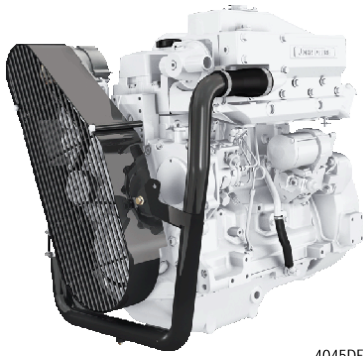


# PowerTech

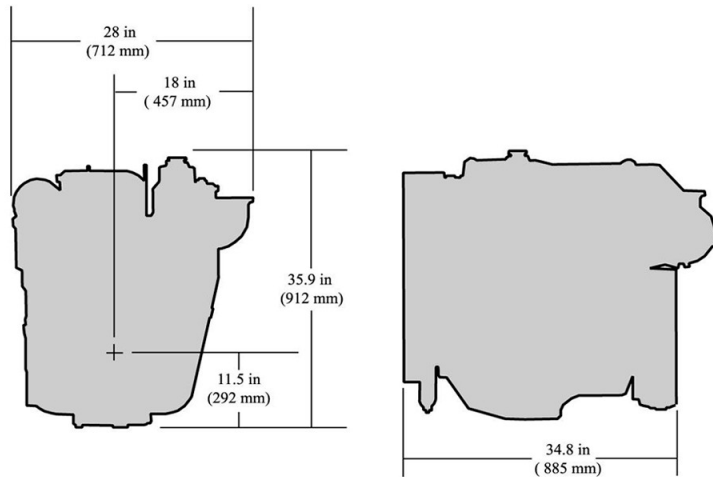
## 4045DFM Diesel Engine

Marine Generator Drive Engine Specifications



4045DFM shown

### Dimensions



### Certifications

- IMO MARPOL Annex VI
- EPA Tier 2
- Det Norske Veritas

### General data

Model	4045DFM70	Length - mm (in)	885 (34.8)
Number of cylinders	4	Width - mm (in)	712 (28.0)
Displacement - L (cu in)	4.5 (275)	Height, Centerline to Top-- mm. (in)	620 (24.4)
Bore and Stroke-- mm (in)	106.5 x 127 (4.19 x 5.00)	Height, Centerline to Bottom-- mm. (in)	282.5 (11.1)
Compression Ratio	17.6:1	Weight, dry-- kg (lb)	462 (1019)
Engine Type	In-line, 4- Cycle	Maximum installed angle	Front Up – degrees 12 Front Down – degrees 0
Aspiration	Naturally aspirated		

### Features and benefits

#### Watercooled Exhaust Manifold

- Cooler and quieter environment for vessel and crew
- Reduced external connections eliminates hoses and fittings that can leak or break

#### Replaceable wet-type cylinder liners

- Excellent heat dissipation
- Hardened and precision machined for long life
- Rebuild to original specifications

#### Internal Balancers

- Low noise and vibration for crew comfort

#### Corrosion Resistant Components

- Provides engine protection from the effects of seawater

#### Either-side Service

- Oil fill and dipstick combinations
- Remote oil filter for easier service access
- Application and service flexibility to provide installation convenience plus fast and easy maintenance

#### Heat Exchanger or Keel Cooled

- High-capacity heat exchanger designed for reliable operation in adverse conditions
- Integrated expansion tank, heat exchanger and exhaust manifold reduce chances of leaks
- Keel cooler options provide application flexibility

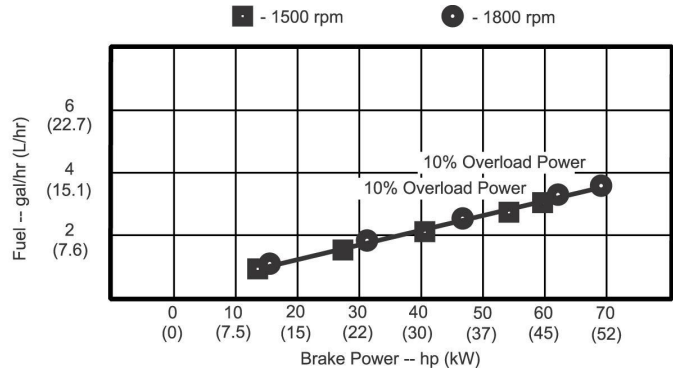
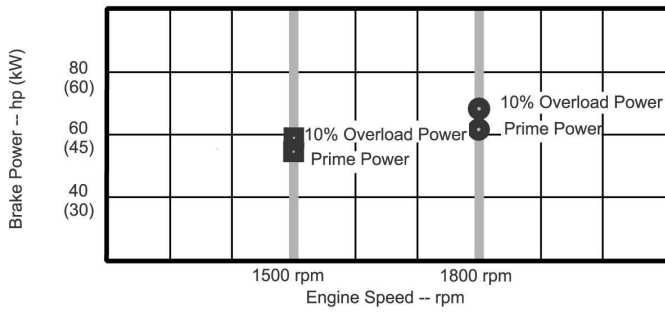
#### High Torque and Low Rated RPM

- Enables the engine to turn larger propellers at lower speed for best efficiency
- Excellent vessel control and maneuvering
- Lower rated rpm limits vibration and noise for better crew comfort

#### Fuel System

- Proven and reliable Mechanical Governor

## Performance curve



### System data

	1800 rpm	1500 rpm
Air system		
Engine air flow - m <sup>3</sup> /min (ft <sup>3</sup> /min)	3.6 (127.1)	2.4 (84.8)
Exhaust system		
Dry - mm (in)	50 (2.0)	50 (2.0)
Wet - mm (in)	65 (2.6)	65 (2.6)
Cooling system		
Coolant flow - L/min (gal/min)	125 (33.0)	116 (30.6)
Sea water system		
Pump flow - L/min (gal/min)	84 (22.2)	70 (18.5)
Fuel system		
Governor type	Mechanical	Mechanical
Governor regulation - %	5%	5%
Total fuel flow - L/hr (gal/hr)	114 (30.1)	109 (28.8)

### Performance data

	1800 rpm	1500 rpm
10% overload engine Power - kW (hp)	50 (67.1)	44 (59.0)
Prime engine power - kW (hp)	45 (60.3)	40 (53.6)
Low idle speed - rpm	1400	1400
BMEP - kPa (psi)	669 (97)	707 (103)

## Performance data

Hz (rpm)	Generator efficiency %	Keel cooled		Power factor	Calculated gen-set rating	
		(no fan)			kW	kVA
50 (1500)	88-92	--	--	0.8	35-37	44-46
60 (1800)	88-92	--	--	0.8	40-42	50-53

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*All values at rated speed and power with standard options unless otherwise noted.  
 Specifications and design subject to change without notice.*