5350	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF 5360	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF 7600	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 7600 A	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 7650	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 7650 A	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 8000	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 8000 A	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 8050	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 8050 A	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 8055	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 8060	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 8060 A	ZF	-	-	-	-	-	-	40090018AK	40099018AK
ZF 9055	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF 9055 A	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF 9060	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF 9060 A	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF W2300	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF W2350	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF W2450	ZF	-	-	-	-	-	-	40090014AK	40099014AK
ZF W3310	ZF	-	-	-	-	-	-	40090016AK	40099016AK
ZF W3350	ZF	-	-	-	-	-	-	40090016AK	40099016AK
ZF W3355	ZF	-	-	-	-	-	-	40090016AK	40099016AK
ZF W3710	ZF	-	-	-	-	-	-	40090016AK	40099016AK
ZF W5300	ZF	-	-	-	-	-	-	40090019AK	40099019AK
ZF W650	ZF	-	-	-	-	-	-	40090020AK	40099020AK

BEARING BUSHING ASSEMBLY

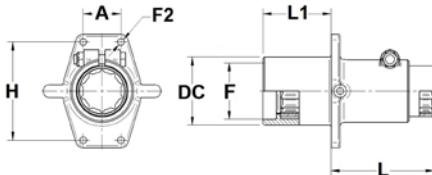
Bearing bushing assembly equipped with seawater-lubricated rubberbearing.



TYPE A



TYPE B



Ø Shaft (mm)	Type	DC (mm)	F (mm)	F2 (mm)	H (mm)	A (mm)	L1 (mm)	L (mm)	Part Number
19	A	48	M28X1,25	9	68	-	8	92	40019165
25	B	57,5	W Ø40 24H"	8,5	86	-	43	81	40025166
25	A	48	W Ø40 24H"	12	92	-	20	120	40025168A
25	B	55	W Ø42,4 24H"	8,5	86	-	43	81	40025176
25	A	48	W Ø42,4 24H"	12	92	-	20	120	40025178
30	B	64	W Ø44 24H"	8,5	94	-	50	75	40030166
30	A	52	M45X1,5	12	98	-	20	120	40030168
30	A	52	W Ø44 24H"	12	98	-	20	120	40030168A
30	B	64	W Ø48 24H"	8,5	94	-	50	75	40030176
30	A	56	W Ø48 24H"	12	98	-	20	120	40030178
35	B	68	W Ø48 24H"	10,5	98	-	57	105	40035166
35	A	56	W Ø48 24H"	12	120	-	20	160	40035168A
35	B	68	W Ø53 24H"	10,5	98	-	57	105	40035176
35	A	62	W Ø53 24H"	12	120	-	20	160	40035178
40	B	75	W Ø60,3 24H"	8,5	112	40	78	115	40040166
45	B	80	W Ø60,3 24H"	8	112	40	83	123	40045166
45	B	80	W Ø63,5 24H"	8	112	40	83	123	40045176
50	B	90	M76X1,25	9	130	50	90	130	40050166
50	B	90	W Ø70 24H"	9	130	50	90	130	40050176

STUFFING BOX WITH FIX STUDS

Studded stuffing box for stern tubes.



Ø Shaft (mm)	Part Number
19	40019125
25	40025125A
30	40030125A
35	40035125A

THREADED STUFFING BOX

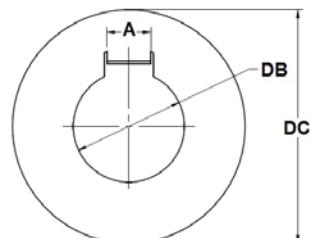
Bronze water-cooled stuffing box, with packing, rubber sleeve, and stainless steel clamps. Additional direct cooling allowed by this system.



Ø Shaft (mm)	Part Number
40	40040125
45	40045125
50	40050125

PROPELLER NUT FASTENER

Made of standard-grade stainless steel. This part prevents the propeller nut from coming unthreaded.



Ø Shaft (mm)	DC (mm)	DB (mm)	A (mm)	Part Number
19	32	14,5	5	40019090
25	40	17	6	40025090
25	40	17	8	40025090.1
30	48	21	7,5	40030090
35	60	26	9,5	40035090
45	66	34	12	40045090
45	66	31	13	40045090M
50	66	37	13	40050090M
60-65	90	43	17	40060090
70	90	50	19	40070090
70-75	90	46	19	40070090M
80-85	103	57	21	40080090M
90	103	65	24	40090090M
100	110	65	27	40099090M

ZINC ANODE NUTS

Cathodic protection by zinc anodes is essential to all the metal parts of any vessel which remain below the waterline. The Solé Diesel anodes are placed at the end of the shaft line and are manufactured with the highest standards. They are aerodynamic and fit perfectly at the shaft.



Ø Shaft (mm)	L (mm)	F	Thread type	Anode	Part Number
25	58	3/8" GAS	LH	40025092	40025193
25	58	M16X1,5	LH	40025092	40025193M
25	58	3/8" GAS	RH	40025092	40025194
25	58	M16X1,5	RH	40025092	40025194M
30	69	M20X1,5	LH	40030092	40030193M
30	69	M20X1,5	RH	40030092	40030194
30	69	M20X1,5	RH	40030092	40030194M
35-40	69	1"W 16H	LH	40035092	40035193
35-40	85	M24X2	LH	40035092	40035193M
35-40	85	1"W 16H	RH	40035092	40035194
35-40	85	M24X2	RH	40035092	40035194M
45	110	M30X2	LH	40045092	40045193M
45	110	M30X2	RH	40045092	40045194M
50	115	M36X3	LH	40045092	40050193M
50	115	M36X3	RH	40045092	40050194M
60-65	147	M42X3	LH	40060092	40060193M
60-65	147	M42X3	RH	40060092	40060194M
70-75	139	M45X3	LH	40070092	40070193M
70-75	139	M45X3	RH	40070092	40070194M
80-85	144	M56X4	LH	40080092	40080193M
80-85	144	M56X4	RH	40080092	40080194M
90-100	144	M64X4,0	LH	40080092	40090193M
90-100	144	M64X4,0	RH	40080092	40090194M





PROPELLERS

FIXED PROPELLERS FOR SHAFT

2 BLADES SHAFT FIXED PROPELLERS

2, 3- and 4-bladed manganese bronze propellers, statically and dynamically balanced. Diameter in pitch in inches.



Ø Shaft (mm)	Diameter (in)	Pitch (in)	BAR (%)	Rotation	Part Number
19	7	6	30	LH	41141816
19	8	7	30	LH	41142018
19	15	8	30	RH	42113721
25	13	9	30	RH	42113322
25	13	9	30	RH	42213322
25	15	8	30	RH	42213721
25	15	13	30	RH	42213934
25	16	15	30	RH	42214037
25	15	9	45	RH	42243823
25	15	10	45	RH	42243826
25	16	10	45	RH	42244126
25	18	12	45	RH	42244530
30	15	15	30	RH	42313839
30	15	13	30	RH	42313934
30	16	14	30	RH	42314035
30	16	15	30	RH	42314037
30	15	10	45	RH	42343826
30	18	12	45	RH	42344530

3 BLADES PROPELLERS

3 blade propellers are perfect for displacement boats of little tonnage or sailing boats which do not reach very high speed.

Material: Bronze manganese

BAR: 55%

Cone: 1:10



Diameter (in)	Pitch range (in)	Shaft range (mm)	Part Number
9	5 - 8	19 - 25	HEL3P09
10	5 - 9	19 - 25	HEL3P10
11	6 - 10	19 - 25	HEL3P11
12	6 - 11	19 - 25	HEL3P12
13	7 - 12	19 - 25	HEL3P13
14	7 - 13	19 - 30	HEL3P14
15	8 - 14	19 - 30	HEL3P15
16	8 - 14	22 - 30	HEL3P16
17	9 - 15	22 - 35	HEL3P17
18	9 - 16	22 - 35	HEL3P18
19	10 - 17	30 - 35	HEL3P19
20	10 - 18	35 - 40	HEL3P20
21	11 - 19	35 - 40	HEL3P21
22	11 - 20	35 - 40	HEL3P22
23	12 - 21	40 - 45	HEL3P23
24	12 - 22	40 - 45	HEL3P24
25	13 - 23	40 - 45	HEL3P25
26	13 - 23	40 - 45	HEL3P26

3 BLADE PROPELLERS PR

3-Blade propellers PR are perfect for semi-displacement and displacement boats intended for commercial use.

BAR: 50-55 %

Standard shaft conicity: 1/10 (Can be modified if necessary)

Diameter (in)	Pitch range (in)	Part Number
30	18 - 39	PR3P30
31	19 - 40	PR3P31
32	19 - 42	PR3P32
33	20 - 43	PR3P33
34	20 - 44	PR3P34
35	21 - 46	PR3P35
36	22 - 47	PR3P36
37	22 - 48	PR3P37
38	23 - 49	PR3P38
39	23 - 51	PR3P39
40	24 - 52	PR3P40
41	25 - 53	PR3P41
42	25 - 55	PR3P42
43	26 - 56	PR3P43
44	26 - 57	PR3P44
45	27 - 59	PR3P45
46	28 - 60	PR3P46
47	28 - 61	PR3P47
48	29 - 62	PR3P48
49	29 - 64	PR3P49
50	30 - 65	PR3P50
51	31 - 66	PR3P51
52	31 - 68	PR3P52
53	32 - 69	PR3P53
54	32 - 70	PR3P54
55	33 - 72	PR3P55
56	34 - 73	PR3P56
57	34 - 74	PR3P57
58	35 - 75	PR3P58
59	35 - 77	PR3P59

4 BLADE PROPELLERS

4 blade propellers are perfect for semi-planing speed boats, both for leisure and commercial with moderate tonnage.

Material: Bronze manganese

BAR: 55%

Cone: 1:10



Diameter (in)	Pitch range (in)	Shaft range (mm)	Part Number
13	7 - 18	19 - 25	HEL4P13
14	7 - 20	22 - 30	HEL4P14
15	8 - 21	22 - 30	HEL4P15
16	8 - 22	22 - 30	HEL4P16
17	9 - 24	22 - 40	HEL4P17
18	9 - 25	30 - 40	HEL4P18
19	10 - 27	30 - 35	HEL4P19
20	10 - 28	35 - 40	HEL4P20
21	11 - 29	35 - 50	HEL4P21
22	11 - 31	35 - 50	HEL4P22
23	12 - 32	35 - 50	HEL4P23
24	12 - 34	40 - 60	HEL4P24
25	13 - 35	40 - 60	HEL4P25
26	13 - 36	40 - 60	HEL4P26
27	14 - 38	45 - 60	HEL4P27
28	14 - 39	45 - 60	HEL4P28
29	15 - 41	45 - 60	HEL4P29
30	15 - 42	45 - 60	HEL4P30
31	16 - 43	50 - 60	HEL4P31
32	16 - 45	50 - 60	HEL4P32
33	17 - 46	50 - 60	HEL4P33

4 BLADE PROPELLERS PR

4-Blade propellers PR are perfect for semi-displacement and displacement boats intended for commercial use.

BAR: 65-70 %

Standard shaft conicity: 1/10 (Can be modified if necessary)

Diameter (in)	Pitch range (in)	Part Number
30	18 - 39	PR4P30
31	19 - 40	PR4P31
32	19 - 42	PR4P32
33	20 - 43	PR4P33
34	20 - 44	PR4P34
35	21 - 46	PR4P35
36	22 - 47	PR4P36
37	22 - 48	PR4P37
38	23 - 49	PR4P38
39	23 - 51	PR4P39
40	24 - 52	PR4P40
41	25 - 53	PR4P41
42	25 - 55	PR4P42
43	26 - 56	PR4P43
44	26 - 57	PR4P44
45	27 - 59	PR4P45
46	28 - 60	PR4P46
47	28 - 61	PR4P47
48	29 - 62	PR4P48
49	29 - 64	PR4P49
50	30 - 65	PR4P50
51	31 - 66	PR4P51
52	31 - 68	PR4P52
53	32 - 69	PR4P53
54	32 - 70	PR4P54
55	33 - 72	PR4P55
56	34 - 73	PR4P56
57	34 - 74	PR4P57
58	35 - 75	PR4P58
59	35 - 77	PR4P59

4 BLADES HIGH SKEW PROPELLERS

Designed for boats with mid-to-high speeds (15-35 knots) or professional boats that require high performance and a high-pitch propeller when there are diameter limitations.

The renewed design of this range, with optimized sections and a increased blade area ratio, improves the reduction of cavitation effects and offers a more effective and progressive thrust. In addition, this high-skew design with the anti-singing edge provides a vibration and noise reduction in the boat hull and rudder.

Made in high-strength manganese bronze. High-precision static and dynamic balancing.



Ø Propeller (in)	Pitch Range (in)	Shaft Range (mm)	Part Number
16	18 - 26	35 - 25	HSK4P16
17	18 - 27	35 - 25	HSK4P17
18	18 - 29	35 - 25	HSK4P18
19	19 - 31	40 - 30	HSK4P19
20	20 - 34	40 - 30	HSK4P20
21	21 - 31	45 - 35	HSK4P21
22	20 - 32	50 - 40	HSK4P22
23	23 - 33	50 - 40	HSK4P23
24	24 - 34	50 - 40	HSK4P24

5 BLADE PROPELLERS PR

5-Blade propellers PR are perfect for semi-displacement and displacement boats intended for commercial use.

BAR: 80-85 %

Standard shaft conicity: 1/10 (Can be modified if necessary)

Diameter (in)	Pitch range (in)	Part Number
30	18 - 39	PR5P30
31	19 - 40	PR5P31
32	19 - 42	PR5P32
33	20 - 43	PR5P33
34	20 - 44	PR5P34
35	21 - 46	PR5P35
36	22 - 47	PR5P36
37	22 - 48	PR5P37
38	23 - 49	PR5P38
39	23 - 51	PR5P39
40	24 - 52	PR5P40
41	25 - 53	PR5P41
42	25 - 55	PR5P42
43	26 - 56	PR5P43
44	26 - 57	PR5P44
45	27 - 59	PR5P45
46	28 - 60	PR5P46
47	28 - 61	PR5P47
48	29 - 62	PR5P48
49	29 - 64	PR5P49
50	30 - 65	PR5P50
51	31 - 66	PR5P51
52	31 - 68	PR5P52
53	32 - 69	PR5P53
54	32 - 70	PR5P54
55	33 - 72	PR5P55
56	34 - 73	PR5P56
57	34 - 74	PR5P57
58	35 - 75	PR5P58
59	35 - 77	PR5P59

FOLDING PROPELLERS FOR SHAFT

2 BLADES SHAFT FOLDING PROPELLERS

Nickel aluminium bronze propellers with 2 foldable blades, dynamically and statically balanced. Designed for sailboats, as they reduce friction when sailing. These propellers are exclusively adapted for axes with 1:10 conicity.



Ø Shaft	Diameter	Pitch	BAR	Rotation	Part Number
(mm)	(in)	(in)	(%)		
25	16	9	25	LH	41214123PL
25	16	9	25	RH	42201609
25	16	10	25	RH	42201610
25	16	12	25	RH	42201612
25	17	10	25	RH	42201710
25	14	8	30	RH	42213620
25	14	10	25	RH	42213625PL
25	15	10	30	RH	42213825
25	16	9	25	RH	42214123

2 BLADES SHAFT VARIFOLD PROPELLERS



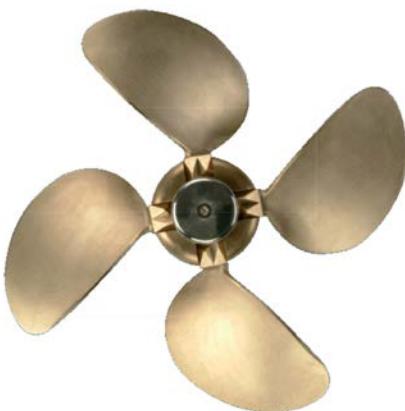
Diameter	Material	Hub size	Shaft range	Part Number
(in)		(mm)		
13	Nibral bronze	VF SE	25-30	PVF213VFSESH
14	Nibral bronze	VF SE	25-30	PVF214VFSESH
15	Nibral bronze	VF SE	25-30	PVF215VFSESH
16	Nibral bronze	VF SE	25-30	PVF216VFSESH
17	Nibral bronze	VF SE	25-30	PVF217VFSESH

3 BLADES SHAFT VARIFOLD PROPELLERS



Diameter (in)	Material	Hub size	Ø Shaft (mm)	Part Number
13	Nibral bronze	VF SE	25-30	PVF313VFSESH
14	Nibral bronze	VF SE	25-30	PVF314VFSESH
15	Nibral bronze	VF SE	25-30	PVF315VFSESH
16	Nibral bronze	VF SE	25-30	PVF316VFSESH
17	Nibral bronze	VF SE	25-30	PVF317VFSESH
18	Nibral bronze	VF 108	MAX Ø 45	PVF318VF108SH
20	Nibral bronze	VF 108	MAX Ø 45	PVF320VF108SH
22	Nibral bronze	VF 108	MAX Ø 45	PVF322VF108SH
23	Nibral bronze	VF 108	MAX Ø 45	PVF323VF108SH

4 BLADES SHAFT VARIFOLD PROPELLERS



Diameter (in)	Material	Hub size	Shaft range (mm)	Part Number
18	Nibral bronze	VF 108	max Ø 45	PVF318VF108SH
18	Nibral bronze	VF 120	max Ø 50	PVF418VF120SH
19	Nibral bronze	VF 120	max Ø 50	PVF419VF120SH
20	Nibral bronze	VF 108	max Ø 45	PVF320VF108SH
20	Nibral bronze	VF 120	max Ø 50	PVF420VF120SH
22	Nibral bronze	VF 108	max Ø 45	PVF322VF108SH
22	Nibral bronze	VF 120	max Ø 50	PVF422VF120SH
23	Nibral bronze	VF 108	max Ø 45	PVF323VF108SH
23	Nibral bronze	VF 120	max Ø 50	PVF423VF120SH
24	Nibral bronze	VF 120	max Ø 50	PVF424VF120SH
25	Nibral bronze	VF 120	max Ø 50	PVF425VF120SH

FEATHERING PROPELLERS FOR SHAFT



Diameter (in)	Material	Hub size	Shaft range	Part Number
				(mm)
12	Nibral bronze	GP 80	max Ø 25	PVP212GP80SH
13	Nibral bronze	GP 80	max Ø 25	PVP213GP80SH
14	Nibral bronze	GP 80	max Ø 25	PVP214GP80SH
15	Nibral bronze	GP 107	max Ø 35	PVP215GP107SH
15	Nibral bronze	GP 80	max Ø 25	PVP215GP80SH
16	Nibral bronze	GP 107	max Ø 35	PVP216GP107SH
16	Nibral bronze	GP 80	max Ø 25	PVP216GP80SH
17	Nibral bronze	GP 107	max Ø 35	PVP217GP107SH
18	Nibral bronze	GP 107	max Ø 35	PVP218GP107SH
19	Nibral bronze	GP 107	max Ø 35	PVP219GP107SH
20	Nibral bronze	GP 107	max Ø 35	PVP220GP107SH

3 BLADES SHAFT VARIPROP GP PROPELLERS



Diameter (in)	Material	Hub size	Shaft range	Part Number
				(mm)
12	Nibral bronze	GP 80	max Ø 25	PVP312GP80SH
13	Nibral bronze	GP 80	max Ø 25	PVP313GP80SH
14	Nibral bronze	GP 80	max Ø 25	PVP314GP80SH
15	Nibral bronze	GP 107	max Ø 35	PVP315GP107SH
15	Nibral bronze	GP 80	max Ø 25	PVP315GP80SH
16	Nibral bronze	GP 107	max Ø 35	PVP316GP107SH
16	Nibral bronze	GP 80	max Ø 25	PVP316GP80SH
17	Nibral bronze	GP 107	max Ø 35	PVP317GP107SH
18	Nibral bronze	GP 107	max Ø 35	PVP318GP107SH
19	Nibral bronze	GP 107	max Ø 35	PVP319GP107SH
20	Nibral bronze	GP 107	max Ø 35	PVP320GP107SH
20	Nibral bronze	GP 112	max Ø 40	PVP320GP112SH
21	Nibral bronze	GP 112	max Ø 40	PVP321GP112SH
22	Nibral bronze	GP 112	max Ø 40	PVP322GP112SH
23	Nibral bronze	GP 112	max Ø 40	PVP323GP112SH
24	Nibral bronze	DF 140	max Ø 50	PVP324DF140SH
24	Nibral bronze	GP 112	max Ø 40	PVP324GP112SH
26	Nibral bronze	DF 140	max Ø 50	PVP326DF140SH
28	Nibral bronze	DF 140	max Ø 50	PVP328DF140SH
30	Nibral bronze	DF 140	max Ø 50	PVP330DF140SH
32	Nibral bronze	DF 140	max Ø 50	PVP332DF140SH

4 BLADES SHAFT VARIPROP GP PROPELLERS



Diameter (in)	Material	Hub size	Shaft range (mm)	Part Number
12	Nibral bronze	GP 80	MAX Ø 25	PVP412GP80SH
13	Nibral bronze	GP 80	max Ø 25	PVP413GP80SH
14	Nibral bronze	GP 80	max Ø 25	PVP414GP80SH
15	Nibral bronze	GP 107	max Ø 35	PVP415GP107SH
15	Nibral bronze	GP 80	max Ø 25	PVP415GP80SH
16	Nibral bronze	GP 107	max Ø 35	PVP416GP107SH
16	Nibral bronze	GP 80	max Ø 25	PVP416GP80SH
17	Nibral bronze	GP 107	max Ø 35	PVP417GP107SH
18	Nibral bronze	GP 107	max Ø 35	PVP418GP107SH
19	Nibral bronze	GP 107	max Ø 35	PVP419GP107SH
20	Nibral bronze	GP 107	max Ø 35	PVP420GP107SH
20	Nibral bronze	GP 112	max Ø 40	PVP420GP112SH
21	Nibral bronze	GP 112	max Ø 40	PVP421GP112SH
22	Nibral bronze	GP 112	max Ø 40	PVP422GP112SH
23	Nibral bronze	GP 112	max Ø 40	PVP423GP112SH
24	Nibral bronze	DF 140	max Ø 55	PVP424DF140SH
24	Nibral bronze	GP 112	max Ø 40	PVP424GP112SH
26	Nibral bronze	DF 140	max Ø 55	PVP426DF140SH
28	Nibral bronze	DF 140	max Ø 55	PVP428DF140SH
30	Nibral bronze	DF 140	max Ø 55	PVP430DF140SH
32	Nibral bronze	DF 140	max Ø 55	PVP432DF140SH

FIXED PROPELLERS FOR SAILDRIVE

2 BLADES SP60 FIXED PROPELLERS

Aluminium two-bladed fixed propellers, statically and dynamically balanced. Only available for Technodrive sail-drive striated shafts.



