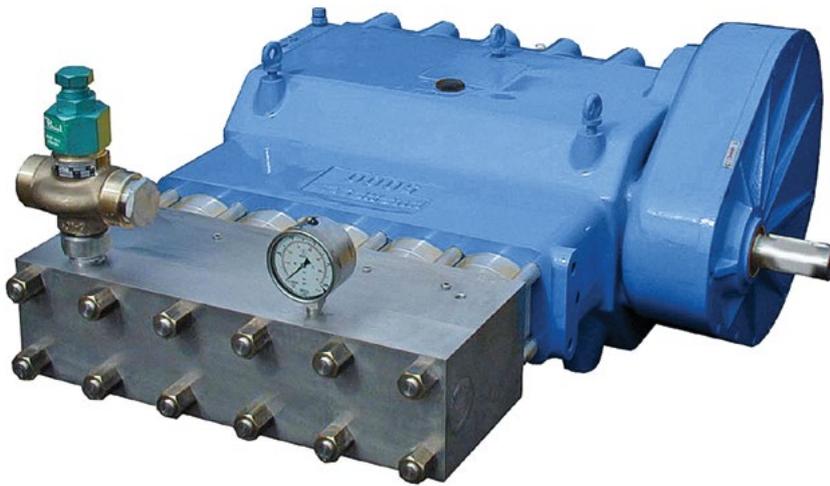


# HPS5000

## High Pressure Quintuplex Pump



Upgraded performance

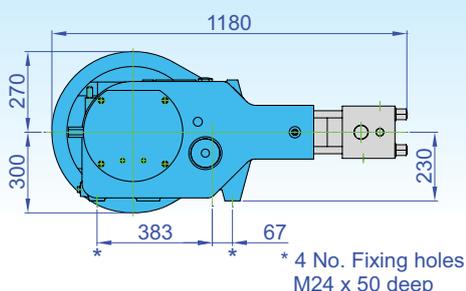
<b>Maximum Flowrate</b>	<b>806 lpm at 250 bar</b> (177.4 igpm / 213.7 usgpm at 3,625 psi)
<b>Maximum Pressure</b>	<b>1400 bar at 141 lpm</b> (20,300 psi at 31.0 igpm / 37.4 usgpm)
<b>Maximum Power</b>	<b>375 kW</b> (500hp)

See overleaf for performance options

The most powerful pump in the Hughes range, the HPS5000 has a specification producing a heavy duty capability for dealing with the more difficult problems in industry and shares critical components with the smaller HPS3000 pump. The 5 cylinder build has an inherently smooth flow characteristic – flow variation is reduced to less than a third when compared to the more common triplex arrangement.

The close coupled, gear driven power end has pressure lubrication, filtration and oil cooling. An SAE 1 adaptor housing is available enabling the pump to be flange mounted to a diesel engine

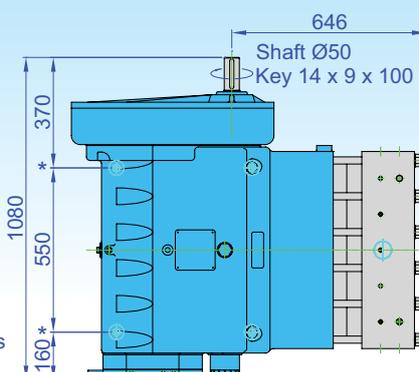
- General Dimensions - typical pump build
- Approx weight - 1200 kg (with gearbox)



flywheel housing or electric motor ensuring extremely compact, perfectly aligned installations and enclosing all moving parts.

For maximum hydraulic efficiency, the in-line valve arrangement is designed to minimise the unswept volume and prevents the adverse effects of cyclic stress within the head block, while allowing all working components to be easily removed on site for service.

This improved design is capable of high pressure to high volume with outstanding seal, plunger and valve life.



### Features

- 5 cylinders for smooth output
- 431 stainless steel pump head
- Solid ceramic plungers & self adjusting seals
- Interchangeable plunger kits
- Hardened, alloy steel crankshaft with heavy duty steel backed white metal main bearings, supported between each connecting rod
- SG iron crankcase with pressure lubrication, filtration and oil cooling
- Forged connecting rods with low friction, shell type big end bearings and lead bronze lined small end bushes
- Gear driven, eliminating the need for belt drive
- Safety relief valve
- Pressure gauge

### Build Options

- 316 stainless/Duplex steel pump head for seawater applications
- Choice of gear ratio to suit diesel engine or electric motor drive
- SAE 1 adaptor housing for flange mounting the pump to a diesel engine flywheel housing or electric motor
- Unloader valves
- Pressure adjusting valves (manual or actuated)
- Selector / Diverter valves (manual or actuated)
- Bare shaft pump only or complete unit build
- ATEX compliant 



HPS5000 with SAE engine adaptor

# HPS5000

## High Pressure Quintuplex Pump



High & Ultra High Pressure Technology

Plunger Diameter mm	Gear ratio Input Speed (rpm)			Pump Speed rpm	Power Required		Nominal Flowrate			Max Pressure	
	1500	1800	2050		kW	HP	lpm	igpm	usgpm	bar	psi
30	5.13			292	269	360	103	22.7	27.4	1400	20,300
		5.13		351	322	432	124	27.3	32.9		
	4.11			365	335	449	129	28.4	34.2		
			5.13	400	367	492	141	31.1	37.4		
35	5.13			292	300	402	141	30.9	37.3	1150	16,675
		5.13		351	360	483	169	37.1	44.7		
	4.11			365	375	502	175	38.6	46.5		
38	5.13			292	308	413	166	36.5	43.9	1000	14,500
		5.13		351	369	495	199	43.8	52.7		
	4.11			365	384	515	207	45.5	54.9		
40	5.13			292	307	411	184	40.4	48.7	900	13,050
		5.13		351	368	494	220	48.5	58.4		
	4.11			365	383	513	229	50.4	60.7		
45	5.13			292	302	405	232	51.1	61.6	700	10,150
		5.13		351	363	486	279	61.4	73.9		
	4.11			365	377	506	290	63.8	76.9		
50	5.13			292	304	407	287	63.1	76.1	570	8,265
		5.13		351	364	488	344	75.8	91.3		
	4.11			365	379	508	358	78.8	94.9		
55	5.13			292	303	406	347	76.4	92.1	470	6,815
		5.13		351	364	488	417	91.7	110.5		
	4.11			365	378	507	434	95.4	114.9		
60	5.13			292	307	411	413	90.9	109.6	400	5,800
		5.13		351	368	494	496	109.1	131.5		
	4.11			365	383	514	516	113.5	136.7		
65	5.13			292	311	417	485	106.7	128.6	345	5,003
		5.13		351	373	500	582	128.1	154.3		
	4.11			365	388	520	606	133.2	160.5		
70	5.13			292	303	406	563	123.8	149.1	290	4,205
		5.13		351	364	487	675	148.5	178.9		
	4.11			365	378	507	702	154.5	186.1		
75	5.13			292	300	402	646	142.1	171.2	250	3,625
		5.13		351	360	482	775	170.5	205.4		
	4.11			365	374	502	806	177.4	213.7		

**Additional Notes.** 1. Flowrates indicated are swept volume & will reduce by approximately 5% at full pressure  
 2. Other gear ratios are available for specific applications, consult Hughes Pumps Ltd 3. Pump stroke 100mm

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In line with the Company's policy of research and development, alterations in design, dimensions and appearance are incorporated from time to time in order to ensure that important developments are included at the earliest opportunity. The Company, therefore, reserves the right to alter design, dimensions etc without notice.