

M 3.28: 3 CYLINDERS 20 KW (27.2 HP)

Technical data

M 3.28	ID1/4stroke/3cyl. in line/ NA diesel
Bore	: 76 mm/3 inch
Stroke	: 70 mm/2.8 inch
Capacity	: 952 cm ³ /58 cu.inch
Number of cylinders	: 3
Compression ratio	: 22:1
Firing order	: 1-3-2
Alternator	: 12 Volt - 75 A.
* Max. output at flywheel (ISO 3046-1)	: 20 kW (27,2 hp)
* Max. output at propeller shaft (ISO 3046-1)	: 19.3 kW (26.2 hp)
Maximum rpm	: 3600
Torque at 3600 rpm	: 53,1 Nm
Fuel consumption at 2600 rpm	: 270 g/kW.h (199 g/hp.h)
Gearbox, standard	: TMC40P
Ratio	: 2,05/2,60:1
Optional	: ZF10M 2,05/2,72:1 ZF15MIV 2,13/2,99:1 TMC60A 2/2,5:1
Dry weight (incl. TMC 40 gearbox)	: 123 kg/271 lbs
Suction height of fuel lift pump	: 1.5 m/5 ft
Max. installation angle (backwards)	: 15°
Max. lateral inclination angle (continuously)	: 25°
Max. lateral inclination angle (5 minutes max.)	: 30°
Calorifier connection	: optional kit
Warning lights and audible alarm for	: oil pressure, temperature (fresh and raw water), charging current
Control light for	: pre-heating
Automatic circuit breaker	: 10 A.
Cooling system	: indirect cooling as standard. (keelcooling optional)

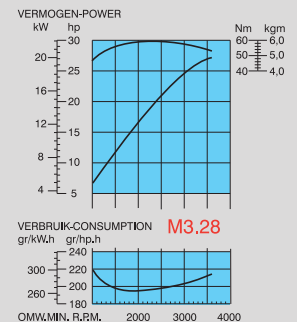
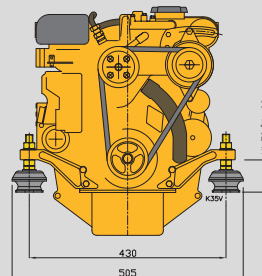
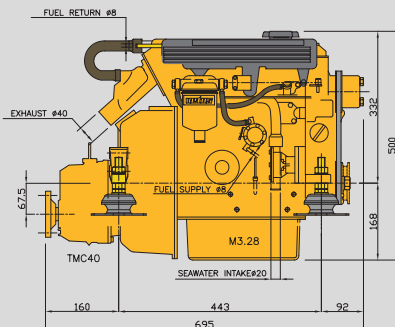
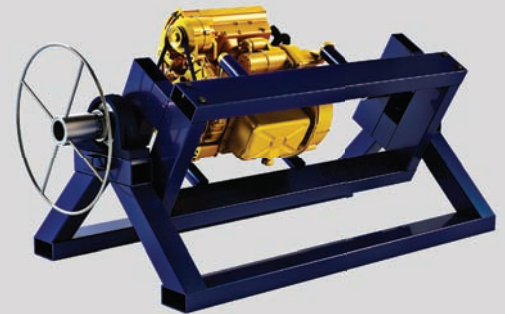
* In accordance with ISO 8665

SOLAS (Safety Of Life At Sea) Approval

Engine model M3.28 is also available to special order with SOLAS approval for use in lifeboats and rescue boats.

The special characteristics of SOLAS approved engines are as follows:

- stop automatically if inverted. If this occurs, leakage of oil and fuel is minimal - can be restarted immediately after righting.
- can be operated with the engine submerged up to crankshaft level.
- can be operated intermittently with a maximum inclination of 30 degrees (e.g. as a consequence of hanging in the davits).
- start at temperatures down to -15° C.
- resist shock as a consequence of free fall.
- are provided with the possibility to mount an external fire fighting pump on the crankshaft pulley.



4 VETUS flexible engine mountings are supplied with this engine.

KSTEUN45V



This **waterproof VETUS** instrument panel, provided with 5 control lights, a tacho/hourmeter, a voltmeter, an acoustic alarm and the starter switch, is standard supply. Instead of the engine panel shown, one of the other VETUS engine panels may be supplied. An engine panel for a second steering position may be supplied as well.

