

# Engines and around the engine

## Marine Diesel Engines

Most pleasure boat owners long for the moment they can set foot aboard. Work is forgotten and other worries vanish into the air. That sense of happiness is complete, when the engine comes to life with a healthy roar. The owner of a power or sailing boat with a VETUS engine is in a position to enjoy every moment on the water to the max, and that is the way it should be! Whether you own a sturdy two cylinder with saildrive or a whispering six cylinder beauty, a VETUS Diesel Engine will be your faithful servant. To complement each marine engine in the range, VETUS also offers a well-thought-out complete package of "around the engine" products: from the engine remote control to the fuel filter to the propeller shaft to the exhaust system.

### Purchasing a VETUS engine brings a host of related benefits

- The extensive VETUS dealer network is on hand to provide service, spare parts and points of contact worldwide
- A VETUS engine brings with it over 50 years of experience in producing reliable and compact marine engines, ensuring safe and continuous boating pleasure
- All VETUS engines come with a 5 year warranty in accordance with the VETUS Warranty and Service Conditions

## M-LINE

VETUS offers a complete range of M-Line marine diesel engines, suitable for many different types of boats including launches, sailing yachts, canal boats and small cabin cruisers. Over the course of many years of steady development these engines have proven both their quality and reliability.

**M2.13**  
**M2.18**



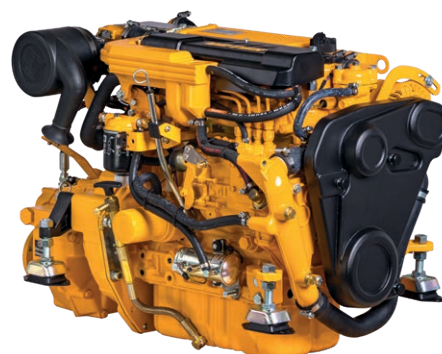
**M3.29**



**M4.35**  
**M4.45**



**M4.56**



## HYBRID BOATING (NEW!)

New in the VETUS product range is the hybrid system for M2, M3 and M4. The two cylinder engine will be supplied with a 2,3 kW electric drive and the 3 and 4 cylinder includes a 6 kW electric drive.

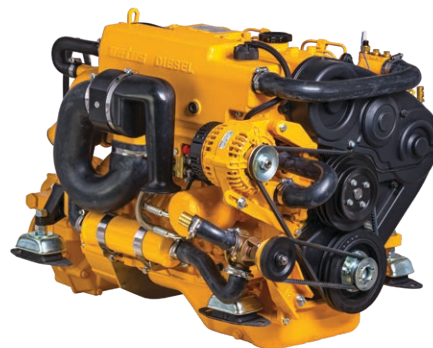
The VETUS hybrid system allows you to benefit from both silent cruising with an electric propulsion in inner cities or eco-sensitive areas but when more power is required the diesel can be engaged at higher speed. Please check for further details on page 86.



# H-LINE

The H-Line engines are sturdy, reliable marine diesel engines and are suitable for all kinds of applications, such as cabin boats, small fishing boats and larger canal boats. These engines have low noise and vibration levels due to their robust construction. They are also highly fuel efficient.

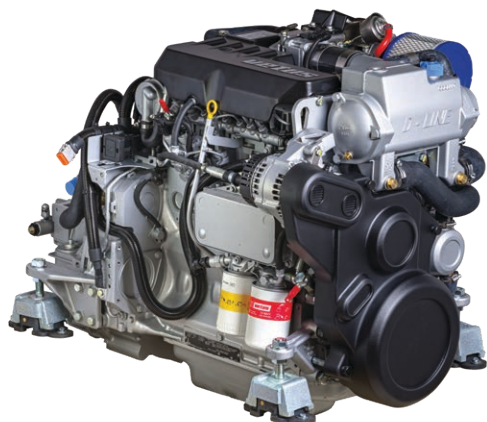
VETUS offers the VH4.65, 65hp at 3000 rpm and VH4.80, 80hp at 4000 rpm which both are naturally aspirated engines. (VH4.80: RCD1, not available in EU.)



**VH4.65**  
**VH4.80**

# D-LINE

VETUS D-Line common-rail engines are ideal for (heavy) displacement boats and semi-planing boats. They are slow running and exceptionally smooth, making them the engine of choice where long distance cruising is involved. Based on the quality of the well-known Deutz engine blocks, they are exceptionally reliable and durable.



**VD4.120**  
**VD4.140**



**VD6.170**  
**VD6.210**

## VETUS marine diesel engines certifications

Engine type	RCD	BSOII pleasure craft		SOLAS
		single	twin	
M2.13	2	✓	✓	x
M2.18	2	✓	✓	x
M3.29	2	✓	✓	✓
M4.35	2	✓	✓	✓
M4.45	2	✓	✓	✓
M4.56	2	x	x	✓
VH4.65	2	x	x	x
VH4.80	1	x	x	x
VD4.120	2	✓	✓	x
VD4.140	2	✓	✓	x
VD6.170	2	✓	✓	x
VD6.210	2	✓	✓	x





# Engines and around the engine

## M-LINE

M-Line engines are quiet running, highly fuel-efficient, reliable and offer high power and torque output. The fuel systems are automatically self-bleeding, a great convenience after a fuel filter replacement. All engines are equipped with a high output marine alternator as standard for fast recharging of batteries. A second alternator is available as an option on all type M4 engines. And there is more....!

### INNOVATION

#### *Engine space temperature reduction*

The heat build-up in engine spaces can easily reach temperatures of 70°C. High ambient temperatures in the engine space can have negative effects on engine performance and installed equipment.

VETUS has developed an elegant yet efficient solution by fitting a water-cooled aluminium top cover. Located directly above the cylinder head, this huge cooling element absorbs radiant heat coming from the engine. This innovative concept results in a significant temperature reduction of up to 15°C - a 20% reduction! In turn, the cooler ambient temperature provides a more fuel-efficient air supply to the engine and better combustion. To the best of our knowledge, no other marine engine manufacturer uses such an incorporated cooling element to reduce ambient temperature in the engine space. A truly unique solution developed by VETUS.

#### *Engine sound reduction*

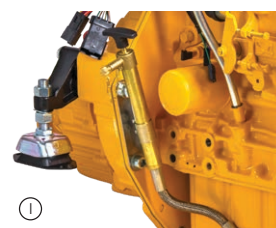
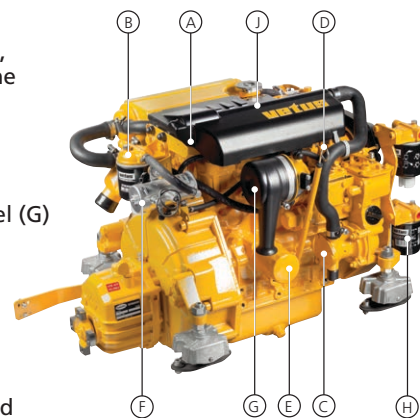
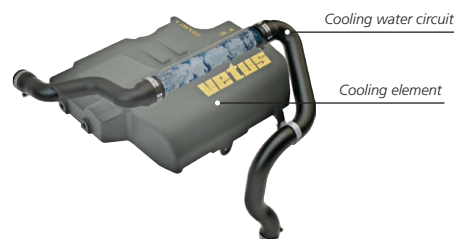
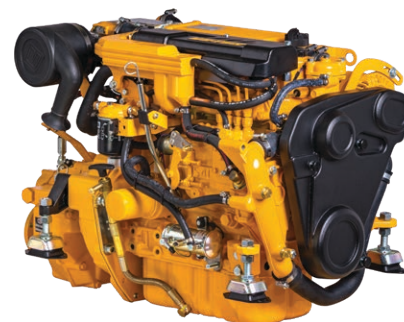
People often go boating to enjoy the peace of the water. VETUS likes to add to this experience by creating a propulsion system that performs as quietly as possible.

The sturdy, aluminium top cover also significantly reduces the noise level. When combined with the newly designed air filter housing, tests show a sound reduction of approximately 5 dB(A) and 'near silent' operation at a cruising speed of around 2200 rpm. Those present at the test sites have all enthusiastically described the engine sound as being incredibly more pleasant to the ear.

### FEATURES

Based on customer feedback, the M-Line incorporates many features designed to make life easier for both the boat builder and the end user.

- Service parts such as fuses and relays (A), fuel filter and fuel connections (B), impeller (C), dipstick (D), and oil filter (E) are all easily accessible. On all M4 engines (except M4.56) the impeller is located at the front, for even easier access
- The wiring is improved to offer easy connection and extra safety
- All M-Line engines are equipped with an electric fuel pump (F), actuated by the ignition switch
- A new air inlet filter housing attenuates the airflow and lowers the induction sound level (G)
- The heat exchanger unit has 26 improvements over earlier versions, including the construction materials and surface treatments
- The synthetic front cover enhances safety and appearance. All pulleys and belts are covered, thereby meeting the EC Machinery Directive
- Front mounted oil and fuel filters including a bracket are available as an option, making servicing as convenient as possible (H)
- When higher charging output is required, all M4 engines are designed to accept a second alternator as an option (when a second alternator is fitted, the front cover is not supplied)
- Furthermore, all M-Line engines can be supplied with an adapter kit for Volvo Penta saildrives (110S/120S and 120SB)
- The oil sump pump on all M-Line engines is already installed on the engine for easy maintenance (I)
- Finally yet importantly, the water-cooled top cover not only reduces engine room temperature, but is designed to be used as a step, making it easier to move around or over the engine (J)



All these new advantages come without compromising any other features. With a range from 12 - 52 HP (9 - 37.5 kW) the VETUS M-Line is the preferred choice for many boat builders. Do you need more reasons to choose a VETUS engine?

You can expect the highest level of service when choosing a VETUS engine, together with high quality and professional advice.

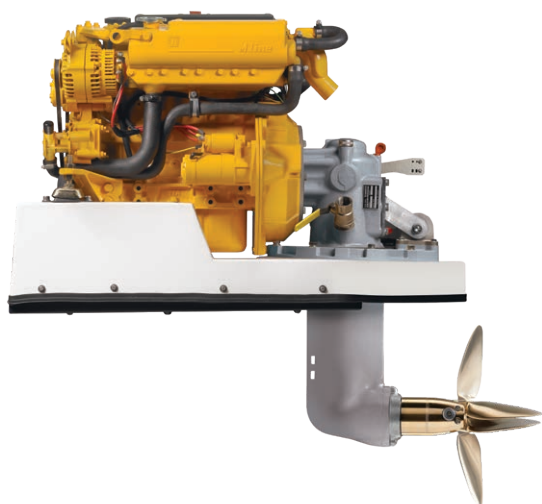
### SOLAS

For our SOLAS solutions see page 30.





## Options for M-Line and H-Line

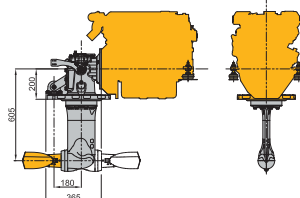


### Saildrive

VETUS can supply a saildrive for all M-Line and H-Line engines. There is one type saildrive available, which is the Technodrive SP60, ratios 2.15:1 or 2.38:1. The SP60 can be used for both single and twin engine installations.

The underwater drive leg can be fitted 180° reversed, on request. This will permit the engine to be installed ahead or behind the saildrive unit for greater flexibility of installation.

Standard scope of supply for saildrive engines: instrument panel MPA10 for M2.13/M2.18 and MPA22KBS2 for other engine models, two flexible engine supports type KSTEUN100V and a pre-installed sump pump.

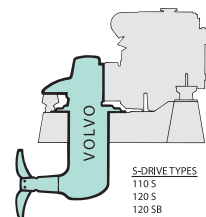


We will be pleased to recommend the correct Flexofold propeller for your saildrive ([www.flexofold.com](http://www.flexofold.com)).

### Saildrive kits

All VETUS M-Line engines can be supplied with an adapter kit to fit an existing Volvo Penta sail drive. Kits are available for 110S, 120S or 120SB saildrives.

Type	Saildrive
STM7614	110S
STM7619	120SB
STM7621	120S



### Filters

Front mounted oil and fuel filters including a bracket are available as an option on the M-Line range, making servicing as convenient as possible.

Type	Engine type
08-01454	M2
08-01455	M3
08-01479	M4
08-01456	M2 + electric fuel pump
08-01457	M3 + electric fuel pump



### Second alternator M4 models

Engine models M4.35, M4.45 and M4.56 can be supplied with a second factory fitted alternator of 110A, if specified at the time of order. When this option is specified, the front belt cover is not fitted. For older M4 models (M4.15/M4.17/M4.55) a 75A alternator can be ordered.



### Keelcooling

M-Line and H-Line models are also available as keelcooled versions. Keelcooling systems are normally installed when the boat is used in shallow waters.







## M-Line

# M2.18

● ● 11.8 kW / 16 HP

Supplied as standard with instrument panel type MPA10 (see page 139), four flexible engine mounts type KSTEUN35V (see page 50) and a pre-installed oil sump pump.

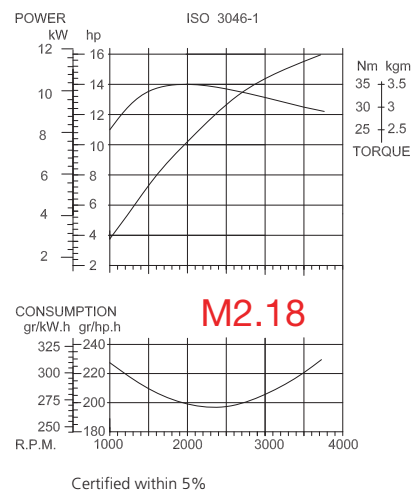
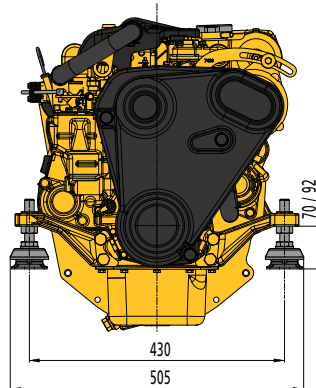
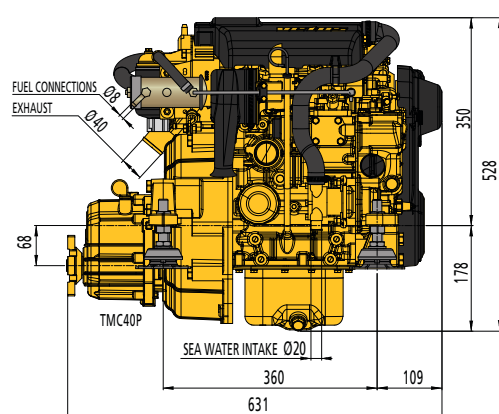


## TECHNICAL SPECIFICATIONS

\* Not available in the United States.

