

GSA/GSI frame 0

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

A versatile range of general service pumps designed to cover a wide duty and application base using the minimum of pump models by maximising interchangeability of components. Available within the range is the GSA (ASME standard pump) and the GSI (ISO DIN standard pump). A GSL option is available for temperatures down to -100°C / -150°F.

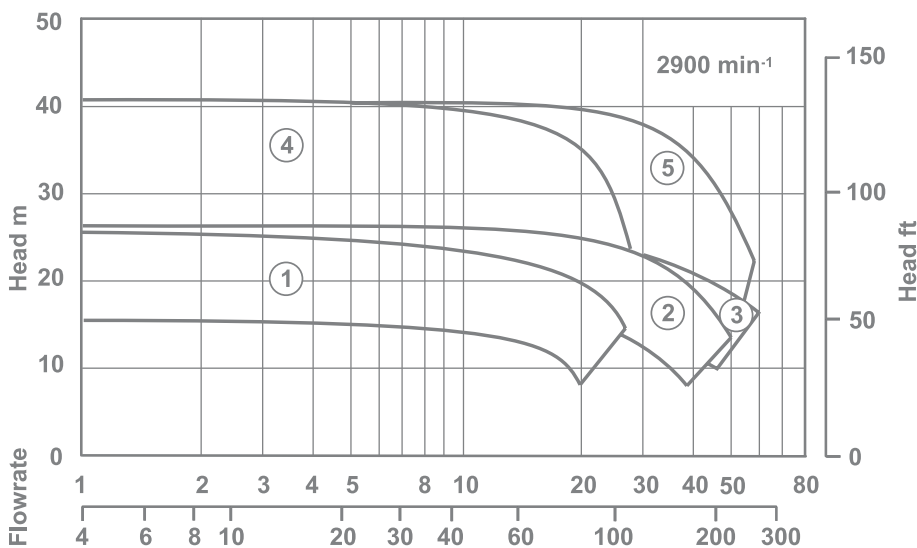
The GSA / (ASME) and GSI (ISO) product covers a hydraulic range that is split between three frame sizes, Frames 0, I, & II. The pumps are offered with a range of Synchronous Magnet Drives rated to match prime mover performance, hence specifications of all denominations can be catered for.

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.



Performance of the GSA/GSI frame 0



Pump model

	GSA	GSI		GSA	GSI
1	1.5 x 1 x 5	50-32-125	4	1.5 x 1 x 6H	50-32-160H
2	3 x 1.5 x 5	65-50-125	5	3 x 1.5 x 6H	65-50-160H
3	3 x 2 x 5	80-65-125			

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, Alloy C, Alloy 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