Compatible with:
Volvo 110S, Volvo 120S,
Yanmar SD20/31/40-4T,
BUCK, NANNI and SONIC
Sail Drives



Diameter (in)	Pitch (in)	BAR (%)	Rotation	Part Number
14	8	30	LH	41111408
14	9	30	LH	41111409
16	9	30	LH	41111609

3 BLADES SP60 FIXED PROPELLERS

Aluminium three-bladed fixed propellers, statically and dynamically balanced. Only available for Technodrive sail-drive striated shafts.



Compatible with:
Volvo 110S, Volvo 120S,
Yanmar SD20/31/40-4T,
BUCK, NANNI and SONIC
Sail Drives



Diameter (in)	Pitch (in)	BAR (%)	Rotation	Part Number
14	9	50	LH	43101409
14	10	50	LH	43101410
15	10	50	LH	43153826
16	10	50	LH	43101610
16	11	50	LH	43101611
16	14	50	LH	43101614
17	11	50	LH	43101711
17	12	50	LH	43101712
17	13	50	LH	43101713
17	14	50	LH	43101714
18	14	50	LH	43101814

FOLDING PROPELLERS FOR SAILDRIVE

2 BLADES SP60 FOLDING PROPELLERS

Two-blades folding propellers made of nickel-aluminium bronze. Statically and dynamically balanced. Reduce drag while sail sailing. Only available for the SDdrive striated shaft.



Compatible with:

Volvo 110S, Volvo 120S,
Yanmar SD20/31/40-4T,
BUCK, NANNI and SONIC
Sail Drives



Diameter (in)	Pitch (in)	BAR (%)	Rotation	Part Number
14	8	25	LH	41101408
15	10	25	LH	41101510
15	9	25	LH	41K13823PL
17	9	25	LH	41101709
18	9	25	LH	41101809
18	10	25	LH	41101810
18	11	25	LH	41101811
18	12	25	LH	41101812
18	13	25	LH	41101813
18	14	25	LH	41101814

2 BLADES SELVA FOLDING PROPELLERS

Two-bladed folding propellers made of nickel-aluminium bronze. Statically and dynamically balanced. Reduce drag while sail sailing. Only available for the Selva sail-drive striated shaft.



Diameter (in)	Pitch (in)	BAR (%)	Rotation	Part Number
13	7	25	RH	42001307
15	7	25	RH	42001507
15	8	25	RH	42001508
15	10	25	RH	42001510
16	9	25	RH	42001609
16	10	25	RH	42001610
16	12	25	RH	42001612

2 BLADES SAILDRIVE VARIFOLD PROPELLERS



Diameter (in)	Material	Hub size	Part Number
13	Nibral bronze	VF SE	PVF213VFSESD
14	Nibral bronze	VF SE	PVF214VFSESD
15	Nibral bronze	VF SE	PVF215VFSESD
16	Nibral bronze	VF SE	PVF216VFSESD
17	Nibral bronze	VF SE	PVF217VFSESD

3 BLADES SAILDRIVE VARIFOLD PROPELLERS



Diameter (in)	Material	Hub size	Part Number
13	Nibral bronze	VF SE	PVF313VFSESD
14	Nibral bronze	VF SE	PVF314VFSESD
15	Nibral bronze	VF SE	PVF315VFSESD
16	Nibral bronze	VF SE	PVF316VFSESD
17	Nibral bronze	VF SE	PVF317VFSESD

4 BLADES SAILDRIVE VARIFOLD PROPELLERS



Diameter (in)	Material	Hub size	Part Number
18	Nibral bronze	VF 108	PVF318VF108SD
20	Nibral bronze	VF 108	PVF320VF108SD
22	Nibral bronze	VF 108	PVF322VF108SD

FEATHERING PROPELLERS FOR SAILDRIVE

2 BLADES SAILDRIVE VARIPROP GP PROPELLERS



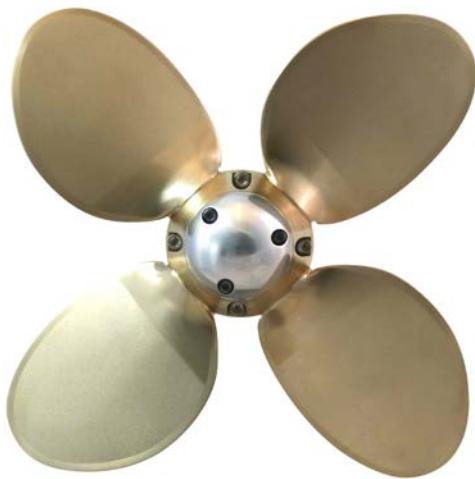
Diameter (in)	Material	Hub size	Part Number
12	Nibral bronze	GP 80	PVP212GP80SD
13	Nibral bronze	GP 80	PVP213GP80SD
14	Nibral bronze	GP 80	PVP214GP80SD
15	Nibral bronze	GP 107	PVP215GP107SD
15	Nibral bronze	GP 80	PVP215GP80SD
16	Nibral bronze	GP 107	PVP216GP107SD
16	Nibral bronze	GP 80	PVP216GP80SD
17	Nibral bronze	GP 107	PVP217GP107SD
18	Nibral bronze	GP 107	PVP218GP107SD
19	Nibral bronze	GP 107	PVP219GP107SD
20	Nibral bronze	GP 107	PVP220GP107SD

3 BLADES SAILDRIVE VARIPROP GP PROPELLERS



Diameter (in)	Material	Hub size	Part Number
12	Nibral bronze	GP 80	PVP312GP80SD
13	Nibral bronze	GP 80	PVP313GP80SD
14	Nibral bronze	GP 80	PVP314GP80SD
15	Nibral bronze	GP 107	PVP315GP107SD
15	Nibral bronze	GP 80	PVP315GP80SD
16	Nibral bronze	GP 107	PVP316GP107SD
16	Nibral bronze	GP 80	PVP316GP80SD
17	Nibral bronze	GP 107	PVP317GP107SD
18	Nibral bronze	GP 107	PVP318GP107SD
19	Nibral bronze	GP 107	PVP319GP107SD
20	Nibral bronze	GP 107	PVP320GP107SD
20	Nibral bronze	GP 112	PVP320GP112SD
21	Nibral bronze	GP 112	PVP321GP112SD
22	Nibral bronze	GP 112	PVP322GP112SD
23	Nibral bronze	GP 112	PVP323GP112SD
24	Nibral bronze	GP 112	PVP324GP112SD

4 BLADES SAILDRIVE VARIPROP GP PROPELLERS



Diameter (in)	Material	Hub size	Part Number
12	Nibral bronze	GP 80	PVP412GP80SD
13	Nibral bronze	GP 80	PVP413GP80SD
14	Nibral bronze	GP 80	PVP414GP80SD
15	Nibral bronze	GP 107	PVP415GP107SD
15	Nibral bronze	GP 80	PVP415GP80SD
16	Nibral bronze	GP 107	PVP416GP107SD
16	Nibral bronze	GP 80	PVP416GP80SD
17	Nibral bronze	GP 107	PVP417GP107SD
18	Nibral bronze	GP 107	PVP418GP107SD
19	Nibral bronze	GP 107	PVP419GP107SD
20	Nibral bronze	GP 107	PVP420GP107SD
20	Nibral bronze	GP 112	PVP420GP112SD
21	Nibral bronze	GP 112	PVP421GP112SD
22	Nibral bronze	GP 112	PVP422GP112SD
23	Nibral bronze	GP 112	PVP423GP112SD
24	Nibral bronze	GP 112	PVP424GP112SD





ACCESSORIES

MARINE ACCESSORIES

CLAMPS

FIXING CLAMP

Rubber-coated clamps to absorb vibrations and noise while providing protection to increase the durability of the attachment.



Description	Part Number
Clamp	17B21079
Clamp	59072604
Clamp	59071504
Clamp 1 60/20 W1	59071604
Clamp 40/15 W1	59071404
Clamp 74/12 SMS with ABA W1	59071745
CLAMP FIJ.RSGU 2 60/25 W1	59072605
Clamp RSGU 1 06/15 W1	59071064
Clamp RSGU 1 16/12 W1	59071161
Clamp RSGU 1 22/15 W1	59071224
Clamp RSGU 1 30/15 W1	59071304
Clamp RSGU 1 32/15 W1	59071324

CLAMPS

HIGH PRESSURE CLAMP

Clamps for applications that require very high tightening and breaking torques, featuring high levels of tensile force.



Ø (mm)	Diameter (in) (in)	Material	Part Number
104 - 112	4 1/16 - 4 7/16	ACERO INOXIDABLE	54083112
112 - 121	4 7/16 - 4 3/4	ACERO INOXIDABLE	54083121
121 - 130	4 3/4 - 5 1/8	ACERO INOXIDABLE	54083130
130 - 140	5 1/8 - 5 1/2	ACERO INOXIDABLE	54083140
162 - 174	6 3/8 - 6 7/8	ACERO INOXIDABLE	54083174
187 - 200	7 3/8 - 7 7/8	ACERO INOXIDABLE	54083200
40 - 43	1 9/16 - 1 11/16	ACERO INOXIDABLE	54083037
40 - 43	1 9/16 - 1 11/16	ACERO INOXIDABLE	54083040
43 - 47	1 11/16 - 1 7/8	ACERO INOXIDABLE	54083043
47 - 51	1 7/8 - 2	ACERO INOXIDABLE	54083047
51 - 55	2 - 2 3/16	ACERO INOXIDABLE	54083051
55 - 59	2 3/16 - 2 5/16	ACERO INOXIDABLE	54083059
59 - 63	2 5/16 - 2 1/2	ACERO CROMADO	51083060
59 - 63	2 5/16 - 2 1/2	ACERO INOXIDABLE	54083060
63 - 68	2 1/2 - 2 11/16	ACERO INOXIDABLE	54083063
68 - 73	2 11/16 - 2 7/8	ACERO INOXIDABLE	54083079
73 - 79	2 7/8 - 3 1/8	ACERO INOXIDABLE	54083073
79 - 85	3 1/8 - 3 3/8	ACERO INOXIDABLE	54083085
85 - 91	3 3/8 - 3 13/16	ACERO ZINCADO	51083085
85 - 91	3 3/8 - 3 9/16	ACERO INOXIDABLE	54083091
91 - 97	3 9/16 - 3 13/16	ACERO INOXIDABLE	54083097
91 - 97	3 9/16 - 3 13/16	ACERO ZINCADO	51083092
97 - 104	3 13/16 - 4 1/6	ACERO INOXIDABLE	54086097

CLAMPS

ENDLESS CLAMP

Clamps indicated for joining flexible pipes subject to high mechanical stresses, with uniform distribution of torque forces that are perfectly aligned over the hose to ensure a perfectly sealed connection.



Description	Part Number
Clamp DIN 3017 140-160/9 W1.	54082033
Clamp DIN 3017 100-120/12 W4	54082100
Clamp DIN 3017 110-130/12 W4	54082110
Clamp DIN 3017 12-22/9 W4	54081012
Clamp DIN 3017 130-150/12 W4	54082130
Clamp DIN 3017 16-27/9 W4	54081016
Clamp DIN 3017 20-32/9 W4	54081020
Clamp DIN 3017 23-35/9 W4	54081023
Clamp DIN 3017 25-40/12 W4	54082025
Clamp DIN 3017 25-40/9 W4	54081025
Clamp DIN 3017 32-50/12 W4	54082032
Clamp DIN 3017 35-50/9 W4	54082035
Clamp DIN 3017 35-50/9 W4	54081032
Clamp DIN 3017 40-60/12 W4	54082040
Clamp DIN 3017 50-70/12 W4	54082050
Clamp DIN 3017 50-70/9 W4	54081050
Clamp DIN 3017 60-80/12 W4	54082060
Clamp DIN 3017 70-90/12 W4	54082070
Clamp DIN 3017 80-100/12 W4	54082080
Clamp DIN 3017 8-12-7,5 W2	54081007
Clamp DIN 3017 8-16 W4	54081008
Clamp DIN 3017 90-110/12 W4	54082090

SOUND INSULATOR

SOUND INSULATOR S1

Alveolar foam with self-extinguishing corrugated polyurethane border. Decorative thermal insulation with good acoustic absorption. 30mm thickness. Supplied in sheets of 2000 x 1000 mm.

Thanks to its high-quality insulation properties and its self-adhesive properties, this insulation will help you reduce the noise impact in the engine room in a practical and simple way.

Consult without obligation at your nearest Solé point of sale.



Thickness (mm)	Rw (dB)	Weight (Kg)	Dimensions (mm)	Self-adhesive	Part Number
30	8	1,5	2000x1000	Yes	62000001

SOUND INSULATOR

SOUND INSULATOR S2

Noise insulation with aluminum coating, fiberglass support and absorbing polyurethane foam. Thermal insulation, M-1 class fire-resistant, good resistance to hydrocarbon. Supplied in sheets of 1200 x 1000 mm



Thickness (mm)	Rw (dB)	Weight (Kg)	Dimensions (mm)	Self-adhesive	Part Number
25	19	0,8	1200X1000	Yes	62002001
40	19	1,86	1200x1000	Yes	62002002

SOUND INSULATOR

SOUND INSULATOR S2PRO

It is a perfect acoustic insulation for marine applications, with good properties due to its structure which includes an aluminium coating with fibreglass support and M-1 flame-retardant absorbent polyurethane foam interwoven with a 5 Kg/m² viscoelastic heavy mass. Supplied in 1200 x 1000 mm sheets.



Thickness (mm)	Rw (dB)	Weight (Kg)	Dimensions (mm)	Self-adhesive	Part Number
30	29	8,08	1200x1000	No	62003001

SOUND INSULATOR

SOUND INSULATOR S3

Insulation with aluminium coating with fibreglass support and composite polyurethane foam with 150 Kg/m³ of density. The higher density increases its properties, including its durability. It is highly effective at absorption. Supplied in sheets of 2000 x 1000 mm

Among all its properties, the following stand out: Thermal insulation, M-1 behavior flame retardant, good resistance to soaking hydrocarbons and good insulator.



Thickness (mm)	Rw (dB)	Self-adhesive	Dimensions (mm)	Part Number
40	24	Yes	2000x1000	62001001

SOUND INSULATOR

SOUND INSULATOR S4

Aluminium-coated insulation with absorbent fibreglass support, with M-1 and F-1 certifications. It functions as excellent thermal insulation, with M-1 fire-protection certification, and also impedes the spread of smoke. Supplied in 1000 x 610 mm sheets



Thickness (mm)	Rw (dB)	Weight (Kg)	Dimensions (mm)	Self-adhesive	Part Number
50	33	7,2	1000x610	No	62004001

SOUND INSULATOR

SOUND INSULATOR S5

High quality acoustic insulation ideal for high performance marine applications. It consists of three insulating layers of which 88 % is open cell polyurethane foam impregnated with anti-flammable treatment. The type of impregnation gives the product great durability. The insulating layer is a heavy sheet made up of an EPDM rubber-based polymer matrix and EVA flame retardant which, in addition to its many technical characteristics, offers high sound-absorbing properties. Finally, the coating is made of fibreglass fabric, which provides high mechanical strength and enhances soundproofing. Supplied in 1200 x 1000 mm plates

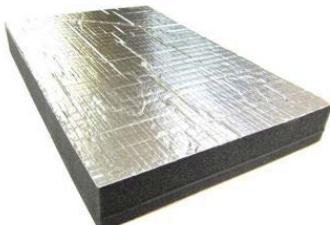


Thickness (mm)	Rw (dB)	Weight (Kg)	Self-adhesive	Dimensions (mm)	Part Number
45	32	10,5	Yes	1200X1000	62007002

SOUND INSULATOR

SOUND INSULATOR S6

Acoustic insulation offers a high level of absorption and noise isolation due to its material composition. It alternates multiple layers of flame-retardant high density foam, open cell and heavy layer sheets based on EPDM rubber and fireproof EVA, and has a special finished coating of aluminium mesh on the visible face providing greater mechanical strength and surface protection in case of fluid discharge. Thus, its applications are thermal insulation, absorption, and acoustic insulation. Solé Diesel's S6 acoustic insulator is therefore a great ally for noise protection in machine rooms and other places with a high sound impact. Supplied in 1000 x 1000 mm sheets



Thickness (mm)	Rw (dB)	Weight (Kg)	Self-adhesive	Dimensions (mm)	Part Number
35	22,9	6	Yes	1000*1000	62008002

SOUND INSULATOR

SOUND INSULATOR SHM

Heavy Mass manufactured with Elastomer mixed with Barite. The product is very dense yet thin. It is very useful for reducing direct noises of metallic elements and other sources of sound, like engines, improving the insulation in machine rooms. Supplied in sheets of 1230 x 1030 mm

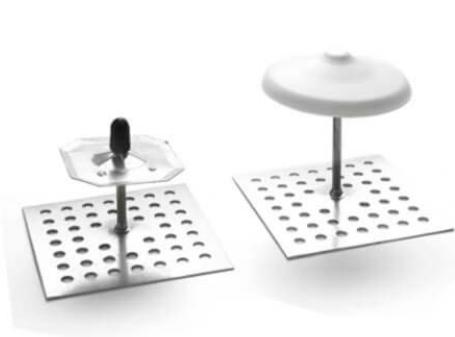


Thickness (mm)	Rw (dB)	Weight (Kg)	Dimensions (mm)	Self-adhesive	Part Numbr
4	17	10	1230x1030	Yes	62005001

SOUND INSULATOR

SOUND INSULATOR ACCESSORIES

Mechanical attachment packs for products.



Description	Part Number
Fixing Nail 32MM Pack + Nautical Cover	62006001
Fixing Nail 44MM Pack + Nautical Cover	62006002

CONTROL CABLES

PUSH-PULL CABLES

Stainless steel cable with plastic sheath. No maintenance required. Thread type UNF10-32h.



L (m)	L (ft)	Part Number
1,5	4,9	60400015
2	6,6	60400020
2,5	8,2	60400025
3	9,8	60400030
3,5	11,5	60400035
4	13,1	60400040
4,5	14,8	60400045
5	16,4	60400050
5,5	18	60400055
6	19,7	60400060
6,5	21,3	60400065
7	23	60400070
7,5	24,6	60400075
8	26,2	60400080
8,5	27,9	60400085
9	29,5	60400090
10	32,8	60400100
11	36	60400110
12	39,4	60400120

CONTROL CABLES

PUSH-PULL XTREME CABLES

Stainless steel cable with a reinforced plastic casing, available in several sizes. It is more resistant and can therefore reach longer lengths.



L (m)	L (ft)	Part Number
13	42,6	60400130
14	45,9	60400140
15	49,2	60400150
16	52,5	60400160
17	55,8	60400170
18	59	60400180
19	62,3	60400190
20	65,6	60400200
21	68,9	60400210
22	72,2	60400220
23	75,4	60400230
24	78,7	60400240

CONTROL CABLES

SHUT-DOWN CABLE

Made of steel cable with plastic sheath and brass ends.



L	L	Part Number
(m)	(ft)	
0,5	1,6	60900405.1
1	3,3	60900410.1
1,5	4,9	60900415.1
2	6,6	60900420.1
2,5	8,2	60900425.1
3	9,8	60900430.1
3,5	11,5	60900435.1
4	13,1	60900440.1
4,5	14,8	60900445.1
5	16,4	60900450.1
6	19,7	60900460.1

CONTROL CABLES

THREADLESS TERMINAL SHUT-DOWN CABLE

Made from steel wire with a plastic case and brass ends.



L	L	Part Number
(m)	(ft)	
6	19,7	60900460VC
10	32,8	609004100C

CONTROL CABLES

VARIABLE SHUT-DOWN CABLES

Made from steel wire with a plastic case and brass ends. They are sold in standard 6 m and 10 m lengths and can be adapted to the desired length by the user.



L (m)	L (ft)	Part Number
6	19,7	60900460V
10	32,8	609004100

CONTROL CABLES

SHUT-DOWN CABLE ACCESSORIES

Attachment element for pair cables without threaded screw connection, required to attach the free end of the steel cable to the element being controlled.

