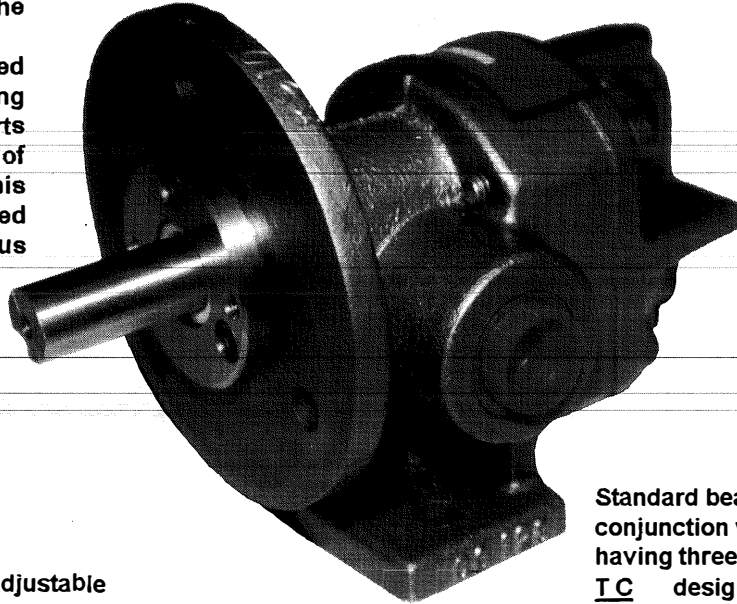


Foot & Flange Group 1 Positive Displacement Gear Pumps

This series extends the range of applications of the Classic Group One pumps. The design has an enhanced specification, featuring larger bearings, larger ports with the option of mechanical seals. This series is to be recommended for particularly arduous duties.



Versatile mounting options, Standard Flange mounting with assured alignment is to be preferred. However mounting from the integral foot may, for many applications, be of benefit.

Release valve options include adjustable or pre-set nonadjustable for internal or return to tank applications

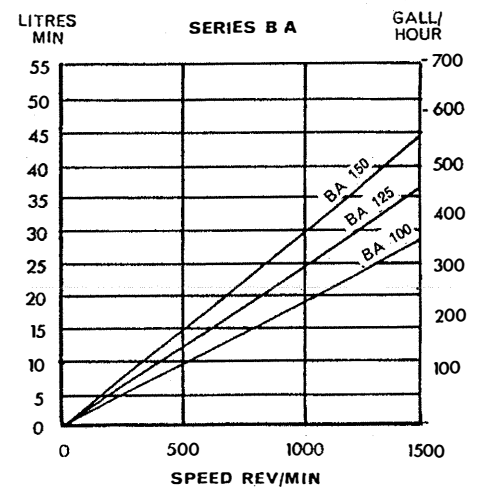
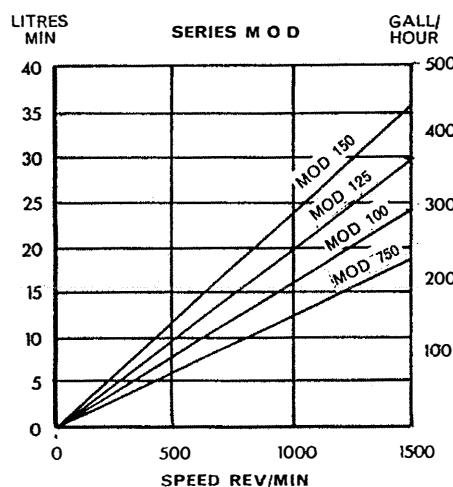
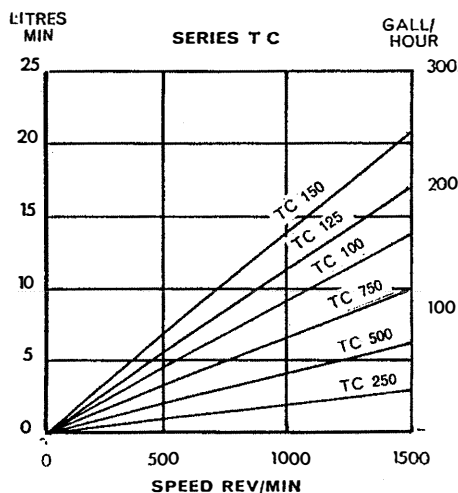
All components are interchangeable, providing an unusually wide choice of assemblies. Where production quantities permit we will design and manufacture to your requirements, for new applications or to interchange with your existing equipment, at near standard prices

Standard bearing housings are used in conjunction with gears and chambers having three basic gear configurations :-
TC designation, having 17 teeth,
MOD designation having 10 teeth
BA designation having 8 teeth.