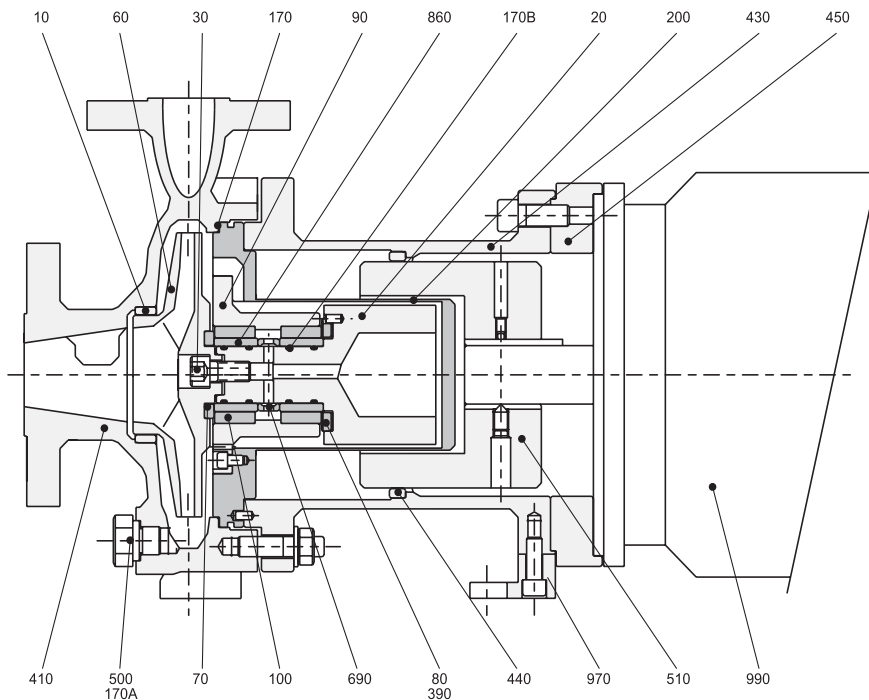
Key Design Features

- **No seals:** To minimise maintenance, all of the associated costs and eliminate potential leaks.
- **Sealless design:** For total containment, essential for hazardous, aggressive or valuable product.
- **Interchangeability of components:** For maximum convenience and reduced stock holding, operator training etc.
- **High efficiency wet end:** To benefit maximum flow / head coverage.
- **Wide choice of materials:** To allow a choice of various metals in the construction of your pump.
- **Casing gasket fully confined:** So eliminating risk of blowout.
- **Universal connection options:** So that suction and discharge flange connections can be configured to your exact requirements.
- **Modular rotating element cartridge:** Providing the most efficient way to perform replacements and manage your spare part inventory.

Benefits of GSA/GSI pump range

- Sealless design for total product containment.
- Ideal for hydrocarbon, toxic, aggressive, hot and valuable product.
- Conforms to ASME and ISO standards.
- Modular high efficiency wet ends.
- Designed to ensure maximum flow/head coverage across all ranges.
- Choice of various metallic materials of construction.
- One fully confined casing / containment shroud / shell joint.

Construction of GSA/GSI frame 0



10	Front Neck Ring	Stainless Steel
20	Pump Shaft/IMR	Stainless Steel
30	Impeller Fixing	Stainless Steel
60	Impeller	Stainless Steel
70	Front Thrust Washer	Alpha SiC
80	Back Thrust Washer	Alpha SiC
90	Bush Holder	Stainless Steel
100	Bush	Alpha SiC
170	Gasket (Casing)	CSF / PTFE
170A	Gasket (Drain)C	CSF / PTFE
170B	'O' Ring	Viton A / PFR
200	Containment Shroud/Shell	Stainless Steel/C276
390	Support Gasket	Exfoliated Graphite & SS
410	Casing	Stainless Steel
430	Coupling Housing	SG Iron
440	Bump Ring	Phosphor Bronze
450	Motor Adaptor	Carbon Steel
500	Drain Plug	Stainless Steel
510	Outer Magnet Ring	Carbon Steel
690	Shaft Sleeve Spacer	Stainless Steel
860	Shaft Sleeve	Alpha SiC
970	Coupling Housing Foot	SG Iron
990	Electric Motor	Proprietary

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 1.5 mm (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 BS4504 PN40.)

Flange Loadings

Allowable flange loadings imposed by pipework are in accordance with Table 4 of API 685 2nd 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.

Option 1: No drain, boss left undrilled.

Option 2: 1/2" NPT plug.

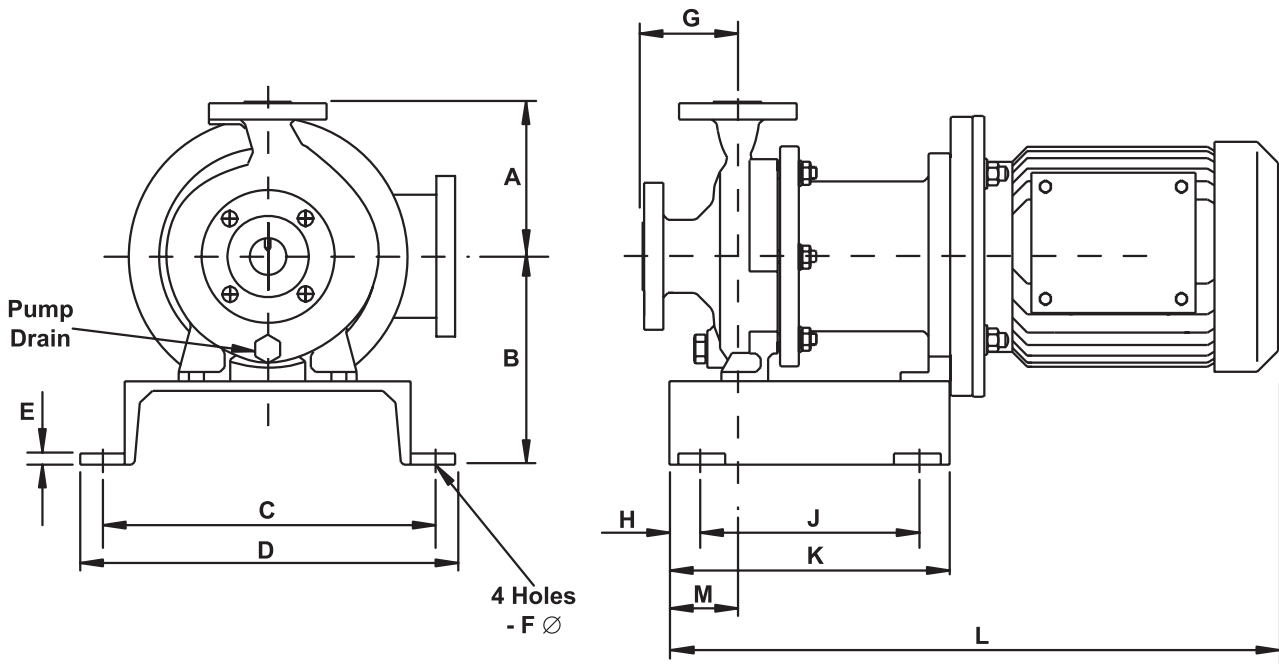
Option 3: 1/2" flange rated to the casing flanges.

