



MARINE COMMON RAIL ENGINES

4JH Series - 80 / 110

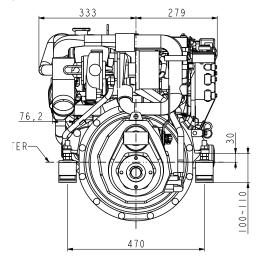
Configuration	In-line, 4-stroke, vertical, water-cooled diesel engine			
Max. output at crankshaft*	58.8 kW@3200 rpm 80.9 kW@3200 rpm	[80 mhp@3200 rpm] [110 mhp@3200 rpm]		
No. of cylinders	4 cylinder			
Displacement	2.000 L	[1.22 cu in]		
Bore x stroke	84 mm x 90 mm	[3.31 in x 3.54 in]		
Aspiration	Turbocharged & intercooled			
Combustion system	Direct injection, Bosch common rail system			
Starting system	Electric starting 12V - 1.4 kW			
Engine management	Electronic			
Cooling system	Fresh water cooling by centrifugal fresh water pump Seawater cooling by rubber impeller seawater pump			
Alternator	12V - 125A			
Lubrication system	Enclosed, forced lubricating system			
Engine lube oil specifications	API class: CD or higher, SAE grade: 10W-30 or 15W-40			
Direction of rotation at crankshaft	Counterclockwise (CCW) viewed from stern			
Dry weight without gear	229 kg [50	[505 lbs]		
Engine dimensions † L x W x H	909 x 613 x 675 mm			
Emission compliance	EU: RCD 2, BSO II, EMC	US: EPA Tier 3, EPA-C		
Flywheel housing size	SAE #4			
Controls	Mechanical (optional - VC20 system)			

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

Technical data is according to (ISO 8665) / (ISO 3046)

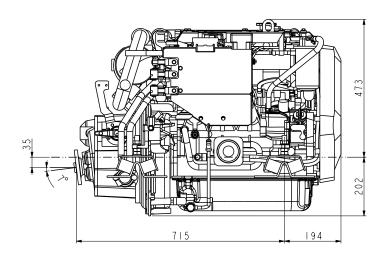
DIMENSIONS

Rear view



4JH80/110 with KM4A2 marine gear (Not to be used for engine installation)

Right side view



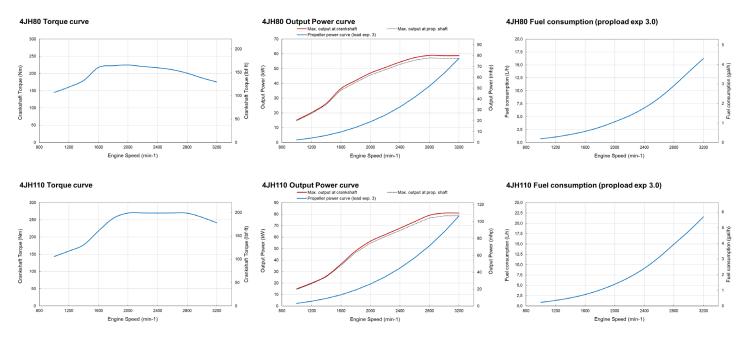
^{*} Fuel temperature 40°C at the inlet of the fuel injection pump [ISO 8665: 2006]

[†]Length includes KM4A2 marine gear (Dimensions may vary with other gears, drives or elbow)





PERFORMANCE CURVES



MARINE GEAR / DRIVE*

Model	KMH4A [down angle: 8°]	KM4A2 [down angle: 7°]	ZF25A [down angle: 8°]	ZF30M [parallel]	Saildrive [SD60]**	Saildrive [SD15]
Clutch type	Hydraulic multi disc	Mechanical cone clutch	Hydraulic multi disc	Mechanical multi-disc	Mechanical multi-disc	Hydraulic multi disc
Dry weight	30 kg [66 lbs] 28.5 kg [63 lbs]		33 kg [73 lbs]	28 kg [62 lbs]	44 kg [97 lbs]	90 kg [198]
Reduction ratio [fwd/asn]	2.04/2.04 2.45/2.45	1.47/1.47 2.14/2.14 2.63/2.63	1.93/1.93 2.80/2.80	2.15/2.64 2.70/2.64	2.23/2.23 2.49/2.49	2.51/2.51
Direction of rotation [viewed from stern]	Clockwise & counterclockwise			Clockwise	Clockwise & counterclockwise	
Lubrication system	Forced lubrication Splash lubrication		Forced lubrication	Splash lubrication	Splash lubrication	Oil bath
Lube oil specifications	ications API class: CD or higher, SAE grade: #20 or #30		ATF		API class: CD or higher, SAE grade: 15W-40	ATF
Max. lube oil capacity	2.0 L	2.0 L	1.8 L	1.1 L	2.8 L	6 L
Dry weight - engine & gear	259 kg [571 lbs]	257.5 kg [568 lbs]	262 kg [578 lbs]	257 kg [567 lbs]	273 kg [602 lbs]	319 kg [703 lbs]

 $^{^{\}star} \, \text{Other marine gearboxes and configurations available upon request. Contact your local supplier for more information.}$

ACCESSORIES

Standard engine package

- Exhaust mixing elbow [L-type]
- Alternator 12V 125A
- Seawater pump rear mounted
- B25 panel
- Flexible mounts
- Mechanical throttle sensor
- Fuel pre-filter with water separator
- Fresh water expansion tank
- Belt safety cover

Optional

- High-riser mixing elbow [instead of L-elbow]
- Secondary alternator 12V 125A or 24V 60A
- Seawater pump front mounted
- C35 panel
- Extension harness [3m, 5m, 10m]
- Second station
- Sidemount control head
- VC20 Vessel Control System

- NMEA2000 Engine monitoring system
- Semi 2-pole
- SOLAS including Certificate [factory fit only]
- Opposite dipstick
- Hot water kit with cocks
- Extension saildrive leg [75 mm]
- Propeller cone nut kit SD60
- On-board spare parts kit

^{**} Not for 4JH110