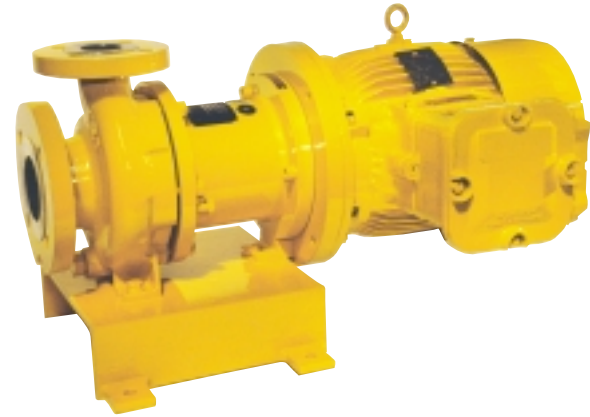
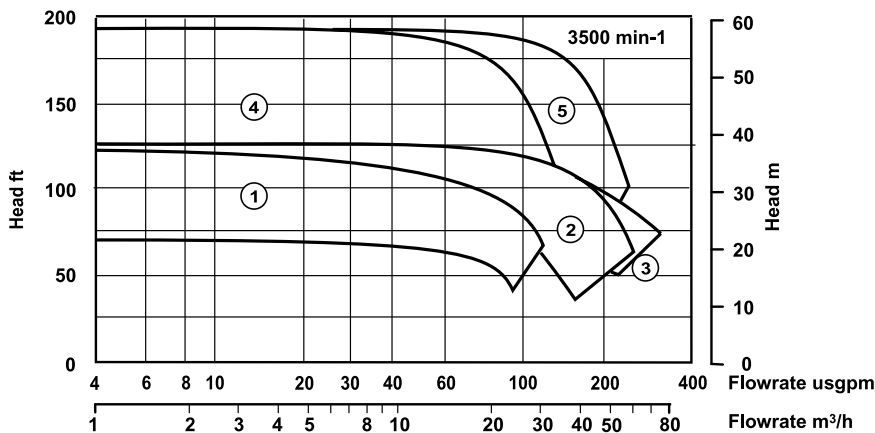


## Technical Profile

Magnet drive, end suction, centrifugal pumps  
to ISO 2858 / DIN. EN 22858:1993 / ANSI B73.3M



### Performance of the GSA/GSI frame 0



### Pump model

	(Imperial)	(Metric)
1	1.5 x 1 x 5	50-32-125
2	3 x 1.5 x 5	65-50-125
3	3 x 2 x 5	80-65-125
4	1.5 x 1 x 6H	50-32-160H
5	3 x 1.5 x 6H	65-50-160H

### Range capabilities

Model	Head	Flow	Temperature	Pressure	Viscosity Cst	Mounting
GSA 0	41 m	60 m <sup>3</sup> /h	-40 to +260°C	18.9 bar	200	Close coupled (CC)
	134 ft	264 usgpm	-40 to +500°F	275 psi		Separate Mounted (SM)
GSI 0	41 m	60 m <sup>3</sup> /h	-40 to +260°C	16 bar	200	Close coupled (CC)
	134 ft	264 usgpm	-40 to +500°F	232 psi		Separate Mounted (SM)

### Product overview

The GSA(ANSI) and GSI(ISO) product covers a hydraulic range that is split between three frame sizes, Frames 0, I, & II. (For frame sizes I & II refer to separate Technical Profiles)

Technical Profiles are available for the complete range of HMD/Kontro GS based pumps up to frame IV.

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.

This range is based on sizes conforming to ANSI & ISO performance and dimensional standards.

The standard materials of construction are Stainless Steel with silicon carbide internal bearings.

### Design range limits

The GSA/GSI pump is designed to operate from -40°C up to +260°C, -40°C up to +500°F without the need for any ancillary cooling medium. Design working pressure is 18.9 bar, 275 psi.