Description	Part Number
Shut-Down Cable Clamp	60900106
Threaded Terminal Shut-Down Cable	60900401



WATER BOILERS

ZINC ANODE FOR WATER BOILER

The anode is the most important element to protect the boiler from corrosion. By sacrificing it electrolytic reaction does not affect the marine water heater for boats.

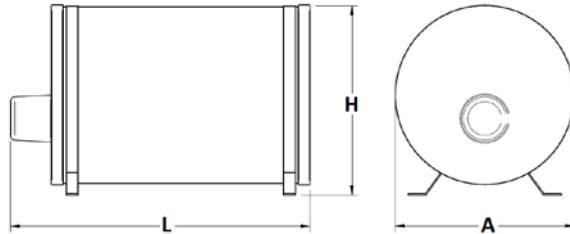


Capacity (L)	Part Number
20 / 22	60800055
30 / 100 / 150 / 200	60800056
45 / 60	60800057

WATER BOILERS

CYLINDRICAL BOILER KIT

The internal surface of the water heater is made of enamelled steel, according to DIN 4753. For heat insulation A.T.I use closed cell expanded polyurethane foam.

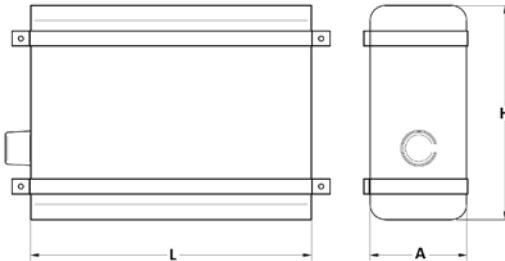


Capacity (L)	Power (kW)	Voltage (V)	Frequency (Hz)	Max. Pressure (kPa)	Weight (Kg)	L (mm)	H (mm)	A (mm)	Part Number
21	1200	230	50	500	10	485	325	322	60800003
22	550	230	50	700	10	490	334	320	6080004.1
22	850	230	50	700	10	490	334	320	6080005.1
22	1250	230	50	700	10	490	334	320	6080006.1
30	550	230	50	700	11,5	625	334	320	6080007.1
30	850	230	50	700	11,5	625	334	320	6080008.1
30	1250	230	50	700	11,5	625	334	320	6080009.1
45	550	230	50	700	15	885	334	320	6080010.1
45	850	230	50	700	15	885	334	320	6080011.1
45	1250	230	50	700	15	885	334	320	6080012.1
60	550	230	50	700	17,3	1070	334	320	6080013.1
60	850	230	50	700	17,3	1070	334	320	6080014.1
60	1200	230	50	500	23	1065	334	322	6080015
60	1250	230	50	700	17,3	1070	334	320	6080015.1

WATER BOILERS

RECTANGULAR BOILER KIT

The rectangular water heater is an accessory that lets you increase the domestic hot water temperature on-board work vessels or pleasure craft. It has been designed with 1200 W and 230V resistance for excellent results, allowing it to heat water even when the ship's engine is stopped.



Capacity (L)	Power (kW)	Voltage (V)	Frequency (Hz)	Max. Pressure (kPa)	Weight (Kg)	L (mm)	H (mm)	A (mm)	Part Number
20	850	230	50	500	12,5	552	420	190	60800019

WATER BOILERS

OTHER SPARE PARTS FOR WATER BOILER

Boiler spare parts are all the necessary elements which allows the boat domestic hot water boiler maintenance and increase the service life.



Description	Part Number
Gasket For Plug Holder Anode	60800059
Heater Element's Gasket	60800058
Hose Connection Kit	60800042
Pressure Relief and Not Return Valve	60800046
Thermostatic Water Mixer Kit	60800041
Thermostat 20A	60800054

WATER BOILERS

WATER BOILER HEATER

Electrical heating elements allow sanitary hot water production when engine is not running. Are available at 500, 800 when marine engine is not running. Are available at 500, 800 and 1200 Watts and 12 and 24 V. and 1200 W and voltages of 12 and 24 V.



Power (kW)	Voltage (V)	Part Number
500	120	60800047
500	230	60800050
800	120	60800048
800	230	60800051
1200	120	60800049
1200	230	60800052

GAUGES

INDICATOR HOUR METER

Dial gauge showing the engine operating time.



Voltage	Part Number
(V)	
12	60900918

GAUGES

REVOLUTION COUNTER MT

Dial gauge showing engine revolutions.



Voltage	Rpm	Associated article	Part Number
(V)	(RPM)		
12	4000	-	60900810
12	4000	MINI-1/2/3	60923710
12	4000	MINI-18	60931710
12	4000	MINI-33/34/44	60934710
12	4000	MINI-23	60936710
12	4000	MINI-10	60937710
12	4000	MINI-11/17/26	60938710
12	4000	HS-121/150	60965710
12	4000	HS-270	60967710
12	4000	MINI-48	60970710
12	4000	MINI-62	60971710
12	4000	MINI-74	60974710
12	4000	SM-75/90	60980710
12	4000	SN-110	60982710
12	4000	SV-140/220	60985710
12	4000	SFN-100/160/210	60990710

GAUGES

REVOLUTION COUNTER TF

Dial gauge showing engine revolutions.



Voltage (V)	Rpm (RPM)	Associated article	Part Number
12	4000	MINI-62	60971910
12	4000	MINI-33/44/55	60972910
12	4000	MINI-74 SM-105	60974910
12	4000	SN-85/110	60982910
12	4000	SV-140	60985910
12	4000	SV-230	60987910
24	4000	-	60900911
24	4000	MINI-33/44/55	60972911
24	4000	SM-105	60975911
24	4000	SFN-160	60992911
24	4000	SDZ-165/205	60994911

GAUGES

REVOLUTION COUNTER VT

Dial gauge showing engine revolutions.



Voltage (V)	Rpm (RPM)	Associated article	Part Number
12	4000	-	60900935
12	4000	MINI-17/26/29	60938910
12	4000	MINI-17/26	60938911
12	4000	MINI-62	60971912
12	4000	MINI-33/44	60972912
12	4000	MINI-74 SM-10	60974911
12	4000	SM-82/94	60978900
12	4000	SN-85/110	60982911
12	4000	SV 140	60985911
12	4000	SV 220/230	60987911
12	4000	SFN-100/160/210	60990912
12	4000	SK-60	609A0900
24	4000	-	60900936
24	4000	SDZ-165/205	60994912

GAUGES

FUEL GAUGE

Dial gauge showing the fuel level. Available in 12 V.



Voltage	Part Number
(V)	
12	60900950R

GAUGES

PRESSURE GAUGE MT

Dial gauge showing the pressure of the engine oil. Available in 12 V and 24 V.



Voltage	Part Number
(V)	
12	60900820M
24	60900821
24	60900821M

GAUGES

PRESSURE GAUGE TF

Dial gauge showing the pressure of the engine oil. Available in 12 V and 24 V.



Voltage	Part Number
(V)	
12	60900920
12	60900920R
24	60900921R

GAUGES

PRESSURE GAUGE VT

Dial gauge showing the pressure of the engine oil. Available in 12 V and 24 V.



Voltage	Part Number
(V)	
12	60900939
24	60900940

GAUGES

THERMOMETER MT

Dial gauge showing the temperature of the engine coolant. Available in 12 V and 24 V.



Voltage	Part Number
(V)	
12	60900815
24	60900816
24	60900816M

GAUGES

THERMOMETER TF

Dial gauge showing the temperature of the engine coolant. Available in 12 V and 24 V.



Voltage	Part Number
(V)	
12	60900915
24	60900916

GAUGES

THERMOMETER VT

Dial gauge showing the temperature of the engine coolant. Available in 12 V and 24 V.



Voltage	Part Number
(V)	
12	60900937
24	60900938

GAUGES

VOLTMETER MT

Dial gauge showing the voltage of the batteries. Available in 12 V and 24 V.



Voltage	Part Number
(V)	
24	60900826
24	60900826M

GAUGES

VOLTMETER TF

Dial gauge showing the voltage of the batteries. Available in 12 V and 24 V.

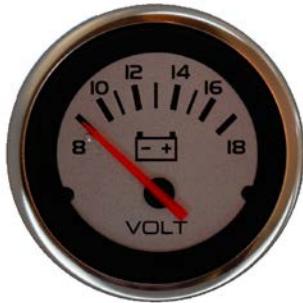


Voltage	Part Number
(V)	
12	60900925
12	60900925R
24	60900926R

GAUGES

VOLTMETER VT

Dial gauge showing the voltage of the batteries. Available in 12 V and 24 V.



Voltage	Part Number
(V)	
12	60900941
24	60900942

GAUGES

GAUGE ACCESSORIES

Accessories for the different gauges.



Description	Part Number
"T" Connection For Extra Revolution Counter 12V	60910041
Capteur Niveau Combustible	60900952
Fixing Nut Gauge+Terminal	60900910.2
Revolution Counter Fixing Bracket	60900910.1

ELECTRICAL ENGINE CONTROL

ULTRAFLEX ELECTRONIC CONTROL

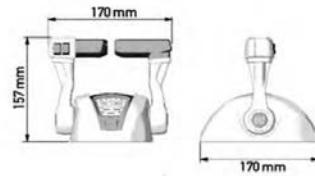
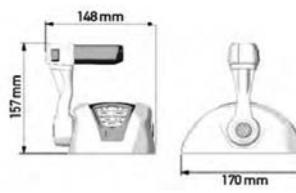
The Ultra Flex electronic control grips consist of a modular control system for both inboard and outboard engines. Their design has been optimised for maximum comfort and ergonomics.

FEATURES

- Compatible with mechanical engines and electrical motors
- Compatible with hydraulic and mechanical transmissions and stern drives.
- Suitable for boats with double engines
- Suitable for multiple stations up to 4 controls
- Dock assist
- Working voltages of 12V and 24V
- Control station brightness regulator
- Communication with NMA 2000
- Compatible with trolling valve control

ACCESSORIES

- Power Cable
- Power Extension cable
- Hyundai V-Throttle Cable
- Electrical Inverter cable
- CA Cable


DOUBLE CONTROL SYSTEM WITH TRIM

SINGLE CONTROL SYSTEM WITHOUT TRIM

Number of engines	Engine regulation	Gearbox regulation	Number of levers	Trim	Part Number
1	Electronical	Mechanical	2	Yes	60420183
1	Electronical	Mechanical	1	Yes	60420184
1	Electronical	Electronical	2	No	60420188
1	Electronical	Electronical	1	No	60420189
1	Electronical	Mechanical	1	No	60420193
1	Electronical	Mechanical	2	No	60420194
1	Mechanical	Mechanical	1	No	60420195
1	Mechanical	Mechanical	1	Yes	60420196
1	Mechanical	Mechanical	2	No	60420197
1	Mechanical	Mechanical	2	Yes	60420198
1	Mechanical	Electronical	1	No	60420219
1	Mechanical	Electronical	2	No	60420220
2	Electronical	Electronical	2	No	60420180
2	Electronical	Mechanical	2	Yes	60420181
2	Electronical	Mechanical	1	Yes	60420182
2	Electronical	Electronical	1	No	60420187
2	Electronical	Mechanical	1	No	60420199
2	Electronical	Mechanical	2	No	60420200
2	Mechanical	Mechanical	1	No	60420201
2	Mechanical	Mechanical	1	No	60420201.1
2	Mechanical	Mechanical	1	Yes	60420202
2	Mechanical	Mechanical	2	No	60420203
2	Mechanical	Mechanical	2	Yes	60420204
2	Mechanical	Electronical	1	No	60420221
2	Mechanical	Electronical	2	No	60420222

ELECTRICAL ENGINE CONTROL

ELECTRONIC CONTROL ACCESSORIES

The electrical controllers for electronic controls systems are all the necessary elements to make a marine engine control installation.

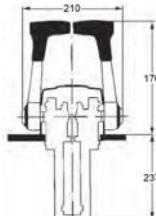


Description	Part Number
Button	60400101.1
Can Cable 1 M	60420174
Can Cable 10 M	60420177
Can Cable 15 M	60420178
Can Cable 20 M	60420179
Can Cable 3 M	60420175
Can Cable 7 M	60420176
Config. et Doc. Commande Électronique	60420223
Connection Kit SVT Panels to Electronic Controls 24m	60420226
Control Unit	60420154
Dual Control Trim	60420157
Dual Control Without Trim	60420158
I-Throttle	60420227
Lever, Control	25610424
Lever, Gas Control	12119071
Lever, Morse	17419002
Main Power Cable 1 M	60420160
Main Power Cable 3 M	60420161
Main Power Cable 7 M	60420162
Main Supply Cable 10 M.	60420163
Mechanical Actuator	60420152
Network Terminators	60420159
Pleasure Hyundai V-Throttle Cable 2 M.	60420168
Pleasure Hyundai V-Throttle Cable 4 M.	60420169
Power Extension Cable 1 M	60420164
Power Extension Cable 10 M	60420167
Power Extension Cable 3 M	60420165
Power Extension Cable 7 M	60420166
Power Unit	60420150
PWM-Throttle	60420149
Shift Cable 1 M.	60420170
Shift Cable 10 M.	60420173
Shift Cable 3 M.	60420171
Shift Cable 7 M.	60420172
Shift Unit	60420153
Single Control With Trim	60420155
Single Control Without Trim	60420156
Universal I/PWM-Throttle Cable, 4 m	60420228
V-Throttle Hyundai	60420151
V-Throttle HYUNDAI CABLE 6 M	60420191
V-Throttle Voltage 0-5	60420229

MECHANICAL ENGINE CONTROL

TOP MOUNTING CONTROL FOR TWIN ENGINES

Engine throttle control grip for dual-engine vessels with mechanical operation via cable and console installation.

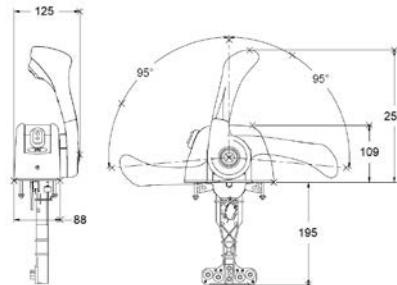


Description	Part Number
Top Mounting Twin Lever Control	60400003

MECHANICAL ENGINE CONTROL

TOP MOUNTING CONTROL TRIM

Engine throttle control grip with trim control, mechanical operation via cable, and console installation. Chrome-plated finish.

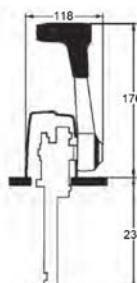


Description	Part Number
Top Mounting Control with Trim	60400007

MECHANICAL ENGINE CONTROL

TOP MOUNTING CONTROL

Engine throttle control grip with mechanical operation via cable and console installation.

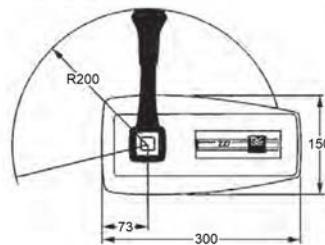


Description	Part Number
Top Mounting Control	60400002

MECHANICAL ENGINE CONTROL

OUTBOARD ENGINE CONTROL

Engine throttle control grip for outboard applications. Mechanical operation via cable and lateral installation.

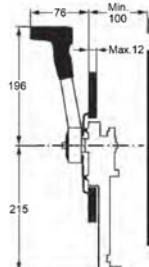


Description	Part Number
Outboard Engine Control	60400005

MECHANICAL ENGINE CONTROL

SIDE MOUNTING CONTROL

Engine throttle control grip with mechanical operation via cable and lateral installation.

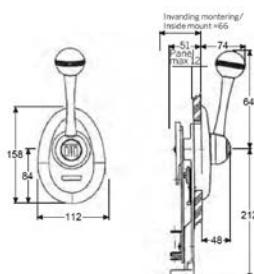


Description	Part Number
Side Mounting Control	60400004

MECHANICAL ENGINE CONTROL

STAINLESS SIDE CONTROL SAILBOAT

Engine throttle control grip with mechanical operation via cable and lateral installation. Finished in stainless steel.

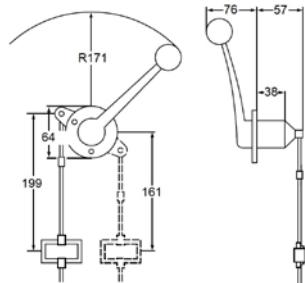


Description	Part Number
Stainless Side Control For Sailboat	60420101

MECHANICAL ENGINE CONTROL

SIDE CONTROL FOR TROLLING VALVE

Engine throttle control grip for trolling with mechanical operation via cable and lateral installation. Finished in stainless steel.

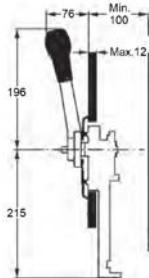


Description	Part Number
Side Control For Trolling Valve	60420002

MECHANICAL ENGINE CONTROL

SIDE CONTROL FOR SAILING BOAT

Engine throttle control grip with mechanical operation via cable and lateral installation.



Description	Part Number
Side Mounting Control For Sailboat	60400001

MECHANICAL ENGINE CONTROL

MECHANICAL CONTROL ACCESSORIES

Set of elements and mechanisms that comprise the mechanical throttle control grips for engines.



Description	Part Number
Control Mechanism	60400010
Control,Side Mount for SailBoats	60400101
Control,Side Mounted	60400104
Control,Top Mounted	60400102
Control,Top Mounted Dual	60400103.1
Control,Top Mounted Dual (no mechanism)	60400103
Dual Station Unit	60400006

HOSES

REINFORCED FUEL HOSE ISO 7840

The reinforced fuel hose is our best hose for diesel, petrol, and oil, and is available in 50-62 mm and 76-87 mm diameters. Its unique composition in flame-retardant rubber means it is highly effective for safe fuel transfers. SAE J 1527: 2004 USCG A1 R1, ISO 7840: 2004 A1 EC Approved by: 0474 R.I.N.A, DIP N. 128405/MI/2 - Lloyd's Register.



Ø int. (mm)	Ø ext. (mm)	Max. Pressure (bar)	R curvature (mm)	Part Number
30	42	10	45	M81513040
38	48	10	60	M81513849
50	62	10	75	M81515062
76	87	10	150	M81517687

HOSES

AIR ASPIRATION HOSE

Ventilation hose designed for the suction of air, gas, smoke, or steam from the engine compartment. It is made from grey PVC with a steel spiral and is resistant to flames, ozone, and sunlight. The hose can be used on the entire ventilation system of a ship. (-25°C / +125°C) Fire resistance: CSTB M1 and DIN 4102.



Ø (mm)	Working pressure (bar)	R curvature (mm)	Part Number
40	0,9	25	M88564000
45	0,9	30	M88564500
50	0,8	35	M88565000
60	0,8	42	M88566000
70	0,7	49	M88567000
76	0,6	53	M88567600

HOSES

FUEL HOSE DIN 73379

Fuel hoses for vessel engines are made with high quality rubber and allow diesel, petrol and oil to circulate at high working temperatures between -35° and +90°. Quality standards: SAE J 1527: 2004 USCG A1 R1, ISO 7840: 2004 A1 EC.



Ø int. (mm)	Ø ext. (mm)	Working pressure (bar)	R curvature (mm)	Part Number
5	11	10	35	M86500512

HOSES

FUEL HOSE ISO 7840

Black rubber fuel hose according to norm ISO-7840A1. Supplied by meters.



Lloyd's
Register

Ø int. (mm)	Ø ext. (mm)	Max. Pressure (bar)	R curvature (mm)	Part Number
6	15	14	30	M81510616
8	16	14	45	M81510817
10	18	14	55	M81511019
12	21	10	70	M81511222
16	25	10	90	M81511626
19	29	10	130	M81511930
25	37	10	250	M81512520
30	42	10	300	M81523040
35	47	10	250	M81513547
38	52	10	380	M81513848
51	65	10	500	M81515063

HOSES

SANITARY WATER HOSE

Smooth-textured sanitary hose, extremely flexible, specially designed for service wastewater. The sanitary hose prevents sanitary drain odours from spreading. Made from vanilla-scented white rubber. Resistant to abrasion, ozone, seawater and marine agents, reinforced with a double steel spiral. (-40°C / +120°C) Standards: European, FDA and ISO 8099: 2000.



Ø int. (mm)	Ø ext. (mm)	Working pressure (bar)	R curvature (mm)	Part Number
16	26	7	35	M87531626
19	29	7	40	M87531929
25	35	7	50	M87532535
38	48	7	80	M87533848

HOSES

EXHAUST HOSE

Rubber hose with highly resistant textile reinforcement with spiral steel wire. Supplied by meters. The physical properties of the hose give an optimum flexibility and resistance to the engine exhaust. Approved by: 0474 R.I.N.A, DIP N. 128405/MI/2 - Lloyds Register.



Lloyd's
Register

Ø int. (mm)	Ø ext. (mm)	Working pressure (bar)	R curvature (mm)	Part Number
40	48	3	40	M88504052
45	53	3	45	M88504557
51	61	3	51	M88505062
55	65	3	55	M88505055
60	70	3	60	M88506072
76	86	3	76	M88507587
80	90	3	80	M88508092
90	100	3	90	M885090102
102	112	3	152	M8850102114
114	128	3	225	M8850114128
120	132	3	240	M88501202
127	139	3	255	M8850127139
152	164	3	305	M8850152164
175	191	3	525	M8850175187
203	219	3	815	M8850203218
254	272	3	1270	M8850254272
305	325	3	1830	M8850305325

HOSES

CABLE PROTECTION HOSE

Cable protective hose with high flexibility in order to adapt to every corner of the boat. Made of material highly resistant to marine corrosion.