Engine model	M2.18
Max. output at flywheel (ISO 8665)	11.8 kW (16 hp)
Max. output at propeller shaft (ISO 8665)	11.6 kW (15.8 hp)
Maximum rpm	3600
Max. torque	35.1 Nm / 2000 rpm
Bore x stroke	76 mm x 70 mm
Displacement	635 cm <sup>3</sup>
Number of cylinders	2 in line
Combustion system	indirect injection
Compression ratio	23:1
Firing order	1-2
Intake	naturally aspirated
Electrical system	12 VDC - 85 Amps.
Cooling system (standard)	indirect cooling (keel cooling optional)
Gearbox, standard	TMC40 (2 / 2.60:1)
Gearbox options	ZF12M 2.14 / 2.63:1 ZF15MIV 2.13 / 2.99:1 TMC60A 2 / 2.5:1

Saildrive	SP60 2.15 / 2.38:1
Dry weight (incl. std. gearbox)	107 kg
Fuel consumption at 2500 rpm	268 g / kW.h (196 g / hp.h)
Max. backwards installation angle	15°
Max. lateral inclination angle;	
Continuously	25°
5 minutes max.	30°
Suction height of fuel lift pump	1.5 m
Calorifier connection kit	optional
Instrument panel (standard)	MPA10
Warning lights and audible alarm	oil pressure, temperature (coolant and exhaust), charging current
Control light for	pre-heating/glow plugs
Electric circuit protection	fuse 20 Amps.
Certifications	EU-RCD II, BSO II





M-Line

M3.29

● ● ● 20 kW / 27 HP



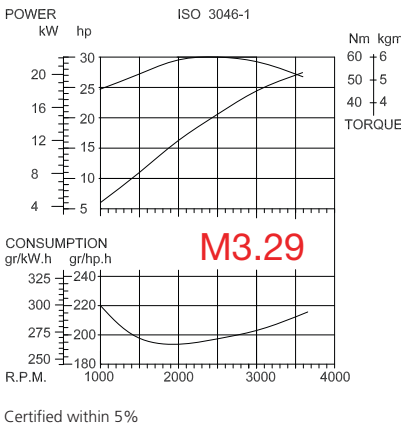
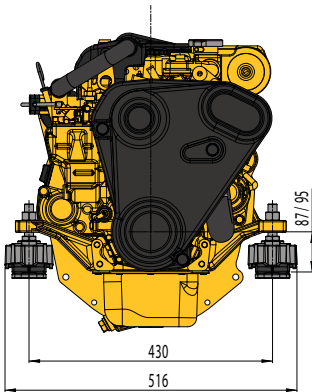
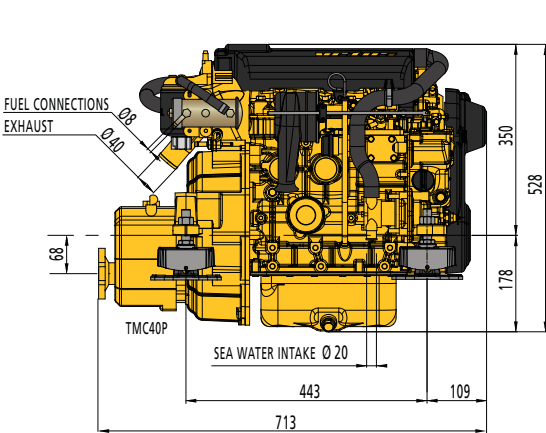
Supplied as standard with instrument panel type MPA22KBS2 (see page 140), four flexible engine mounts type KSTEUN40A (see page 50) and a pre-installed oil sump pump.



TECHNICAL SPECIFICATIONS

\* Not available in the United States.

Engine model	M3.29		
Max. output at flywheel (ISO 8665)	20 kW (27 hp)	Saildrive	SP60 2.15 / 2.38:1
Max. output at propeller shaft (ISO 8665)	19.3 kW (26.2 hp)	Dry weight (incl. std. gearbox)	134 kg
Maximum rpm	3600	Fuel consumption at 2500 rpm	270 g / kW.h (199 g / hp.h)
Max. torque	60.2 Nm / 2500 rpm	Max. backwards installation angle	15°
Bore x stroke	76 mm x 70 mm	Max. lateral inclination angle;	
Displacement	952 cm³	Continuously	25°
Number of cylinders	3 in line	5 minutes max.	30°
Combustion system	indirect injection	Suction height of fuel lift pump	1.5 m
Compression ratio	22:1	Calorifier connection kit	optional
Firing order	1-3-2	Instrument panel (standard)	MPA22KBS2
Intake	naturally aspirated	Warning lights and audible alarm	oil pressure, temperature (coolant and exhaust), charging current
Electrical system	12 VDC - 85 Amps.	Control light for	pre-heating/glow plugs
Cooling system (standard)	indirect cooling (keel cooling optional)	Electric circuit protection	fuse 20 Amps.
Gearbox, standard	TMC40 (2 / 2.60:1)	Certifications	EU-RCD II, BSO II, SOLAS
Gearbox options	ZF12M 2.14 / 2.63:1 ZF15MIV 2.13 / 2.99:1 TMC60A 2 / 2.5:1		





## M-Line

# M4.35

● ● ● ● 24.3 kW / 33 HP



Supplied as standard with instrument panel type MPA22KBS2 (see page 140), four flexible engine mounts type KSTEUN75V (see page 50) and a pre-installed oil sump pump.

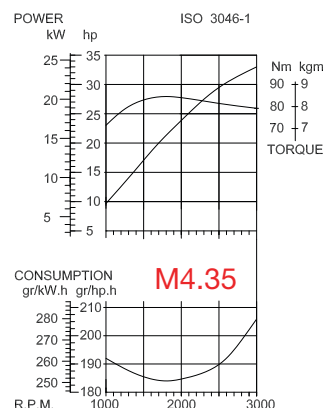
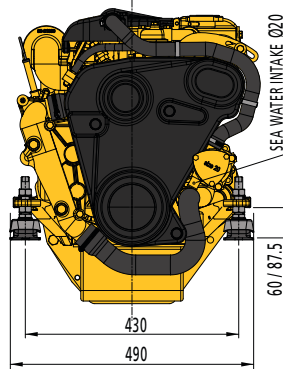
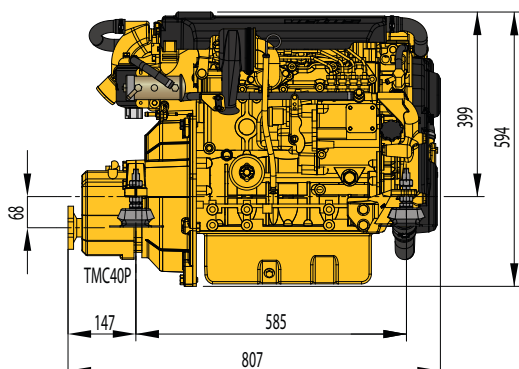


## TECHNICAL SPECIFICATIONS

\* Not available in the United States.

Engine model	M4.35
Max. output at flywheel (ISO 8665)	24.3 kW (33 hp)
Max. output at propeller shaft (ISO 8665)	23.6 kW (32.1 hp)
Maximum rpm	3000
Max. torque	83.8 Nm/1700 rpm
Bore x stroke	78 mm x 92 mm
Displacement	1758 cm <sup>3</sup>
Number of cylinders	4 in line
Combustion system	indirect injection
Compression ratio	22:1
Firing order	1-3-4-2
Intake	naturally aspirated
Electrical system	12 VDC - 110 Amps.
Cooling system (standard)	indirect cooling (keel cooling optional)
Gearbox, standard	TMC40 2:1
Gearbox options	TMC60 (2 / 2.5 / 2.94:1) ZF12M 2.14 / 2.63:1 TMC60A 2 / 2.5:1

Saildrive	SP60 2.15 / 2.38:1
Dry weight (incl. std. gearbox)	199 kg
Fuel consumption at 2500 rpm	252 g / kW.h (185 g / hp.h)
Max. backwards installation angle	15°
Max. lateral inclination angle;	
Continuously	25°
5 minutes max.	30°
Suction height of fuel lift pump	1.5 m
Calorifier connection kit	optional
Instrument panel (standard)	MPA22KBS2
Warning lights and audible alarm	oil pressure, temperature (coolant and exhaust), charging current
Control light for	pre-heating/glow plugs
Electric circuit protection	fuse 20 Amps.
Certifications	EU-RCD II, BSO II, SOLAS



Certified within 5%

M-Line

M4.45

● ● ● ● 30.9 kW / 42 HP



Supplied as standard with instrument panel type MPA22KBS2 (see page 140), four flexible engine mounts type KSTEUN75V (see page 50) and a pre-installed oil sump pump.

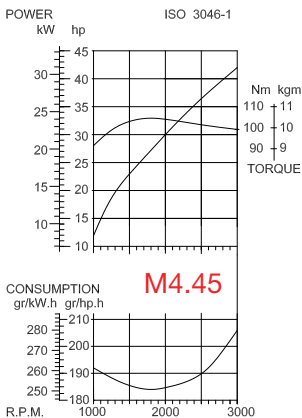
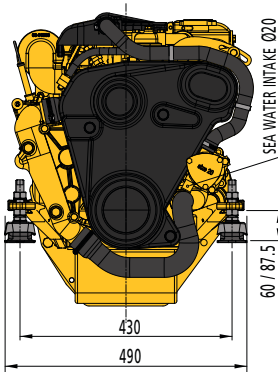
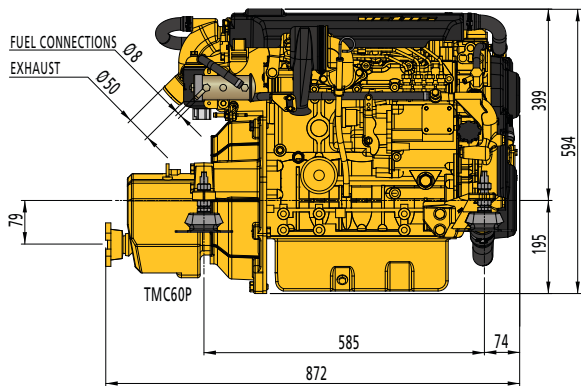


TECHNICAL SPECIFICATIONS

\* Not available in the United States.

Engine model	M4.45
Max. output at flywheel (ISO 8665)	30.9 kW (42 hp)
Max. output at propeller shaft (ISO 8665)	30 kW (40.8 hp)
Maximum rpm	3000
Max. torque	106.4 Nm / 1750 rpm
Bore x stroke	78 mm x 92 mm
Displacement	1758 cm <sup>3</sup>
Number of cylinders	4 in line
Combustion system	indirect injection
Compression ratio	22:1
Firing order	1-3-4-2
Intake	naturally aspirated
Electrical system	12 VDC - 110 Amps.
Cooling system (standard)	indirect cooling (keel cooling optional)
Gearbox, standard	TMC60 (2 / 2.5 / 2.94:1)
Gearbox options	ZF12M 2.14 / 2.63:1 TMC60A 2 / 2.5:1

Saildrive	SP60 2.15 / 2.38:1
Dry weight (incl. std. gearbox)	199 kg
Fuel consumption at 2500 rpm	252 g / kW.h (185 g / hp.h)
Max. backwards installation angle	15°
Max. lateral inclination angle;	
Continuously	25°
5 minutes max.	30°
Suction height of fuel lift pump	1.5 m
Calorifier connection kit	optional
Instrument panel (standard)	MPA22KBS2
Warning lights and audible alarm	oil pressure, temperature and (coolant exhaust), charging current
Control light for	pre-heating/glow plugs
Electric circuit protection	fuse 20 Amps.
Certifications	EU-RCD II, BSO II, SOLAS



Certified within 5%





## M-Line

# M4.56

• • • • 38.3 kW / 52 HP



Supplied as standard with instrument panel type MPA22KBS2 (see page 140), four flexible engine mounts type KSTEUN80V (see page 50) and a pre-installed oil sump pump.

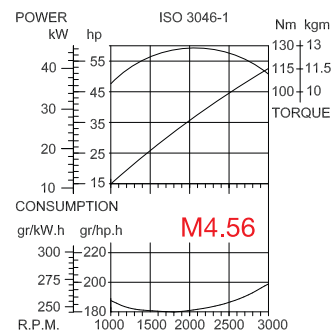
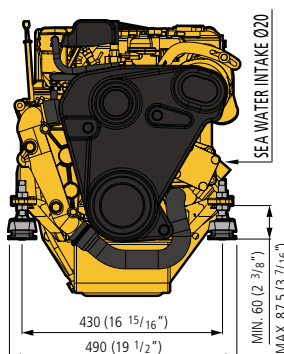
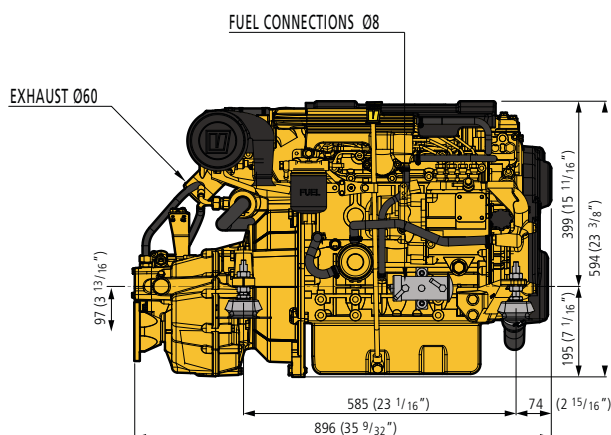


## TECHNICAL SPECIFICATIONS

\* Not available in the United States.

Engine model	M4.56
Max. output at flywheel (ISO 8665)	38.3 kW (52 hp)
Max. output at propeller shaft (ISO 8665)	37.1 kW (51 hp)
Maximum rpm	3000
Max. torque	127 Nm / 2000 rpm
Bore x stroke	78 mm x 92 mm
Displacement	1758 cm <sup>3</sup>
Number of cylinders	4 in line
Combustion system	indirect injection
Compression ratio	22:1
Firing order	1-3-4-2
Intake	Turbo charged
Electrical system	12 VDC - 110 Amps.
Cooling system (standard)	indirect cooling (keel cooling optional)
Gearbox, standard	TM345(A) (2 / 2.47:1)
Gearbox options	ZF12M 2.14:1 ZF15MIV 2.13 / 2.99:1 TMC60 2/2,5/2,94:1

Saildrive	SP60 2.15 / 2.38:1
Dry weight (incl. std. gearbox)	206 kg
Fuel consumption at 2500 rpm	244 g / kW.h (179 g / hp.h)
Max. backwards installation angle	15°
Max. lateral inclination angle;	
Continuously	25°
5 minutes max.	30°
Suction height of fuel lift pump	1.5 m
Calorifier connection kit	optional
Instrument panel (standard)	MPA22KBS2
Warning lights and audible alarm	oil pressure, temperature (coolant and exhaust), charging current
Control light for	pre-heating/glow plugs
Electric circuit protection	fuse 20 Amps.
Certifications	EU-RCD II, SOLAS



# Engines and around the engine

## SOLAS Engines

VETUS also offers a range of marine diesel engines which are SOLAS approved for life and rescue boats and tenders. This range comprises of four models from 27hp up to 52hp.

