



GENERAL PUMPS

ESPAÑA



**Difusores De Succión
Suction Diffuser
Diffuseurs D'aspiration**

Introduction

The General Pumps GSD Suction Diffuser is an important component of an HVAC pumping system. It directly mounts to the suction side of horizontal or vertical centrifugal HVAC pumps.

GSD is designed with the purpose of reducing space and installation cost by replacing a 90° suction elbow elbow, 'Y' strainer and a suction flow stabilizing piping for a centrifugal pump. All size models are available where they can also be used as a reducing elbow, should the suction piping be larger than the centrifugal pump suction size..

The GSD is furnished as a new unit with factory fitted start-up strainer which is a removable fine mesh filter, permanent stainless steel strainer and guide vane for flow stabilizing.

The start up suction strainer helps protect the pump from fine metal particles which may have been left in the pipes during the fabrication of piping system. Fine mesh start up strainer also serves the purpose of preventing seal failure and instrumentation damage during commissioning.

The permanent suction strainer helps to remove foreign materials that may be cause damage to the pump or other system components, while providing the proper suction flow conditions to the pump.

Guide vanes reduce turbulence in the suction flow to the pump resulting into laminar flow through impeller eye and also helps reduce stress and vibration.



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Features and Benefits

The multi feature design of GSD saves space and installation costs by incorporating all conventional components used on a suction side of centrifugal pump into a single component solution.

90° ELBOW

Direct mounting of GSD to the suction flange of any pump where a 90° turn is required, serves the purpose of replacing a conventional elbow.

IN-LINE STRAINER

Two in-line strainers are provided

1. A fine mesh circular outer strainer and
2. A permanent corrugated strainer.

The fine mesh outer strainer shall remove fine metal and other foreign particles or objects left in the pipes when the pump is being commissioned at site. This strainer is made out of zinc plated mild steel and should be removed after the first couple of weeks of regular service of pumps.

The permanent corrugated strainer is constructed out of 3 mm perforated stainless steel AISI 304 sheet metal. It's purpose is to protect the centrifugal pump against any metallic or other foreign particles and objects which are found in the water being pumped during the entire service life of the pump. The design of this strainer provide a large free flow area and has a very low pressure drop. This feature serves the purpose of installing a conventional 'Y' strainer in suction pipe.

GUIDE VANES

Flow stabilizing vanes on the outlet section of GSD ensures that it can be bolted directly to the suction flange of the centrifugal pump. This saves space and also reduces cost of a conventional long straight pipe to the pump suction. They being the integral part of GSD, straightening guide vanes also reduces flow turbulence, thereby creating optimum flow conditions and minimize stress on pump components and vibration in the pump.