Ø ext. (mm)	Ø int. (mm)	R curvature (mm)	Part Number
61	50	125	M87535000

HOSES

HIGH QUALITY REFRIGERATION HOSE

Cooling water suction hose for marine engines and generators, made from rubber. Supplied by meters. The physical properties of the hose give it optimum flexibility and resistance. This additional flexibility is what makes it perfect for all kinds of installations of generator sets and marine engines because it has the same suction and cooling water transport properties as a keel cooler. Perfect for suction of fresh water, salt water, and all cooling fluids. It can be used as an exhaust pipe.



Ø int. (mm)	Ø ext. (mm)	Working pressure (bar)	R curvature (mm)	Part Number
15	23	5	55	M87501523
19	27	5	70	M87501927
20	28	5	70	M87502029
22	32	5	75	M87502232
25	33	5	85	M87502535
28	36	5	95	M87502838
30	38	5	100	M87503040
32	42	5	105	M87503242
35	45	5	115	M87503545
38	48	5	130	M87503848
40	50	5	135	M87504050
42	52	5	140	M87504252
45	55	5	150	M87504555
51	61	5	165	M87505060
55	65	5	180	M87505565
60	70	5	200	M87506070
80	94	5	265	M87508094

HOSES

TRANSPARENT WATER HOSE STEEL REINFORCEMENT

Smooth transparent PVC hose with steel wire reinforcement. Resistant to weathering and most chemicals, allowing temperatures that vary from -10°C to 60°C.



Ø int. (mm)	Ø ext. (mm)	Working pressure (bar)	R curvature (mm)	Part Number
10	16	7	20	M87521016
12	18	7	25	M87521218
14	20	6	30	M87521420
16	22	6	35	M87521622
20	27	5	50	M87522027
25	33	5	75	M87522533
30	38	45	90	M87523038
32	40	45	95	M87523240
35	44	4	105	M87523544
38	47	4	115	M87523847
40	48	3	120	M87524049
50	60	3	150	M87525060

HOSES

WATER ASPIRATION HOSE

Marine water aspiration hose reinforced with high tensile textile plies and helix wire embedded, cover with black rubber resistant to abrasion, heat and marine environment. Also suitable for cooling the heat exchangers on private boats. Standards: SAE J 2006:03 R2 - ISO 13363:04 Type 2 Class B Approved by: LLOYD'S REGISTER nr. 96/00126 - RINA nr.DIP103514CS.



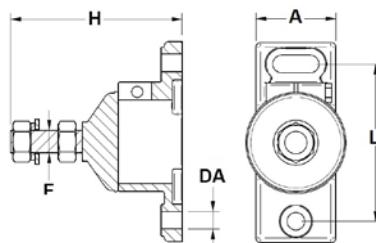
Lloyd's
Register

Ø int. (mm)	Working pressure (bar)	R curvature (mm)	Part Number
19	3	84	M88500019
25	3	110	M88500025
30	3	135	M88500030
32	3	145	M88500032
35	3	155	M88500035
38	3	170	M88500038
40	3	180	M88500040
45	3	200	M88500045
50	3	230	M88500050
60	3	270	M88500060
63	3	295	M88500063

SILENTBLOCKS

SILENTBLOCKS A

Flexible synthetic rubber and metal supports, able to absorb the thrust of the propeller. The Solé Diesel hangers are designed to eliminate engine vibrations and noise turn. They also allow easy alignment. Also known as silentblocks for marine engines or generators.

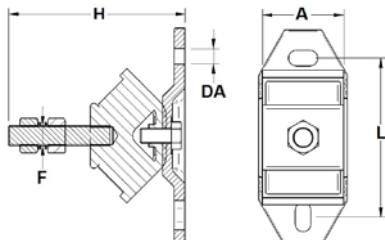


Load (Kg)	Hardness (Sh A)	DA (mm)	H (mm)	L (mm)	A (mm)	F (mm)	Part Number
100	60	11	125	98	50	M14X1,5	61631101
100	60	11	125	98	50	M16X1,5	61651008

SILENTBLOCKS

SILENTBLOCKS B

Flexible synthetic rubber and metal supports, able to absorb the thrust of the propeller. The Solé Diesel hangers are designed to eliminate engine vibrations and noise turn. They also allow easy alignment. Also known as silentblocks or silent blocks for marineengine or generator.

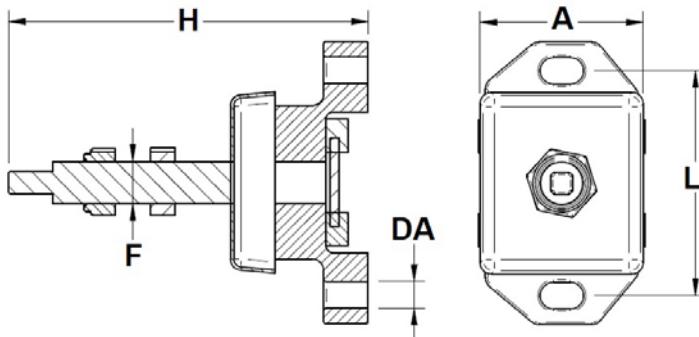


Load (Kg)	Hardness (Sh A)	DA (mm)	H (mm)	L (mm)	A (mm)	F (mm)	Part Number
100	45	13	149	127	65	M16X1,5	61653001
150	60	13	149	127	65	M16X1,5	61685004
150	60	13	149	127	65	M20X1,5	61685005

SILENTBLOCKS

SILENTBLOCKS C

Flexible synthetic rubber and metal supports, able to absorb the thrust of the propeller. The Solé Diesel hangers are designed to eliminate engine vibrations and noise turn. They also allow easy alignment. Also known as silentblocks or silent blocks for marineengine or generator.

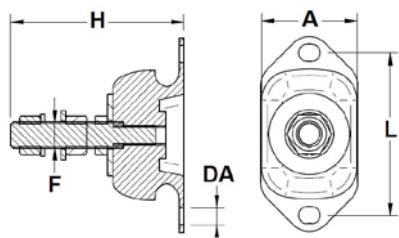


Load (Kg)	Hardness (Sh A)	DA (mm)	H (mm)	L (mm)	A (mm)	F (mm)	Part Number
255	65	13	137	101,6	69,86	5/8 UNF	61690058
256	65	13	165	101,6	69,86	3/4 UNF	61690000
309	75	13	137	101,6	69,85	5/8 UNF	61691058
310	75	13	165	101,6	69,85	3/4 UNF	61691000
345	60	13	137	101,6	92,08	5/8 UNF	61696058
346	60	13	152	101,6	92,08	3/4 UNF	61696000

SILENTBLOCKS

SILENTBLOCKS D

Flexible synthetic rubber and metal supports, able to absorb the thrust of the propeller. The Solé Diesel hangers are designed to eliminate engine vibrations and noise turn. They also allow easy alignment. Also known as silent blocks for marine engines or generators.

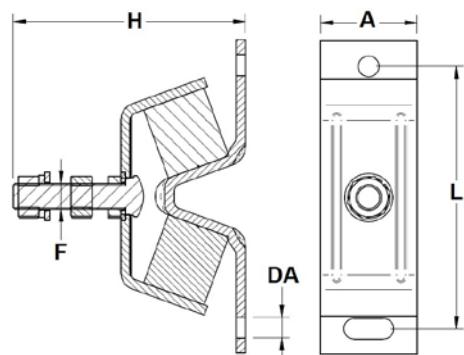


Load (Kg)	Hardness (Sh A)	DA (mm)	H (mm)	L (mm)	A (mm)	F	Part Number
70	55	11	106	100	60	M16x1,5	61654000
90	65	11	95	98	61	M14x1,5	61639000
90	65	11	108	98	61	M16x1,5	61661000
120	45	13	114	140	75	M16x1,5	61673100
120	45	13	114	140	75	M16X1,5	61678100
220	55	13	110	140	75	M16x1,5	61678000
220	55	13	110	140	75	M16X1,5	61678001
225	55	13	105	140	75	M16x1,5	61652000
300	65	13	120	140	75	M20x1,5	61665000
300	65	13	130	140	75	M16x1,5	61665000.1
350	45	18	114	182	112	M20x1,5	61694001
400	75	13	120	140	75	M20x1,5	61694004
525	55	18	155	182	112	M20X1,5	61694007
800	65	18	150	182	112	M20X1,5	61694009

SILENTBLOCKS

SILENTBLOCKS E

Flexible synthetic rubber and metal supports, able to absorb the thrust of the propeller. The Solé Diesel hangers are designed to eliminate engine vibrations and noise turn. They also allow easy alignment. Also known as silentblocks or silent blocks for marine engine or generator.

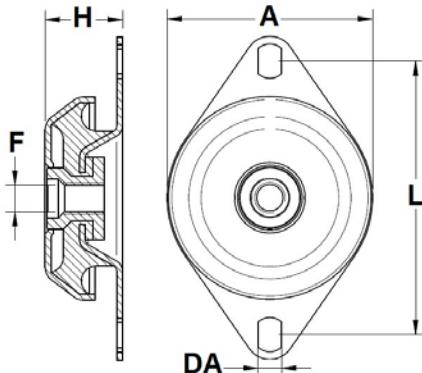


Load (Kg)	Hardness (Sh A)	DA (mm)	H (mm)	L (mm)	A (mm)	F	Part Number
75	50	12	148	174	60	M16X1,5	61672000.1
100	60	12	148	174	60	M16X1,5	61673000.1
150	70	12	147	173	60	M16x1,5	61682000.1

SILENTBLOCKS

SILENTBLOCKS F

Flexible synthetic rubber and metal supports for marine generators. The Solé Diesel hanger are designed to eliminate engine vibrations and noise turn. They also allow easy alignment. Also known as silent blocks for marine engines or generators.



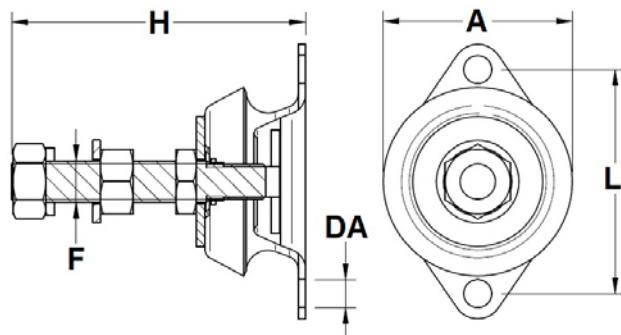
Load (Kg)	Hardness (Sh A)	DA (mm)	H (mm)	L (mm)	A (mm)	F (mm)	Part Number
75	50	9	34	83,5	63	M12	61638001
200	35	10	34	123	94	M12	61673001
200	35	10,5	34	122	95	M10	61674000
200	40	12,5	41	143	107,5	M16	61674001
200	35	12,5	41	143	107,5	M12	61674002

SILENTBLOCKS

SILENTBLOCKS G

Flexible supports made from synthetic rubber and metal that can absorb the push of the propeller. Solé Diesel hangers are designed to eliminate engine vibrations and noise. They also facilitate easy alignment.

Note: the references ending in R correspond to the silent blocks supplied until 2018 and are currently only sold as spare parts for the engines supplied until this year. For models from 2018, the current hangers are 61638005 and 61676005.



Load (Kg)	DA (mm)	H (mm)	L (mm)	A (mm)	F (mm)	Part Number
50	9,5	100	76	64	M14X1,5	61676000R
50	11	101	100	64	M14X1,5	61676005
70	9,5	100	76	64	M14X1,5	61638000R
70	11	101	100	64	M14X1,5	61638005

SILENTBLOCKS

SHIMS

Discover the shims height levellers developed and suitable for the engine replacements. These shims provide a precise and secure adjustment. They are made of an anticorrosion covering with an electrolytic galvanizing, 12/15 microns thick.

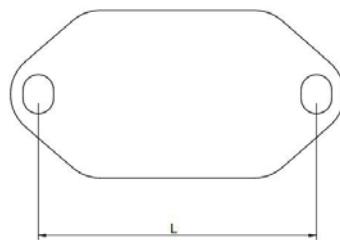
The DIN rule about ships and high-speed light watercrafts (Shipment Jan 2001-Point4-Chapter3-Section1-F202), establishes that standard height adjustment systems are not acceptable for levelling due to the cyclic bending moments beared by the studs and screws. For this reason, placing shims under the silentblocks is the recommended method for a correct levelling of the silentblocks.

The range consists of 3 packs, suitable for all the Solé Diesel engines and Hyundai leisure application. Solé Diesel engines with Deutz base are not included.

All the packs include the box and 12 shims (3 different sizes* / 4 pieces per size)

*Sizes: 3 / 5 / 10 mm

On the other hand, you can read more about special feet for the repowering on the section Marine Engines/Special feet

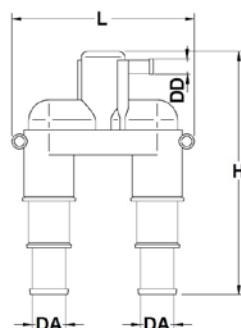


L (mm)	Associated engine	Part Number
76	Mini-17/Mini-29	61638100
100	Mini-17/Mini-29/Mini-33	61654100
140	Mini-44/Mini-55/Mini-62/SK-60/Mini-74/SM-82/SM-94/SM-103/U125/D170/R200/S270	61673101

ANTI SYPHON SYSTEM

PLASTIC SYPHON BREAKER

Kit that prevents cooling water from entering inside the engine with the engine stopped as a result of the siphon effect. This dangerous situation can occur when the cooling water injection point inside the exhaust is located at least 15 cm above the waterline.

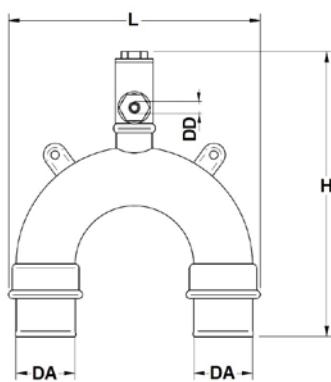


DA (mm)	H (mm)	L (mm)	DD (mm)	Part Number
13 - 38	308	158	-	60730012
16 - 19 - 25 - 32	163	85	8	60730013

ANTI SYPHON SYSTEM

METALLIC SYPHON BREAKER

When the injection point of the cooling water inside the exhaust system is located under 15 meters above the waterline, there could be risk that if the engine is stopped, cooling water could enter the engine due to the siphoning effect. This problem can be solved by installing an air vent in the cooling waterduct, about 40cm above the waterline (max. height 2 meters). The air vent is connected by means of tube and hull transom (always mounted above the waterline). To vent outside. The air vent comes without hoses.



DA	H	L	DD	Part Number
(mm)	(mm)	(mm)	(mm)	
12	194	138	8	60730042
20	204	138	8	60730039
22	206	138	8	60730041
25	236	178	8	60730029
27	239	178	8	60730031
30	236	178	8	60730033
32	239	178	8	60730035
35	239	178	8	60730037
38	240	178	8	60730011
40	240	178	8	60730027
42	220	178	8	60730014
45	240	178	8	60730026

ANTI SYPHON SYSTEM

ACCESSORIES FOR METALLIC ANTI SYPHON SYSTEMS

The accessories for metallic anti siphon systems include the 1 1/4" and 1" anti siphon manifold, the 1/2" anti siphon valve and the 1/2" compact anti siphon valve.



Description	Part Number
Anti Siphon Collector 1 1/4"	60730014.1
Anti Siphon Collector 1"	60730014.4
Anti Siphon Valve 1/2"	60730014.2
Compact Anti Siphon Valve 1/2"	60730014.5

WATER ASPIRATION SYSTEMS

WATER INOX STRAINER ELEMENT

Stainless steel and plastic baskets available for all Brass/Bronze sea water filters.



DD (mm)	DD (in)	Material	Part Number
12	1/2	Inox	60310012.1
25	1	Inox	60310100.1

WATER ASPIRATION SYSTEMS

WATER PLASTIC STRAINER ELEMENT

Plastic grid filtering element available for all brass / bronze water filter models.



DD (in)	DD (mm)	Part Number
1	25	60310100.3
2	50	60310200.3
1 1/2	38	60310112.3
2 1/2	63	60310113.3

WATER ASPIRATION SYSTEMS

HOSE CONNECTION FITTINGS WATER STRAINER

Different sizes of couplings.

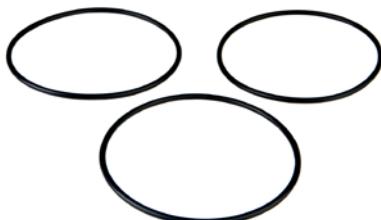


Thread diameter (in)	Hose Ø (mm)	Part Number
1	20	60371055
1	22	60371056
1	27	60371058
1	30	60371059
1	32	60371060
1	33	60371061
1	34	60371062
1	35	60371063
1,5	39	60394059
2	38	60310205
2	45	60310206
2	50	60310207
2	51	60310208
2	55	60310209
2	60	60310210
2	63	60310211
2	64	60310212
2	65	60310213
1 1/2	32	60394056
1 1/2	35	60394057
1 1/2	38	60394058
1 1/2	40	60394060
1 1/2	41	60394061
1 1/2	45	60394062
1 1/2	50	60394063
1 1/2	51	60394064
1/2	18	60338055
1/2	19	60338056
1/2	20	60338057

WATER ASPIRATION SYSTEMS

WATER STRAINER GASKET

Rubber toroidal seal to ensure the tightness of water filters.

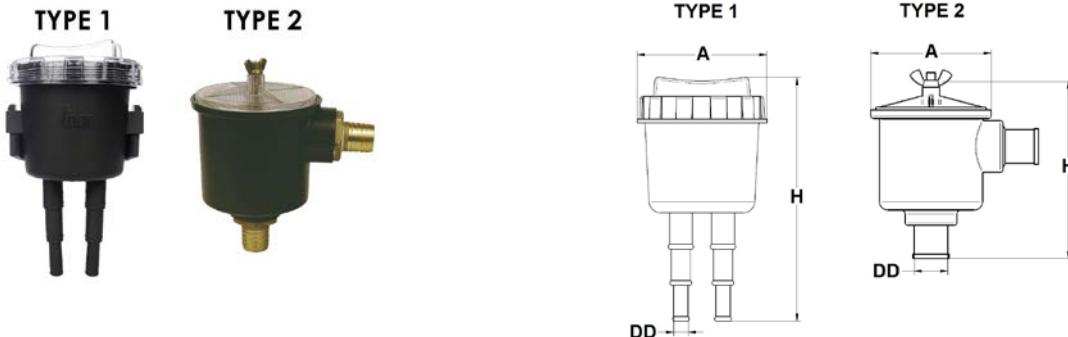


Ø (mm)	Thickness (mm)	Part Number
74	3,5	60310012.2
100	3,5	60310100.2
120	3,5	60310112.2

WATER ASPIRATION SYSTEMS

PLASTIC WATER STRAINER

Water filters prevent pump and heat exchangers from becoming blocked. Transparent plastic cover facilitates service and washing of the element. Must be installed over the waterline.

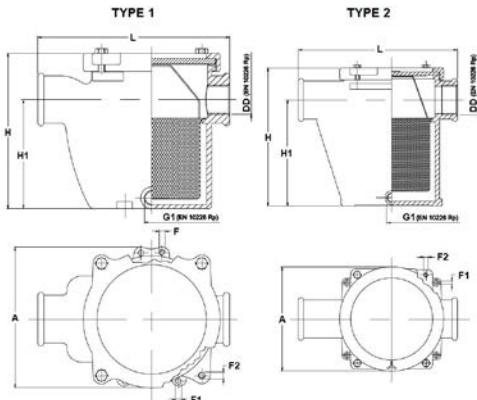


Type	DD (in)	DD (mm)	A (mm)	H (mm)	Material	Fuel element material	Part Number
1	1/2 - 5/8 - 3/4	12 - 16 - 19	130	160 - 130 - 100	Plastic	Plastic	60338000
1	3/4 - 1 - 1 1/4	19 - 25 - 32	160	230 - 190 - 160	Plastic	Plastic	60371000
2	1 3/4	45	145	190	Plastic	Plastic	60301000
2	1 1/2	38	145	190	Plastic	Plastic	60367100
2	1 3/4	41	145	190	Plastic	Plastic	60394000

WATER ASPIRATION SYSTEMS

METALLIC WATER STRAINER

Sea water filters chromed with chromed brass housing and plastic filter which has very good resistance in marine environments and requires an easy maintenance. The fittings are supplied separately. (See measurements). Approved by: R.I.N.A. N. 20200202

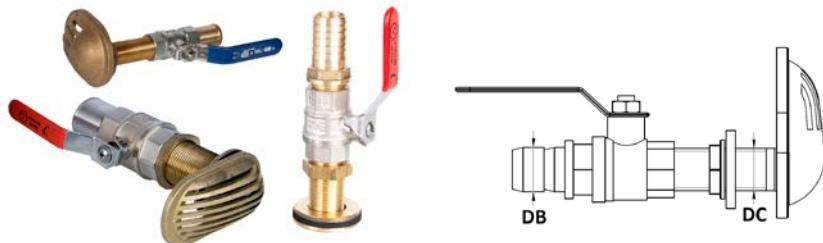


Flow rate (at 0.1 bar) (l/h)	Flow rate (at 1 bar) (l/h)	Type	DD (in)	DD (mm)	H (mm)	L (mm)	H1 (mm)	G1 (mm)	A (mm)	F (mm)	F1 (mm)	F2 (mm)	Material	Fuel element material	Part Number
2910	9210	2	1/2	12	119	139	87	6,35	98	N/A	5	M6	COBRE	INOX	60310012
8170	25850	1	1	25	139	172	98	6,35	132	M5	5	M6	COBRE	POLIPROPILENO	60310100
13430	42480	2	1 1/2	38	187	200	137	6,35	154	M6	7	M8	COBRE	POLIPROPILENO	60310112
31560	99790	1	2	50	226	274	164	6,35	193	N/A	6	M8	Bronze	POLIPROPILENO	60310200
46220	146170	1	2 1/2	63	267	295	191	19,05	241	M6	6,5	M8	Bronze	POLIPROPILENO	60310113
101020	319460	1	4	100	371	345	282	25,4	258	M8	9	M10	Bronze	POLIPROPILENO	60310400

WATER ASPIRATION SYSTEMS

SEA WATER COCK

Brass salt water intake for cooling. The element consists of a water intake with filtering mesh, through-hull, ball valve, and connection hoses. The filtering mesh must be installed facing the stern and the ball valve must always be below the flotation line.



