

4JH110 Common Rail Series

Configuration	4-stroke, vertical, water-cooled diesel engine	
Maximum output at crankshaft	* 80.9 kW@3200 rpm	[110 mhp@3200 rpm]
Displacement	2.0 ltr	[122 cu in]
Bore x stroke	84 mm x 90 mm	[3.31 in x 3.54 in]
Cylinders	4 in line	
Combustion system	Direct injection with common rail system	
Aspiration	Turbocharged with intercooler	
Starting system	Electric starting 12V - 1.4 kW	
Alternator	12V - 125A	
Cooling system	Fresh water cooling by centrifugal water pump and rubber impeller sea water pump	
Lubrication system	Enclosed, forced lubricating system	
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side	
Dry weight without gear	229 kg	[505 lbs]
Environmental	EU: RCD (will comply RCD2 from 2016) BSO II US: EPA Tier 3	
Engine mounting	Rubber type flexible mounting	

NOTE:

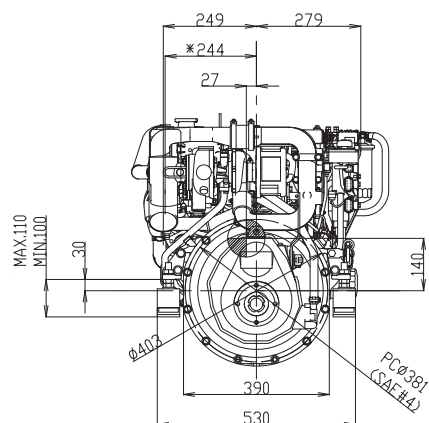
Fuel condition: Density at 15°C = 0.84 g/cm³: 1 kW = 1.3596 mhp = 1.3410 HP

* Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]

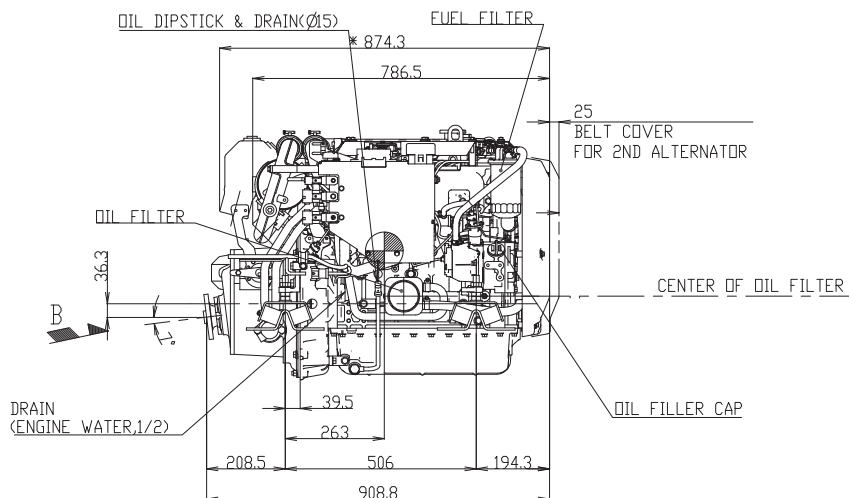
Technical data is according to ISO 8665: 2006