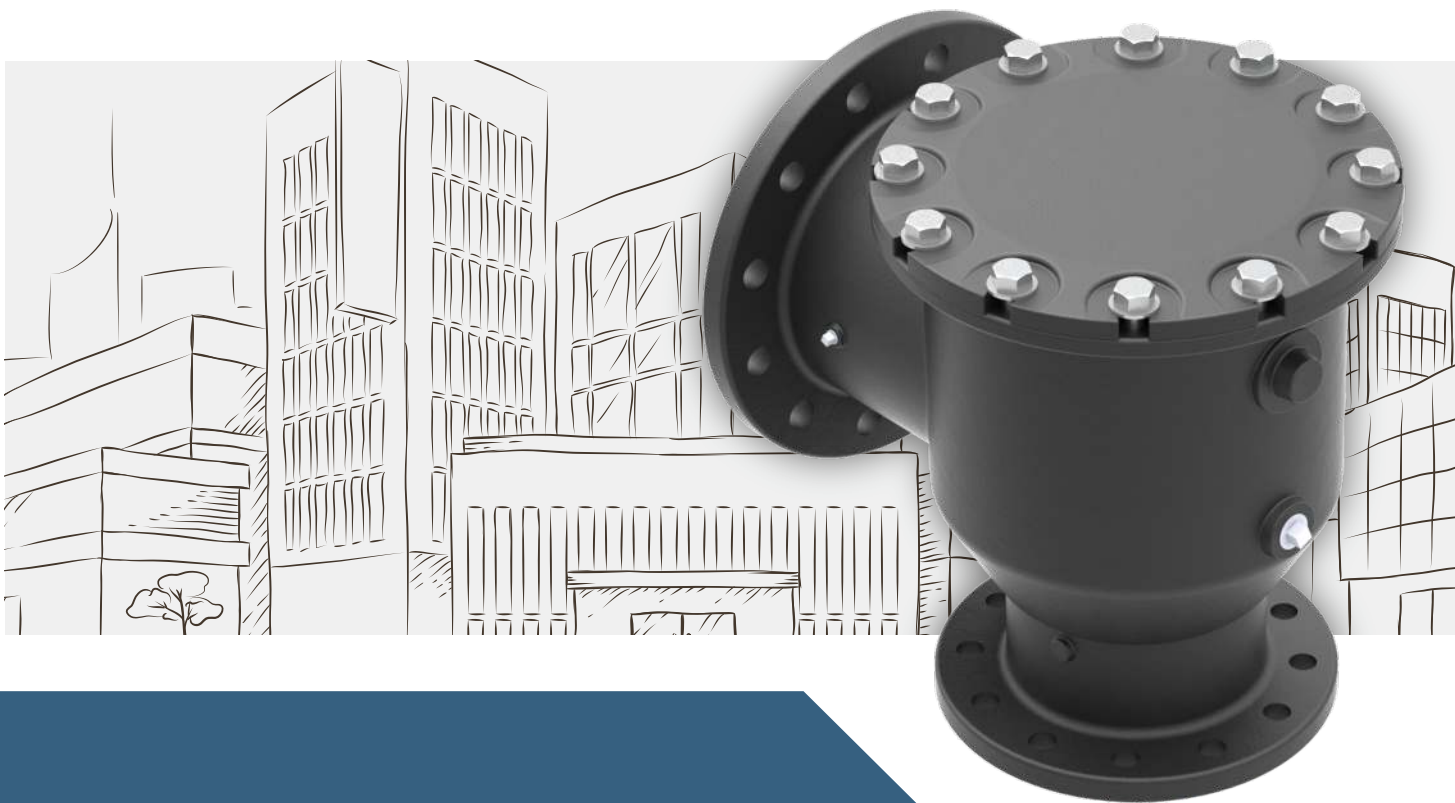
REDUCING ELBOW

All size models of GSD are available to connect same size piping to the pump suction, but can also connect to inlet piping one or more size larger than the pump suction, eliminating the need for a reducing elbow in the suction piping.



Standard Features Include

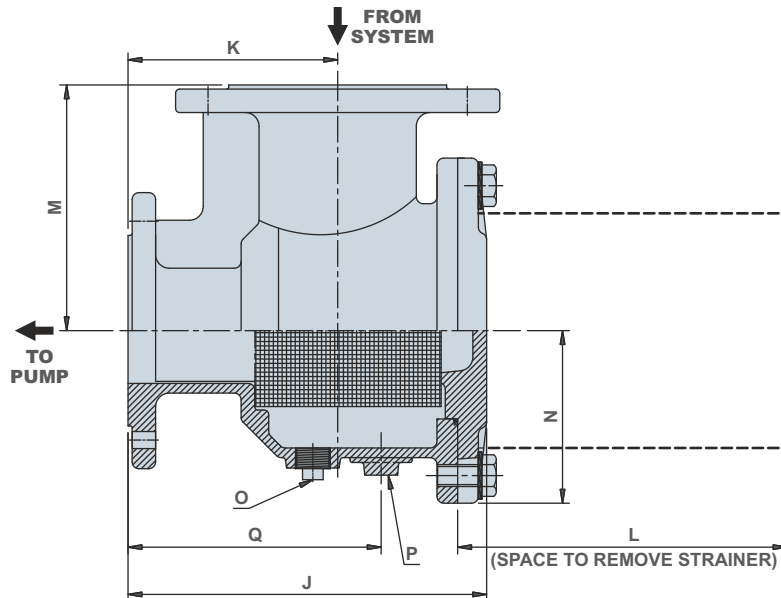
- Available in PN 16 & PN 25 as per DIN standard EN 1092- 2, with flanged connections. Flanges with ANSI 125 & ANSI 250 are available as per ASME B16.1.
- Available with equal or reduced outlet flanges.
- Cast on supporting pads for convenient mounting of standard inside diameter pipe footing
- Drain plug is provided to drain the GSD when required. An in-built magnet integral to plug is provided to trap small metallic particles.
- Available suction gauge port.
- 'O' ring seals body cover.
- Quick opening bolted body cover minimize down time while routine cleaning the strainer.



