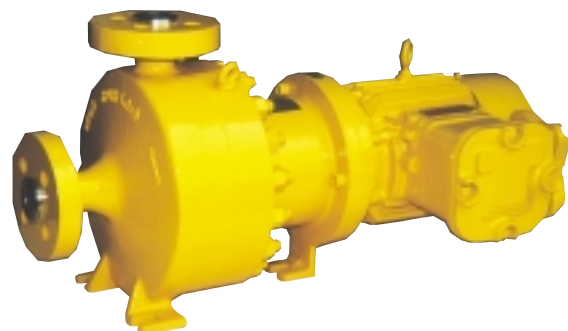
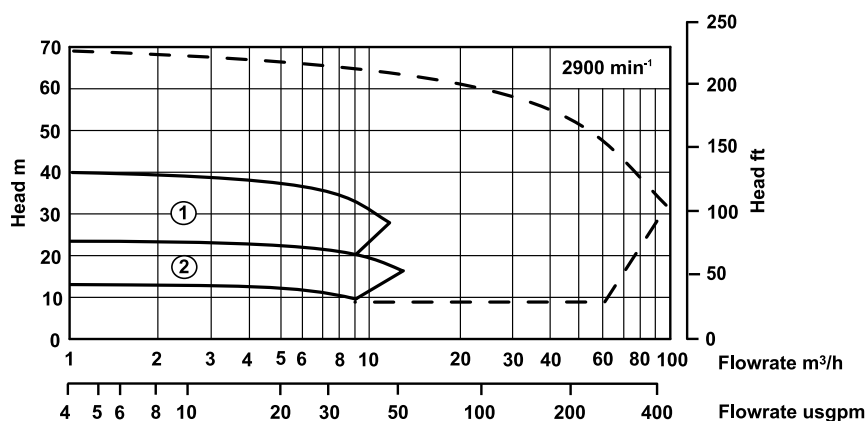


Technical Profile

Synchronous magnet drive, hydraulic pumps



Performance of the GS high pressure range



Pump model

	(Imperial)	(Metric)	pumps are available to cover duties within the outer curve and are built on an "as specified" basis.
1	1 x 1 x 5	25-25-125	
2	1 x 1 x 6	25-25-160	

Range capabilities

Model	Head	Flow	Temperature	Pressure	Viscosity Cst	Mounting
1x1x5	24 m 78 ft	11 m³/h 48 usgpm	-40 to +205°C -40 to +400°F	148.9 bar 2160 psi	200	Close coupled (CC) Separate Mounted (SM)
1x1x6	40 m 131 ft	10.5 m³/h 46 usgpm	-40 to +205°C -40 to +400°F	148.9 bar 2160 psi	200	Close coupled (CC) Separate Mounted (SM)

Product overview

The new HPGS range of pumps covers an hydraulic range based on GS frame 'O' pumps.

The pumps are offered with a range of Synchronous Magnet Drives rated to match prime mover performance. Prime mover specifications of all denominations can be catered for.

Maximum use has been made of components from our range of ANSI and ISO pumps to ensure optimum interchangeability of parts.

The standard materials of construction are stainless steel with silicon carbide internal bearings.

Design range limits

The HPGS pump is designed to operate from -40°C up to +205°C, -40°F up to +400°F without the need for any ancillary cooling medium. Maximum design working pressure is 148.9 bar, 2160 psi