### Standard specification

- Keelcooling system with thermostat and dry exhaust fitting
- Tilt switch
- Electric fuel lift pump
- Automatic self-bleeding system
- Fuel filter/water separator
- Electric start
- Air filter
- Alternator 12 VDC/85A (M3) or 12 VDC/110A (M4)
- MPA10S SOLAS panel including 4 m cable, warning lights and audible alarm for low oil pressure, high coolant temperature and exhaust temperature and ignition switch with a non-removable key for start and stop
- V-belt cover
- Pre-installed sump pump

### Options

- Intercooling system including exhaust injection bend with seawater alarm sensor
- Fire fighting pump including pump bracket
- Engine heating (48 VDC)
- Spring starter
- Hydraulic starter
- Bigger alternator 12 VDC/140A for M4 engines
- Second alternator 12 VDC/110A or 12 VDC/140A for M4 engines
- MPA1XTSMB panel instead of MPA10S SOLAS panel
- Instrument panels type MP(A)22 or MP(A)34
- Flexible engine mounts
- Bracket for remote oil and fuel filter
- Spare parts kit

### In addition we can offer:

- Complete propeller shaft system
- Exhaust system for intercooled engines
- Remote controls and push-pull cables
- All other around the engine equipment



MPA10S



MPA1XTSMB

Type	Dial colour	Dimensions (mm)	Built-in depth (mm)	Voltage (DC)
MPA10S	Black	100 x 154	120	12
MPA1XTSMB	Black	167,5 x 85	120	12



Fassmer - CL-T 11.5





# H-LINE

The H-Line engines are sturdy, reliable engines and are suitable for many applications, such as cabin boats, small fishing boats and larger canal boats. These engines have low noise and vibration levels due to their robust construction. They are also highly fuel efficient.

The H-Line engines are four-cylinder 4-stroke engines with an indirect fuel injection system, a dual-circuit cooling system with integrated heat exchanger and a seawater injected exhaust bend.

Available in two versions: 65hp at maximum 3000 rpm (VH4.65) and 80hp at maximum 4000 rpm (VH4.80). The VH.480 is not available in the EU, USA or Canada.

## A few advantages of these engines

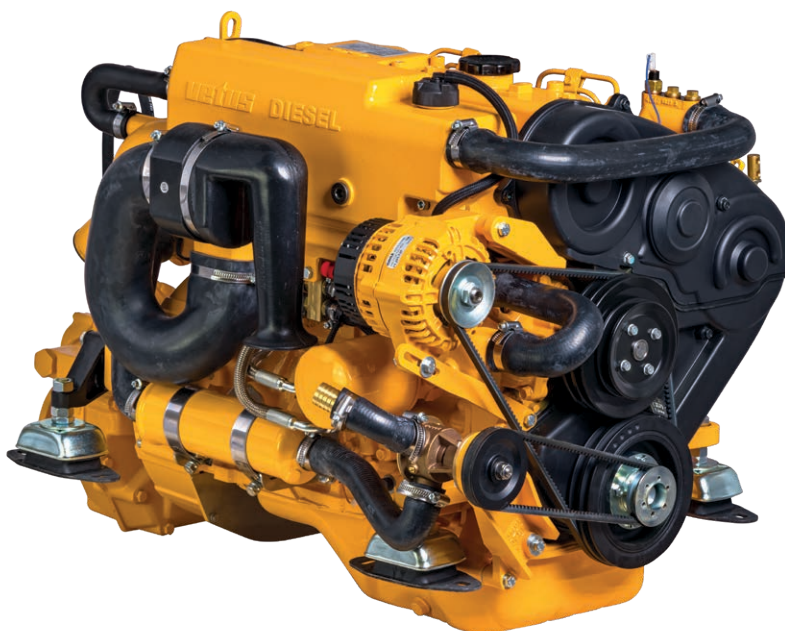
- Extremely favourable power to weight ratio
- Very low noise and vibration levels due to counter balancing shafts
- Very low fuel consumption
- Minimum hose connections, owing to extensive use of moulded rubber cooling system components
- High alternator output as standard, developed for marine applications for fast recharging of the batteries
- When higher charging output is required, a second alternator 12VDC/110A can be fitted on both engine models
- Self-bleeding fuel system
- Good accessibility of service parts for easy maintenance

## Options

- The H-Line engines can be supplied with gearbox or saildrive
- The H-Line can be supplied with a 2nd alternator 12VDC/80A or 12VDC/110A and will be installed when ordered together with the engine



Second alternator





H-Line

VH4.65

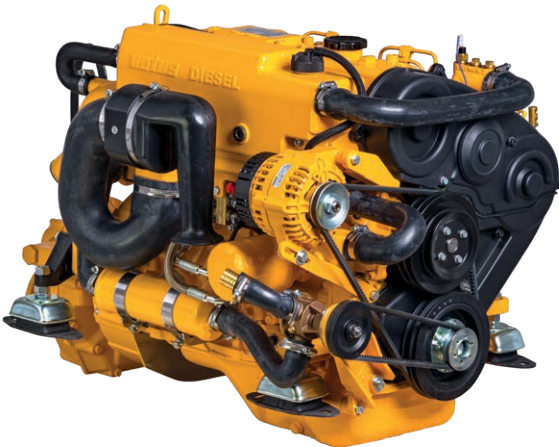
48 kW / 65.3 HP

VH4.80<sup>\*)</sup>

59 kW / 80.3 HP

\*) Not available in EU, USA and Canada.

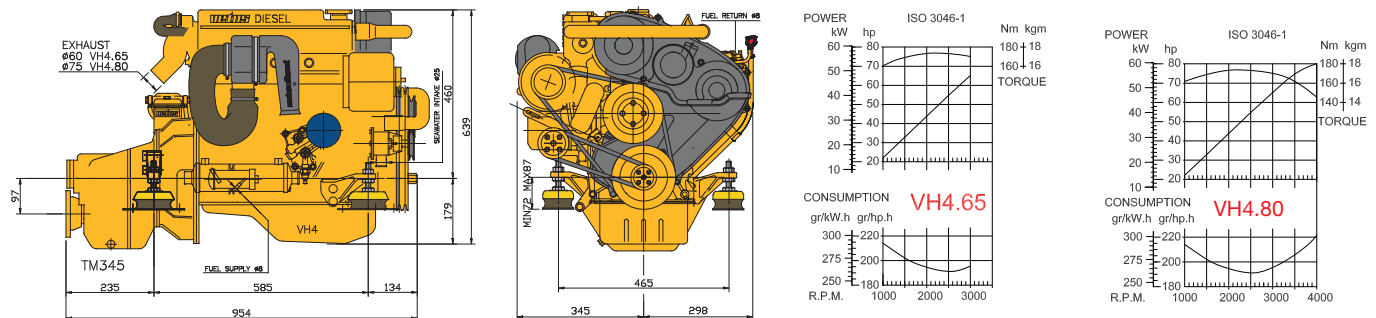
Supplied as standard with instrument panel type MPA22KBS2 / BS25 (see page 140), four flexible engine mounts type HY100 (see page 51) and an oil sump pump.



TECHNICAL SPECIFICATIONS

Engine model	VH4.65 / VH4.80	
*Max. output at flywheel (ISO 3046-1)	48 kW (65.3 hp) (VH4.65)	59 kW (80.3 hp) (VH4.80)
*Max. output at propeller shaft (ISO 3046-1)	46.6 kW (63.4 hp) (VH4.65)	57.2 kW (77.6 hp) (VH4.80)
Maximum rpm	3000 (VH4.65) / 4000 (VH4.80)	
Bore x stroke	91.1 mm x 100 mm	
Displacement	2607 cm <sup>3</sup>	
Number of cylinders	4 in line	
Combustion system	indirect injection	
Compression ratio	22:1	
Firing order	1-3-4-2	
Intake	Naturally aspirated	
Electrical system	12 VDC - 115 Amps.	
Cooling system (standard)	indirect cooling (keel cooling optional)	
Gearbox (standard)	TM345(A)	
Ratio	2 / 2.47:1	
Gearbox options	ZF25A 1.93 / 2.29 / 2.71:1 ZF25 1.97 / 2.8:1	
Saildrive	SP60 2.15:1	
Dry weight (incl. std. gearbox)	240 kg (VH4.65) 245 kg (VH4.80)	
Fuel consumption at 2500 rpm	260 g / kW.h (190 g / hp.h)	
Max. torque	170 Nm / 2.200 rpm	
Max. backwards installation angle	15°	
Max. lateral inclination angle;		
Continuously	25°	
5 minutes max.	30°	
Suction height of fuel lift pump	1.5 m	
Calorifier connection kit	optional	
Instrument panel (standard)	MPA22KBS2 / BS25	
Warning lights and audible alarm	oil pressure, temperature (coolant and exhaust), charging current	
Control light for	pre-heating	
Electric circuit protection	fuse 20 Amps.	
Certifications	EU-RCD II (VH4.65) EU-RCDI, RCDII pending (VH4.80) RRR emission standards (VH4.65/VH4.80)	

\* In accordance with ISO 8665



Certified within 5%



## Equipment selection table for M-Line and H-Line



### BULFL

See flexible couplings on page 96



### FTR330

See water strainers on page 53



### SISCO

See remote controls on page 44



See fuel filters on page 158



### NLP40

See waterlocks on page 118 and 119



See propellers on page 108



### NLP340

Engine model	M2.13		M2.18		M3.29		M4.35		M4.45		M4.56		VH4.65		VH4.80		
Gearbox reduction	2:1	2.6:1	2:1	2.6:1	2:1	2.6:1	2:1	2.5:1	2:1	2.5:1	2:1	2,47:1	2:1	2.63:1	1.97:1	2.8:1	
VETUS water lubricated propeller shaft system																	
* Shaft diam., Remanit 4462	25				30				35		30	35	30	35	30	40	
Indication for VETUS manganese bronze propeller for displacement boats (please ask for exact propeller calculation)																	
* 3-blade, P3B, diameter in inches	13"	15"	13"	15"	14"	16"	18"		20"	18"	20"	17"	21"	request	22"		
* 4-blade, P4E, diameter in inches	on request																
Flexofold NiAlBz folding propellers for sailing boats can exclusively be purchased through the Flexofold network (look at: <a href="http://www.flexofold.com">www.flexofold.com</a> )																	
2-blade, FoF folding propeller	13"	15"	13"	15"	15"							n.a.					
3-blade, FoF folding propeller					n.a.	15"	16"	17"	17"	18"	18"	20"	18"	20"	request	20"	
4-blade, FoF folding propeller	on request																
VETUS flexible couplings																	
* Bullflex type	01			02			04			08	04	08	04	08	04	08	
* Uniflex type					13						16	13	16				
* Combiflex type					12						n.a.	12	n.a.				
VETUS water strainer																	
* hose connection diam.(mm)													20		25		
* water strainer, type FTR:													470, 330 or 140/19			470 or 330/25	
* water strainer kit, type													WKIT33019			WKIT33025	
VETUS water separator / fuel filter																	
* hose connection suction/return in mm													8-8				
* water separator / fuel filter, type:													WS180 or (75)330VTEB				
VETUS water-injected exhaust systems																	
* exhaust hose, diam. (mm)	40				50				60				75				
* waterlock, type	NLP(3)40/LP40/LSSA NLP40HD				NLP(3)50/L50R/S/LSSA NLP50HD				NLP(3)60/LP60/LSL/LSG NLP60HD				NLP(3)75/LP75/ LSL/LSG/NLP75HD				
* combi waterlock/muffler, type	NLPH40				NLPH50				NLPH60				NLPH75				
* muffler, type	MP40				MP50				MP60				MP60		MP75		
* gooseneck, type	LT40				LT50				LT60				LT60		LT75		
* combi muffler/gooseneck, type	NLPG40				NLPG50				NLPG60				NLPG60		NLPG75		
* transom exhaust connection, type TRC	40R / PV or SV				50R / PV or SV				60R / PV or SV				TRC7590R				
* anti-siphon, type ASD or AIRVENT	V or H																
VETUS engine remote controls																	
* to be selected	SICO, SISCO, AFSTZIJ, RCTOPB, RCTOPS, AFSTTOP																
* push-pull cable:	CABL... (length to be determined)																
VETUS maintenance free batteries																	
* voltage													12				
* starter battery	min. 60A/max. 105A (M-Line)												min. 70A/max. 105A (H-Line)				
* service battery, Ah.	to be selected																
Advise on VETUS louvred air suction vents																	
* per engine, type ASV, SSV or SSVL	1 x 20	1 x 20			1 x 30		1 x 40 or 2 x 20		1 x 50 or 2 x 25		1 x 60 or 2 x 30		1 x 70 or 1 x 30 / 1 x 40		1 x 80 or 2 x 40		

## D-LINE

### COMMON-RAIL D-LINE ENGINES 122 - 210 HP

VETUS D-Line common-rail engines run smoothly, have a high power and torque, low revolutions and are highly reliable and durable. They are in conformity with the RCD2 emission regulations. Extremely suitable for power hydraulics on board. These engines have a CAN bus system with a SAE J1939 protocol but can easily work with NMEA2000 systems on board as well.

These VETUS D-Line engines have the unique VETUS designed water cooled top cover, to reduce the heat in the engine room but also the engine noise of an already quiet engine block. Furthermore, it can be used as a step. Other features are: a smaller air filter in order to save space in the engine room, exhaust manifold insulation, high output alternator (160 Amps) and an electric sump pump. A 12VDC or 24VDC second alternator can be ordered as an option. A front cover can be supplied only in combination with the 24VDC/75Amps alternator including ACR regulator.

#### The following options can be ordered with the engine

- 24 VDC electrical installation
- Double pole (aluminium boats)
- PTO for installation of a hydraulic pump
- Second alternator 12 VDC / 160 Amps or 24 VDC / 60 Amps
- Second alternator 24 VDC / 75 Amps including ACR regulator (WP)
- Potentiometer for mechanical controls
- Front belt cover for second 24 VDC/75A alternator
- Calorifier kit
- Electrical trolling valve 12 VDC or 24 VDC
- Extra pulley 2x SPA
- Fly-bridge instrument panel
- Possible read-out on NMEA2000 multifunctional displays (MFDs)



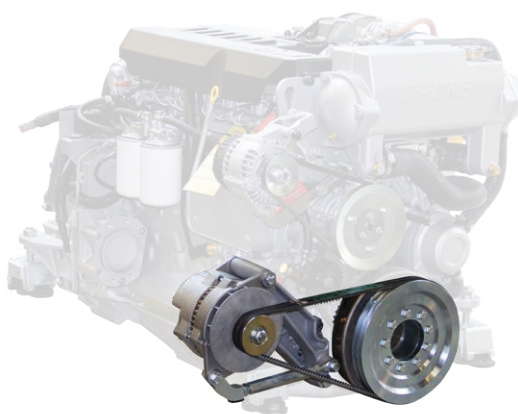
A 2nd alternator 24 VDC including an intelligent controller (ACR) can be supplied as an option. This combination can charge your batteries quickly, even at low revolutions. The ACR maximizes the output of the 2nd alternator. It is designed for optimal recharging and suitable for all battery types such as VETUS SMF maintenance free, gel and AGM batteries. The 3-step charging method guarantees fast and safe charging of your batteries.