DB	DC	Valve	Part Number
(mm)	(mm)	(in)	
13	21	1/2	60121000
15	33	1	60151000.1
20	21	1/2	60132000
25	33	1	60141000
27	33	1	60151000
33	33	1	60146000
38	42	1 1/4	60167000
42	48	1 1/2	60194000
45	48	1 1/2	60101000

WATER ASPIRATION SYSTEMS

HOSE REDUCTION FOR WATER STRAINER

Less brass to adapt to different water filter diameters.

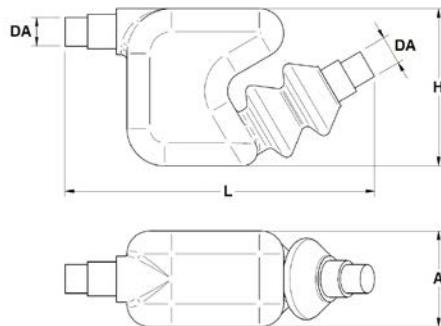


Input diameter	Output diameter	Part Number
(in)	(in)	
1	3/4	60394003
1 1/2	1 1/4	60394002
1/2	3/8	60394004

WATER EXHAUST SYSTEMS

PLASTIC WATERLOCK

A waterlock/muffler performs the task of collecting the water from the exhaust hose after the engine stops so it prevents water from entering it. The waterlock has a built-in muffler.



Type	DA (mm)	Capacity (L)	L (mm)	H (mm)	A (mm)	Part Number
1	40-45-50	7	485	220	150	60700040
2	55-60-65	20	660	320	220	60700041
3	75-90	33	760	400	290	60700042
3	100-115	33	760	400	290	60700044

WATER EXHAUST SYSTEMS

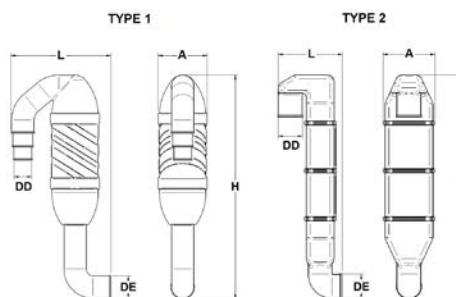
GOOSE NECK

One of the key accessories in the marine engine exhaust system is the gooseneck.

The gooseneck is a plastic conduit with a shape similar to a long neck with bends in the shape of an elbow (hence its name) that stops the entry of water and therefore prevents salt water from entering the engine, protecting it from a possible flood.

It is an essential accessory in installations where the boat motor is below the waterline, although it is also recommended in cases where the motor is an above-said line.

To complete your exhaust system and guarantee the correct operation of your boat engine to the maximum, avoiding unforeseen events, do not forget the siphon breaker, the exhaust waterlock or the water/gas separator.

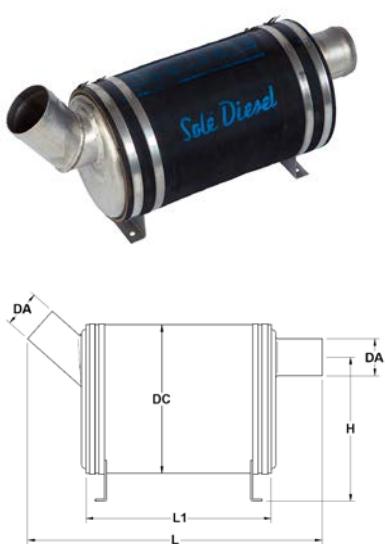


Type	DD (mm)	DE (mm)	L (mm)	A (mm)	H (mm)	Part Number
1	40 - 45 - 50	50	110	110	480	60700241
2	50	50	182	135	502	60700250
2	60	60	182	135	502	60700260

WATER EXHAUST SYSTEMS

WATERLOCK (STRAIGHT INLET-INCLIN.OUTLET)

An efficient muffler made for the toughest marine use with very good exhaust resistance and excellent waterlock function. his muffler is manufactured in several different sizes to fit any engine installations. Available for exhaust hoses with inside diameter form 40 up to 127mm. Material: Heat, oil and grease resistant rubber with holders, gables and hoseclamps made o f stainless and acid-proof steel.



DA (mm)	DC (mm)	Capacity (L)	L (mm)	L1 (mm)	H (mm)	Part Number
40	160	4	320	200	155	60700045
45	160	4	320	200	155	60700046
45	160	6	420	300	155	60700081
51	160	4	330	200	150	60700047
51	160	6	430	300	150	60700048
51	160	8	520	400	150	60700082
57	160	6	480	300	150	60700083
60	160	6	470	300	145	60700085
63	160	6	470	300	145	60700049
76	160	8	590	400	140	60700050
76	160	10	660	500	140	60700084
89	215	15	660	450	190	60700051
100	215	17	710	500	190	60700052
125	265	28	820	550	230	60700053
153	265	28	900	550	215	60700054

WATER EXHAUST SYSTEMS

WATERLOCK (STRAIGHT INLET & OUTLET)

An efficient muffler made for toughest marine use with very good exhaust resistance and excellent waterlock function. his muffler is manufactured in several different sizes to fit any engine installations. Available for exhaust hoses with inside diameter form 40 up to 127mm. Material: Heat, oil and grease resistant rubber with holders, gables and hoseclamps made o f stainless and acid-proof steel.

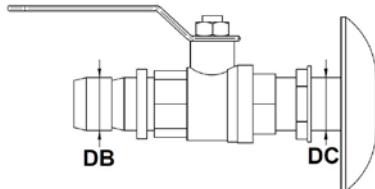


DA (mm)	DC (mm)	Capacity (L)	L (mm)	L1 (mm)	H (mm)	Part Number
40	160	4	310	200	155	60700055
45	160	4	310	200	155	60700056
45	160	6	410	300	155	60700078
51	160	4	320	200	150	60700057
51	160	6	410	300	150	60700058
51	160	8	510	400	150	60700079
57	160	6	420	300	150	60700059
60	160	6	420	300	150	60700060
63	160	6	420	300	150	60700061
76	160	8	560	400	140	60700062
76	160	10	660	500	140	60700080
89	215	15	640	450	190	60700063
100	215	17	680	500	190	60700064
125	265	28	750	550	230	60700065
153	265	28	800	550	215	60700066

WATER EXHAUST SYSTEMS

SEA COCK WATER OUTFLOW

Seawater outlet valves that must be placed below the waterline.

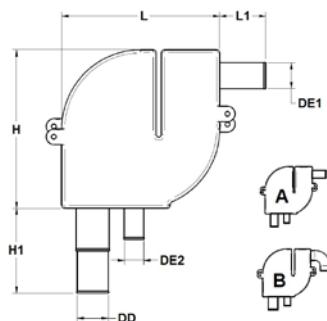


DB (mm)	DC (mm)	Part Number
20	21	60139008
25	26	60139000
25	33	60139009
25	42	60139010
25	48	60139011
38	42	60171001
50	48	60174001

WATER EXHAUST SYSTEMS

PROFESSIONAL WATER/GAS SEPARATOR

The water/gas separator kit offers an ultimate solution to the noises made by the exhausts of the engines. Noise is reduced significantly due to the separation from the cooling water and the exhaust gases. This professional range allows a higher workload without losing efficiency. Hose is not included.

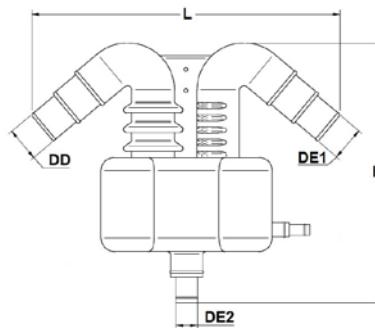


DD (mm)	DE1 (mm)	DE2 (mm)	Type	L (mm)	L1 (mm)	H (mm)	H1 (mm)	Flow rate (l/min)	Part Number
40	40	38	B	269	90	269	71	20	60730048
50	50	38	A	306	89	306	83	42	60730043
75	76	50	B	371	143	371	100	60	60730045
45 - 50	50	38	B	306	112	306	133	42	60730049
60 - 63,5	50	38	A	306	89	306	164	42	60730044

WATER EXHAUST SYSTEMS

WATER/GAS SEPARATOR

Gas/water separator for marine engines and generator sets. Gensets and marine diesel engines often produce disturbing gurgling exhaust noises. The Solé Diesel gas/water separator offers a solution because it separates the injected raw cooling water from the exhaust gases. In addition it provides an excellent sound attenuation and functions as a gooseneck.

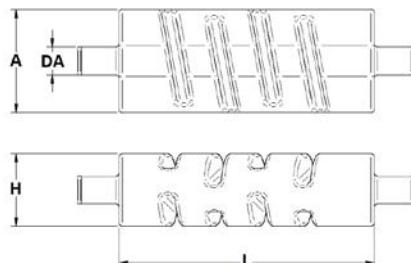


DD (mm)	DE1 (mm)	DE2 (mm)	L (mm)	H (mm)	Capacity (L)	Part Number
40 - 45 - 50	40 - 45 - 50	25 - 38	370	310	2,5	60730025
40 - 45 - 50	40 - 45 - 50	25 - 38	370	370	4,5	60730028

WATER EXHAUST SYSTEMS

EXHAUST SILENCER

Wet exhaust silencer with a particular inner structure which allows to significantly reduce noises produced by gases, creating an additional mixture with the exhaust water. In addition, the resistance of the water/smoke mixture passage is reduced to the minimum due to its design.

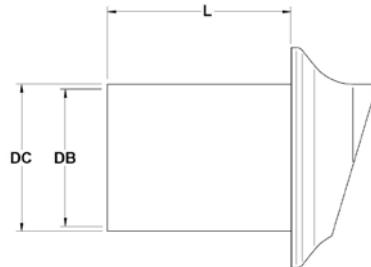


DA (mm)	L (mm)	A (mm)	H (mm)	Part Number
45	372	150	105	60700341
50	372	150	105	60700342
60	372	150	105	60700343
75	372	150	105	60700344
90	460	183	135	60700345
102	460	183	135	60700346

WATER EXHAUST SYSTEMS

TRANSOM EXHAUST CONNECTION CHECK VALVE

Hull outlet in STAINLESS 316 with check valve to prevent water from entering.



DC (mm)	DB (mm)	L (mm)	Part Number
40	36	75	60700070
45	41	75	60700071
51	45	75	60700072
60	56	75	60700073
76	70	90	60700074
90	86	110	60700075
100	96	115	60700076
125	121	140	60700077

FUEL SYSTEMS

WATER SEPARATOR FUEL FILTER ACCESSORIES

Water Separator Fuel Filters Accessories includes diesel filter fitting for marine engines to avoid fuel system obstruction. Available in D.10 and D.8.

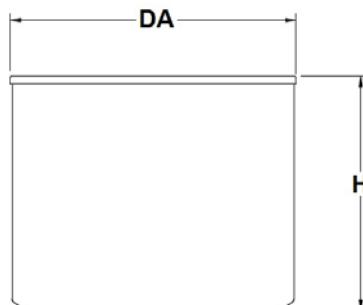


Hose Ø (mm)	Filter type	Part Number
8	DELPHI	60300117
8	SEPAR	60300206
8	GRIFFIN 228	60300301
10	DELPHI	60300118
10	SEPAR	60300207
10	GRIFFIN 228	60300302
10	GRIFFIN 341/681	60300303
10	GRIFFIN 341/681	60300304
12	SEPAR	60300208

FUEL SYSTEMS

GAS-OIL FILTER ELEMENT

Diesel filtering elements for removing fuel impurities in marine engines. It is available in 10 and 30 microns and includes a seal for the decanting filter. The filtering element prevents blockages in the circuit and guarantees proper functioning of the fuel systems of large and small marine engines.

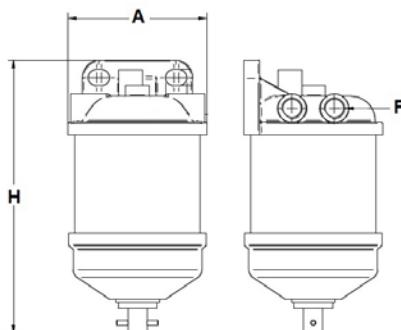


DA (mm)	H (mm)	Microns	Associated article	Part Number
41	35,5	20	MINI-32/34/48	13124071
76	24	30	603002001	60300200.2
79	67	30	60300200	60300201
80	70	10	PROF. 228 L/H	60300305
84	120	2	SDZ-165/205/280	19424020.3
88,4	72,2	20	60300115	12814028
89	54	10	60300200	60300201.1
112	120	10	PROF. 341 L/H	60300306
112	240	10	PROF. 681 L/H	60300307

FUEL SYSTEMS

WATER SEPARATOR FUEL FILTER DELPHI

Full decanting filter with glass vessel, purger, and interchangeable filtering element. For marine engines with maximum cylinder capacity of 3,500 CC. Maximum flow of 50 l/h. Installations with decanting filters are essential for avoiding blockage problems in the fuel system.



H (mm)	A (mm)	F	Flow Rate (l/h)	Weight (Kg)	Microns	Associated article	Part Number
170	96	M14X1,5	50	0,62	20	12814028	60300115

FUEL SYSTEMS

WATER SEPARATOR FUEL FILTER SPARE PARTS

The spare parts for diesel decanting filters contain all the elements required to interchange the main components of the marine engine diesel filter. These include the glass body, the decanting filter, and the decanting filter vessel. Fuel decanting filters must be serviced when they show signs of wear or blockage.

Now available the new professional range of fuel system accessories. See here the new references marked with the name "Prof".



Description	Part Number
Deep Spherical Bowl for Filter	60300203
Flat Bowl for Filter	60300103
Spherical Bowl for Filter	60300103I
Spherical Bowl for Prof. Filter 228	60300310
Spherical Bowl for Prof. Filter 341/681	60300311

SOLÉ DIESEL ORIGINAL CONSUMABLES

OIL AND GASOIL FILTERS

SOLÉ DIESEL OIL FILTER

Oil filters for the wide range of Solé Diesel filters on the market. The oil filter is a basic element for proper engine functioning and keeps the lubrication circuit protected from impurities.



Associated article	Part Number
HS-121/150/270	16524051
Mercedes	15314051
MINI-1/2/3	12114082
MINI-10/11/14/17/18/23/26/29/33/34/44/55	13124051
MINI-28	12825051
MINI-50	16124051
MINI-62	13924051
MINI-74	17424051
SDZ-165/205/280	19424051
SFN-100	19024051.1
SFN-100/130/160/210	19024051
SK-60	1A024051
SM-120	13324028
SM-75/90/105	17524051
SV.140 SN-85/110	18524051

OIL AND GASOIL FILTERS

SOLÉ DIESEL GASOIL FILTER

Diesel filters for all Solé Diesel engines on the market. The diesel filter acts as a barrier against fuel impurities to ensure the proper functioning of the engine circuits.

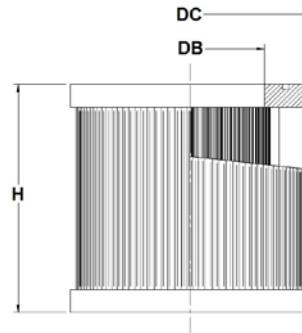


Associated article	Part Number
HS-121/150	16524204.1
Hs-270	16724204
Mercedes 615/16	15324020
Mercedes 636	15114022
MINI-1/2/3	11114095
MINI-10/11/14/17/18/23/26/29/33/34/44/48/55	13114022
MINI-62	17114022
MINI-74 SM-105	17414022
SDZ-165/205/280	19424022
SFN	19024022.1
SM-81	17A24030
SN-85/110	18224022
Sv-220	18524020

AIR FILTERS

AIR FILTER ELEMENT

The air filter is comprised of a filtering element that cleans the air that enters for engine combustion.

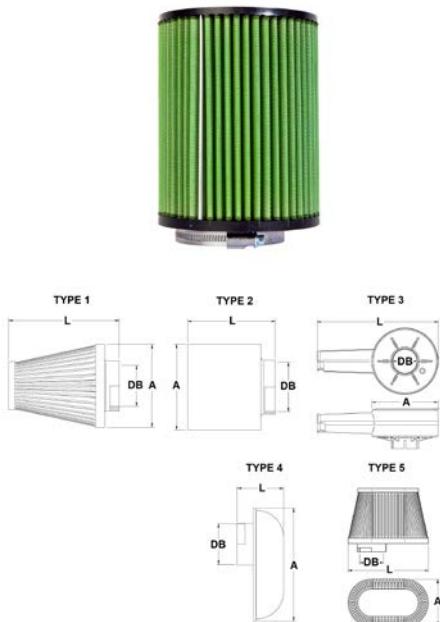


DB (mm)	DC (mm)	H (mm)	Part Number
48	78	80	13810073
51,8	103,5	45,5	GC020043
80	81,6	64	18210030.3
106	149	45	19010031
140	166	120	17410031
148	200	58	18210031

AIR FILTERS

AIR FILTER

Air filters protect the inside of the marine engine of dust or solids, etc. Which are aspirated by the engine and might damage it. We have a wide range of sizes and spare parts for all our line of engines.



Type	DB (mm)	L (mm)	A (mm)	Part Number
1	43	100	86	17710012.1
1	102	215	200	19410032
2	70	180	140	17410033
2	76	75	153	19010030
2	80	234	140	19110030.1
3	42	210	109	13111012
3	38	292	150	13510012
3	40	208,5	107	13810074
3	63	359	224	16510030
3	40	208,5	107	17010030
3	64	313	170	17110030
3	50	95	172	17110033
3	64	313	170	18210030
4	59,5	61	128,5	15310033
5	45	84	75	17710012.2
6	-	460	175	19610062
4GSCH V.2	-	151	75	GC020026

ENGINE OIL AND COOLANT

ORIGINAL ENGINE OIL SOLÉ DIESEL

Multigrade oil specially designed for marine diesel engines and generators. This oil has been specially developed for tough conditions with high loads and extreme temperatures. It provides longer change intervals, is an excellent corrosion protection, keeps clean the inside of the marine engine, which means less wear and counteracts the cylinders polishing. It is suitable for boatengines turbocharged or not.



Capacity (L)	Certification	SAE	Part Number
5	ACEA E5 / E3. API CH-4 / SJ	15W40	A0105000

ENGINE OIL AND COOLANT

ATF MECHANICAL GEAR OIL

ATF oil reduces friction produced in mechanical marine transmissions. This oil contains additives that increase its anti-wear properties, excellent power transmission, and increase service life with superb resistance to ageing and deposit formation. Available in 1 L and 5 L.



Capacity (L)	Certification	Part Number
1	DEXRON II-D	A0201000
5	DEXRON II-D	A0205000

ENGINE OIL AND COOLANT

ENGINE COOLANT SOLÉ DIESEL

Solé Coolant Liquid 50% is a very high performance refrigerating and anti-freeze liquid for direct use formulated with the latest organic additives. Provides long life protection and free maintenance for boats and automotive cooling systems, commercial vehicles, agricultural machinery, etc. This product prevents against corrosion all types of metals present in the cooling circuits. Available in 5L and 20L.



Capacity (L)	Freezing point (°C)	Concentration (%Vol.)	Part Number
5	-38	50	MA000001
20	-38	50	MA000002

ENGINE OIL AND COOLANT

DIELECTRIC PROTECTOR

Dielectric anti-humidity protector for marine use. Thanks to this 5-micron protective film in spray format, your marine engine will be protected from humidity, preventing oxidation and corrosion of the most delicate parts such as electrical connections and mechanical parts. At Solé Diesel we remind you of the importance of carrying out adequate and regular maintenance on your engine, in order to prolong its useful life. Avoid unforeseen events, always choose original products.



Description	Part Number
Dielectric/Rust Protector 400 ml	MPINAH400

GENUINE PAINT

SOLÉ DIESEL PAINT CAN

High quality high-heat paint for touching up any peeling caused by the passage of time.



