

WATER

# MH300i



## Diesel Drive Compressor Prime Pump

**MEDIUM**  
**300i** **HEAD**

The Sykes MH300i is the first product in a new medium-head pump range developed to operate in harsh mining, construction and sewerage by-pass environments which feature both high water flow and long pipe runs.

Exhaustive field trials showed that standard cast iron impeller and plates can corrode before they wear out. Fitting the MH300i with 316 stainless steel front and rear wear plates and impeller instead, has helped increase pumping efficiency to 77%.

As well as the switch to 316 stainless steel and the introduction of a new bearing bracket, the pump features a drive coupling to

suit power requirements and resonance conditions (ie torsional vibration). This also makes the pump unusually robust as well as helping to reduce fuel consumption, emissions and maintenance costs.

Other MH300i innovations include the introduction of a flooded, oil-lubricated pump bearing set-up and leak-free pump bearing isolator in place of the grease lubrication system featured in many other pumps. This neatly sidesteps the usual threat of pump failure due to either too much or too little grease - or because of contamination.

[www.allightsykes.com](http://www.allightsykes.com)

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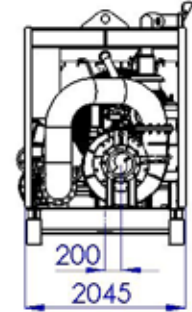
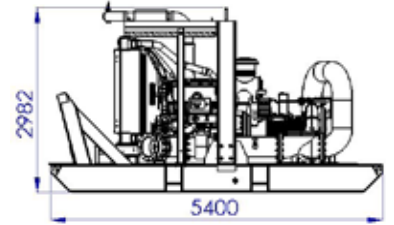
# MEDIUM HEAD

## Features

- Closed coupled pump SAE # 1 - virtually eliminates pump / engine misalignment
- Flooded oil lubricated pump bearing set up
- Pump Bearing Isolator set up
- Excellent suction lift capabilities at high flow at variable diesel speeds (1,300 - 1,600rpm)
- Pump efficiency (77%)
- Excellent solids handling capacity (90mm)
- Pump designed from first principles (in house pump design) / Computational Fluid Dynamics (CFD) / Finite Element Analysis (FEA)
- Pump designed / manufactured / tested in Australia to suit Australian conditions
- Standard 316 stainless front, rear wear plates and impeller
- Multi spring double cartridge complete with pumping ring mechanical seal
- Standard SG Iron 400/12 bearing bracket set up
- Drive coupling selected / calculated to suit power requirement and eliminate any possible torsional vibration in pump / engine combination / set up

## Application

- Mining
- Quarries
- Industrial
- Pipelines
- Jetting
- Drilling
- Construction
- Sewer Bypass
- Municipal



## TECHNICAL DATA

### PUMPSET DIMENSIONS

Width:	2045 mm
Height:	2982 mm
Length:	5400 mm
Dry Weight:	7800 kg
Wet Weight:	9585 kg
Fuel Capacity:	2100 litres

### MATERIALS OF CONSTRUCTION

Pump Casing:	S.G. IRON 400/12
Suction Cover:	S.G. IRON 400/12
Air Separation Tank:	S.G. IRON 400/12
Bearing Bracket:	S.G. IRON 400/12
Pump Shaft:	431 Stainless Steel
Impeller:	316 Stainless Steel
Wearplates:	316 Stainless Steel
Mechanical Seal:	Double Cartridge C/W pumping ring
Non Return Valve:	300mm Flapper Style

### DESIGN DETAILS

Pump Description:	Automatic self priming single end suction centrifugal pump
Impeller Type:	Semi Open
Suction Flange:	300 mm
Delivery Flange:	300 mm
Solids Handling Size:	90 mm
Operating Speed:	MIN: 1300rpm MAX: 1600rpm
Maximum Head:	99 m
Maximum Capacity:	530 L/sec

### FUEL USAGE INFORMATION FUEL RATE

Speed (rpm)	POWER USAGE (kW)	FUEL RATE (L/hr)	RUN TIME (hrs - 2100L fuel tank)
1300	160	39.5	53.1
1400	194	47.9	43.8
1500	240	59.3	35.4
1600	290	71.6	29.3

CALCULATIONS BASED ON 210 g/kw.hr