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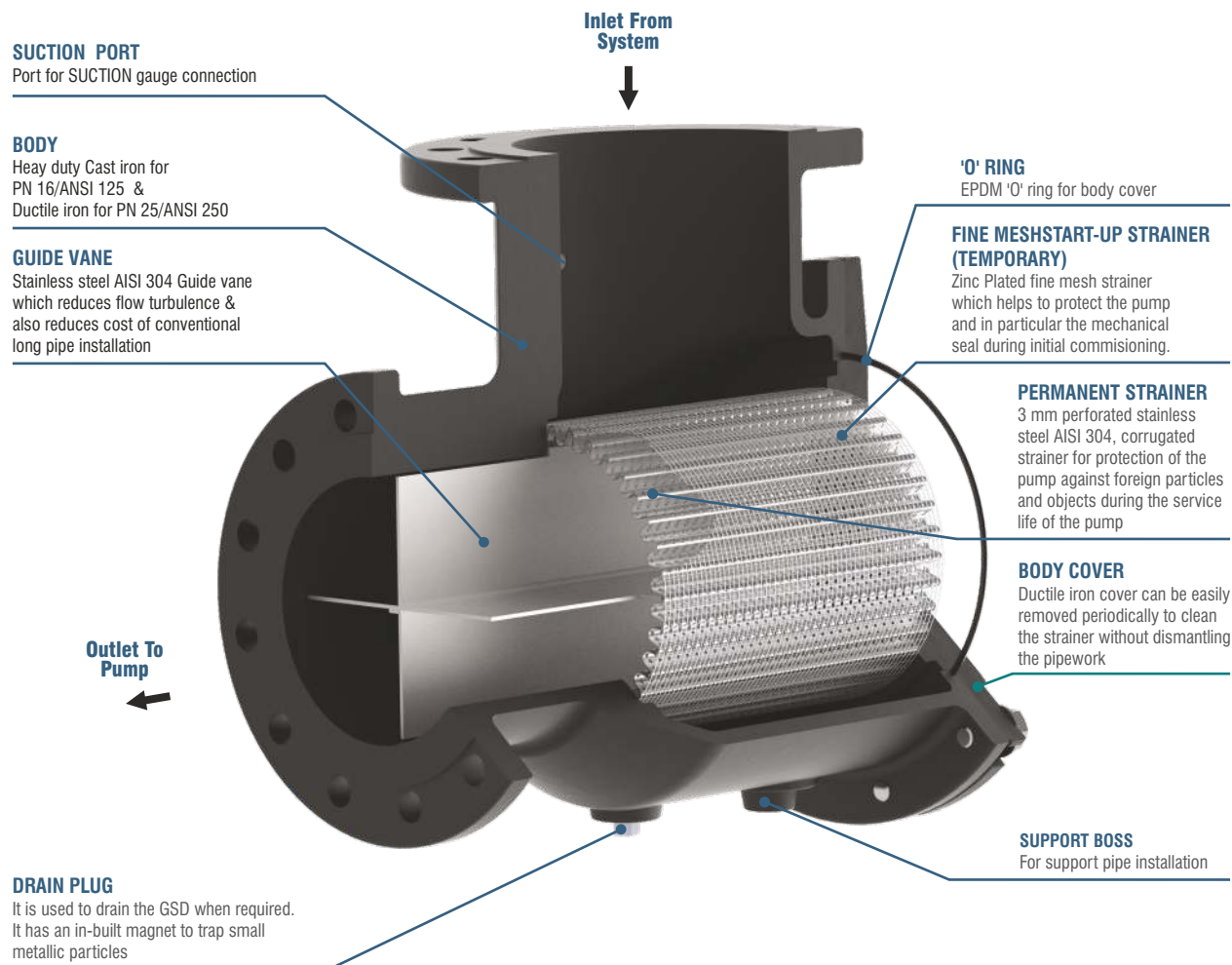
Technical Data