Each individual size in Group One is thus defined by a pre-fix denoting the gear followed by a number denoting the chamber width in inches. For example BA 100 denotes gear style B A, with 8 teeth in a chamber 25.4 millimetre (1 inch) wide.

Midland pumps are positive displacement and for most applications output (Flow) is directly proportional to the speed of shaft rotation. The following graphs, discharge against rotational speed are based on "ideal" conditions :-

Oil with a viscosity 95 centistokes with pump running "Free Flow", flooded suction and without any restriction imposed upon the output.



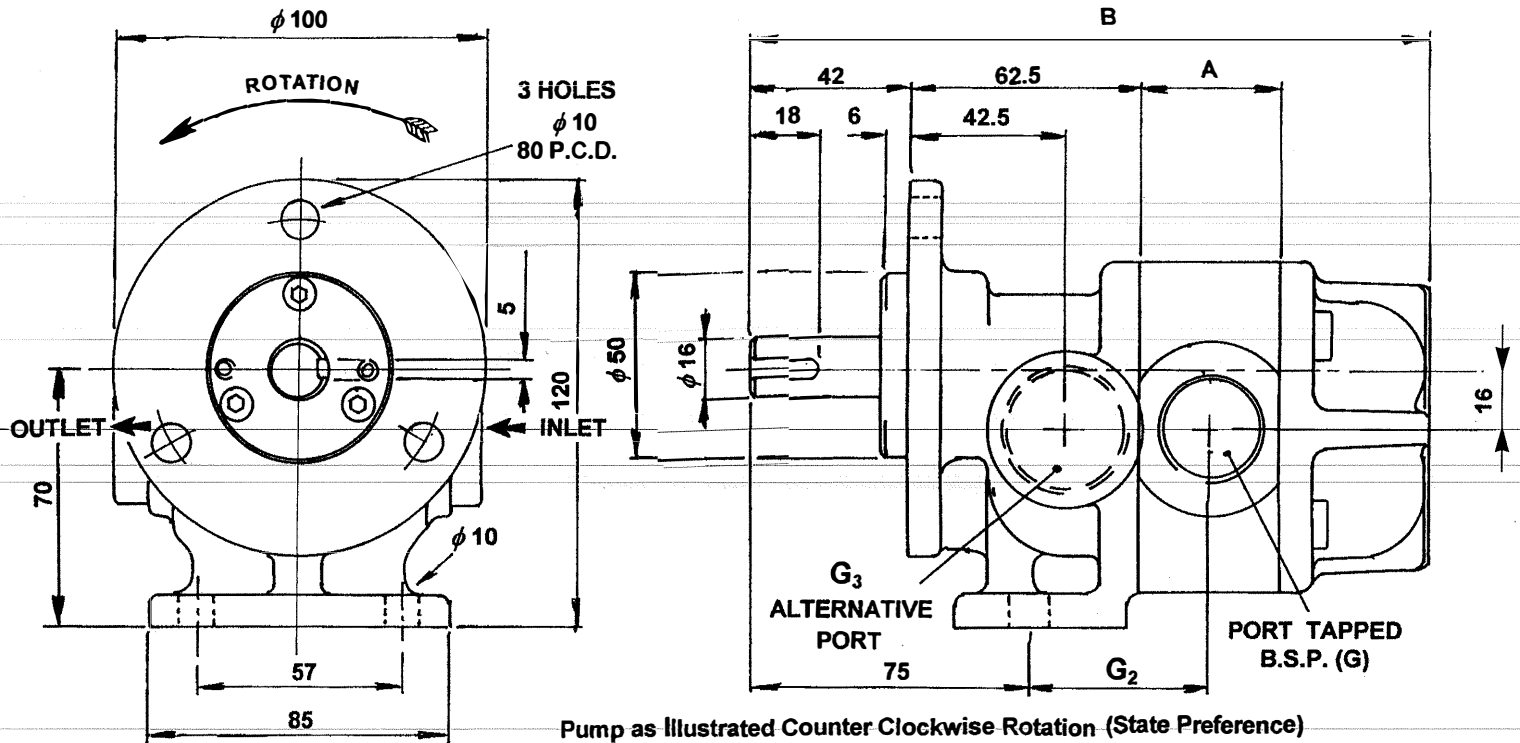
With thinner materials the volumetric output is reduced due to "slippage".

Slippage may be considered as an escape of fluid from the output side to the inlet side of the pump, through the fixed working clearances within the pump.

Slippage is a function of the internal clearances, the viscosity of the fluid, the differential pressure across the pump and in part upon the speed of shaft rotation.

Midland has available, and will furnish on request slippage characteristic graphs, for all sizes. These form part of our advanced data package, which includes information relating to pump driver power, speed reduction criteria and power corrections for very viscous materials. Our skilled engineers will willingly advise and assist in the selection of the pump for your requirement.

Foot & Flange Group 1 Positive Displacement Gear Pumps



Specific Discharge	
Pump model	mL/rev
TC 500	4.8
TC 750	7.1
TC 100	9.5
TC 125	11.8
TC 150	14.2
MOD100	16.1
BA 100	19.6
MOD125	20.2
MOD150	24.2
BA 150	29.4

					Port Position BSP parallel (oversized)			
Pump Model	A	B	G2		G2 Preferred	G3		
TC	500	12.7	157.2	35.9		1/4	3/8	1/2 3/4
TC MOD	750	19.0	163.6	39.0	1/4 (3/8)	1/4	3/8	1/2 3/4 1
TC MOD BA	100	25.3	170.0	42.1	3/8 (1/2)	1/4	3/8	1/2 3/4 1
TC MOD BA	125	31.6	176.4	45.2	3/8 1/2 (3/4)	3/8	1/2	3/4 1
TC MOD BA	150	37.9	182.8	48.3	1/2 3/4	1/2	3/4	1

Pump type, external fixed clearance gear type, with Product Lubricated Bearings.

Pump casings Standard fitted close grained cast iron 230

Option - malleable S. G. Iron. We are pleased to offer alternative casing materials where quantity permits

Rotors Standard fitted, Carbon steel straight Spur involute form gears.

(Options) Helical form gears, Stainless Steel material and Through Hardened Carbon steel (check with factory)

Spindles Standard fitted, Carbon alloy steel, deep case hardened, full treatment, and precision ground.

Options Hard Chrome Plated, deposited on hardened steel substrate and Stainless Steel

Bearings Standard fitted P T F E wrapped steel backed bushes

Options plain cast iron, plain cast iron replaceable, bronze alloy plain bearings and Needle Roller bearings

Other bearing materials can be supplied i.e. engineering plastics, subject to quantity

Shaft Sealing - Lip Seals

Standard fitted Midland standard uses 2 Nitrile Lip Seals, fitted back to back and the arrangement incorporate a Scavenge system, where by liquid drawn from behind the seal and fed to the inlet side of the pump. By necessity, this hands the direction of pump rotation. Standard direction of rotation is counter clockwise when looking at the pump drive shaft. Clockwise rotation available on request.

Options Lip sales using elastomers in VITON, E. P. D. M and P. T. F. E. Lip seal 'back-up' support inserts are available for special applications. Consideration will be given to supplying Lip seals incorporating other elastomers, subject to quantity.

-- **Packed Gland** Standard fitted packing boxes fitted with screw type adjustment and lock nut. The standard gland packing comprises graphite impregnated asbestos substitute cord, in combination with a Nitrile, Base sealing ring.

Options, P T F E Type packing with P T F E sealing ring in base and Gland adjusting screws fitted with "O ring".

--Mechanical seals

The seal elements are readily accessible by removal of screws which attach the seal housing to the pump. The housing will accept seals to D I N standard 24960 with either 013 D I N (short) or 011 D I N (pin drive) seats

Standard fitted The basic mechanical seal fitted, comprises Nitrile elastomers, carbon face running against Ni-resist iron seating.

Options any specification available within the DIN standard size can be fitted. This allows selection, subject to application, from the very extensive range of elastomers and Face/Seal material combinations, which are readily available

Connections Standard fitted all pumps incorporate female screwed ports "G" (British Standard parallel Pipe thread)

Option Screwed Rc (British Standard Taper Pipe thread), Screwed, N P T (American national Taper Pipe thread).

Oversized ports. These can be an advantage when handling very viscous material, but extra care is required on installation to avoid damage to the pump casing elements.