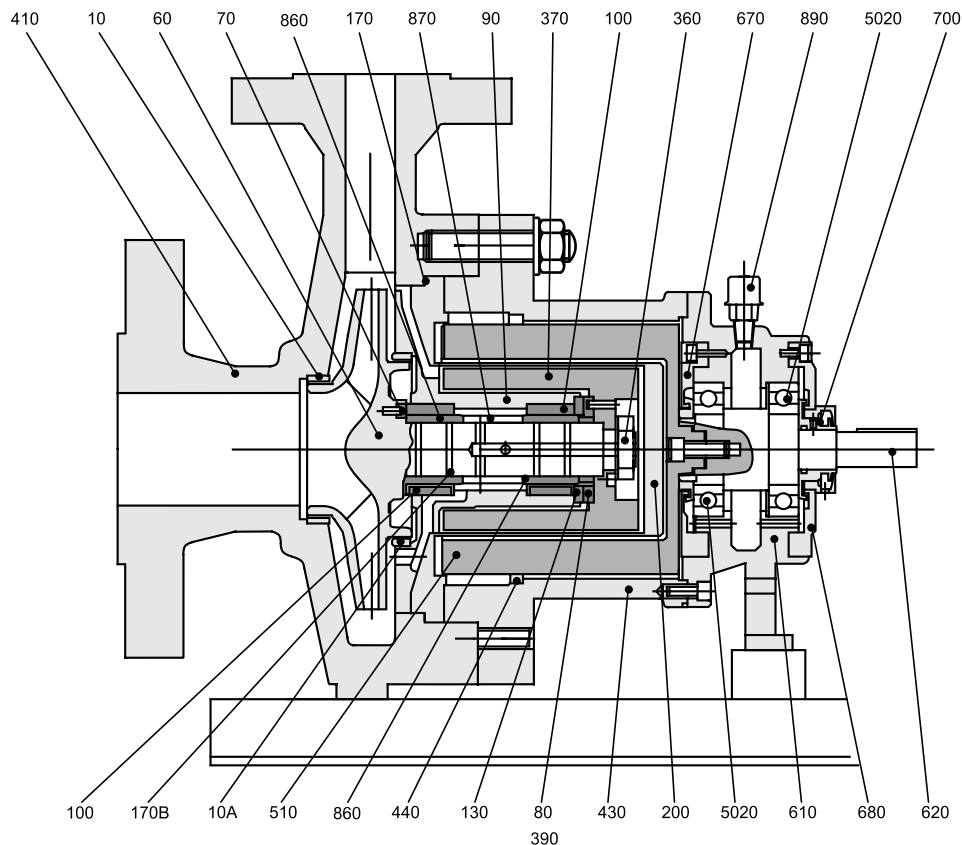
Solids handling capability

The unit is capable of handling solids up to 5% w/w with 150 microns.

Options

Large range of pump protection.

Construction of the HPGS range



10	Neck Ring (Front)	Stainless Steel
10A	Neck Ring (Back)	Stainless Steel
50	Coupling Washer	Stainless Steel
60	Impeller	Stainless Steel
70	Front Thrust Washer	Alpha SiC
80	Back Thrust Washer	Alpha SiC
90	Bush Holder (1500C/3000F)	Stainless Steel
100	Bush	Alpha SiC
130	Thrust Pad	Alpha SiC
170	Casing Gasket	SS / Graphite
170B	'O' Ring	Viton A
200	Containment Shroud/Shell	SS / Alloy 625
360	Coupling Nut	Stainless Steel
370	Inner Magnet Ring	Stainless Steel
390	Support Gasket	Graphite & Nickel
410	Casing	Stainless Steel
430	Coupling Housing	SG Iron
440	Bump Ring	Phosphor Bronze
510	Outer Magnet Ring	Carbon Steel
610	Bearing Housing	SG Iron
620	Drive Shaft	Carbon Steel
670	Front Cap	Carbon Steel
680	Back Cap	Carbon Steel
700	Labyrinth Seal (Kit)	Brass
860	Shaft Sleeve	Alpha SiC
870	Shaft Sleeve Spacer	Stainless Steel
890	Breather	Stainless Steel
5020	Race	Steel

Flanges and Connections

Separate mounted model shown

Casing

Suction and discharge flanges are designed in accordance with the following relevant standards:

ANSI B16.5 Class 150 Machined with 1.5mm (0.06") high raised face having a continuous spiral groove.

ANSI B16.5 Class 600 Machined with 6.35mm (0.25") high raised face having a continuous spiral groove.

ANSI B16.5 Class 900 Machined with 6.35mm (0.25") high raised face having a continuous spiral groove.

ANSI B16.5 Class 1500 Class 1500 flanges are also available, but maximum pressure will remain as ANSI Class 900 flange.

Flange Loadings

Allowable flange loadings imposed by pipework are in accordance with Table 2 of API 610 8th edition and exceed the values in ANSI 5199 Annex C.

Drain Connections

There are no drain options available for these pumps.

Gauge Connections:

No provision for gauge connections has been made on this range of pumps.