### Solids handling capability

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

### Options

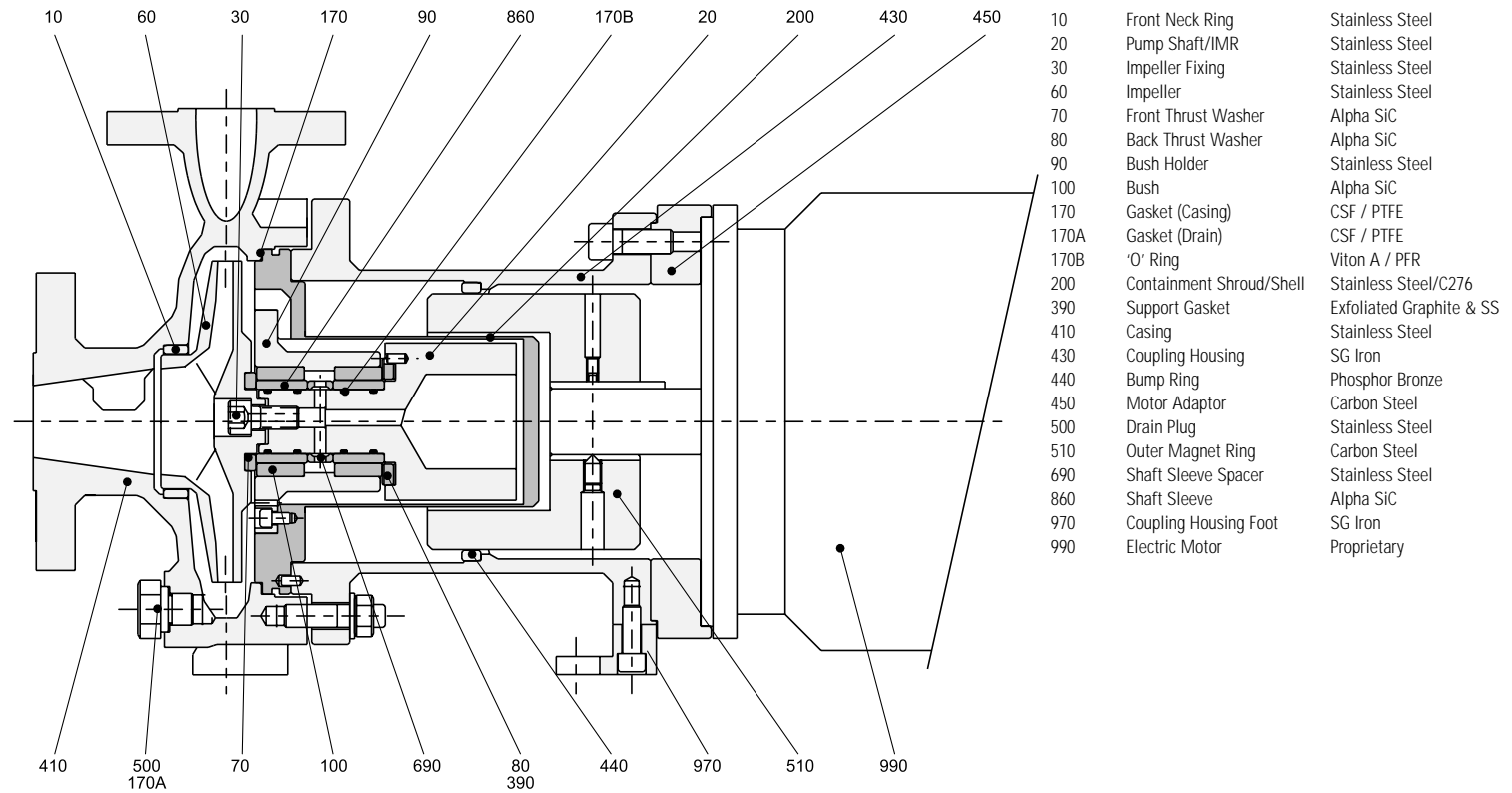
#### Materials of construction

Wetted parts	Alloy 20, C, B
Internal bearings	SiC / Carbon
Gaskets	PTFE

#### Other options

- Casing drains flanged or screwed
- Jacketed pump casing
- Coupling housing drain
- Large range of pump protection

## Construction of GSA/GSI frame 0



## Flanges and Connections

### Casing

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

#### ANSI B16.5

##### Class 150 + 300

Machined with 1.5mm (0.06") high raised face having a continuous spiral groove.