Colour	Capacity (ml)	Weight (Kg)	Part Number
Classic Blue 1603	750	0,9	MPINA0750
Metallic Blue	1000	1,2	MPINA1001

GENUINE PAINT

SOLÉ DIESEL SPRAY PAINT

Paint sprays, varnish sprays and primer sprays are used to create anticorrosion coats to protect the marine engines against the sea conditions. These sprays are fast drying and are easy to apply and can be used in outboard and inboard engines. Thanks to their features they have a good resistance to the contact of oil, fuel, coolants and high temperatures. Primer Spray of high adherence is used to create a base where apply the paint. Second stage is paint the marine engine with the anticorrosive paint. The last phase is the varnish that creates a final coatto protect the engines against scratches.



Colour	Weight (Kg)	Capacity (ml)	Part Number
Classic Blue 1603	0,4	400	PINES400A
Metallic Blue	0,4	400	PINES400
Primer Spray	0,2	400	PINIM400
Varnish	0,4	400	PINES400B
White Ral 9016	0,4	400	PINES400BL

ZINC ANODES FOR ENGINES

SOLÉ DIESEL ENGINES ANODES

Cathodic protection by zinc anodes is essential to all the metal parts of any vessel which remain below the waterline. The Solé Diesel anodes are placed at the end of the shaft line and are manufactured with the highest standards. They are aerodynamic and fit perfectly at the shaft. Spare parts of the zinc anode for the marine engine.



L (mm)	Part Number
12	13110009
30	18511031
45	18011031
29,5	13811043

ACCESSORIES PACKS

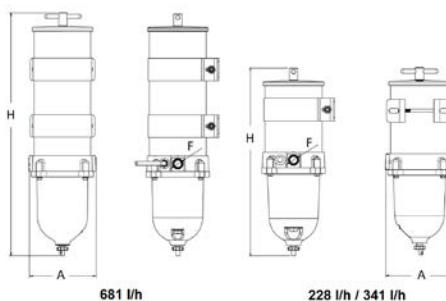
ACCESSORIES PACKS

PROFESSIONAL FUEL SYSTEM ACCESSORY PACK

Fuel and water separation filters and accessories have been specially designed to protect your marine engine from dirt, rust, algae, asphaltenes and other debris that can compromise equipment durability. Thanks to the exclusive components of these packs, an efficient separation of water and fuel is carried out. It also incorporates a transparent bowl that allows visualizing the water and contaminating agents removed from the fuel during the filtering process.

Solé professional fuel filters remove contaminants and separate water through a four-stage process:

1. Centrifugal action : larger solid contaminants and free water are separated.
2. Melting Action - Smaller water droplets and solid contaminants are filtered out by multi-grade filtration media, causing them to become together and fall into the collection container.
3. Micro Action I - Micro action filtration removes the smallest water droplets and solid contaminants from the fuel.
4. Micro Action II: A Second Micro Action Leak ensures almost 100% pure fuel filtration.



Hose Ø (mm)	Flow Rate (l/h)	Weight (Kg)	A (mm)	F (mm)	H (mm)	Part Number
8	228	1,3	115	3/4 - 16" UNF	295	60395001
10	228	1,3	115	3/4 - 16" UNF	295	60395002
10	341	3	152	7/8 - 14" UNF	412	60395004
10	681	4,5	152	7/8 - 14" UNF	559	60395006
12	341	3	152	7/8 - 14" UNF	412	60395005
12	681	4,5	152	7/8 - 14" UNF	559	60395007

ACCESSORIES PACKS

FUEL SYSTEM ACCESSORIES PACK

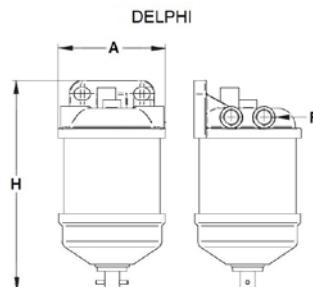
Diesel fuel filter with water separator, bleed screw and connectors. Delphi 296 - 50l/h
Aluminum head.

Thanks to this filter element, you will prevent residue from depositing in the tank, which can cause anomalies in the operation of the injection system of your marine engine.

This pack fulfills a double function: the separation of water, whose density is greater than that of fuel and whose accumulation can cause poor performance, and, on the other hand, a filtering function, thus eliminating residual particles.

Avoid unforeseen events by protecting your engine with the most efficient accessories.

Hose not included in the pack. It has to be purchased separately.



Hose Ø (mm)	Flow Rate (l/h)	Weight (Kg)	A (mm)	F (mm)	H (mm)	Associated article	Filter type	Part Number
8	50	0,62	96	M14X1,5	170	60300115	DELPHI	60339100
10	50	0,62	96	M14X1,5	170	60300115	DELPHI	60339101

ACCESSORIES PACKS

SHYPON BREAKER PACK

This kit must be installed in order to prevent the syphoning effect from damaging the engine. This means that if the engine is under the waterline, it is exposed to water entering into the exhaust system and subsequently into the engine itself. To prevent this from happening, the siphon breaker kit will have to be installed above the waterline, letting air enter the hose and liberating the engine from the siphon effect. 1 meter hose included.



Ø (mm)	Canopy	Part Number
12	Yes	60730021
16	Yes	60730030
19	Yes	60730015
19	No	60730018
27	No	60730019
32	Yes	60730016
32	No	60730022

ACCESSORIES PACKS

METALLIC SYPHON BREAKER PACK

Protect your boat engine from water ingress through the water suction line.

When the injection point of the cooling water inside the exhaust system is located under 15 meters above the waterline, there could be risk that if the engine is stopped, cooling water could enter the engine due to the siphoning effect.

This problem can be solved by installing an air vent in the cooling waterduct, about 40cm above the waterline (max. height 2 meters). The air vent is connected by means of tube and hull transom (mounted above the waterline). To vent outside. The air vent comes without hoses.

In this pack you will find everything you need for the installation: metal air vent, hose and clamps.



Ø	Canopy	Part Number
(mm)		
12	Yes	60731005
20	No	60730993
20	Yes	60731004
22	No	60730994
25	No	60730995
27	No	60730996
30	No	60730997
32	No	60730998
32	Yes	60731009
35	No	60730999
38	No	60731000
40	No	60731001
42	No	60731002
42	Yes	60731013
45	No	60731003

Type:

A = Propulsion or open genset

B = Genset with canopy

ACCESSORIES PACKS

EXHAUST PACK ACCESSORIES

These exhaust kits are composed of a waterlock, connection brackets, and a transom exhaust connection. Hose not included.



Ø	Part Number
(mm)	
40	60739040
45	607D0040
50	60772040
60	60771040
75	60774040
90	60794040

ACCESSORIES PACKS

PROFESSIONAL WATERLOCK PACK I-STR O-INC

Waterlock whose installation in the exhaust system is necessary in order to avoid water ingestion and possible flooding of your marine engine or generator.

Therefore, the elements included in this pack are essential for the correct operation of the generator set.

This pack includes the professional metallic water collector, clamps and exhaust outlet with non-return valve.

On the other hand, do not forget to also add to your order the rest of the components that will allow you to obtain the best performance, such as the gooseneck or the siphon breaker. (Both sold separately)



Ø	Capacity	Part Number
(mm)	(L)	
40	4	60701040
45	4	60715040
45	6	60724040
50	4	60703040
50	6	60704040
50	8	60726040
60	6	60719040
75	8	60708040
75	10	60727040
90	15	60714040
100	17	60717040
125	28	60712040

ACCESSORIES PACKS

PROFESSIONAL WATERLOCK PACK I-STR O-STR

This pack includes the water trap, clamps, and hull exhaust outlet with check valve. These packs are available in several sizes.

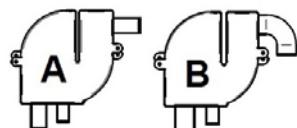


Ø	Capacity	Part Number
(mm)	(L)	
40	4	60702040
45	4	60716040
45	6	60721040
50	4	60705040
50	6	60706040
50	8	60722040
60	6	60707040
75	8	60709040
75	10	60725040
90	15	60711040
100	17	60718040
125	28	60713040

ACCESSORIES PACKS

PROFESSIONAL WATER/GAS SEPARATOR PACK

The water/gas separator kit offers an ultimate solution to the noises made by the exhausts of the engines. Noise is reduced significantly due to the separation from the cooling water and the exhaust gases. This professional range allows a higher workload without losing efficiency. Hose is not included.



Ø	Type	Part Number
(mm)		
40 - 40 - 38	B	607C0048
45/50 - 50 - 38	B	607D0049
50 - 50 - 38	A	60771038
60/63,5 - 50 - 38	A	60773038
76 - 76 - 50	B	60774050

ACCESSORIES PACKS

WATER/GAS SEPARATOR PACK

The water/gas separator kit offers an ultimate solution to the exhaust noises produced. It separates the injected raw cooling water from the exhaust gases. Hose not included.



Ø	Part Number
(mm)	
40	60739025
40	60772025

ACCESSORIES PACKS

METALLIC WATER ASPIRATION SYSTEM PACK

The metallic water filter kit includes the metallic cooling water filter strainer built in on brass, the sea water cock and the brackets for connection of the parts. The kit is highly recommended for all kind of installations, but specially for commercial boats applications, as the metallic water filter is homologated by RINA. The transparent cover allows easy inspection of the filter without dismantling. Cleaning of the filter can be achieved quickly and easily. It suits all size of boats. Hose not included.



Ø	Part Number
(mm)	
12	601B0101
16	601D0101
20	60139101
25	60141001
27	60177101
32	60171101
42	60194101
45	60101101

ACCESSORIES PACKS

WATER ASPIRATION PACK

These kits come with three pieces. The filter prevents pump and heat exchangers from becoming blocked. The transparent plastic cover facilitates service and washing of the element. The sea water cock consists of a water intake with filter screen and hull transom. The brackets are used for connection of the parts. Hose not included.

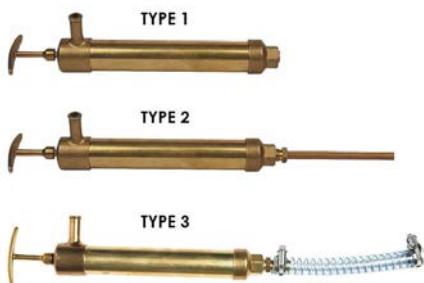


Ø	Part Number
(mm)	
12	601B0100
16	601D0100
20	60139100
25	60141002
32	60171100
42	60194100
45	60110100

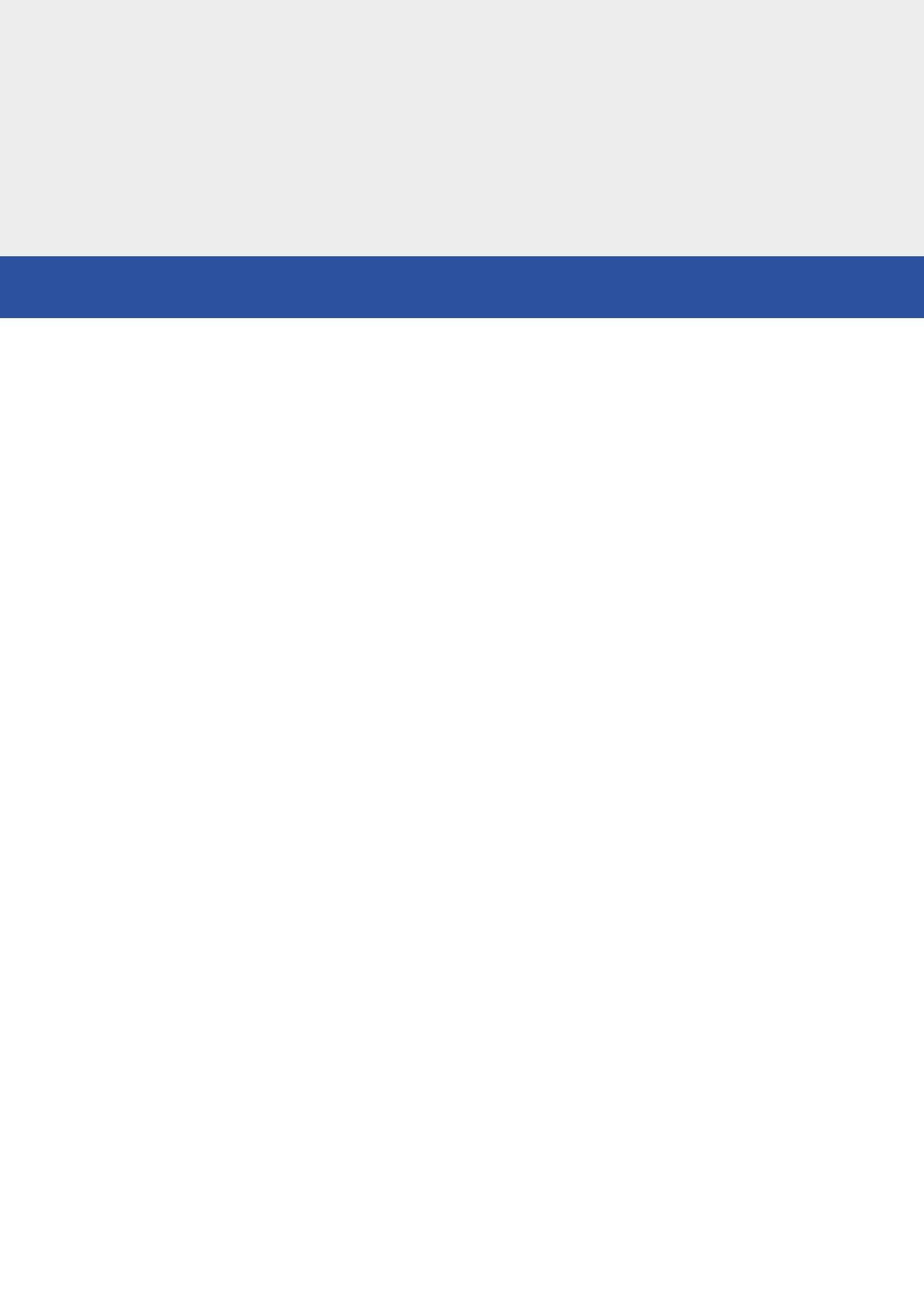
ACCESSORIES PACKS

OIL EXTRACTION PUMP

Manual brass pump for extracting engine oil.



Type	Part Number
1	14714001
2	14714101
3	13812020





APPENDIX

DEFINITION OF SERVICE TYPES IMPORTANT INFORMATION ABOUT THE APPLICATION RESPONSIBILITIES

Recreational craft service:

Very intermittent use, with a broad range of demands placed on the engine. The maximum rated power indicated is understood to be only for personal use of craft with a planing hull for which the operating time at the maximum rating is less than 10% of the total time. For the remaining time, the craft must be operated at a level equal to or less than 80% of its maximum rating. Mean limit of engine operating hours:

- 500 hours/year for hydraulic gear boxes (TM).
- 300 hours/year for mechanical gearboxes (TMC).

Typical applications: Private, non-charter use, sporting/ recreational activities.

Intermediate service:

Intermittent use, with a broad range of demands placed on the engine. Mean limit of engine operating hours: 2000 hours/ year.

Typical applications: Private and charter use, sporting/recreational activities. Planing, semi-displacement and displacement hulls.

Continuous service:

Continuous use, with little or no variation in the power demands

placed on the engine. Unlimited hours per year.

Typical applications: Intensive use in fishing or commercial craft.

Transmission ratios are based on the use of the gearbox in a system that is torsionally compatible with a torque coupler of suitable input.

- The ratio applies to diesel engines.
- Enquire with the factory about ratios that are applicable to petrol engines or other applications not included in the definition of a given service class.
- The ratios apply to right-turning engines (anticlockwise rotation of the flywheel when viewing the motor from the stern).
- The ratios are for full power in forward and reverse, unless otherwise indicated.
- The transmission ratios must be equal to or greater than those published for the engine for a given application. 1 kW = 1.34 HP.
- The data provided may be modified or corrected with no previous notice.

Responsibility for assuring that the torsional compatibility of the propulsion system is satisfactory lies with the installer of the propulsion equipment. Twin Disc Technodrive accepts no liability for noise or malfunctioning in the gear box, in the flexible coupling or in the transmission parts that may be caused by this type of vibration.

For further information and assistance, contact Twin Disc Technodrive.

MECHANICAL GEARBOXES PLEASURE														
Model	Reduction ratios		Power rating/rpm		Max.	Power rating Max. -kW (Hp)			Weight*		Adaptors/comments			
	Forward	Reverse	kW	Hp		2800	3000	3600	kg	lb				
TMC40P	1,45	2,13	0,0121	0,0162	4500	26	35	26	35	26	35	9	20	SAE 5, BW
	2,00	2,13	0,0094	0,0126	4500	26	35	26	35	26	35	Max input power 26 KW		
	2,60	2,13	0,0073	0,0098	4500	20	27	22	29	26	35	Max power in reverse: 33% of listed ratings		
TMC60P	1,55	2,00	0,0178	0,0239	5000	50	67	53	72	60	80	14	31	SAE 4, SAE 5, BW
	2,00	2,00	0,0157	0,021	5000	44	59	47	63	57	76	Max input power 60 KW		
	2,45	2,45	0,0126	0,0168	5000	35	47	38	51	45	61	Max power in reverse: see note		
	2,83	2,45	0,0105	0,014	5000	29	39	31	42	38	51			
TMC 60 A	2,00	2,17	0,0136	0,0182	4500	38	51	41	56	49	66	14	31	SAE 4, SAE 5, BW
	2,45	2,17	0,0136	0,0182	4500	38	51	41	56	49	66	"Max input power 52 KW Max power in reverse: 33% of listed ratings"		
TMC 260	1,54	2,00	0,0272	0,0364	5000	76	102	82	109	84	113	18	40	SAE 4, SAE 5, BW
	2,00	2,00	0,0272	0,0364	5000	76	102	82	109	84	113	Max input power 84 KW		
	2,47	2,47	0,022	0,0295	5000	62	83	66	88	79	106	Max power in reverse: see note		
	2,88	2,47	0,0188	0,0252	5000	53	71	56	76	68	91			

MECHANICAL GEARBOXES INTERMEDIATE SERVICE														
Model	Reduction ratios		Power rating/rpm		Max.	Power rating Max. -kW (Hp)			Weight*		Adaptors/comments			
	Forward	Reverse	kW	Hp		2800	3000	3600	kg	lb				
TMC40P	1,45	2,13	0,0108	0,0145	4500	26	35	26	35	26	35	9	20	SAE 5, BW
	2,00	2,13	0,008	0,0107	4500	21	30	24	32	26	35	Max input power 26 KW		
	2,60	2,13	0,0064	0,0085	4500	17	24	19	25	22	30	Max power in reverse: 33% of listed ratings		
TMC60P	1,55	2,00	0,0151	0,0202	5000	42	57	45	61	54	73	14	31	SAE 4, SAE 5, BW
	2,00	2,00	0,0133	0,0178	5000	37	50	40	53	48	64	Max input power 60 KW		
	2,45	2,45	0,0116	0,0155	5000	32	44	35	47	42	56	Max power in reverse: see note		
	2,83	2,45	0,009	0,0121	5000	25	34	27	36	32	43			
TMC 60 A	2,00	2,17	0,0117	0,0156	4500	32	43	35	47	42	56	14	31	SAE 4, SAE 5, BW
	2,45	2,17	0,0117	0,0156	4500	32	43	35	47	42	56	"Max input power 52 KW Max power in reverse: 33% of listed ratings"		
TMC 260	1,54	2,00	0,0231	0,031	5000	65	87	69	93	83	111	18	40	SAE 4, SAE 5, BW
	2,00	2,00	0,0231	0,031	5000	65	87	69	93	83	111	Max input power 84 KW		
	2,47	2,47	0,0187	0,0251	5000	52	70	56	75	67	90	Max power in reverse: see note		
	2,88	2,47	0,016	0,0214	5000	45	60	48	64	57	77			
SP 60	2,15	2,15	0,009	0,0121	3000	38	52	40	55	32	43	35	SAE 7" BW ref. / part no. 24813501	

Notes * Weight without oil.