Features and user benefits of the HPGS Pump range

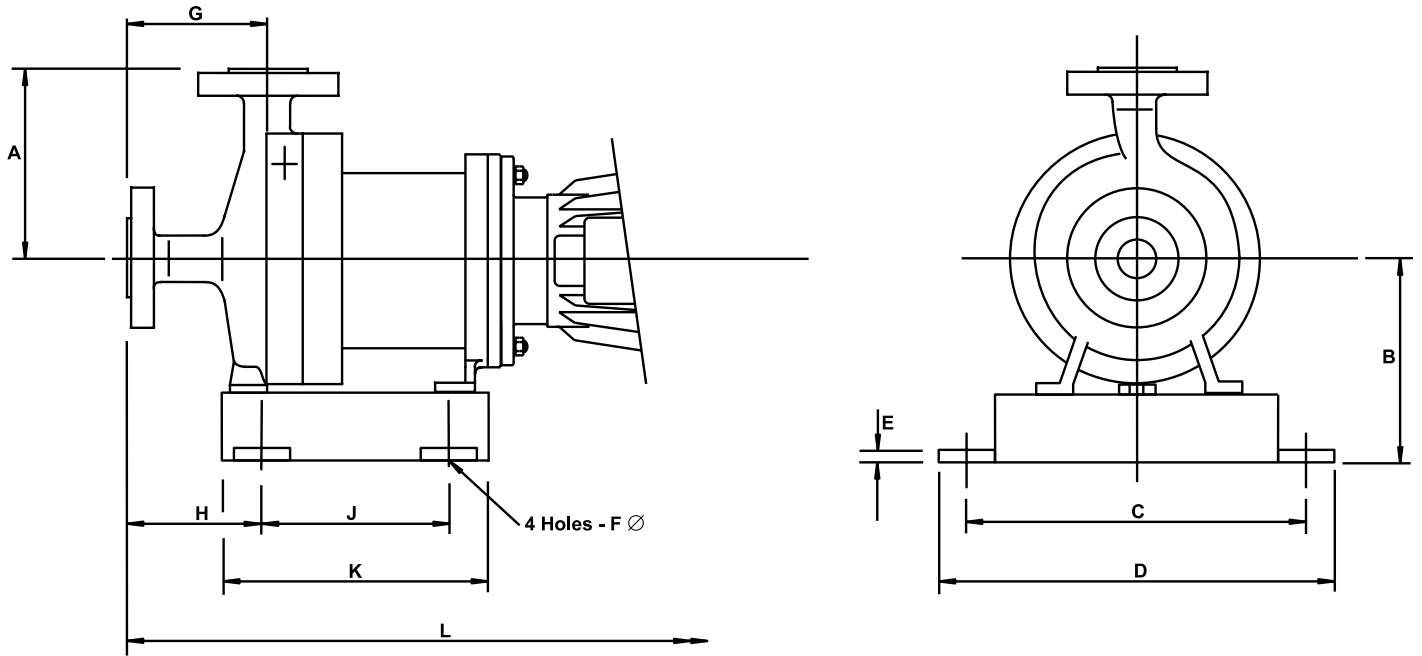
- **Seal/less design** - total product containment - ideal for hydrocarbon, petrochemical, toxic, aggressive, hot, crystallising and valuable product.
- Maximum interchangeability of components with standard GS pump.
- Modular/Interchangeable high efficiency magnetic couplings.
- Choice of various metallic materials of construction.
- One joint casing/containment shroud/shell design
- Casing gasket fully confined to eliminate 'Blowout' risk.
- Various suction and discharge flange connection options.
- Maximum interchangeability exists between spare parts for the entire range.
- Cartridge assemblies allowing fast replacement of the rotating element.
- Internationally approved pressure vessel standard: ASME VIII code.

Overall benefits to the user

- Ease of application
- Low capital cost
- Design ensures safe, leak free operation
- Low running costs
- Minimal spares holding
- Minimal downtime/fast maintenance
- Maximises on-line process time

Dimensions of HPGS range (close coupled)

All dimensions are in millimetres unless stated otherwise



Pump size	A	B	C	D	E	F	G	H	J	K	Motor Frame	L
1x1x5	200/7.9"	239/9.4"	350/13.8"	400/15.7"	12/0.5"	14/0.55"	155/6.1"	106/4.2"	230/9.1"	306/12"	80-90	620/24.4"
1x1x6	200/7.9"	239/9.4"	350/13.8"	400/15.7"	12/0.5"	14/0.55"	155/6.1"	106/4.2"	230/9.1"	306/12"	100-112	685/27"
											132	773/30.4"
25-25-125	200/7.9"	239/9.4"	350/13.8"	400/15.7"	12/0.5"	14/0.55"	155/6.1"	106/4.2"	230/9.1"	306/12"	160	918/36.1"
25-25-160	200/7.9"	239/9.4"	350/13.8"	400/15.7"	12/0.5"	14/0.55"	155/6.1"	106/4.2"	230/9.1"	306/12"	143-145	610/24"
											182-184	686/27"
											213-215	762/30"
											254-256	914/36"

Dimensions shown are metric/imperial (inches).

Pressure limits

All parts are to be rated to the pressures shown below at 38°C (100°F)

Flange standard

316 St St

ANSI B16.5 Class 300	4.96 N/mm ² 719 psi
-------------------------	-----------------------------------

ANSI B16.5 Class 600	9.93 N/mm ² 1140 psi
-------------------------	------------------------------------

ANSI B16.5 Class 900	14.89 N/mm ² 2160 psi
-------------------------	-------------------------------------

Component Hydrostatic test value

316 St St

Casing (ANSI 300)	7.44N/mm ² 1100 psi
-------------------	-----------------------------------

Casing (ANSI 600)	14.89 N/mm ² 2160 psi
-------------------	-------------------------------------

Casing (ANSI 900)	22.34 N/mm ² 3950 psi
-------------------	-------------------------------------

Temperature limits

Standard Range	-40°C to 150°C (-40°F to +300°F)
----------------	----------------------------------

Option	205°C (400°F)
--------	---------------

For sub zero temperatures a suitable sealing compound (Loctite Multi Gasket or similar) is used to prevent the Ingress of moisture into the coupling housing between the containment shroud/shell, coupling housing, bearing housing or motor adaptor assembly interface.



HMD KONTRO

Sealless Pumps



HMD Seal/less Pumps Ltd. Brampton Road, Hampden Park Industrial Estate, Eastbourne, East Sussex, BN22 9AN, England

Tel: 01323 452000 Fax: 01323 503369 Tel: (Int) +44 1323 452000 Fax: (Int) +44 1323 503369 email: pumps@hmdpumps.com

www.hmdkontro.com