#### BS 4504

##### PN16 + PN40

Machined with 1.5mm (0.06") high raised face having a continuous spiral groove.

#### DIN 2543/2545

##### PN16 + PN40

Machined with a 2mm high raised face with a continuous spiral groove. (Note: these flanges are identical to BS 4504 PN40.)

### Flange Loadings

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

### Drain Connections

The following drain options are available:

**Standard:** 3/8" BSP drain plug fitted with fully trapped gaskets.

**Option1:** No drain, boss left undrilled.

**Option 2:** 1/2" NPT plug.

**Option 3:** 1/2" flange rated to the casing flanges.

### Gauge Connections:

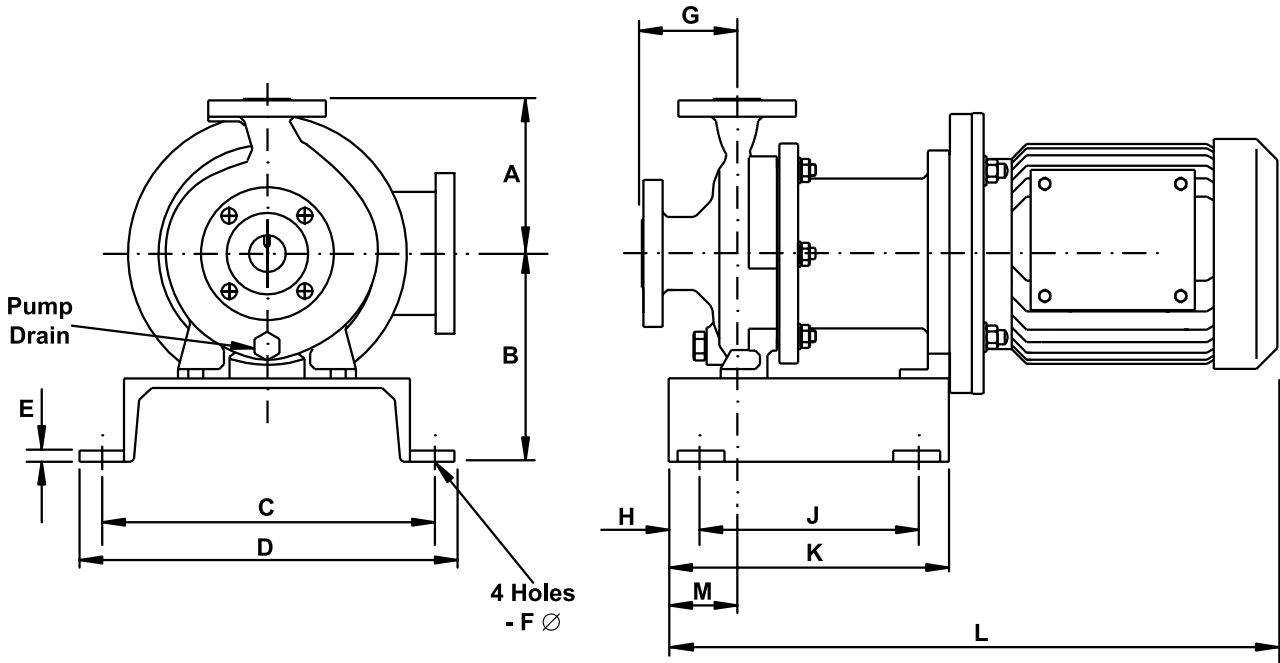
Connection of pressure gauges at the suction and discharge branches is possible. The connections are not drilled.