1 The power rating given refers to forward gear.

For reverse:

2.1 TMC 60 E red. 1.55: 80% of the reduction ratio 2.00
2.2 TMC 60 E red. 2.00 and 2.45: 80% of the value indicated

2.3 TMC 60 E red. 2.83 : 80% of the reduction ratio 2.5

2.4 TMC 260 red. 1.54 and 2.00: 80% of the value indicated
2.5 TMC 260 red. 2.47 and 2.88: 80% of the reduction ratio 2.47

MECHANICAL GEARBOXES CONTINUOUS SERVICE																		
Model	Reduction ratios		Power rating/rpm		Max.	Power rating Max. -kW (Hp)				Weight*		Adaptors/comments						
	Forward	Reverse	kW	Hp		1800	2300	2600	kg	lb								
TMC40P	1,45	2,13	0,0099	0,0133	4500	18	24	23	31	26	35	9	20	SAE 5, BW Max input power 26 KW Max power in reverse: 33% of listed ratings				
	2,00	2,13	0,0073	0,0098	4500	13	18	17	23	19	25							
	2,60	2,13	0,0052	0,007	4500	9	13	12	16	14	18							
TMC60P	1,55	2,00	0,0126	0,0169	5000	23	30	29	39	33	44	14	31	SAE 4, SAE 5, BW Max input power 44 KW Max power in reverse: see note				
	2,00	2,00	0,0115	0,0154	5000	21	28	26	35	30	40							
	2,45	2,45	0,0094	0,0126	5000	17	23	22	29	24	33							
	2,83	2,45	0,0078	0,0105	5000	14	19	18	24	20	27							
TMC 60 A	2,00	2,17	0,0094	0,0126	4500	17	23	22	49	24	33	14	31	SAE 4, SAE 5, BW Max input power 52 KW Max power in reverse: 33% of listed ratings				
	2,45	2,17	0,0094	0,0126	4500	17	23	22	49	24	33	14	31					
TMC 260	1,54	2,00	0,0199	0,0267	5000	36	48	46	61	52	69	18	40	SAE 4, SAE 5, BW Max input power 61 KW Max power in reverse: see note				
	2,00	2,00	0,0199	0,0267	5000	36	48	46	61	52	69							
	2,47	2,47	0,0147	0,0197	5000	26	35	34	45	38	51							
	2,88	2,47	0,0115	0,0154	5000	21	28	26	35	30	40							

HYDRAULIC TRANSMISSIONS FOR LEISURE																		
Model	Reduction ratios		Power rating/rpm		Max.	Power rating Max. -kW (Hp)				Weight*		Adaptors/comments						
	Forward	Reverse	kW	Hp		2600	2800	3300	kg	lb								
TM345	1,54	1,54	0,0361	0,0484	4500	94	126	101	135	110	147	25	55	SAE 3, 4, 5, BW max input power 110 kw				
	2,00	2,00	0,0293	0,0393		76	102	82	110	97	130							
	2,47	2,47	0,022	0,0295		57	77	62	83	73	97							
TM345A	1,54	1,54	0,0361	0,0484	4500	94	126	101	135	110	147	25	55					
	2,00	2,00	0,0293	0,0393		76	102	82	110	97	130							
	2,47	2,47	0,022	0,0295		57	77	62	83	73	97							
TM93	1,51	1,51	0,0534	0,0716	4500	139	186	150	200	176	236	53	117	SAE 3, 4, YANMAR LH, BW max input power 184 kw				
	2,09	2,09	0,0461	0,0618		120	161	129	173	152	204							
	2,40	2,40	0,0408	0,0547		106	142	114	153	135	180							
	2,77	2,77	0,0356	0,0477		93	124	100	134	117	157							
TM93A	1,51	1,51	0,0492	0,0659	4500	128	171	138	185	162	218	53	117					
	2,09	2,09	0,0408	0,0504		106	142	114	153	135	180							
	2,40	2,40	0,0356	0,0477		93	124	100	134	117	157							
TM485A1	1,51	1,51	0,05	0,067	4500	130	174	140	188	165	221	36	79	SAE 3, 4, YANMAR 1 LH, BW max input power 210 kw				
	2,09	2,09	0,05	0,067		130	174	140	188	165	221							
	2,40	2,40	0,0438	0,0587		114	153	123	164	145	194							
TM170	1,50	1,50	0,0785	0,1052	4000	204	273	220	295	257	344	75	165	SAE 3, 4, YANMAR LH, BW max input power r 1,50 / 2,04 257 kw r 2,50 / 2,94 220 kw max input power r 1,53 / 2,08 257 kw r 2,60 220 kw"				
	2,04	2,04	0,0785	0,1052		204	273	220	295	257	344							
	2,50	2,50	0,0628	0,0842		163	219	176	236	207	278							
	2,94	2,94	0,0534	0,0716		139	186	150	200	176	236							
TM170A	1,53	1,53	0,0785	0,1052	4000	204	273	220	295	157	344	75	165					
	2,08	2,08	0,0785	0,1052		204	273	220	295	157	344							
	2,60	2,60	0,0628	0,0842		163	219	176	236	207	278							
TM880A	1,53	1,53	0,0921	0,1234	4000	239	321	258	346	295	395	54	119	SAE 3, 4, YANMAR LH, BW max input power 295 kw				
	2,08	2,08	0,0921	0,1234		239	321	258	346	295	395							
	2,60	2,60	0,0628	0,0842		163	219	176	236	207	278							
TM265	1,17	1,17	0,1109	0,1486	3000	288	386	311	416	-	-	165	364	SAE 1, 2, 3				
	1,50	1,50	0,1109	0,1486		288	386	311	416	-	-							
	2,09	2,09	0,1109	0,1486		288	386	311	416	-	-							
	2,82	2,82	0,1109	0,1486		288	386	311	416	-	-							
TM265A	1,44	1,44	0,1109	0,1486	3000	288	386	311	416	-	-	165	364					
	2,00	2,00	0,1026	0,1375		267	357	287	385	-	-							
	2,30	2,30	0,0932	0,1249		242	325	261	350	-	-							
TM200	3,60	3,60	-	-	3000	-	-	-	-	-	-	235	518	SAE 1, 2, 3				
	4,48	4,48	-	-		-	-	-	-	-	-							
TM360	3,00	3,00	-	-	2600	-	-	-	-	-	-	415	915	SAE 1, 2, 3				
	3,50	3,50	-	-		-	-	-	-	-	-							
	4,00	4,00	-	-		-	-	-	-	-	-							
	5,00	5,00	-	-		-	-	-	-	-	-							
TM1200A	1,44	1,44	0,1461	0,1957	3200	380	509	409	548	-	-	115	253	SAE 1, 2, 3				
	2,00	2,00	0,1461	0,1957		380	509	409	548	-	-							
	2,30	2,30	0,125	0,1675		325	435	469	469	-	-							
ZF 68 IV	1,29	1,29	0,07	0,10	6000	185	248	199	267	235	315	62	137	SAE 3, 4, 5				
	1,56	1,57	0,07	0,10		185	248	199	267	235	315							
	1,75	1,75	0,07	0,10		185	248	199	267	235	315							
	1,99	2,03	0,07	0,10		185	248	199	267	235	315							
	2,48	2,53	0,07	0,09		171	230	185	248	217	292							

HYDRAULIC GEARBOXES INTERMEDIATE SERVICE														
Model	Reduction ratios		Power rating/rpm		Power rating Max. -kW (Hp)				Max.	Weight*	Adaptors/comments			
	Forward	Reverse	kW	Hp	2100	2500	2800	kg	lb					
TM345	1,54	1,54	0,0225	0,0302	47	63	56	75	63	84	4500	25	55	SAE 3, 4, 5, BW
	2,00	2,00	0,0225	0,0302	47	63	56	75	63	84				
	2,47	2,47	0,0167	0,0224	35	47	42	56	47	63				
TM345A	1,54	1,54	0,0225	0,0302	47	63	56	75	63	84	4500	25	55	
	2,00	2,00	0,0225	0,0302	47	63	56	75	63	84				
	2,47	2,47	0,0167	0,0224	435	47	42	56	47	63				
TM93	1,51	1,51	0,0443	0,0594	93	125	111	148	124	166	4500	53	117	SAE 3, 4, YANMAR LH, BW max input power 184 kw
	2,09	2,09	0,0383	0,0513	80	108	96	128	107	144				
	2,40	2,40	0,0339	0,0454	71	95	85	114	95	127				
	2,77	2,77	0,0295	0,0395	62	83	74	99	83	111				
TM93A	1,51	1,51	0,0377	0,0505	79	106	94	126	106	141	4500	53	117	
	2,09	2,09	0,0314	0,0421	66	88	79	105	88	118				
	2,40	2,40	0,0272	0,0364	57	77	68	91	76	102				
TM485A1	1,51	1,51	0,0386	0,0517	81	109	96	129	108	145	4500	36	79	SAE 3, 4, YANMAR 1 LH, BW
	2,09	2,09	0,0386	0,0517	81	109	96	129	108	145				
	2,40	2,40	0,0329	0,0440	69	92	83	110	92	123				
TM170	1,50	1,50	0,0636	0,0852	134	179	159	213	178	239	4000	75	165	SAE 3, 4, YANMAR LH, BW
	2,04	2,04	0,0636	0,0852	134	179	159	213	178	239				
	2,50	2,50	0,0509	0,0682	107	143	127	171	143	191				
	2,94	2,94	0,0441	0,0591	93	124	110	148	123	165				
TM170A	1,53	1,53	0,0597	0,0800	125	168	149	200	167	224	4000	75	165	
	2,08	2,08	0,0597	0,0800	125	168	149	200	167	224				
	2,60	2,60	0,0471	0,0631	99	133	118	158	132	177				
TM880A	1,53	1,53	0,0700	0,0938	147	197	175	235	196	263	4000	54	119	SAE 3, 4, YANMAR LH, BW
	2,08	2,08	0,0700	0,0938	147	197	175	235	196	263				
	2,60	2,60	0,0471	0,0631	99	135	118	160	132	179				
TM265	1,17	1,17	0,0985	0,1320	207	277	246	330	276	370	3000	165	364	SAE 1, 2, 3
	1,50	1,50	0,0985	0,1320	207	277	246	330	276	370				
	2,09	2,09	0,0985	0,1320	207	277	246	330	276	370				
	2,82	2,82	0,0985	0,1320	207	277	246	330	276	370				
TM265A	1,44	1,44	0,0984	0,1319	207	277	246	330	276	369	3000	165	364	
	2,00	2,00	0,0911	0,1221	191	256	228	305	255	342				
	2,30	2,30	0,0827	0,1108	174	233	207	277	232	310				
TM200	3,60	3,60	-	-	-	-	-	-	-	-	3000	235	518	SAE 1, 2, 3
	4,48	4,48	-	-	-	-	-	-	-	-				
TM360	3,00	3,00	-	-	-	-	-	-	-	-	2600	415	915	SAE 1, 2, 3
	3,50	3,50	-	-	-	-	-	-	-	-				
	4,00	4,00	-	-	-	-	-	-	-	-				
	5,00	5,00	-	-	-	-	-	-	-	-				
TM1200A	1,44	1,44	0,1284	0,1721	269	361	320	430	359	482	3200	115	253	SAE 1, 2, 3
	2,00	2,00	0,1284	0,1721	269	361	320	430	359	482				
	2,30	2,30	0,1096	0,1469	230	308	274	367	307	411				
ZF 68 IV	1,29	1,29	0,0578	0,0775	121	163	145	145	162	217	6000	62	137	SAE 3, 4, 5
	1,56	1,57	0,0539	0,0723	113	152	135	135	151	202				
	1,75	1,75	0,0539	0,0723	113	152	135	135	151	202				
	1,99	2,03	0,0539	0,0723	113	152	135	135	151	202				
	2,48	2,53	0,0518	0,0695	109	146	130	130	145	195				

HYDRAULIC GEARBOXES CONTINUOUS SERVICE														
Model	Reduction ratios		Power rating/rpm		Power rating Max. -kW (Hp)				Max.	Weight*	Adaptors/comments			
	Forward	Reverse	kW	Hp	1800	2100	2400	kg	lb					
TM345	1,54	1,54	0,0194	0,0260	35	47	41	55	47	62	4500	25	55	SAE 3, 4, 5, BW
	2,00	2,00	0,0194	0,0260	35	47	41	55	47	62				
	2,47	2,47	0,0147	0,0197	26	35	31	41	35	47				
TM345A	1,54	1,54	0,0194	0,0260	35	47	41	55	47	62	4500	25	55	
	2,00	2,00	0,0194	0,0260	35	47	41	55	47	62				
	2,47	2,47	0,0147	0,0197	26	35	31	41	35	47				
TM93	1,51	1,51	0,0408	0,0547	73	98	86	115	98	131	4500	53	117	SAE 3, 4, YANMAR LH, BW
	2,09	2,09	0,0356	0,0477	64	86	75	100	85	114				
	2,40	2,40	0,0319	0,0427	57	77	67	90	77	103				
	2,77	2,77	0,0277	0,0371	50	67	58	78	66	89				
TM93A	1,51	1,51	0,0261	0,0350	47	63	55	73	63	84	4500	53	117	
	2,09	2,09	0,0216	0,0289	39	52	45	31	52	69				
	2,40	2,40	0,0189	0,0253	34	46	40	53	45	61				

HYDRAULIC GEARBOXES CONTINUOUS SERVICE																		
Model	Reduction ratios		Power rating/ rpm		Power rating Max. -kW (Hp)					Max.	Weight*	Adaptors/comments						
	Forward	Reverse	kW	Hp	1800	2100	2400	kg	lb									
TM485A1	1,51	1,51	0,0328	0,0439	59	79	69	92	78	105	4500	36	79	SAE 3, 4, YANMAR 1 LH, BW				
	2,09	2,09	0,0328	0,0439	59	79	69	92	78	105								
	2,40	2,40	0,0289	0,0387	52	70	61	81	69	93								
TM170	1,50	1,50	0,0576	0,0772	104	139	121	162	138	185	4000	75	165	SAE 3, 4, YANMAR LH, BW				
	2,04	2,04	0,0576	0,0772	104	139	121	162	138	185								
	2,50	2,50	0,0461	0,0618	83	111	97	130	111	148								
	2,94	2,94	0,0398	0,0533	72	96	84	112	96	128								
TM170A	1,53	1,53	0,0416	0,0557	75	100	87	117	100	134	4000	75	165					
	2,08	2,08	0,0416	0,0557	75	100	87	117	100	134								
	2,60	2,60	0,0333	0,0446	60	80	70	94	80	107								
TM880A	1,53	1,53	0,0583	0,0781	105	141	122	164	140	187	4000	54	119	SAE 3, 4, YANMAR LH, BW				
	2,08	2,08	0,0583	0,0781	105	141	122	164	140	187								
	2,60	2,60	0,0333	0,0446	60	82	70	95	80	109								
TM265	1,17	1,17	0,0869	0,1164	156	210	182	245	209	279	3000	165	364	SAE 1, 2, 3				
	1,50	1,50	0,0869	0,1164	156	210	182	245	209	279								
	2,09	2,09	0,0869	0,1164	156	210	182	245	209	279								
	2,82	2,82	0,0869	0,1164	156	210	182	245	209	279								
TM265A	1,44	1,44	0,0588	0,0788	106	142	123	165	141	189	3000	165	364					
	2,00	2,00	0,0544	0,0729	98	131	114	153	131	175								
	2,30	2,30	0,0494	0,0662	89	119	104	139	119	159								
TM200	3,60	3,60	0,0639	0,0856	115	154	134	180	153	206	3000	235	518					
	4,48	4,48	0,0639	0,0856	115	154	134	180	153	206								
TM360	3,00	3,00	0,1235	0,1655	222	298	259	348	296	397	2600	415	915					
	3,50	3,50	0,1235	0,1655	222	298	259	348	296	397								
	4,00	4,00	0,1235	0,1655	222	298	259	348	296	397								
	5,00	5,00	0,1235	0,1655	222	298	259	348	296	397								
TM1200A	1,44	1,44	0,0949	0,1272	170	228	199	267	228	305	3200	115	253					
	2,00	2,00	0,0949	0,1272	170	228	199	267	228	305								
	2,30	2,30	0,0801	0,1073	144	193	168	225	192	257								
ZF-15 MIV	2,13	2,22	0,0152	0,0204	27	37	32	43	36	49	5000	21	47	SAE 4, 5, B/W, Yanmar JH				
	2,72	2,22	0,0111	0,0149	20	27	23	31	27	36								
	3,00	2,22	-	-	-	-	-	-	-	-								
ZF 68 IV	1,29	1,29	0,0471	0,0632	85	114	99	133	113	152	6000	62	137	SAE 3, 4, 5				
	1,56	1,57	0,0442	0,0593	80	107	93	125	106	142								
	1,75	1,75	0,0442	0,0593	80	107	93	125	106	142								
	1,99	2,03	0,0442	0,0593	80	107	93	125	106	142								
DMT-25AL	1,64	1,64	0,0300	0,0410	55	73	63	85	70	94	3500	75	165	SAE 3, 4, 5				
	2,07	2,07	0,0300	0,0410	55	73	63	85	70	94								
	2,52	2,52	0,0300	0,0410	55	73	63	85	70	94								
	2,96	2,96	0,0300	0,0410	55	73	63	85	70	94								
DMT-100IV	3,32	3,32	0,0300	0,0410	55	73	63	85	70	94	326	400	150	330	SAE 2, 3, 4			
	1,21	1,21	1,1050	0,1410	190	255	222	279	243	326								
	1,54	1,84	0,1050	0,1410	190	255	222	297	243	326								
	1,84	2,12	0,1050	0,1410	190	255	222	297	243	326								
DMT-150H	2,52	2,52	0,1050	0,1410	190	255	222	297	243	326	2500	287	631	SAE 1, 2				
	2,09	2,09	0,1720	0,2310	310	416	361	485	396	531								
	2,51	2,51	0,1720	0,2310	310	416	361	485	396	531								
	3,08	3,43	0,1720	0,2310	310	416	361	485	396	531								
DMT-240H	1,50	1,97	0,2240	0,3000	403	541	471	632	516	692	2500	400	880	SAE 0, 1				
	1,97	2,44	0,2240	0,3000	403	541	471	632	516	692								
	2,44	2,93	0,2240	0,3000	403	541	471	632	516	692								
	2,93	3,40	0,2240	0,3000	403	541	471	632	516	692								
DMT-260HL	3,53	4,08	0,2650	0,3550	477	640	557	747	610	818	2500	640	1408	SAE 0, 1				
	4,08	4,52	0,2650	0,3550	477	640	557	747	610	818								
	4,52	5,04	0,2650	0,3280	441	591	514	690	564	756								

RATING DEFINITION FOR SOLÉ MARINE PROPULSION ENGINES.

S1 – Heavy Duty Commercial

This power rating is for commercial vessels with displacement hulls in heavy operation. Load and speed could be constant, and full power can be used without interruption.

These applications typically operate more than 2000 hours per year and have load factor* over 65%.

Typical application: Fishing boats, tugboats, crane boats where it is possible to use the maximum power.

S2 – Medium Duty Commercial

This power rating is for commercial vessels with semi planning or displacement hulls in cyclical operation.

These applications typically operate less than 2000 hours per year and have load factor* up to 50%.

Full power could be utilized max 4 hours per 12 hours of operation period.

Between full load operation periods, the engine speed should be reduced at least 10 % from the obtained full load engine speed.

Typical application: Pilot boats, fishing boats, work boats, research boats and passenger boats.

S3 – Light Duty Commercial

This power rating is for commercial boats with high demands of speed and acceleration, planning or semiplaning hulls in cyclical operation.

These applications typically operate less than 800 hours per year and have load factor* below 40%.

Full power could be utilized maximum 2 hours per 12 hours operation period.

Between full load operation periods, engine speed should be reduced at least 10 % from the obtained full load engine speed.

Typical applications: Light passenger boats and charters.

* Load factor is the actual fuel burned over a period divided by the full-power fuel consumption for the same period.

All our engines can work at full power ("intermittent power" on Solé Specification Sheet) as indicate in each rating (S1, S2 & S3), as specified by ISO 3046-1
Of course, the engine can also be used in an application with a higher rating. For example, a product with rating S1, can also be used for rating S2 or S3.

Solé Rating	Typical load factor		Typical hours per year		Typical full power operation	
S1	>65%		> 2000		Uninterrupted	
S2	$\leq 50\%$		< 2000		4 of each 12 hr	
S3	<40%		< 800		2 of each 24 hr	

ISO 3046-1:2002

ISO 3046-1 specifies the requirements for the declaration of power, fuel consumption, lubricating oil consumption and the test method in addition to the basic requirements defined in ISO 15550.

It defines codes for engine brake power in accordance with ISO 15550, in order, where necessary, to simplify the application of the statements of power and to facilitate communication. This applies, e.g., to statements of power used on engine data plates.

ISO 3046-1 applies to reciprocating internal combustion (RIC) engines for land, rail-traction and marine use and may be applied to engines used to propel road construction and earth-moving machines, industrial trucks as well as for other applications where no suitable International Standard for these engines exists.

Engine model	S1					S2					S3				
	HP	kW	rpm	I/h	g/kW·h	HP	kW	rpm	I/h	g/kW·h	HP	kW	rpm	I/h	g/kW·h
MINI-17	0	0	0	0	0	14,204	10,6	3600	3,93349398	308	15,812	11,8	3600	4,378795181	308
MINI-29	0	0	0	0	0	24,12	18	3600	6,33253012	292	26,8	20	3600	7,036144578	292
MINI-33	0	0	0	0	0	27,872	20,8	3000	7,01686747	280	30,954	23,1	3000	7,792771084	280
MINI-44	0	0	0	0	0	37,252	27,8	3000	9,24433735	276	41,406	30,9	3000	10,27518072	276
MINI-55	0	0	0	0	0	44,354	33,1	3000	10,8472289	272	49,312	36,8	3000	12,05975904	272
MINI-62	0	0	0	0	0	52,394	39,1	3000	12,4837349	265	58,156	43,4	3000	13,85662651	265
SK-60	0	0	0	0	0	53,064	39,6	2700	12,9773494	272	58,96	44	2700	14,41927711	272
MINI-74	56,682	42,3	2500	11,87457831	233	62,98	47	2500	13,1939759	233	0	0	0	0	0
SM-82	72,762	54,3	2500	16,68253012	255	80,802	60,3	2500	18,5259036	255	0	0	0	0	0
SM-94	83,214	62,1	2500	18,70481928	250	92,46	69	2500	20,7831325	250	0	0	0	0	0
SM-103	91,388	68,2	2500	21,38686265	260,28	101,572	75,8	2500	23,7701494	260,28	0	0	0	0	0
SDZ-165	142,308	106,2	2300	27,06436627	211,52	158,12	118	2300	30,0715181	211,52	0	0	0	0	0
SDZ-205	173,53	129,5	2300	35,57349398	228	192,826	143,9	2300	39,5291566	228	0	0	0	0	0
SDZ-280	241,2	180	2300	50,74698795	234	268	200	2300	56,3855422	234	0	0	0	0	0

POWER RATINGS MARINE GENERATORS

Introduction to power ratings

Power ratings for marine generators are designed to achieve the highest possible performance without affecting the service life of the engine or its components. The two types of power ratings that have been defined for gensets are the prime power and maximum power ratings. These ratings are mainly defined by industry standards, in addition to ISO regulations.