DIMENSIONS

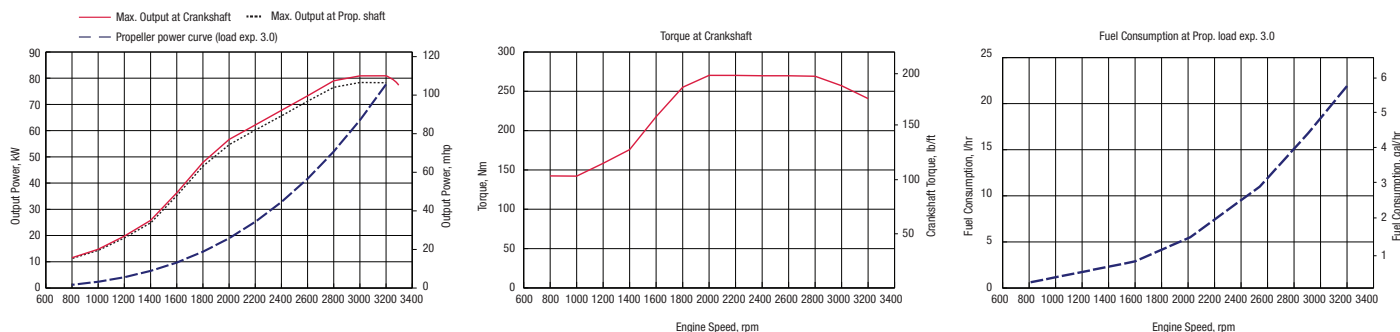
Rear view



Right side view



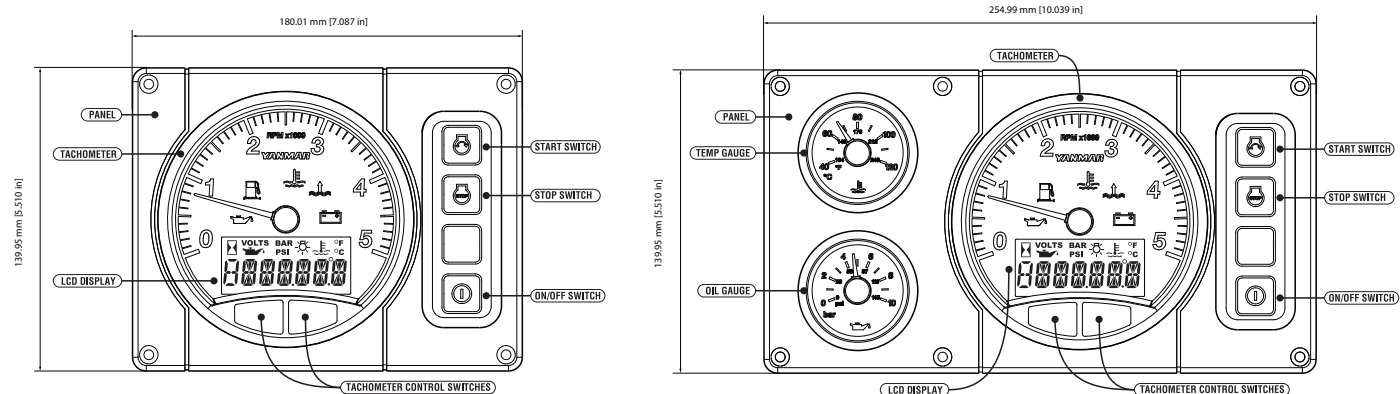
PERFORMANCE CURVES



MARINE GEARS

Model	KMH4A [down angle: 8°]		ZF25A [down angle: 8°]		KM4A2 [down angle: 7°]		ZF30M	
Type	Hydraulic, multi disk clutch		Hydraulic, multi disk clutch		Mechanical cone clutch		Mechanical multi-disc	
Dry Weight	33 kg [73 lbs]		30 kg [66 lbs]		33 kg [73 lbs]		25 kg [55 lbs]	
Reduction Ratio [fwd/asn]	2.04/2.04		1.93/1.93		2.14 / 2.14		2.15/2.64	
Propeller speed [fwd/asn]	1569/1569		1658/1658		2177/2175		1488/1212	
Direction of rotation [propeller shaft - fwd]	Clockwise & counterclockwise viewed from stern		Clockwise & counterclockwise viewed from stern		Clockwise & counterclockwise viewed from stern		Clockwise viewed from stern	
Dry weight - engine & gear	261 kg [575 lbs]		259 kg [571 lbs]		263 kg [580 lbs]		254 kg [560 lbs]	
Length engine and gear/drive	907 mm [35.7 in]		905 mm [35.6 in]		909 mm [35.8 in]		925 mm [36.4 in]	

INSTRUMENT PANELS



B25 STANDARD

C35 OPTIONAL

ACCESSORIES

Standard Package

- Set of flexible engine mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Fresh water expansion tank
- Alternator 12V - 125A
- Operation manual
- B25-panel
- Sensors for instrument panel
- Engine Topcover for protection