The second alternator will be supplied as a complete set, consisting of: a 24V/75Amps alternator including an intelligent controller (ACR), double SPA-pulley and V-belts, temperature sensor and a set of parts designed for easy installation on the engine.

There are sets for the VD4 and VD6 D-Line engines available. A protection cover for second alternator can also be supplied.

#### Second alternator 24 VDC 75 Amps including ACR regulator

Type	Engine type
18-15756	VD4
18-14446	VD4
18-15004	VD6
18-14446	VD6
18-16367	Front cover







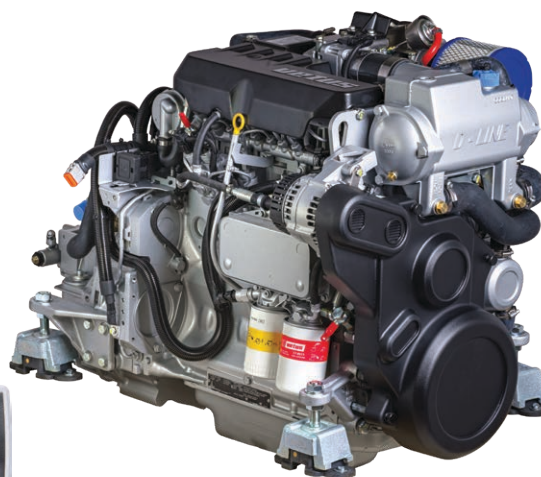
## D-Line

# VD4.120

● ● ● ● 90 kW / 122 HP

DI diesel / 4 stroke / 4 cyl. in line / turbo-charged  
aftercooled / common rail / EMR 3

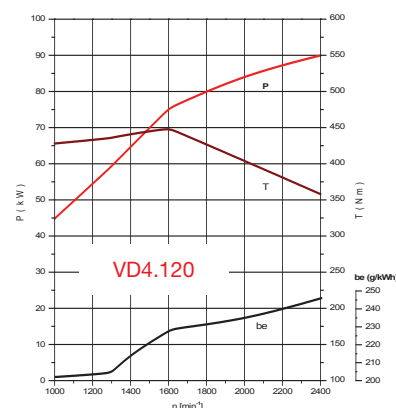
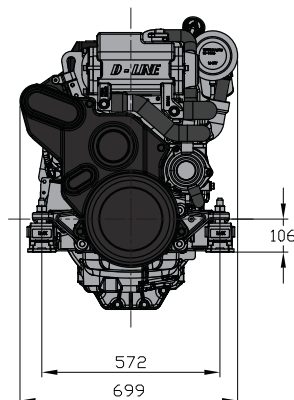
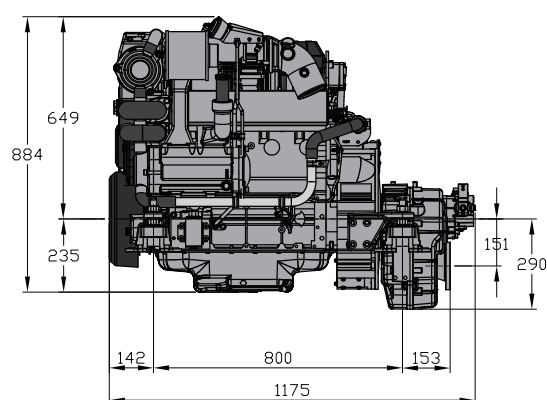
Supplied as standard with instrument  
panel type MPA34CANBS2  
(see page 140) and four flexible  
engine mounts type LMX140  
(see page 51).  
Fuel filter/water separator type  
340VTEB including water sensor.



## TECHNICAL SPECIFICATIONS

\* Not available in the United States or Canada.

Engine model	VD4.120
CAN bus	SAE J1939
Max. output at flywheel (ISO 8665)	90 kW (122 hp)
Max. output at propeller shaft (ISO 8665)	86 kW (117 hp)
Maximum rpm	2400
Bore x stroke	101 mm x 126 mm
Capacity	4040 cm <sup>3</sup>
Number of cylinders	4 in line
Cooling system	intercooling (keelcooling n.a.)
Compression ratio	18:1
Firing order	1-3-4-2
Alternator	12 VDC - 160 Amps. 24 VDC - 60 Amps.
Optional second alternator	12 VDC - 160 Amps. 24 VDC - 60 Amps. 24 VDC - 75 Amps. ACR regulator (WP)
Torque	449 Nm / 1600 rpm
Idle speed	800 rpm
Fuel consumption at max. rpm	235 g / kW.h
Gearbox (standard)	ZF45
Ratio	2.2 / 2.51 / 3.1
Gearbox (optional)	ZF45A 1.26:1 / 1.51 / 2.03 / 2.44:1 ZF68IV 1.29 / 1.56 / 1.99 / 2.47:1
Dry weight (incl. standard gearbox)	532 kg
Fuel lift pump	1.5 m
Max. installation angle (backwards)	15°
Max. athwartship angle (continuously)	30°
Calorifier connection kit	optional
Electric oil drain pump	standard
P.T.O. flange to install hydr. pump	optional
Instrument panel	MPA34CANBS2
Instruments	Key switch, tacho meter/hour counter, volt meter, oil pressure gauge, temperature gauge
Acoustic alarm	Oil pressure, temperature, charging current fresh and raw water
Electric circuit protection	Resetable circuit breaker
Certification	2013/53/EU RCD II



Certified within 5%

# Engines and around the engine

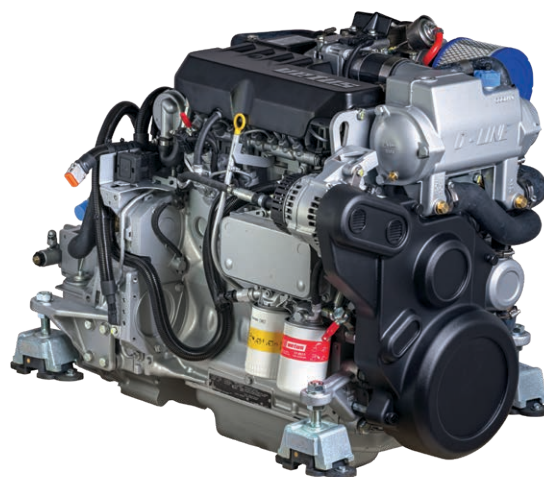
## D-Line

# VD4.140

● ● ● ● 103 kW / 140 HP

DI diesel / 4 stroke / 4 cyl. in line / turbo-charged  
aftercooled / common rail / EMR 3

Supplied as standard with instrument  
panel type MPA34CANBS2  
(see page 140) and four flexible engine  
mounts type LMX140 (see page 51).  
Fuel filter/water separator type  
340VTEB including water sensor.

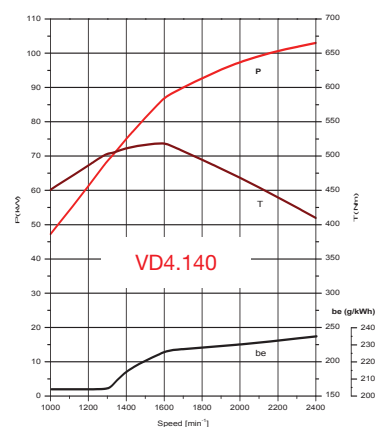
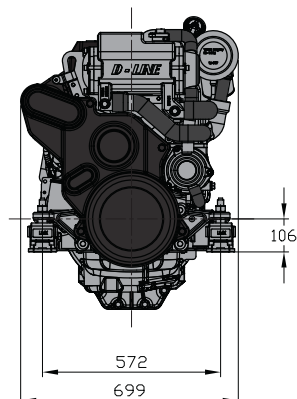
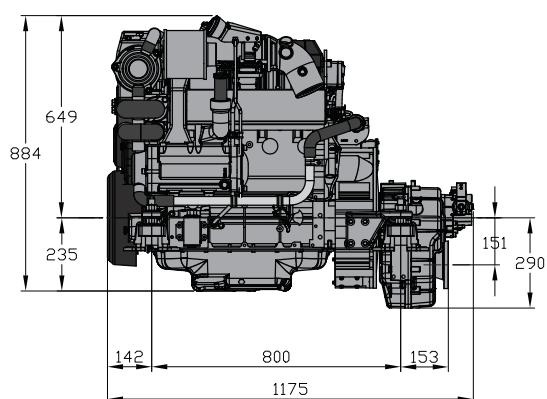


## TECHNICAL SPECIFICATIONS

\* Not available in the United States or Canada.

Engine model	VD4.140
CAN bus	SAE J1939
Max. output at flywheel (ISO 8665)	103 kW (140 hp)
Max. output at propeller shaft (ISO 8665)	98.9 kW (134.4 hp)
Maximum rpm	2400
Bore x stroke	101 mm x 126 mm
Capacity	4040 cm <sup>3</sup>
Number of cylinders	4 in line
Cooling system	intercooling (keelcooling n.a.)
Compression ratio	18:1
Firing order	1-3-4-2
Alternator	12 VDC - 160 Amps. 24 VDC - 60 Amps.
Optional second alternator	12 VDC - 160 Amps. 24 VDC - 60 Amps. 24 VDC - 75 Amps. ACR regulator (WP)
Torque	520 Nm / 1600 rpm
Idle speed	800 rpm
Fuel consumption at max. rpm	235 g / kW.h
Gearbox (standard)	ZF45
Ratio	2.2 / 2.51 / 3.1

Gearbox (optional)	ZF45A 1.26:1 / 1.51 / 2.03 / 2.44:1 ZF68IV 1.29 / 1.56 / 1.99 / 2.47:1
Dry weight (incl. standard gearbox)	532 kg
Fuel lift pump	1.5 m
Max. installation angle (backwards)	15°
Max. athwartship angle (continuously)	30°
Calorifier connection kit	optional
Electric oil drain pump	standard
P.T.O. flange to install hydr. pump	optional
Instrument panel	MPA34CANBS2
Instruments	Key switch, tacho meter/hour counter, volt meter, oil pressure gauge, temperature gauge
Acoustic alarm	Oil pressure, temperature, charging current fresh and raw water
Electric circuit protection	Resetable circuit breaker
Certification	2013/53/EU RCD II



Certified within 5%



## D-Line

# VD6.170

● ● ● ● ● ● 125 kW / 170 HP

DI diesel / 4 stroke / 6 cyl. in line / turbo-charged  
aftercooled / common rail / EMR 3

Supplied as standard with instrument panel type MPA34CANBS2 (see page 140) and four flexible engine mounts type LMX210 (see page 51).  
Fuel filter/water separator type 340VTEB including water sensor.

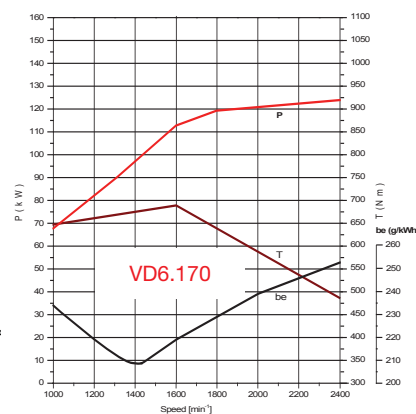
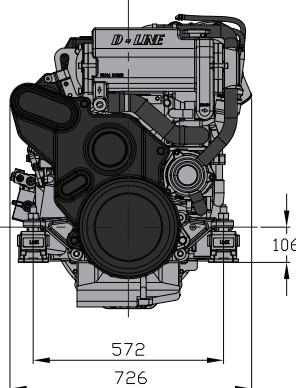
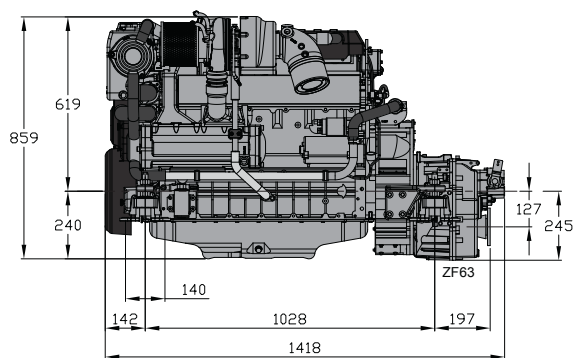


## TECHNICAL SPECIFICATIONS

\* Not available in the United States or Canada.