Prime power rating

The prime power rating is applied in situations where power is not available from the electrical grid. With this rating, the number of operational hours for the generator with variable loads is unlimited. A generator's prime power is the power that ensures that it can be supplied by the generator continuously and indefinitely. These ratings are in accordance with ISO 3046.

Max. power rating

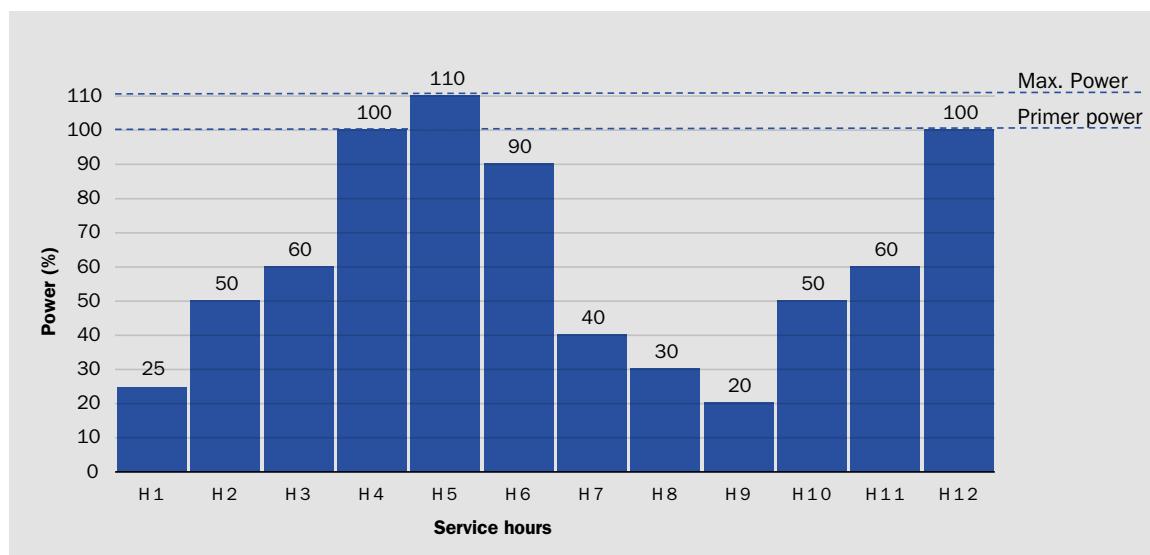
Should the prime power rating need to be exceeded for a limited time, the maximum power rating will apply. The limitations of this rating are outlined in ISO 3046/1, BS 5514, AS 2789 and DIN 6271, for overloading generators. They allow a 10% overload with respect to the prime power. The 10% overload is available for a period of one hour every 12 hours, and cannot exceed 400 hours per year.

Example of max. power rating: If a generator has a prime power rating of 100 kW, the maximum power it can deliver is 10% of 100 kW = 110 kW.

Operating conditions

To ensure correct operation and increase the service life of the equipment, it is recommended to use the generator with loads higher than 40% of prime power most of the time during operation, but never exceeding the limitations of the previous ratings.

EXAMPLE OF MAXIMUM POWER EVERY 12 HRS



NAME:

COMPANY:

ADDRESS:

TEL.:

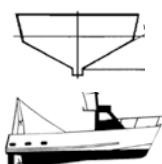
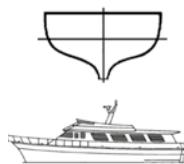
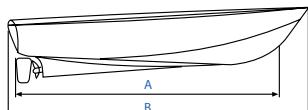
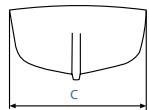
FAX:

E-MAIL:

PRINCIPAL FEATURES OF THE BOAT

BRAND AND MODEL:

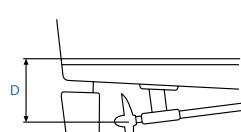
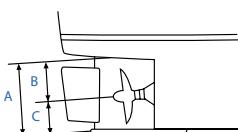
SHIPYARD:

HULL TYPE DISPLACEMENT SEMI-DISPLACEMENT SAIL BOAT PLANING HULL CATAMARAN BARGE**HULL MATERIAL** STEEL FIBERGLASS ALUMINIUM WOOD**SERVICE** PASSENGER-PLEASURE HEAVY DUTY - COMMERCIAL TOWING**USE** OFFSHORE LAKE**DIMENSIONS**

A: LENGTH WATERLINE _____ m feet _____

B: LENGTH OVERALL _____ m feet _____

C. BEAM _____ m

FULL LOAD DISPLACEMENT _____ TM KG**STERN GEOMETRY**

(Ø MAX.)

A _____ mm

B _____ mm

C _____ mm

D _____ mm

SHAFT ANGLE: _____ °

ENGINE DATA - GEARBOX

Nº MOTORS

BRAND

MODEL

POWER

RATING

GEARBOX RED

:1

PROPELLER DATA

CURRENT N° BLADES _____

SPIN LH RH

DIAMETER _____ PITCH _____

Ø _____ mm

DESIRED N° BLADES _____

SPIN LH RH

A _____ mm

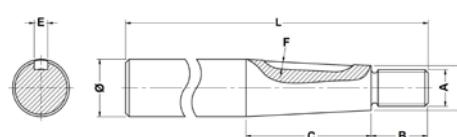
B _____ mm

C _____ mm

D _____ mm

E _____ mm

F _____ mm



Signature & stamp

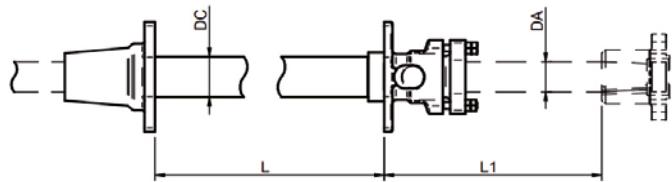
NAME:

CLIENT NR.:

PHONE NR.:

E-MAIL:

DATE:

SPECIFICATIONS OF THE STERN TUBE

Installation dimensions.

L	Space between bulkheads	
L1	Distance between the prow bulkhead and the shaft coupling	
DA	Shaft diameter	
DC máx.	Maximum diameter available for the stern tube lodging	

Dimensions in mm.
Stern tube material.

AISI 304	
AISI 316	

Mark one option.
STERN TUBE TYPE*

Rigid stern tube assy	
Floating stern tube assy	

Mark one option.

If you have chosen the floating stern tube assy, select the type below.

Type A1 (Stuffing box)	
Type A2 (Stuffing box)	
Type B1 (Rubber stuffing box)	
Type B2 (Rubber stuffing box)	
Type C1 (Refrigerated rubber stuffing box)	
Type C2 (Refrigerated rubber stuffing box)	

Mark one option.

*Consult catalogue.

DELIVERY TIME

Standard (/ 2 weeks)	
Urgent (4 days)	

Mark one option.

NAME:

CLIEI NR.:

PHONE NR.:

E-MAIL:

DATE:

1) SHAFT SPECIFICATIONS

a. A TYPE (> Ø50mm)

Mark Ø of the shaft										Shaft Length - L (mm)	GBox Length - L1 (mm)
50	60	65	70	75	80	85	90	100			

Preferably indicate length L1 between threaded end of propeller side and gearbox plate.

b. B TYPE (< Ø45mm)

Mark Ø of the shaft					Shaft Length - L (mm)	GBox Length - L1 (mm)
25	30	35	40	45		

Preferably indicate length L1 between threaded end of propeller side and gearbox plate.

		Quantity
Shaft Rotation	RH	
	RI	

Shaft type:
Machined one end
Machined both ends

Seen from aft to bow.

2) OPTIONAL LENGTHS

Solé Diesel manufactures standard 1:10 cones. **OPTIONALLY** indicate dimensions in the table below.

	A	B	C	D	E	F	G
Propeller Side							
Gearbox Side							
Material (Opcional)							

3) GEARBOX SPECIFICATIONS

Brand	
Model	

Solé Diesel advises mounting an elastic connection to solve possible problems of bad alignment shaft.

4) CERTIFICATION & ANALYSIS

	SI
Shaft Certificate by Capitanía	
Shaft Certificate by Classification Society ¹	
Shaft Traction Analysis	
Shaft Resilience Analysis	
Shaft Bending Analysis	
Shaft Hardness Analysis	
Shaft Chemical Composition Analysis	

¹Specify which Classification society.

5) DELIVERY TIME

Standard (2 weeks)	
Urgent (4 days)	

Mark one option.

NAME:

CLIENT NR.:

PHONE NR.:

E-MAIL:

DATE:

1 HYBRID MODULE

I.C. Engine	Brand and model: (Enclose torque-rpm curve)
Rated power-speed	<input type="checkbox"/> (kW) <input type="checkbox"/> (hp) - rpm
Ancillaries power <input type="checkbox"/> (kW) <input type="checkbox"/> (hp)	Hydraulic pumps
	Others
Flywheel SAE	SAE J620
Flywheel housing SAE	SAE J617
	<input type="checkbox"/> 10" <input type="checkbox"/> 11 1/2" <input type="checkbox"/> 14" <input type="checkbox"/> 18"
	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> 0

2 ELECTRIC MACHINE

Rated power-speed	<input type="checkbox"/> (kW) <input type="checkbox"/> (hp) - rpm
Battery voltage	(Vdc)
Recharge battery ability	<input type="checkbox"/> YES <input type="checkbox"/> NO
Booster ability *	<input type="checkbox"/> YES <input type="checkbox"/> NO

* Internal combustion engine and electric machine working together.

3 MARINE TRANSMISSION

Marine Transmission	Brand and model:
Solenoid valves voltage	<input type="checkbox"/> 12 Vdc <input type="checkbox"/> 24 Vdc
Flywheel SAE	<input type="checkbox"/> 10" <input type="checkbox"/> 11 1/2" <input type="checkbox"/> 14" <input type="checkbox"/> 18"
Flywheel bell housing SAE	<input type="checkbox"/> 4 <input type="checkbox"/> 3 <input type="checkbox"/> 2 <input type="checkbox"/> 1 <input type="checkbox"/> 0
Reduction ratio	_____ :1
Output configuration	

4 BOAT

Boat	Brand and model:		
Weight (full) "displacement"	<input type="checkbox"/> (kg) <input type="checkbox"/> (lb)		
Length (LWL)	<input type="checkbox"/> (m) <input type="checkbox"/> (ft)		
# of propellers			<input type="checkbox"/> 1 <input type="checkbox"/> 2
Propeller diameter-speed	<input type="checkbox"/> (mm) <input type="checkbox"/> (inch) – rpm		
Hotel loads (average)	_____ kW <input type="checkbox"/> 24 Vdc <input type="checkbox"/> 230 Vac / _____ V _____		
Required performances:			
Diesel mode	Max speed <input type="checkbox"/> (km/h) <input type="checkbox"/> (kn)		
Electric mode	Max speed <input type="checkbox"/> (km/h) <input type="checkbox"/> (kn)		
Electric mode	Range <input type="checkbox"/> (km) <input type="checkbox"/> (nm)	_____ at speed _____	

5 DUTY CYCLE

Internal combustion engine		_____ %
Electric motor		_____ %
Booster mode		_____ %

NAME:

CLIENT NR.:

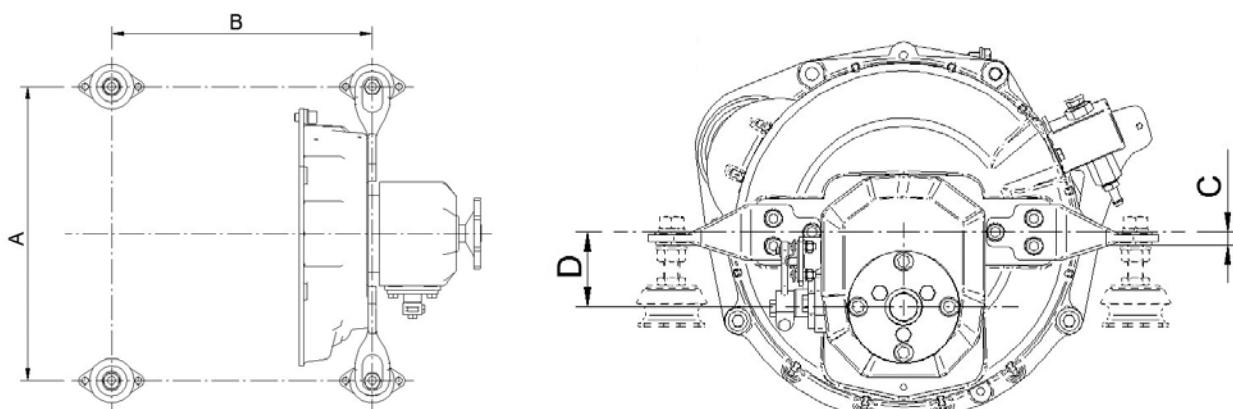
PHONE NR.:

E-MAIL:

DATE:

1) DATA OF YOUR ENGINE

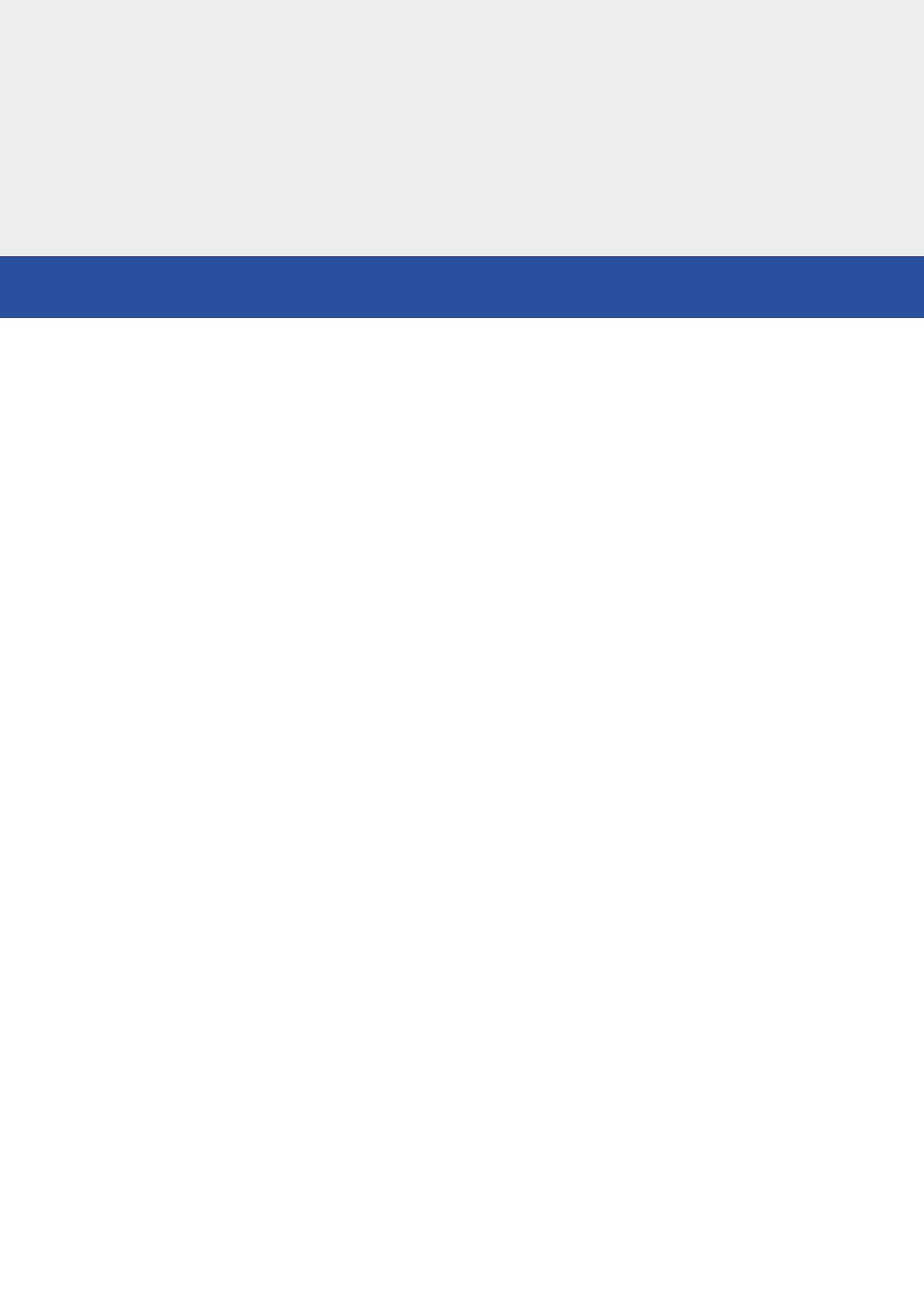
Engine brand		
Engine model		
Brand and model of gearbox		
Power		
Number of cylinders		
Layout of the cylinders		
Width between supports (A):	mm	
Length between supports (B):	mm	
Height between the motor shaft and supports (C):	mm	
Distance between motor shaft and transmission shaft (D):	mm	

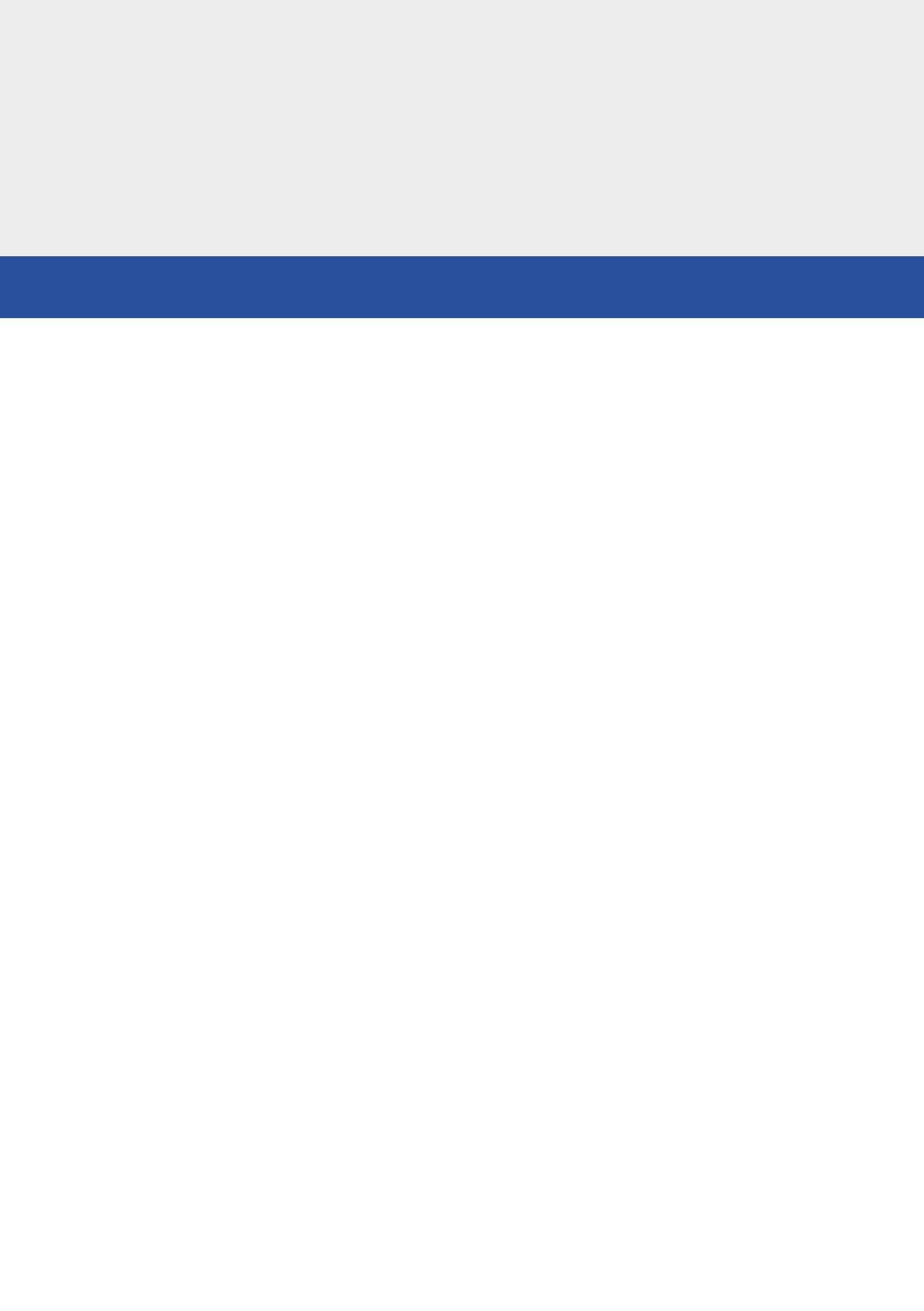
**2) ENGINE THAT WANTS TO ACQUIRE**

Engine model		
Do you want the standard inverter?		
- If it is not, what model do you want?		

3) OBSERVATIONS

--	--	--







C-243b, KM 2· 08760 Martorell, Barcelona

info@solediesel.com | +34 93 775 14 00

solediesel.com

09900006.ENG

DISTRIBUTED BY: