

GA12 Gearchem® Pump

Stocked in 316 SS, Alloy C, and Alloy 20.



Manufactured in U.S.A.

This self-priming, external spur gear pump has 1½-inch FNPT or BSPT, or 150 lb. raised face ANSI horizontal ports, and will deliver flows up to 28 gpm. Maximum rated discharge pressure for this pump is 150 psig with metallic gears and to 100 psig with a combination of metallic and non-metallic gears. Designed for simplified maintenance, the pump may be quickly disassembled without the need to break piping connections. The GA 12 is designed for continuous duty industrial applications with clear, corrosive, non-abrasive fluids.

Metallic and non-metallic gears are machine generated. A variety of materials is available and an existing pump can be quickly converted to satisfy different service conditions. Combination metallic and non-metallic gear sets allow the pump to handle low viscosity and non-lubricating fluids at standard motor speeds. This capability provides reduced noise levels and eliminates the need for larger pumps operating at reduced speeds. All gear materials are non-sparking for use with hazardous fluids.

Pumps do not require periodic lubrication, since the pumped fluid provides the necessary lubrication and cooling. In addition to reducing maintenance, this feature eliminates the possibility of contamination of the pumped fluid.

Mechanical seals are available for the most demanding applications including single internal and double mechanical seals. Two packing box designs are also offered with a variety of packing material.

Because they are expressly designed for chemical service, ECO gear pumps do not include integral/built-in by-pass pressure relief valves. Designs with internal valves can cause heat build-up in the pumped fluid, resulting in accelerated corrosion rates, possible vapor binding or even pump seizure. ECO recommends the use of externally mounted pressure relief valves, piped back to the fluid source. ECO can supply such relief valves, in various metallurgies, for many process requirements.

Standard features include bearing flush plugs and center housing drain connection. A center housing vent port is available as an optional feature. Additional accessories include bolt-on heating/cooling jackets, pressure relief valves and back pressure valves.

Pump components, in all offered materials, are stocked to provide quick delivery. A variety of constant or variable speed motors, with electric or air power, are also stocked for quick delivery of completely mounted and assembled pump packages. Pumps and replacement parts are also stocked in Europe.

GENERAL SPECIFICATIONS

Port size and type	1 1/2-inch NPT or BSPT, 150# ANSI RF flange
Port location	Side inlet and outlet
Direction of rotation	Bidirectional
Theoretical displacement	2.792 gal/100 rev (105.7 cc/rev)
Drive shaft diameter	1-inch
Maximum discharge pressure ¹	150 psi (1050 kPa)
Minimum system pressure	0.1mm Hg (abs)
Maximum speed	1150 rpm
Capacity at 1150 rpm, 0 psi ²	28 gpm (6.3m ³ /hr)
Maximum viscosity ³	100,000 cP
Minimum viscosity	None
Standard temp limits	-100°F (-73°C) to 450°F (232°C) with metallic gears or carbon idler -100°F (-73°C) to 120°F (49°C) with non-metallic gear
Fluid pH range	0-14
Bearing type	Internal sleeve
Bearing lubrication	By pumped fluid
Packing arrangements	Lantern ring packing box
Mechanical seals	Single internal, double
Approximate weight	39 lbs. (17.6 kg) pump only

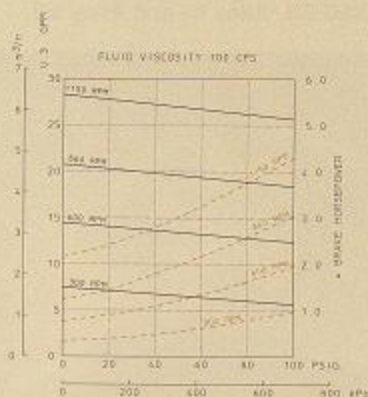
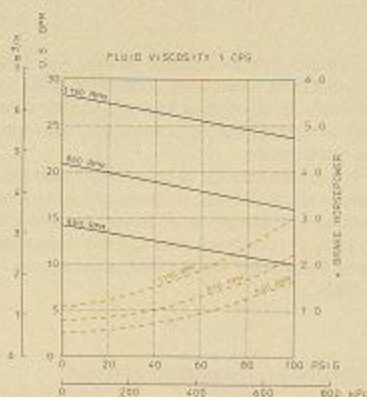
¹Consult factory for approved application above 100 psi.
²At nominal viscosity.
³Higher viscosities possible with speed reduction.

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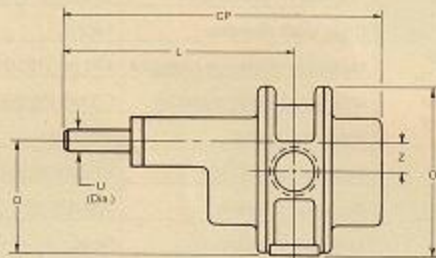
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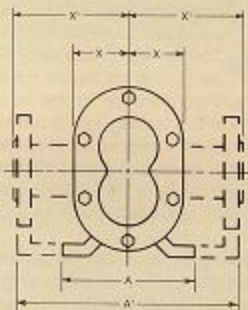
TYPICAL PERFORMANCE



DIMENSIONS — UNMOUNTED PUMP



GA 12 — 1 1/2" — METRIC S.P. GA 12 — 1 1/2" — 100MM FLANGES



MATERIALS OF CONSTRUCTION

Housings, shafts and shaft fittings	316 SS, Alloy 20, Alloy C
Drive gear	Alloy C
Idler gear	Alloy C, TFE (GF), Carbon, peek
Bearings	Carbon, TFE (GF)
Wearplates	Carbon, TFE (GF), ceramic, peek
Housing O-rings	TFE, TFE coated stainless steel
Packing	TFE, Grafol®
Seal mating faces	Carbon/silicon carbide Carbon metallic

PORTS	DIMENSIONS			INCHES				
	A/A'	cP	D	L	O	U	X/X'	Z
1 1/2-in threaded	6	15 1/8	5	11 1/4	7 1/2	1	2 1/2	1 3/16
1 1/2-in flanged	152.4	384.2	127.0	285.8	190.5	25.4	63.5	30.2
1 1/2-in threaded	9 7/16	15 1/8	5	11 1/4	7 1/2	1	5	1 3/16
1 1/2-in flanged	239.7	384.2	127.0	285.8	190.5	25.4	127.0	30.2

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