Engine model	VD6.170
CAN bus	SAE J1939
Max. output at flywheel (ISO 8665)	125 kW (170 hp)
Max. output at propeller shaft (ISO 8665)	120 kW (163 hp)
Maximum rpm	2400
Bore x stroke	101 mm x 126 mm
Capacity	6060 cm <sup>3</sup>
Number of cylinders	6 in line
Cooling system	intercooling (keelcooling n.a.)
Compression ratio	18:1
Firing order	1-5-3-6-2-4
Alternator	12 VDC - 160 Amps. 24 VDC - 60 Amps.
Optional second alternator	12 VDC - 160 Amps. 24 VDC - 60 Amps. 24 VDC - 75 Amps. ACR regulator (WP)
Torque	680 Nm / 1600 rpm
Idle speed	800 rpm
Fuel consumption at max. rpm	240 g / kW.h
Gearbox (standard)	ZF68
Ratio	1.51 / 1.93 / 2.48 / 2.78:1

Gearbox (optional)	ZF68A 1.22 / 1.56 / 2.04 / 2.52:1 ZF68IV 1.29 / 1.56 / 1.99 / 2.47:1
Dry weight (incl. standard gearbox)	657 kg
Fuel lift pump	1.5 m
Max. installation angle (backwards)	15°
Max. athwartship angle (continuously)	26°
Calorifier connection kit	optional
Electric oil drain pump	standard
P.T.O. flange to install hydr. pump	optional
Instrument panel	MPA34CANBS2
Instruments	Key switch, tachometer/hour counter, volt meter, oil pressure gauge, temperature gauge
Acoustic alarm	Oil pressure, temperature, charging current fresh and raw water
Electric circuit protection	Resettable circuit breaker
Certification	2013/53/EU RCD II



Certified within 5%







## Equipment selection table for D-Line



### BULFL

See flexible couplings  
on page 96



### 340VTEB

See fuel filters on  
page 158



### EC4

See engine  
remote control on  
page 46



### FTR330

See water strainers  
on page 53



### MGP

See waterlocks  
on page 120  
and 123



### HPW127

Engine model	VD4.120		VD4.140		VD6.170		VD6.210	
Gearbox reduction	2,03/2,2:1	2,5:1	2,03/2,2:1	2,5:1	1,93/2,04:1	2,5:1	1,93/2,04:1	2,5:1
VETUS water lubricated propeller shaft system								
* Minimum required shaft diameter, Duplex 1-4462	40	40	40	40	45	45	45	50
VETUS manganese bronze propeller								
* 3-, 4- or 5-blade				on request				
VETUS flexible couplings								
* Bullflex type	12	12	12	16	16	16	16	32
VETUS intermediate flange between gearbox and flexible coupling								
* Type, only suitable for ZF gearbox		ZF45A: CT50009; ZF45: CT50068; ZF68(A)/16: CT50009; ZF68(A)/32: CT50065; ZF85A: CT50064						
VETUS constant velocity joint with integrated thrust bearing								
* Type				depending on the application				
* Dimensions gearbox flange			ZF45/ZF85A/ZF220: 6", ZF45A/ZF68/ZF68A: 5"					
VETUS water strainers								
* hose connection (mm)					32			
* water strainer, type FTR470, FTR330..(M) or CWS:				470 or 330(M)/32 / CWS1¼				
* water strainer kit, type					WKIT33032			
VETUS water separator / fuel filter (standard supplied with the engine including water sensor)								
* hose connection suction/return in mm					12 - 10			
* water separator / fuel filter, type:					(75)340VTEB			
VETUS water-injected exhaust systems								
* exhaust hose, diam. (mm)		100				125		
* waterlock, type		MF - MGP or HPW102				MF - MGS or HPW127		
* muffler, type		MP100				n.a.		
* gooseneck, type		LT102				LT127		
* exhaust transom connection, type				TRCR/PV or SV				
* anti-siphon, type ASD or AIRVENT				V or H				
VETUS engine remote controls								
* electronic			EC4, see selection table retail engine price list					
* mechanical			SICO, SISCO, AFSTZIJ, RCTOPB, RCTOPS, AFSTTOP					
* push-pull cable			CABL_ (length to be determined)					
Remark: please note when a mechanical remote control is installed, a potentiometer is needed.								
VETUS maintenance free batteries								
* voltage					12 or 24VDC			
* start battery, Ah					105			
* light battery, Ah					min. 110A/max. 170A (12VDC) or min. 2 x 85A/max. 2 x 110A (24VDC)			
VETUS louvered air suction vents								
* per engine, type ASV, SSV or SSVL		2 x 60		2 x 70		2 x 90		2 x 50 + 2 x 60



## UNLEASH THE POWER OF PERFORMANCE

### Sail Smarter with a Folding Propeller

Switching from a fixed propeller to a Flexofold folding propeller reduces drag and can increase sailing speed by around 15%, equivalent to 1–1.5 knots.

### Low Drag, High Efficiency

Our precision-engineered blades fold automatically while sailing, minimizing resistance and improving overall performance. The result: faster, quieter, and more efficient sailing.

### Power When You Need It

Under power, the blades open instantly to deliver strong thrust and reliable handling in all conditions.

### Built to Last

Manufactured from high-quality, corrosion-resistant alloys, Flexofold propellers are designed for long life and minimal maintenance.

### Tailored for Your Boat

Choose the ideal model for your engine and hull type. Every Flexofold propeller is optimized to ensure the perfect balance of speed, power, and smooth operation.

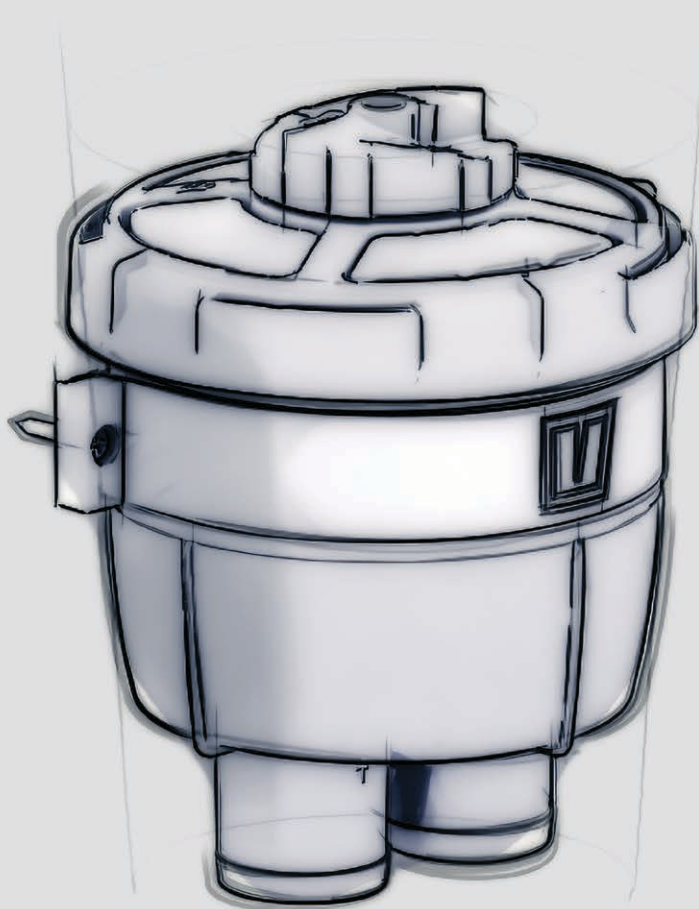
### Engineered in Denmark – Trusted Worldwide

For over 30 years, Flexofold has set the standard in folding propeller technology – trusted by sailors and boatbuilders around the world.



Visit our website and learn more about our products and request a quote: [www.flexofold.com](http://www.flexofold.com)  
or contact us by phone +45 7555 4346 or via email at [sales@flexofold.com](mailto:sales@flexofold.com)





## Around the engine

### Overview VETUS around the engine

#### Mechanical engine remote controls see page 44 - 45



SISCO



SICO



RCTOPS



RCTOPTS



RCTOPTB



RCTOPB



AFSTTOPT



AFSTZIJ

#### Electronic engine remote controls see page 46 - 47

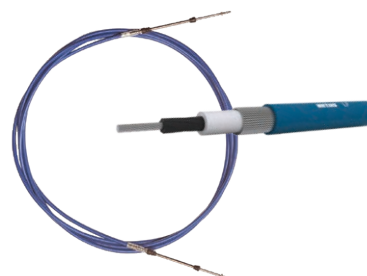


EC4



EC4HSM

#### Push-pull cables and accessories see page 48



CABL F

#### Flexible engine mounts see page 50 - 51



KSTEUN25V



KSTEUN35V



KSTEUN40A



KSTEUN..V



MITSTEUN



HY



LMX



## Cooling water strainers see page 52 - 55



**FTR140**



**FILTER150**



**FTR330**



**FTR470**



**FTR1320**



**FTR1900**



**FTR330..M**

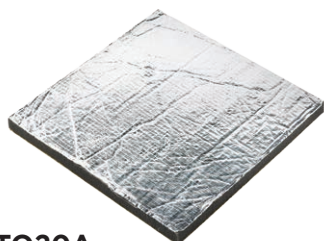


**CWS**

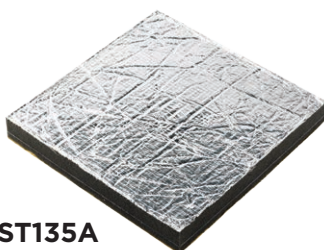


**FTR525**

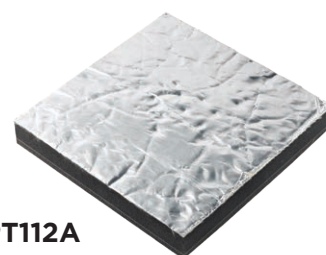
## Sound insulation materials see page 58 - 59



**STO20A**



**ST135A**



**PT112A**



**PT225S**



**ARM10X12**





# Around the engine

## Mechanical engine remote controls

All remote controls (except type AFST) have a neutral safety switch as standard, which prevents the engine from being started when the gearbox is engaged. Controls are supplied with a red and a black knob.

### Type SISCO - single lever

*With stainless steel (AISI 316) high-gloss polished handle and housing*

VETUS single lever remote control for side mounting. The push-pull cables can be installed horizontally or vertically.

Type	Length (mm)	Width (mm)	Height (mm)	Handle length from centre (mm)	Mechanism depth from centre (mm)
SISCO	142	122	85	200	243
SISCOG	142	122	85	200	243



### Type SICO - single lever

*With stainless steel (AISI 316) high-gloss polished handle and synthetic housing*

VETUS single lever remote control for side mounting.

Type	Length (mm)	Width (mm)	Height (mm)	Handle length from centre (mm)	Mechanism depth from centre (mm)
SICO	147	127	85	200	243
SICOG	147	127	85	200	243



### Type RCTOPS - single lever

*With high-gloss polished stainless steel (AISI 316) handle and housing*

VETUS single lever remote control for top mounting.

Type	Length (mm)	Width (mm)	Height (mm)	Handle length from centre (mm)	Mechanism depth (mm)
RCTOPS	162	104	237	200	208
RCTOPSG	162	104	237	200	208



### Type RCTOPTS - twin lever

*With high-gloss polished stainless steel (AISI 316) handles and housing*

VETUS twin lever remote control for top mounting.

Type	Length (mm)	Width (mm)	Height (mm)	Handle length from centre (mm)	Mechanism depth (mm)
RCTOPTS	162	200	237	200	208
RCTOPTSG	162	200	237	200	208





## Mechanical engine remote controls

### Type RCTOPTB - twin lever

*With black/silver cast aluminium housing and stainless steel (AISI 316) high-gloss polished handles*

VETUS twin lever remote control for top mounting.

Type	Length (mm)	Width (mm)	Height (mm)	Mechanism depth (mm)
RCTOPTB	162	200	237	208
RCTOPTBG	162	200	237	208



**RCTOPTB**



**RCTOPTBG**

### Type RCTOPB - single lever

*With black/silver cast aluminium housing and stainless steel (AISI 316) high-gloss polished handle*

VETUS single lever remote control for top mounting.

Type	Length (mm)	Width (mm)	Height (mm)	Mechanism depth (mm)
RCTOPB	162	104	237	208
RCTOPBG	162	104	237	208



**RCTOPB**



**RCTOPBG**

### Type AFSTTOP

VETUS single lever control for top mounting, single engine version. Without neutral safety switch.

### Type AFSTTOPT

VETUS twin lever control for top mounting, twin engine version. Without neutral safety switch.

Type	Length (mm)	Width (mm)	Height (mm)
AFSTTOP	154	118	238
AFSTTOPT	154	208	238



**AFSTTOP**



**AFSTTOPT**

### Type AFSTZIJ

This side mount engine control can be used with mechanically controlled engines from 12 - 110 hp. The AFSTZIJ should be mounted in reach of the vessel's helm on either port or starboard side.

The mechanical part of the lever is made of painted zinc, finished with a synthetic housing and an ergonomically shaped rubber grip. The AFSTZIJ works with push/pull cables and features an integrated safety mechanism to protect the transmission. The gearbox can only be shifted at idling speed. The AFSTZIJ is the ideal engine control for sailing boats.

Type	Length (mm)	Width (mm)	Height (mm)
AFSTZIJ	138	110	78

**AFSTZIJ**



# Around the engine

## Electronic engine remote control

### Type EC4

#### High quality with the latest technology

This high quality electronic engine control lever is made of high-grade stainless steel (AISI 316) with hand-polished stainless steel (AISI 316) casing and is suitable for power and sailing yachts. It can operate single or twin engines and has multiple helm station possibilities with identical controls at all helm stations. The communication goes via CAN-bus protocol. The EC4 is easy to install and configure and meets the EMC requirements as standard.

#### Characteristics

- Available for 12 and 24 VDC
- Waterproof (IP67)
- Suitable for mechanically controlled engines, combination mechanical / electronic engine control or fully electronic engine control
- Suitable for mechanical or hydraulic gearboxes and stern drives

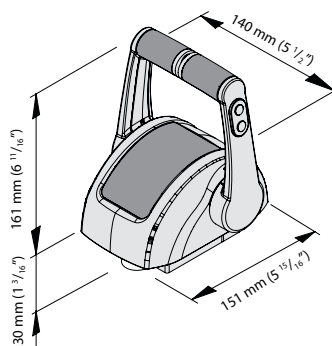
#### Optional

Trolling valve control, trim tab or bow thruster control.

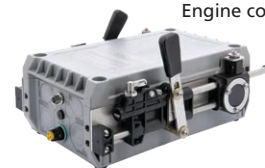


EC4

Type	Length (mm)	Width (mm)	Height (mm)	Engines
EC4H1	151	140	161	1 (left handle)
EC4H1R	151	140	161	1 (right handle)
EC4HT1	151	140	161	1 with trim control
EC4H2	151	140	161	2
EC4HT2	151	140	161	2 with trim control



Engine control boxes

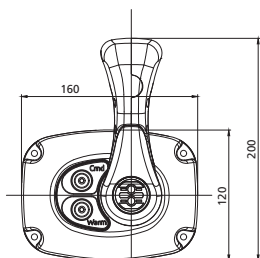


This engine control can be used with electrical and / or mechanical controlled diesel engines and gearboxes. Ask your dealer for more information, as the EC4 is supposed to be used with VETUS engines. It may though also be used with other engine brands which have the same control system as the VETUS engines, either 0-5V, mechanical or a combination of both.

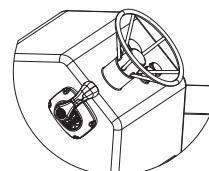
### Type EC4HSM

The EC4 series has now been expanded to include a sidemount variant. The same familiar technology, but now suitable for side mounting. Depending on the intended position of mounting, four different variants are available. See the images for the required model.

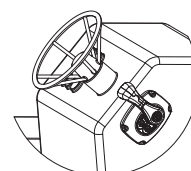
Type	Length (mm)	Width (mm)	Height (mm)	Engines
EC4HSM1CL	160	120	200	1 (centre console left)
EC4HSM1CR	160	120	200	1 (centre console right)
EC4HSM1WL	160	120	200	1 (wall mount left)
EC4HSM1WR	160	120	200	1 (wall mount right)



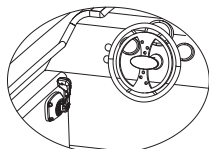
EC4HSM



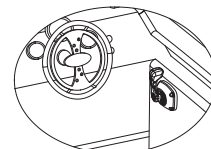
EC4HSM1CL



EC4HSM1CR



EC4HSM1WL



EC4HSM1WR





## EC4 Selection table

EC4 electronic motor control system			1 Engine	2 Engines	1 Engine	2 Engines	1 Engine	2 Engines	1 Engine	2 Engines	Optional/Remarks
Control method: first position = Throttle, Second position = Gears M = mechanical, E = Electrical			M/M	M/M	M/E	M/E	E/E	E/E	E/M	E/M	Extra control head units. Max. total units = 4
EC4 Stainless steel control head 1 engine	EC4H1/EC4H1R (right)		1		1		1		1		+1/+2/+3
EC4 Stainless steel control head 1 engine + Trim buttons	EC4HT1		1		1		1		1		+1/+2/+3
EC4 Stainless steel control head 2 engines	EC4H2			1		1		1		1	+1/+2/+3
EC4 Stainless steel control head 2 engines + Trim buttons	EC4HT2			1		1		1		1	+1/+2/+3
EC4 Stainless steel side mount control head 1 engine centre console Left	EC4HSM1CL		1		1		1		1		+1/+2/+3
EC4 Stainless steel side mount control head 1 engine centre console Right	EC4HSM1CR		1		1		1		1		+1/+2/+3
EC4 Stainless steel side mount control head 1 engine wall mount Left	EC4HSM1WL		1		1		1		1		+1/+2/+3
EC4 Stainless steel side mount control head 1 engine wall mount Right	EC4HSM1WR		1		1		1		1		+1/+2/+3
Electronic control box for 1 x mechanical motor and mechanical gear	12+24V	EC4UMM1	1	2	x	x	x	x	x	x	
Electronic control box for 1 x mechanical motor and mechanical gear and <b>trim</b>	12+24V	EC4UMMT1	1	2	x	x	x	x	x	x	
Electronic control box for 1 x mechanical motor and electrical gear and <b>trim</b>	12+24V	EC4UMET1	x	x	1	2	x	x	x	x	
Electronic control box for 2 x mechanical motor and electrical gear and <b>trim</b>	12+24V	EC4UMET2	x	x	x	1	x	x	x	x	
Electronic control box for 1 x mechanical motor and electrical gear and <b>trolling</b>	12+24V	EC4UMETR1	x	x	1	2	x	x	x	x	
Electronic control box for 1 or 2 x electric motor (0-5V) and electrical gear and <b>trim</b>	12+24V	EC4UEE	x	x	x	x	1	1	x	x	
Electronic control box for 1 or 2 x electric motor (0-5V) and electrical gear and <b>trolling</b>	12+24V	EC4UEETR	x	x	x	x	1	1	x	x	
Electronic control box for 1 x electric motor control (0-5V) and mechanical gear	12+24V	EC4UEM1	x	x	x	x	x	x	1	x	
Electronic control box for 2 x electric motor control (0-5V) and mechanical gear	12+24V	EC4UEM2	x	x	x	x	x	x	1	1	
Electric throttle cable universal L = 3 m		EC3E3U	x	x	x	x	1	2	1	2	
Electric throttle cable for D engines L = 3 m		EC3E3MD	x	x	x	x	1	2	1	2	
Electric gear cable (12V only boxes 3 wires) L = 3 m		EC3G3M	x	x	1	2	1	2	x	x	For box with 3p connector
Electric gear cable for EC4 (12V+24V boxes, 6 wires) L = 3 m		ECG3/6	x	x	1	2	1	2	x	x	
Electric gear cable for EC4 (12V+24V boxes, 6 wires) L = 5 m		ECG5/6	x	x	1	2	1	2	x	x	
Electric gear cable for EC4 (12V+24V boxes, 6 wires) L = 7 m		ECG7/6	x	x	1	2	1	2	x	x	
Trim/Trolling cable L = 3 m		EC3T3M	O = 1		O = 1		O = 1		O = 1		Opt. for trim/trolling only
Trim/Trolling cable Mercruiser L = 3 m		EC3T3MM	O = 1		O = 1		O = 1		O = 1		Opt. for trim/trolling only
x = Not applicable 1 or 2 = Choose the requested type and the indicated amount											



# Around the engine

## Push-pull cables

### Type CABLE

Our standard push-pull cables type CABLE are especially suitable for applications where the required total length of the cables are not exceeding the 5 m. For more comfort and for longer required lengths we advise the use of our low friction cables, type CABLF.

#### Specifications

- Available lengths from 0,5 m to 5 m
- Minimum bend radius 130 mm
- Stroke 76,2 mm (3")
- Standard rod 10-32 UNF threaded ends

Type	Description
CABLE05A*	Standard 33C cable, length 0.5 m
CABLE10A*	Standard 33C cable, length 1.0 m
CABLE15A*	Standard 33C cable, length 1.5 m
CABLE20A*	Standard 33C cable, length 2.0 m
CABLE25A*	Standard 33C cable, length 2.5 m
CABLE30A*	Standard 33C cable, length 3.0 m
CABLE35A*	Standard 33C cable, length 3.5 m
CABLE40A*	Standard 33C cable, length 4.0 m
CABLE50A*	Standard 33C cable, length 5.0 m

\* Available to special order



CABLE..A

### Type CABLF (low friction)

#### Superb strength and flexibility

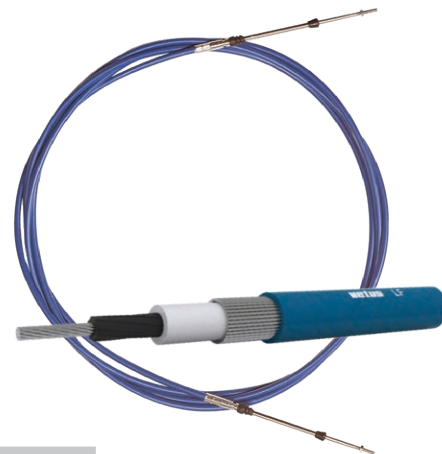
This high quality cable utilise a multi-strand wire core and a ribbed synthetic sheath to ensure that contact with the outer casing is kept to a minimum. Type CABLF is ideal for long and complicated runs and dual station installations.

#### Specifications

- Available lengths from 0,5 m to 15 m (up to 17 m available to special order)
- Minimum bend radius 165 mm
- Stroke 76,2 mm (3")
- Standard rod 10-32 UNF threaded ends

Type	Description
CABLF05	Low friction cable, length 0.5 m
CABLF075	Low friction cable, length 0.75 m
CABLF10	Low friction cable, length 1.0 m
CABLF15	Low friction cable, length 1.5 m
CABLF20	Low friction cable, length 2.0 m
CABLF25	Low friction cable, length 2.5 m
CABLF30	Low friction cable, length 3.0 m
CABLF35	Low friction cable, length 3.5 m
CABLF40	Low friction cable, length 4.0 m
CABLF45	Low friction cable, length 4.5 m
CABLF50	Low friction cable, length 5.0 m
CABLF55	Low friction cable, length 5.5 m
CABLF60	Low friction cable, length 6.0 m
CABLF65	Low friction cable, length 6.5 m

Type	Description
CABLF70	Low friction cable, length 7.0 m
CABLF75	Low friction cable, length 7.5 m
CABLF80	Low friction cable, length 8.0 m
CABLF85	Low friction cable, length 8.5 m
CABLF90	Low friction cable, length 9.0 m
CABLF95	Low friction cable, length 9.5 m
CABLF100	Low friction cable, length 10.0 m
CABLF110	Low friction cable, length 11 m
CABLF120	Low friction cable, length 12 m
CABLF130	Low friction cable, length 13 m
CABLF140	Low friction cable, length 14 m
CABLF150	Low friction cable, length 15 m



CABLF

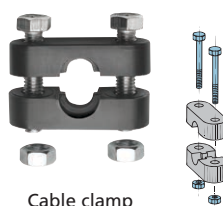


## Cable accessories

### Ball-joint / Cable clamp

An extra for all VETUS push-pull cables.

Type	Description
KABELKL	Cable clamp for cables type 33 and LF
KOGELGEWR	Ball-joint for cables type 33 and LF



Cable clamp

**KABELKL**



Ball-joint

**KOGELGEWR**

### Shut-off control

#### Type DC

Designed for mechanical fuel shut-off and similar actuation tasks. Equipped with a robust mounting base and connection point for push-pull control cables, allowing precise and reliable manual operation.

Type DC is corrosion resistant and easy to install (horizontally or vertically) and can be used with VETUS push-pull cables. Comes with a 30° mounting bracket.

Type	Description
DC	Cable pull handle type DC



**DC**

### Dual station units type DS

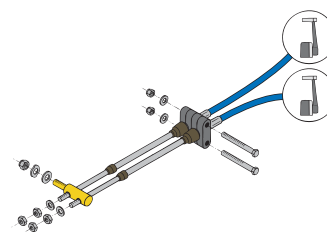
Type DS combines the action of a single lever control from either of two command stations, providing a single output to the engine throttle or gearbox lever. Two dual station units are needed per engine (type DS-UNIT for the gearbox and type DS-KITF for the throttle).

#### DS-kit throttle

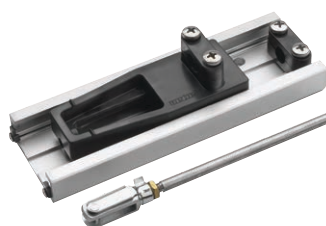
(only suitable for throttle control by pulling).



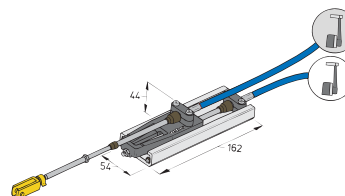
**DSKITF**



#### DS-unit (gearbox)



**DS**



Type	Description
DSKITF	Dual station unit type DS, for throttle
DS	Dual station unit type DS, for gearbox





# Around the engine

## Flexible engine mounts

The torque of an engine is one of the deciding factors for determining the load applied to the engine mounts. When more powerful engines are installed, it is important to use the following formula to define the load per support in kg (four supporting points).

$$\frac{\text{engine weight in kg}}{\text{number of supports}} + \frac{\text{kW} \times 487 \times \text{reduction of gearbox}}{\text{engine revs/min.} \times \text{centre to centre spacing in metres of the longitudinal engine bearers}} = \text{max. load per support in kg}$$

### Type K25V and K35V

*For small engines and generator sets with one or two cylinders*

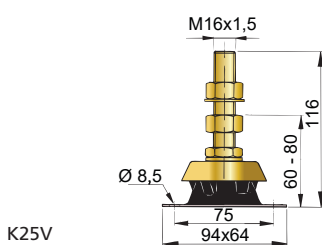
These flexible mounts contain a special rubber compound with excellent vibration damping properties. They are suitable for marine engines in the power range between 4 and 15 kW (6-20 hp).



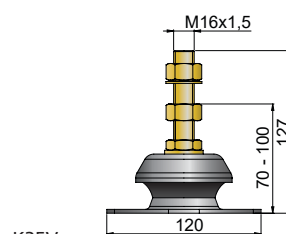
**KSTEUN25V**



**KSTEUN35V**



K25V



K35V

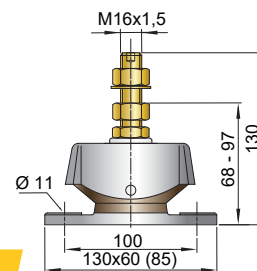
### Type K40A

*For three-cylinder marine diesel engines*

Type K40 has a relatively soft, rubber compound which fulfills the requirements of light-weight vessels with a modern three-cylinder marine diesel engine. The rubber elements create optimum vibration dampening. Type KSTEUN40 features internal buffers which limit the engine movements when started or stopped. It is also secured against overload and shearing off.



**KSTEUN40A**



### Type K

*For smaller engines up to ± 60 kW (80 hp)*

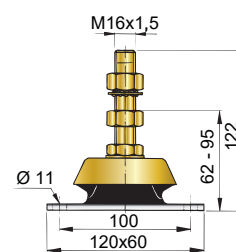
This type is suitable for smaller engines up to approximately 60 kW (80 hp).

**KSTEUN50V**

**KSTEUN75V**

**KSTEUN80V**

**KSTEUN100V**



Type	Stiffness ratio			Min. load (kg)	Min. compression (mm)	Max. load (kg)	Max. compression (mm)	Hardness in ° Shore
	vertical	athwart ships	fore and aft	static		static + dynamic		
KSTEUN25V	1	1,4	1,4	15	1,3	25	3	45
KSTEUN35V	1	1,4	1,4	15	1,3	30	7	45
KSTEUN40A	1	1	2,4	25	5	40	8	50
KSTEUN50V	1	0,75	2,5	25	2	50	4	45
KSTEUN75V	1	0,75	2,5	38	2	75	4	55
KSTEUN80V	1	0,75	2,5	40	2	80	4	60
KSTEUN100V	1	0.75	2.5	50	2	100	4	65



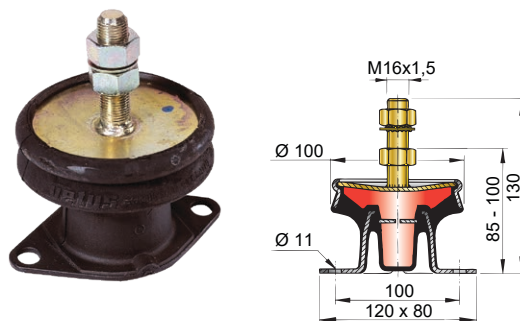
## Flexible engine mounts

### Type MITSTEUN

#### For marine diesel engines from 18 up to 26 kW (25-35 hp)

This hydro-damper is a combination of a conventional rubber-metal damper and a hydraulic shock absorber. Its reduction of vibration and noise is truly amazing. The maximum static load per support is 60 kg and the maximum thrust 50 kg.

**MITSTEUN**



### Type HY

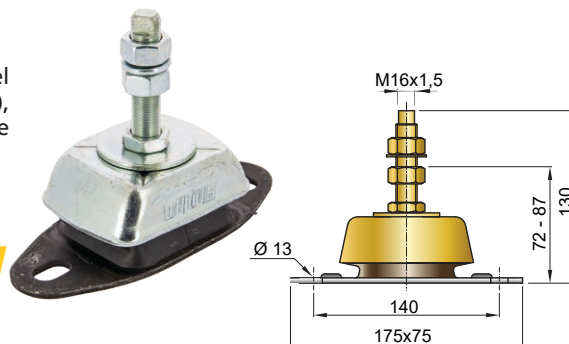
#### For heavy-weight engines with four or more cylinders

This type is extremely suitable for application with marine diesel engines in the power range between 30 and 125 kW (40-170 hp), by virtue of a low stiffness combined with high stiffness in the longitudinal direction.

**HY100**

**HY150**

**HY230**



### Type LMX

#### For marine diesel engines from 70 up to 350 kW (95-480 hp)

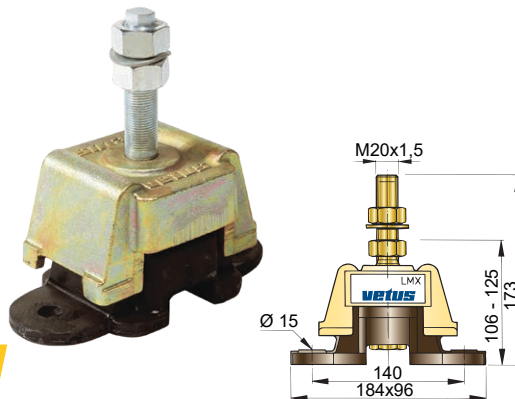
This type has been designed with particular regard to the power to weight ratio of modern diesel engines. The weight of an engine, in comparison to its thrust, has become lower and lower. Type LMX guarantees optimum damping of vibrations, even at idling revs. It has a very high horizontal and aft stiffness which allows the acceptance of considerable thrust. The cushioning of vibrations in horizontal direction athwart-ships is of equal excellence.

**LMX140**

**LMX210**

**LMX340**

**LMX500**



Type	Stiffness ratio			Min. load (kg)	Min. compression (mm)	Max. load (kg)	Max. compression (mm)	Hardness in ° Shore
	vertical	athwart ships	fore and aft	static		static + dynamic		
MITSTEUN	1	1	1	25	1,3	67	4,5	45
HY100	1	1,2	3,5	40	2	100	5	35
HY150	1	1,2	3,5	60	2	150	5	50
HY230	1	1,2	3,5	92	2	230	5	60
LMX140	1	1	7	85	3	140	5	35
LMX210	1	1	7	125	3	210	5	45
LMX340	1	1	7	205	3	340	5	55
LMX500	1	1	7	300	3	500	5	65

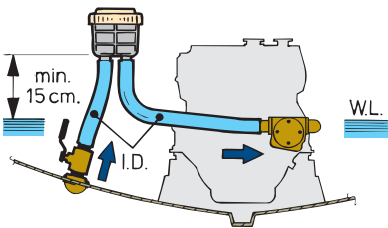
# Around the engine

## Cooling water strainers

All VETUS cooling water strainers have a transparent cover for easy inspection of the filter without dismantling. Cleaning of the filter seldomly needs to be done but can be easily and quickly achieved.

### Typical installation

VETUS advises to install the water strainer always above the waterline. Only type CWS and FTR330..M series can be installed below the waterline. Always install a sea-cock behind the inlet water scoop.



### Type FTR140

This water strainer is available with three different hose connection diameters. See page 56 for water strainer install kit.

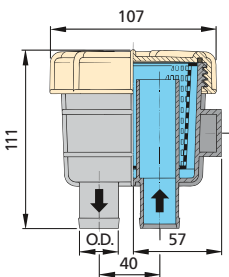
#### Specifications

- Housing is made of Polypropylene GF
- Filter element is made of HD Polyethylene
- Cover is made of Styrol/Acrylonitrile SAN

Type	Internal hose Ø		Recommended input
	(mm)	(inches)	(L/min.)
FTR140/13	12,7	1/2	23
FTR140/16	15,9	5/8	35
FTR140/19	19,1	3/4	51
MBSET03	Mounting bracket set for FTR140		

See page 61 for the mounting bracket set.

FTR140



MBSET03



### Type FILTER150

This water strainer is suitable for Ø 28,5 mm hoses.

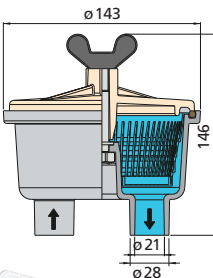
#### Specifications

- Housing is made of Polypropylene GF
- Filter element is made of Polyamide
- Cover is made of A.B.S.

Type	Internal hose Ø		Recommended input
	(mm)	(inches)	(L/min.)
FILTER150	28,5	1 1/8	114
MBSET05	Mounting bracket set for FILTER150		

See page 61 for the mounting bracket set.

FILTER150



MBSET05







## Cooling water strainers

### Type FTR330

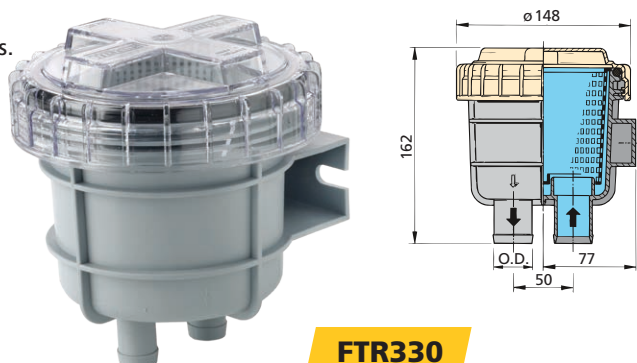
This water strainer is available for six different hose connections. See page 56 for water strainer install kit.

#### Specifications

- Housing is made of polypropylene GF
- Filter element is made of HD Polyethylene
- Cover is made of Styrol/Acrylonitrile SAN

Type	Internal hose Ø		Recommended input
	(mm)	(inches)	(L/min.)
FTR330/13	12,7	1/2	23
FTR330/16	15,9	5/8	35
FTR330/19	19,1	3/4	51
FTR330/25	25,4	1	91
FTR330/32	31,8	1 1/4	143
FTR330/38	38,1	1 1/2	200
MBSET05	Mounting bracket set for FTR330		

See page 61 for the mounting bracket set.



**FTR330**

**MBSET05**

### Type FTR470

#### Easy mounting with 360° rotating wall bracket

This strainer is supplied with a rotating stainless steel (AISI 316) wall bracket for easy alignment of the hose connections and clamping it securely in place. This eliminates the need for back-bolting and simplifies the mounting process.

#### Specifications

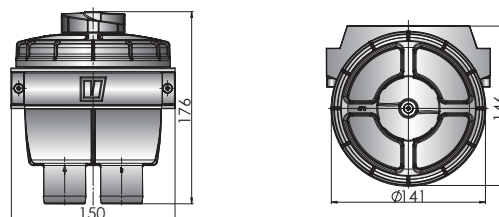
- Housing is made of Polypropylene GF
- Filter element is made of HD Polyethylene
- Cover is made of Polypropylene GF/Polycarbonate

See page 56 for the water strainer installation kit.

Type	Internal hose Ø		Recommended input
	(mm)	(inches)	(L/min.)
FTR470/13	12,7	1/2	23
FTR470/16	15,9	5/8	35
FTR470/19	19,1	3/4	51
FTR470/25	25,4	1	91
FTR470/32	31,8	1 1/4	143
FTR470/38	38,1	1 1/2	200



**FTR470**



### Type FTR1320

This type is provided with adjustable stainless steel (AISI 316) brackets for bulkhead mounting and is available with three different threaded connection diameters. Hose connectors are not supplied as standard. They can be found on page 432 of this catalogue.

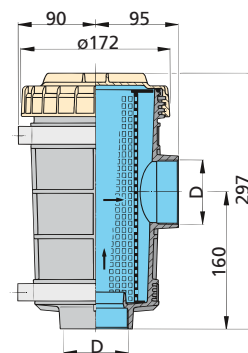
#### Specifications

- Housing is made of Polypropylene GF
- Filter element is made of Polyethylene
- Cover is made of A.B.S.

Type	D	Internal hose Ø		Recommended input
		(mm)	(inches)	(L/min.)
FTR132038	G 1 1/2	38	1 1/2	205
FTR132050	G 2	50	2	365
FTR132063	G 2 1/2	63	2 1/2	570



**FTR1320**



# Around the engine

## Cooling water strainers

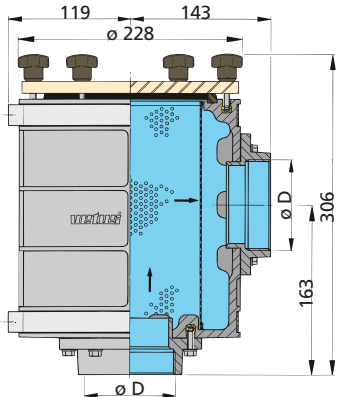
### Type FTR1900

This type has two different threaded connection diameters and comes with adjustable stainless steel (AISI 304) mounting brackets for bulkhead installation. Hose connectors are not supplied as standard. They can be found on page 432 of this catalogue.

#### Specifications

- Housing is made of Polypropylene
- Stainless steel (AISI 316) filter element
- Acrylic cover

Type	D	Internal hose Ø		Recommended input
		(mm)	(inches)	(L/min.)
FTR190063	G 2½	63	2½	570
FTR190076	G 3	76	3	820



FTR1900

### Type FTR330..M

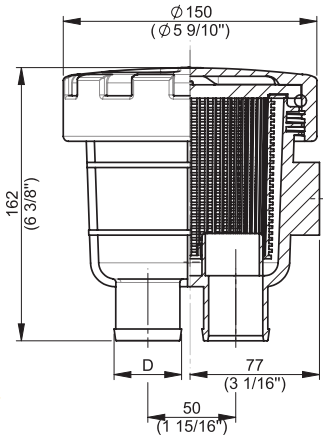
The filter housing is made of NAVIDURIN® and features 19, 25, 32 or 38 mm hose connections. The metal lid allows easy inspection of the filter without removal. The FTR330..M series is tested up to a maximum of 8 bar overpressure, which means these filters are safe to place below the waterline!



#### Specifications

- NAVIDURIN® material Lloyd's approved!
- Easy inspection without dismantling
- New easily removable metal cover
- Robust and durable filter
- Can be mounted below the waterline

Type	Internal hose Ø		Recommended input
	(mm)	(inches)	(L/min.)
FTR33019M	19	1¾	51
FTR33025M	25	1	91
FTR33032M	32	1¼	143
FTR33038M	38	1½	200



FTR330..M





## Cooling water strainers

### Heavy duty filter: Type CWS

For installations where the cooling water strainer must be mounted close to or below the waterline and for commercial applications, these nickel plated bronze strainers are an ideal solution. The cover is removable with one screw. Tested up to 7 bar overpressure.

This filter is available in three different sizes, with threaded connections of G1, G1 ¼ and G1 ½. Matching V-Quipment hose connections are available separately, see table below for item numbers.

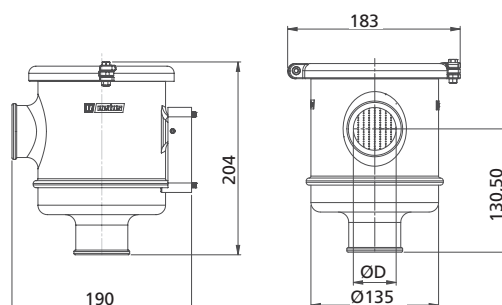
#### Specifications

- Housing is made of nickel plated bronze
- Cover is made of polycarbonate
- Filter element is made of stainless steel (AISI 316)
- Mounting bracket is made of nickel plated bronze
- Can be mounted near or below the waterline
- V-Quipment hose connections available separately, see also page 432



**CWS**

Type	Matching hose connector			Hose size		Recommended input (L/min.)
	Bronze	Brass	Brass	(mm)	(inches)	
CWS1¼	HPB11/4	HPM11/4	SLP11/438	31,8	1¼	143
CWS1½	HPB11/2	HPM11/2	SLP11/432	38,1	1½	200



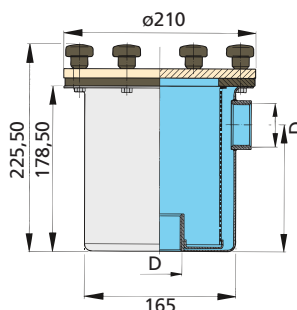
### Type FTR525

This water strainer has G 1½ threaded connections. A set of stainless steel (AISI 316) mounting brackets (SETBKB170) can be supplied as an option. Hose connectors are not supplied as standard. They can be found on page 432 of this catalogue.

#### Specifications

- Stainless steel (AISI 316) housing and filter element
- Acrylic cover

Type	D	Internal hose Ø		Recommended input (L/min.)
		(mm)	(inches)	
FTR525	G 1½	38	1½	205



**FTR525**



**SETBKB170**



# Around the engine

## Accessories

### Water strainer kit

We offer an installation kit for any VETUS cooling water strainer with 13, 19, 25, 32 or 38 mm hose connection. These are available with brass fittings. For continuous immersion in salt water, we advise against the use of brass fittings.

The kit consists of: 2 m drinking water hose, one ball valve, four hose clamps, one water scoop and one hose connector.

Type	Hose connection	Thread connection
WKIT33013	13 mm	½" Brass
WKIT33019	19 mm	¾" Brass
WKIT33025	25 mm	1" Brass
WKIT33032	32 mm	1¼" Brass
WKIT33038	38 mm	1½" Brass



**WKIT330..**

For bronze fittings we refer to page 430 at the V-Quipment section.

### Connection parts for water strainers, type CONN330

#### Easy interconnecting

With these connection parts two water strainers type 330/32 or 470/32 can be interconnected with a maximum capacity of 460 L/min.

Type 470 cannot be rotated when the kit is used.

Type	Description
CONN330	Connection kit for two FTR330/32 strainers



**CONN330**

### Bilge water/oil separator, type BISEP

#### Collecting and retaining oil and grease from bilge water

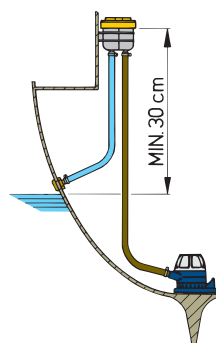
The BISEP19 is now supplied with new filter elements. These filter discs are made from a different material, have a larger capacity (up to 600 grams of oil) and filter up to 15.000 L of water, outperforming the previous filter by 87%! The new filter elements are reusable and made entirely from waste fibres. They absorb oils and oil-based contamination, thus removing oils, oil film and fats from the bilge water. The absorbed oil can be collected and recycled, after which the filter can be washed and reused.

This VETUS separator has a replaceable filter element with a capacity of 600 grams. It can remove 95% of oil in the bilge water. The bilge pump used in combination with this filter should have a maximum capacity of 25 L/min.

#### Specifications

- Connections for Ø 19 mm hoses
- Dimensions l 148 x w 150 x h 162 mm

Type	Description
BISEP19	Bilge water/oil separator
BISEP19F2	Replacement element for bilge water/oil filter BISEP19, set of 15 pieces



**BISEP19**



## Accessories

### Fire port

The fire port permits a fire extinguisher to be discharged into the engine space, or any other enclosed area without opening the engine access hatch or panel. Complies with ISO 9094:2022.