Optional

- Second alternator 12V - 125A or 24V - 60A
- High-riser mixing elbow [instead of L-elbow]
- Extension wire harness [3m, 5m, 10m]
- Hot water kit with cocks
- Second station harness and panel
- C35-panel
- Oil pressure sensor for C35-panel
- Extension saildrive leg [75 mm]
- NMEA 2000 convertor for Engine monitory system
- Emergency stop switch
- Seawaterpump front mounted

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	* 39.6 kW@3000 rpm	[53.1 mhp@3000 rpm]	
Displacement	2.19 ltr	[134 cu in]	
Bore x stroke	88 mm x 90 mm	[3.46 in x 3.54 in]	
Cylinders	4 in line		
Combustion system	Direct injection		
Aspiration	Natural aspiration		
Starting system	Electric starting 12V		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal water pump and rubber impeller sea water pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	201 kg	[443 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier 3		
Engine mounting	Rubber type flexible mounts		

NOTE:

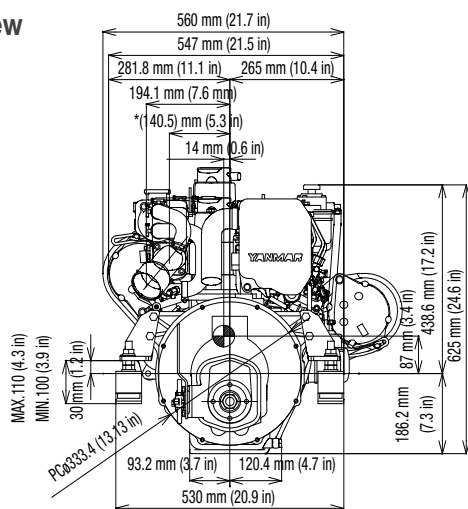
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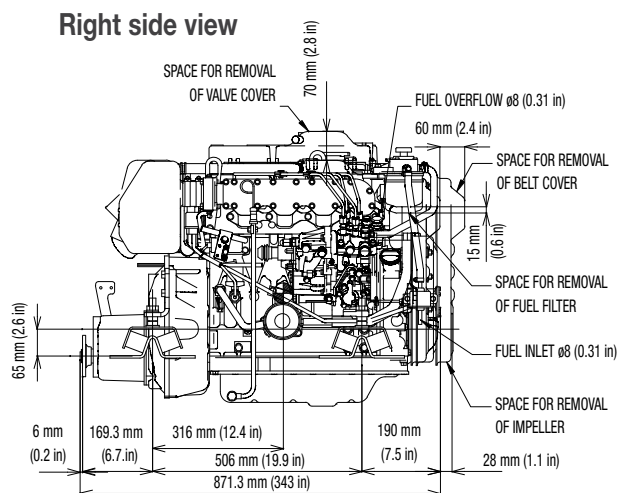
Technical data is according to ISO 8665: 2006/3046-1

DIMENSIONS

Rear view

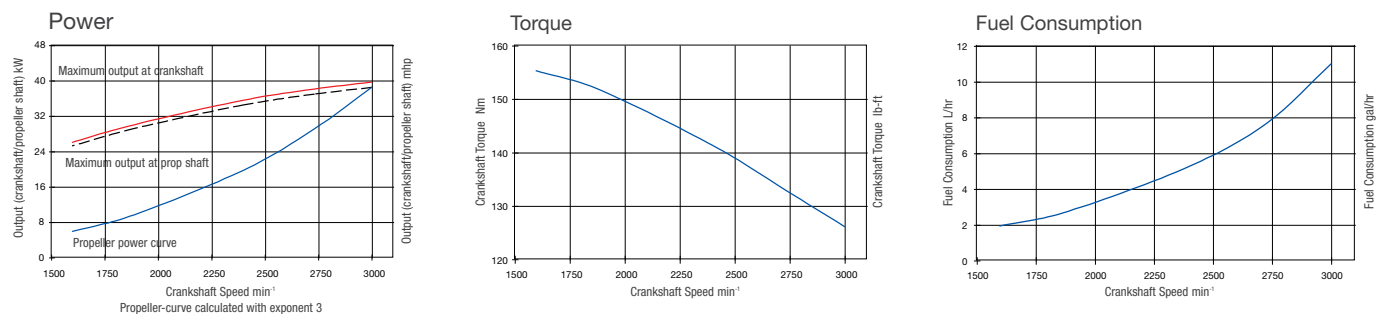


Right side view



4JH5E with KM35P marine gear

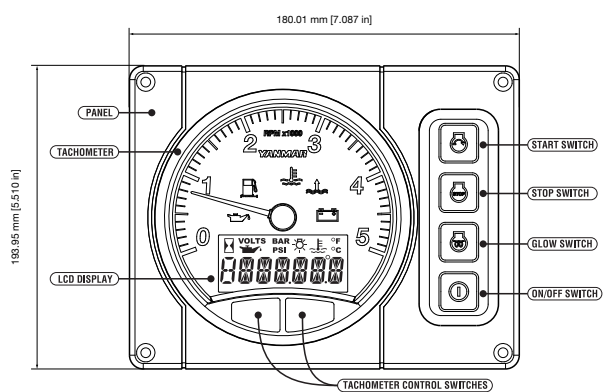
PERFORMANCE CURVES



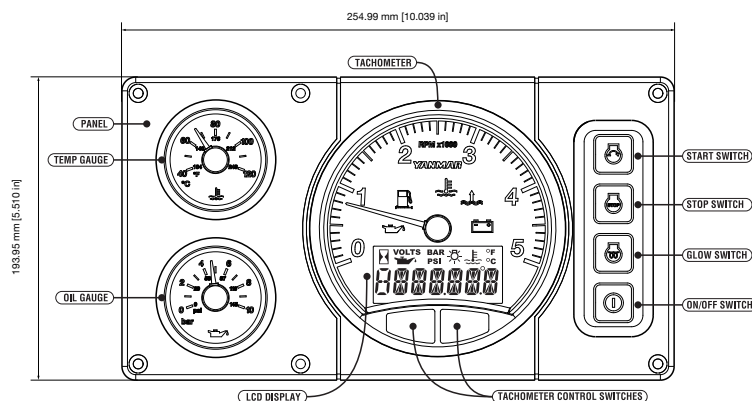
MARINE GEARS/DRIVE

Model	KM35P		KM35A2 [down angle: 7°]		KM4A1 [down angle: 7°]		ZF30M	Saildrive SD60	
Type	Mechanical cone clutch		Mechanical cone clutch		Mechanical cone clutch		Mechanical multi-disc	Mechanical wet type multi-disc	
Dry Weight	12 kg [27 lbs]		13 kg [29 lbs]		29 kg [64 lbs]		28 kg [61 lbs]	40 kg [88 lbs]	
Reduction Ratio [fwd/asn]	2.36/3.16		2.33/3.06		2.14 / 2.14		2.15/2.64	2.23/2.23	
Propeller speed [fwd/asn]	1271/949		1288/980		1402/1402		1395/1136	1345/1205	
Direction of rotation [propeller shaft - fwd]	Clockwise viewed from stern		Clockwise viewed from stern		Clockwise viewed from stern		Clockwise viewed from stern	Clockwise & counterclockwise viewed from stern	
Dry weight - engine & gear	213 kg [469.5 lbs]		214 kg [471.7 lbs]		214 kg [471.7 lbs]		229 kg [505 lbs]	241 kg [531 lbs]	
Length engine and gear/drive	871 mm [34 in]		864 mm [34 in]		922 mm [36 in]		950 mm [37 in]	1113 mm [44 in]	

INSTRUMENT PANELS



B20 STANDARD



C30 OPTIONAL

ACCESSORIES

Standard Package

- Set of flexible engine mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Fresh water expansion tank
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- B20-panel
- Sensor for instrument panel

Optional

- Second alternator 12V - 80A, 12V - 130A or 24V - 75A, including smart regulator
- High-riser mixing elbow [instead of L-elbow]
- Extension wire harness [4m, 6m, 10m]
- Hot water kit with cocks
- Second station harness
- C30-panel
- Sensor for C30-panel
- Extension saildrive leg [75 mm]
- Propeller cone nut kit SD60

Configuration	4-stroke, vertical, water-cooled diesel engine		
Maximum output at crankshaft	28.7 kW@3000 rpm	[38.5 mhp@3000 rpm]	
Displacement	1.642 ltr	[100 cu in]	
Bore x stroke	88 mm x 90 mm	[3.46 in x 3.54 in]	
Cylinders	3 in line		
Combustion system	Direct injection		
Aspiration	Natural aspiration		
Starting system	Electric starting 12V - 1.4 kW		
Alternator	12V - 80A		
Cooling system	Fresh water cooling by centrifugal fresh water pump and rubber impeller sea water pump		
Lubrication system	Enclosed, forced lubricating system		
Direction of rotation [crankshaft]	Counterclockwise viewed from flywheel side		
Dry weight without gear	173 kg	[381 lbs]	
Environmental	EU: RCD	BSO II	EMC
	US: EPA Tier 3		
Engine mounting	Rubber type flexible mounting		

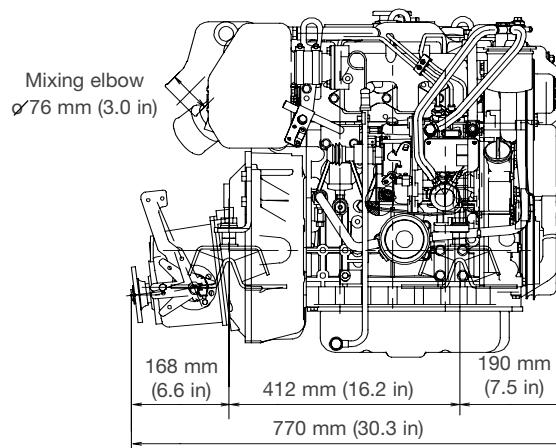
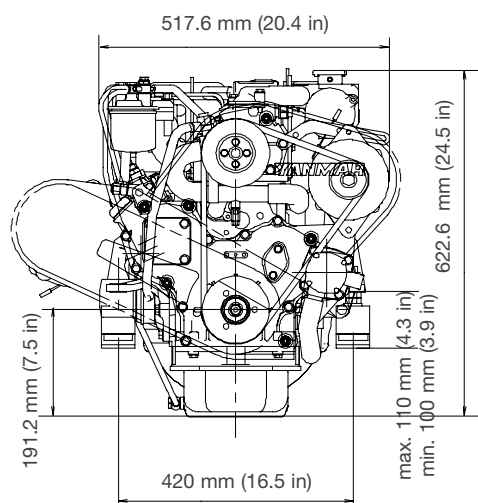
NOTE:

Fuel condition: Density at 15°C = 0.84 g/cm³: 1 kW = 1.3596 mhp = 1.3410 HP

Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]

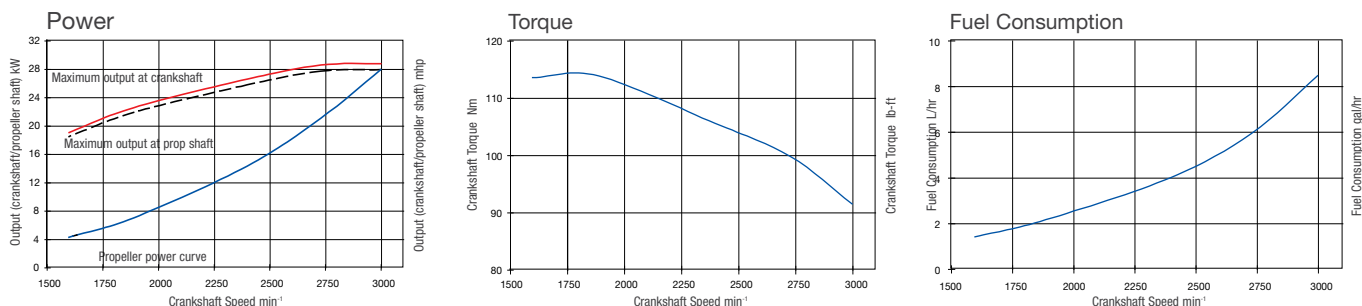
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DIMENSIONS