Gauge Connections:

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

Dimensions of GSA/GSI frame 0

Dimensions are for guidance only



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"		

Dimensions shown are metric / imperial (inches).

Range capabilities

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



COMPRESSORS

PUMPS

GENUINE PARTS

SERVICE

Sundyne Headquarters:
Sundyne, LLC
 14845 West 64th Avenue
 Arvada, Colorado 80007
 USA
 1-866-Sundyne
 Phone: 1.303.425.0800
 Fax: 1.303.425.0896
 www.sundyne.com

Sundyne China:
 Building 1, No. 879 Shen Fu Road
 XinZhuang Industrial Zone
 Min Hang District
 Shanghai, China 201108
 Phone: +8621 5055 5005
 Fax: +8621 5442 5265

Sundyne France:
Sundyne International S.A.
 13-15, Boulevard Eiffel - B.P. 30
 21604 Longvic Cedex
 France
 Phone: +33 380 38 33 00
 Fax: +33 380 38 33 66

Sundyne Spain:
Sundyne Marelli Bombas, S.R.L.
 Ctra. Madrid-Toledo, Km.30.8
 45200 Illescas
 Toledo, Spain
 Phone: +34 925 53 45 00
 Fax: +34 925 51 16 00

Sundyne United Kingdom:
Sundyne HMDKontro Sealless Pumps, Ltd.
 Marshall Road
 Hampden Park Industrial Estate
 Eastbourne East Sussex, BN22 9AN
 United Kingdom
 Phone: +44 1323 452000
 Fax: +44 1323 503369
 Email: info@hmdkontro.com

Worldwide Sales Headquarters
 Unit 2 Harvington Business Park
 Hampden Park Industrial Estate
 Bampton Road
 Eastbourne East Sussex, BN22 9BN
 United Kingdom
 Phone: +44(0) 1323 452125

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/mm ² 275 psi	1.59 N/mm ² 230 psi	2.00 N/mm ² 290 psi
BS 4504 PN16 + PN40	1.60 N/mm ² 232 psi	1.52 N/mm ² 220 psi	1.60 N/mm ² 232 psi
DIN 2543/2545 PN16 + PN40	1.60 N/mm ² 232 psi	1.52 N/mm ² 220 psi	1.60 N/mm ² 232 psi

Component	Hydrostatic test values		
	316 St St	Alloy 20	Alloy C
Casing (ANSI 150 + 300lb)	2.93 N/mm ² 425 psi	2.41 N/mm ² 350 psi	3.10 N/mm ² 450 psi
Casing (PN16 + PN40)	2.40 N/mm ² 348 psi	2.30 N/mm ² 325 psi	2.40 N/mm ² 348 psi
Containment Shroud /Shell	2.93 N/mm ² 425 psi	2.41 N/mm ² 350 psi	3.10 N/mm ² 450 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.

To locate the global representative, distributor or authorized service center nearest you, or for additional information please visit www.sundyne.com

GLOBAL STRENGTH, powered by people

All information provided is subject to change without notice.
 © 2013 Sundyne, LLC
 All Rights Reserved. Other logos and trade names are property of their respective owners.

HMD Kontro GSA/GSI F0 1.0 5/12 A4 Eng.