#### Specifications

- Nozzle can be inserted through the port in complete safety
- Minimizes the amount of oxygen so the fire does not increase
- Made of UV and seawater resistant synthetic material

#### Dimensions

- Cut-out Ø 38 mm
- Outside Ø 76 mm



**FIREPORTB**

Type	Description
FIREPORTB	Fire port for engine compartment with black finishing ring

### Cooling water hose, type MWHOSE

#### For all cooling fluids

Type MWHOSE is made of EPDM rubber with synthetic fabric and spiraled steel reinforcement. Suitable for cooling water, both suction and pressure (max. 2,5 bar), salt and fresh water. Temperature resistant between -30° and +120°C.

Unlike lower quality un-reinforced hoses, MWHOSE will not kink or fold shut, thereby preventing a major cause of low seawater flow to the engine cooling system and consequent damage to the impeller and the exhaust system. Similar benefits accrue from the use of this hose for cockpit drains and other critical water connections.



**MWHOSE**

Type	Internal Ø (mm)	External Ø (mm)	Weight (kg/m)	Max. pressure (bar)	Bending radius (mm)	Roll length (m)	HCHDS clamp	HCS clamp
MWHOSE19	19	28	0,39	2.5	29	20		HCS20
MWHOSE25	25	34	0,51	2.5	38	20		HCS25
MWHOSE32	32	41	0,71	2.5	48	20	HCHDS040	HCS32
MWHOSE38	38	47	0,88	2.5	57	20	HCHDS047	HCS40
MWHOSE51	51	60	1,15	2.5	77	20	HCHDS059	HCS50

For a complete overview of our range of hoses see page 466. HCHDS (heavy duty) and HCS clamps are made of stainless steel (AISI 316). For a complete overview of our range of hose clamps see page 440.



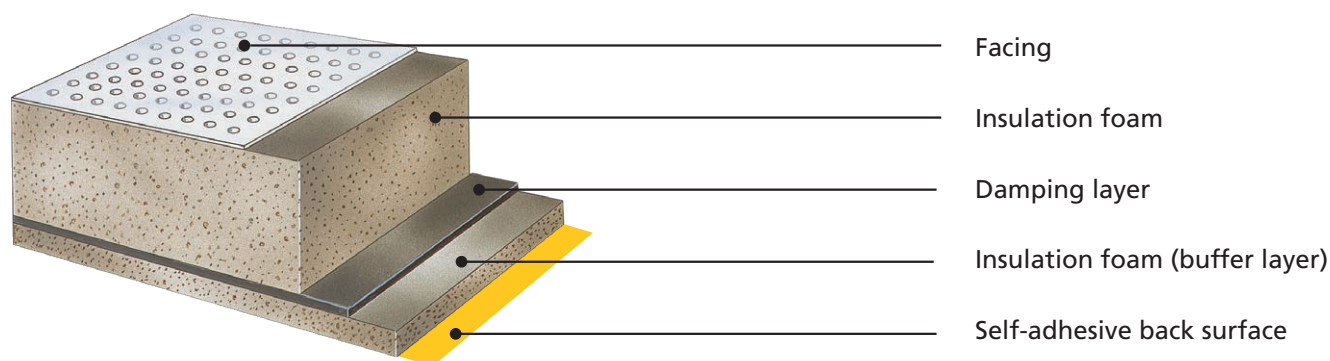
# Around the engine

## Sound insulation materials

### VETUS sound insulation, discover peace and quietness!

Designed specifically for marine use, VETUS sound insulation offers a comprehensive range of high-performance materials that reduce noise and enhance onboard comfort. Liquid-tight, fire-resistant, and built from the highest quality insulation foams, our sound insulation solutions are ideal for use in engine rooms and other demanding onboard applications.

This product range is built on two advanced insulation foams - Sonitech and Prometech - each available in a variety of sheet thicknesses. Their sound absorption performance is independently tested in accordance with ISO 10534 standards. On the next page a selection table is presented to help you select the correct product for your application.



#### Sound insulation

The sound absorption coefficients of both base foam materials are tested according to ISO 10534.

#### Guaranteed fire resistance; Class 0

The 'BS476 Class 0' fire resistance rating is the most demanding rating on the market today. To achieve class 0 the product must achieve:

- BS476 part 7, Surface spread of flame, Class 1
- BS476 part 6, Fire propagation, Index I <12 and i1 < 6

This means that the material does not spread flames and limits the amount of heat released from the surface during a fire.

## Installation guidelines

### Preparing the engine room

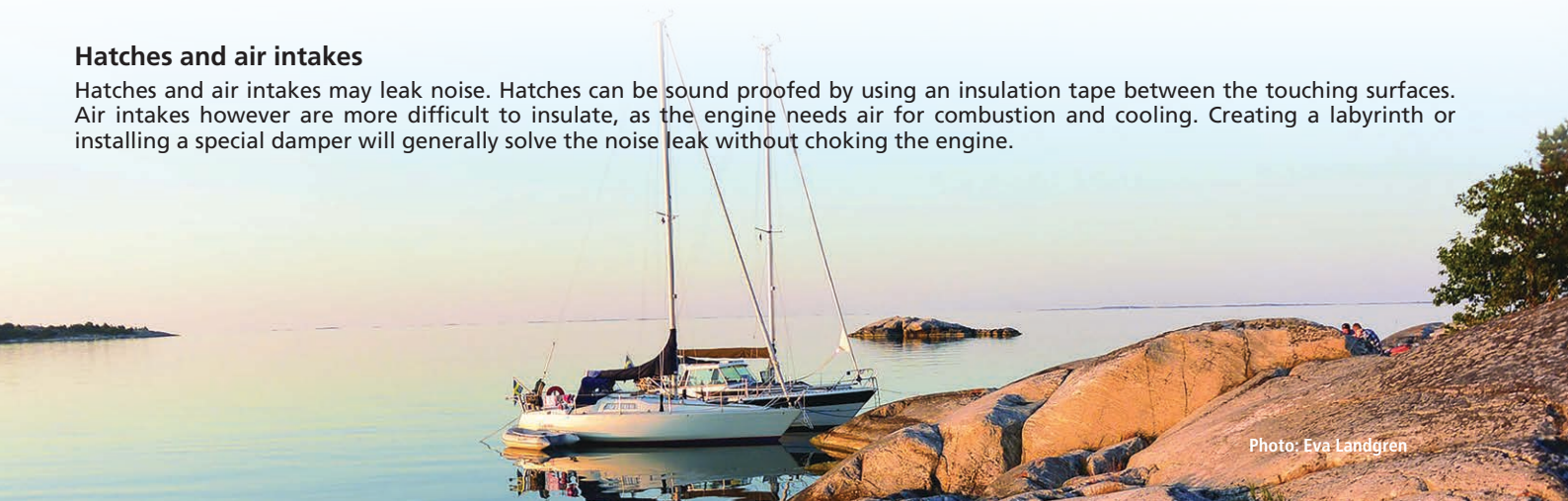
Sound is like water and until the last gap is closed, it will find a way out of the engine room. Therefore it is important to cover as much of the surface in the engine room as possible and to close all possible leaks. Any small gaps or holes in, between or under the bulkheads should be filled with flexible sealant, foam or other material. When the 'engine room' is in direct contact with the bilge or other spaces that run through the boat, it is recommended to build bulkheads or a box around the engine.

### Fitting the sheets

While fitting the sheets, work around obstacles by cutting the sheet into the right shape and try to fit the puzzle as neatly as possible before actually sticking the sheets in place. Note that tanks tend to amplify noise. When a tank is in the same space as the engine, cover the tank in insulation sheets or build a bulkhead between them.

### Hatches and air intakes

Hatches and air intakes may leak noise. Hatches can be sound proofed by using an insulation tape between the touching surfaces. Air intakes however are more difficult to insulate, as the engine needs air for combustion and cooling. Creating a labyrinth or installing a special damper will generally solve the noise leak without choking the engine.







## Sound insulation materials

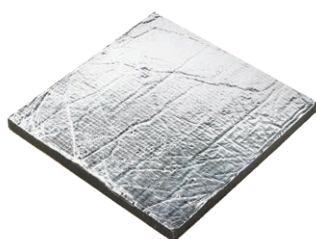
VETUS offers four product lines, based on two insulation foams: Sonitech and Promotech. Both foams have excellent sound reducing capabilities and are fire resistant. Promotech is rated to BS476 Class 0 fire resistance.

All sheets measure 100 x 60 cm and are supplied with a self-adhesive backing for quick and easy installation. The modified acrylic adhesive has high initial tag and adhesion of 1000 N/m to steel (ATM.1-PSTC.1).

### Sonitech light

#### *Flexible and light-weight sheet*

This product has efficient sound insulation and is ideal for use when cost or space is the prime concern.

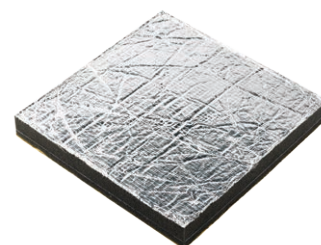


**ST020A**

### Sonitech single

#### *Good sound insulation capabilities*

These sheets have a single damping layer resulting in good sound insulation. It gives excellent results at reasonable prices.

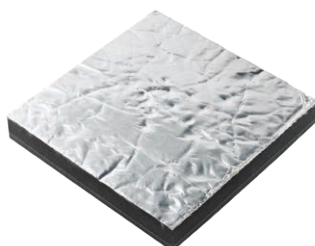


**ST135A**

### Promotech single

#### *Excellent sound insulation, highest safety level*

This product has good sound reducing capabilities and the highest level of safety. Ideal for applications where space is limited. Fire resistant Class 0.



**PT112A**

### Promotech double

#### *Ultimate sound insulation and safety*

This line is designed to absorb as much sound as possible. It is the top of the range product line with double damping layers. Fire resistant Class 0.



**PT225S**

Range		Sonitech light				Sonitech single				Promotech single					Promotech double						
Product code (All sheets are 600 x 1000 mm)		ST020A	ST040A	ST020W	ST040W	ST135A	ST145A	ST135W	ST145W	PT112A	PT135A	PT145A	PT112W	PT135W	PT145W	PT225S	PT245S	PT260S	PT225W	PT245W	PT260W
Material	Sonitech	•	•	•	•	•	•	•	•												
	Promotech									•	•	•	•	•	•	•	•	•	•	•	•
	Number of damping layers	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	Total thickness	20	40	20	40	35	45	35	45	12	35	45	12	35	45	25	45	60	25	45	60
Facing	Aluminium	•	•			•	•			•	•	•									
	White foil				•																
	Glass cloth Silver															•	•	•			
	Glass cloth White							•	•				•	•	•				•	•	•
Back	Self-adhesive	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Weight	(kg)	0,4	0,7	0,4	0,7	3,6	3,8	3,6	3,8	3,6	4,9	5,4	3,6	4,9	5,4	7,2	7,8	9,2	7,2	7,8	9,2
Class 0	Fire resistant									•	•	•	•	•	•	•	•	•	•	•	•

# Around the engine

## Sound insulation materials

### Anti-reverberation material type ARM

#### *Reduces structure borne sounds*

Type ARM specifically reduces structure-borne sounds caused by, for example, the ship's propeller. These plates are suitable for steel and aluminium structures.

#### Specifications

- Plate dimensions 100 cm x 120 cm x 4 mm
- Weight per plate 8 kg
- Temperature resistance -10° C to +90°C

Type	Description
ARM10X12	Anti-reverberation plate



**ARM10X12**

### Self-adhesive tape

#### *Providing a neat and professional finish*

When installing any VETUS sound insulation sheet, we recommend using these self-adhesive tapes to cover the joints.

#### Specifications

- Come in rolls of 30 m long and 50 mm wide
- Available in the colours grey (TAPEG30), white (TAPEW30) and aluminium (TAPEA30)

Type	Description
TAPEG30	Self-adhesive tape, grey
TAPEW30	Self-adhesive tape, white
TAPEA30	Self-adhesive tape, aluminium



**TAPE**

### Glass cloth tape

#### *For use with glass cloth faced insulation sheets*

This tape is perfect for sound insulation applications, requiring strength, flexibility and resistance to heat. Especially suitable for use with the VETUS glass fibre faced sound insulation sheets.

Available in rolls of 50 m x 50 mm wide.

Type	Description
TAPEGF50	Self-adhesive tape, glass fibre



**TAPEGF50**



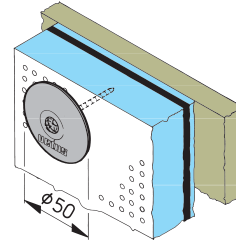
## Sound insulation materials

### Rosettes

#### For easy installation of heavy sheets

These fixing rosettes made of Polypropylene are ideal for easy installing of heavy sheets. They come in packs of fifteen pieces (screw not supplied).

Type	Description
FIXP	Ceiling rosette for fastening sound insulation sheets



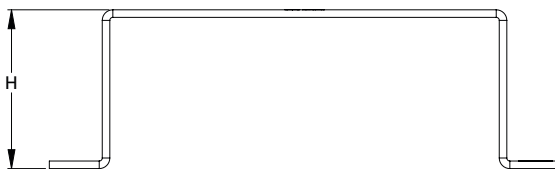
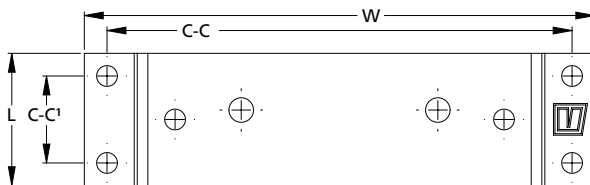
**FIXP**

### Mounting bracket type MBSET

#### For easy fixing of ancillary equipment

With these stainless steel (AISI 316) mounting brackets you easily fix cooling water strainers, no-smell and fuel filters on sound insulation materials up to 40 mm thick. They are supplied with bolts, washers and self-locking nuts. Fixings to mount the brackets are not included.

Type	Description	L (mm)	W (mm)	H (mm)	C-C (mm)	C-C' (mm)
MBSET01	Mounting bracket set M5 x 35 for ASD38V, ASD38H	45	166	42	154	33
MBSET02	Mounting bracket set for ASDV/H, AIRVENTV/H	35	135	42	123	23
MBSET03	Mounting bracket set for FTR140, WS180, WS720, NSFS	35	135	42	123	23
MBSET04	Mounting bracket set for fuel filters 330VTE(P)B, 340VTE(P)B & 350VTE(P)B	35	135	42	123	23
MBSET05	Mounting bracket set for FTR330, FILTER150, NSF	45	166	42	154	33



**MBSET01**

**MBSET02**

**MBSET03**

**MBSET04**

**MBSET05**







# Passion for water

Get out of the house and onto the water with YellowV. Take our powerful Heartbeat Stand Up Paddling board series for example. These boards combine modern graphics with a distinguished black PVC backdrop. Double layered PVC wrapped around a high density drop-stitched core to be precise. And because we are YellowV, we add just that bit extra. Curious what that bit is? Visit us on [vetus.com/brands/yellowv](https://vetus.com/brands/yellowv) or find us on social media!



**YellowV** Next level leisure