3JH5E with KM35A marine gear

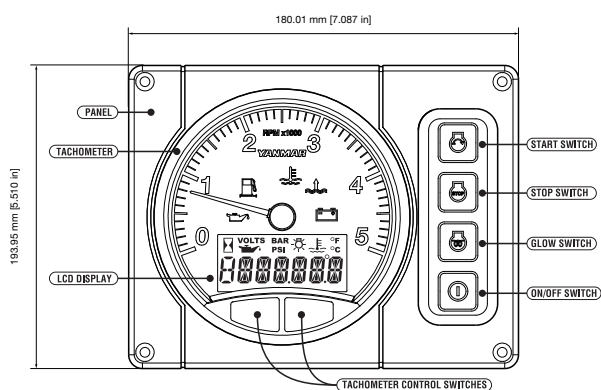
PERFORMANCE CURVES



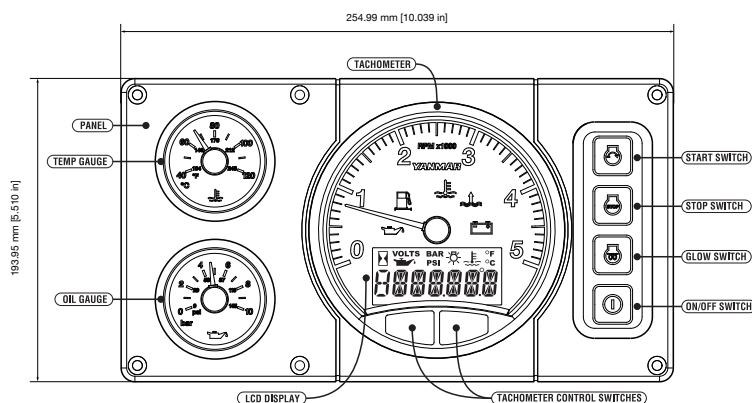
MARINE GEARS/DRIVE

Model	KM35P		KM35A (DOWN ANGLE: 7DEG)		SAILDRIVE (SD60)	
Type	Mechanical cone clutch		Mechanical cone clutch		Mechanical wet type multi-disc	
Dry Weight	12 kg [27 lbs]		13 kg [29 lbs]		40 kg [88 lbs]	
Reduction Ratio [fwd/asn]	2.36/3.16	2.61/3.16	2.33/3.04	2.64/3.04	2.23/2.23	2.49/2.49
Propeller speed [fwd/asn]	1271/949	1149/949	1288/987	1136/987	1345/1345	1205/1205
Direction of rotation [propeller shaft - fwd]	Clockwise viewed from the stern		Clockwise viewed from the stern		Clockwise & Counterclockwise viewed from flywheel side	
Dry weight - engine & gear	185 kg [408 lbs]		186 kg [410 lbs]		213 kg [470 lbs]	
Length engine and gear/drive	777 mm [31 in]		776 mm [31 in]		1019 mm [40 in]	

INSTRUMENT PANELS



B20 STANDARD



C30 OPTIONAL

ACCESORIES

Standard engine package

- Set of flexible engine mounts
- Exhaust mixing elbow [L-type]
- V-belt safety cover
- Fresh water expansion tank
- Alternator 12V - 80A
- Electric stop solenoid
- Operation manual
- B20-panel
- Sensor for instrument panel

Optional accessories

- Second alternator 12V - 130A or 24V - 75A incl. smart regulator
- High-riser mixing elbow [instead of L-elbow]
- Hot water kit with cocks
- Second station harness
- C30-panel
- Sensor for C30-panel
- Extension saildrive leg [75 mm]
- Extension wire harness [4m, 6m 10m]
- Propeller cone nut kit SD60