Type	Flange size [mm]		Flange size [inch]		Strainer free area [sq.inch]	Dimensions [mm]								Gross weight [kg]
	Pump side	System side	Pump side	System side		J	K	L	M	N	O	P	Q	
GSD 5050	50	50	2	2	35	228	127	250	159	110	1/2" NPT	25	161.5	20
GSD 6550		65		2 1/2	35	228	127	250	159	110	1/2" NPT	25	161.5	21.5
GSD 8050		80		3	35	228	127	250	159	110	1/2" NPT	25	161.5	23.5
GSD 6565	65	65	2 1/2	2 1/2	35	241	140	275	159	110	1/2" NPT	25	174.5	23
GSD 8065		80		3	35	241	140	275	159	110	1/2" NPT	25	174.5	25
GSD 8080	80	80	3	3	50	267	152	300	178	125	3/4" NPT	25	183.5	32
GSD 10080		100		4	50	267	152	300	178	125	3/4" NPT	25	183.5	34
GSD 100100	100	100	4	4	88	315	178	325	203	138	3/4" NPT	32	232	45
GSD 125100		125		5	88	315	178	325	203	138	3/4" NPT	32	232	46
GSD 150100		150		6	88	315	178	325	203	138	3/4" NPT	32	232	48
GSD 125125	125	125	5	5	114	360	204	375	230	166	1" NPT	32	268	61
GSD 150125		150		6	114	360	204	375	230	166	1" NPT	32	268	65
GSD 150150	150	150	6	6	162	448	267	450	279	188	1" NPT	50	345	85
GSD 200150		200		8	162	448	267	450	279	188	1" NPT	50	345	91
GSD 200200	200	200	8	8	270	545	330	525	330	225	1" NPT	50	441	144
GSD 250200		250		10	270	545	330	525	330	225	1" NPT	50	441	150
GSD 250250	250	250	10	10	475	629	368	600	368	257.5	1" NPT	50	472	197
GSD 300250		300		12	475	629	368	600	368	257.5	1" NPT	50	472	205
GSD 300300	300	300	12	12	780	762	457	700	457	334.5	1" NPT	50	584	342
GSD 350300		350		14	780	762	457	700	457	334.5	1" NPT	50	584	355

Note: All dimensions in mm unless otherwise noted.