## Features and user benefits of the GSA/GSI Pump range

- **Seal/less design** - total product containment - ideal for hydrocarbon, petrochemical, toxic, aggressive, hot, crystallising and valuable product.
- Modular/Interchangeable high efficiency wet end, designed to ensure maximum flow/head coverage across all GS product ranges.
- Modular/Interchangeable high efficiency magnetic couplings.
- Choice of various metallic materials of construction.
- One joint between casing and containment shroud/shell.
- 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
- Interchangeable with mechanical seal pumps.



GSA frame 0

Pump size	A	B	C	D	E	F	G	H	J	K	M	Motor Frame	L
1.5x1x5	165/6.5"	222.5/8.75"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	101.6/4"	34.5/1.4"	230/9"	306/12"	73/2.9"	80-90	631/25"
3x1.5x5	165/6.5"	222.5/8.75"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	101.6/4"	34.5/1.4"	230/9"	306/12"	73/2.9"	100-112	696/27.5"
3x2x5	165/6.5"	222.5/8.75"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	101.6/4"	34.5/1.4"	230/9"	306/12"	73/2.9"	132	784/31"
1.5x1x6H	165/6.5"	222.5/8.75"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	101.6/4"	34.5/1.4"	230/9"	306/12"	73/2.9"	160	930/36.5"
3x1.5x6H	165/6.5"	222.5/8.75"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	101.6/4"	34.5/1.4"	230/9"	306/12"	73/2.9"	143-145	630/25"
												182-184	679/26.7"
												213-215	783/31"
												254-256	921/36"

GSI frame 0

Pump size	A	B	C	D	E	F	G	H	J	K	M	Motor Frame	L
50-32-125	140/5.5"	221/8.7"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	80.31"	34.5/1.4"	230/9"	306/12"	73/2.9"	80-90	529/20.8"
65-50-125	140/5.5"	221/8.7"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	80/3.1"	34.5/1.4"	230/9"	306/12"	73/2.9"	100-112	594/23.4"
80-65-125	140/5.5"	221/8.7"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	100/3.9"	34.5/1.4"	230/9"	306/12"	73/2.9"	132	681/26.8"
50-32-160H	160/6.3"	221/8.7"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	80/3.1"	34.5/1.4"	230/9"	306/12"	73/2.9"	160	827/32.5"
65-50-160H	160/6.3"	221/8.7"	350/13.8"	400/15.75"	12/0.5"	14/0.55"	80/3.1"	34.5/1.4"	230/9"	306/12"	73/2.9"		

## Pressure limits

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

Flange standard	Design pressure		
	316 St St	Alloy 20	Alloy C
ANSI B16.5 Class 150 + 300	1.89 N/mm2 275 psi	1.59 N/mm2 230 psi	2.00 N/mm2 290 psi
BS 4504 PN 16 + PN40	1.60 N/mm2 232 psi	1.52 N/mm2 220 psi	1.60 N/mm2 232 psi
DIN 2543/2545 PN16 + PN40	1.60 N/mm2 232 psi	1.52 N/mm2 220 psi	1.60 N/mm2 232 psi

Component	Hydrostatic test value		
	316 St St	Alloy 20	Alloy C
Casing (ANSI 150 + 300 lb)	2.93N/mm2 425 psi	2.41 N/mm2 350 psi	3.10 N/mm2 450 psi
Casing (PN 16 + PN40)	2.40 N/mm2 348 psi	2.30 N/mm2 333 psi	2.40 N/mm2 348 psi
Containment Shroud/Shell	2.93 N/mm2 425 psi	2.41 N/mm2 350 psi	3.10 N/mm2 450 psi

## Temperature limits

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

Option -40°C to +260°C (-40°F to +500°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 and motor adaptor assembly interface.



**HMD**  
**KONTRO**

Sealless Pumps



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