Design Features



Material of Construction

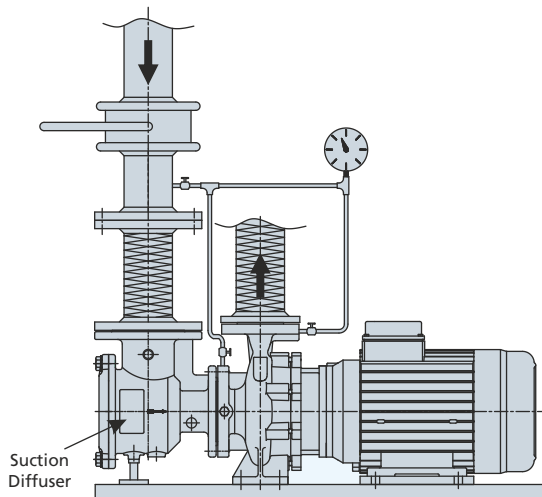
COMPONENT	MATERIAL	
	PN 16/ANSI 125	PN 25/ANSI 250
Diffuser body	Cast iron	Ductile iron
Body cover	Ductile iron	Ductile iron
Permanent strainer (3 mm perforations)	Stainless steel AISI 304	Stainless steel AISI 304
Start-up strainer (fine mesh)	Zinc Plated steel	Zinc Plated steel
Guide vane (flow straightening vane)	Stainless steel AISI 304	Stainless steel AISI 304
Body cover 'O' ring	EPDM Rubber	EPDM Rubber



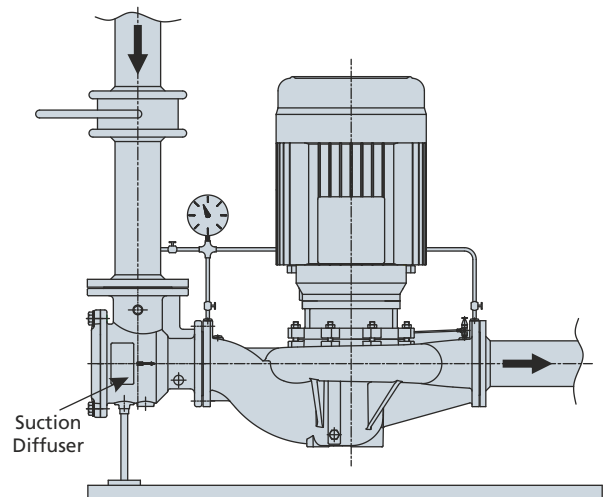
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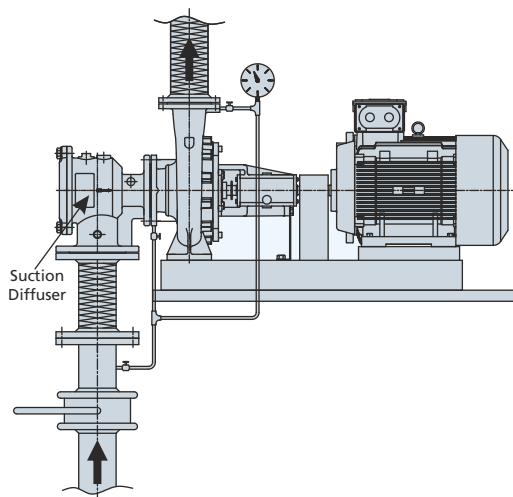
Typical Installation



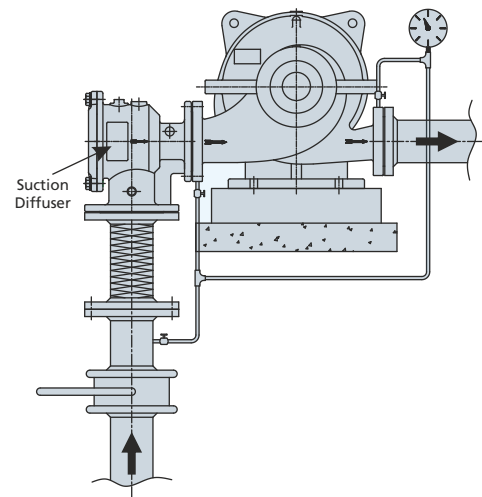
END-SUCTION CLOSE COUPLED MOTOR PUMP



VERTICAL IN-LINE PUMP



END-SUCTION PUMP COUPLED WITH MOTOR ON BASE FRAME



HORIZONTAL SPLIT CASE PUMP



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