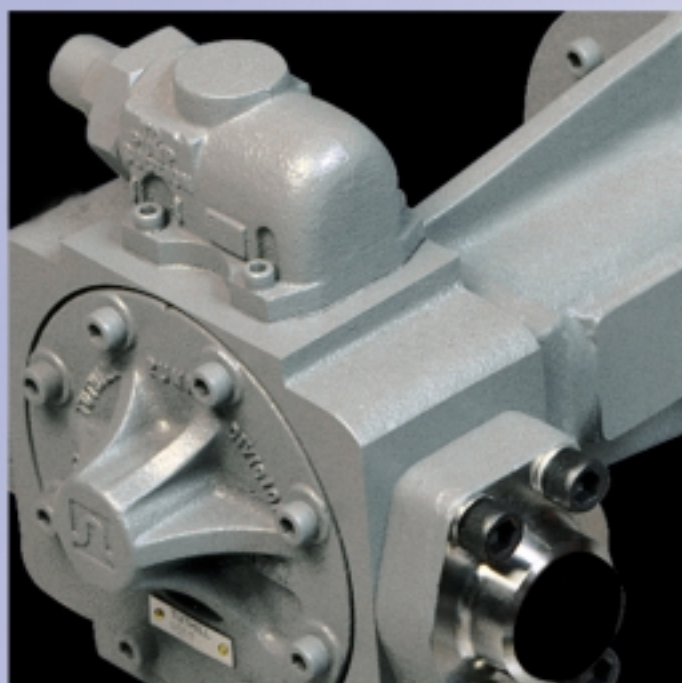




# TUTHILL PUMP GROUP

ENGINEERED solutions



**1000 Series**

**Lube Tech** Family of Lubrication Pumps

# TUTHILL 1000 SERIES Internal Gear Pumps

**1000 Series pumps** are based on the proven internal gear principal, but have been enhanced in response to demands from our OEM customers for a pump that offered advanced features which made installation easier. These side-ported pumps have the option to bolt SAE/DIN flanges onto them ensuring maximum flexibility on the porting arrangements. Our goal was to design a pump that meets your technical requirements and is easily fitted into your system.

Our manufacturing expertise and knowledge of applications enable us to not only provide you with an engineered solution, but

we ensure your satisfaction with post-sales service. We pride ourselves on properly servicing you with specification, installation, and operation and troubleshooting.

The pump was originally designed to meet and exceed the exacting requirements of the refrigeration compressor market. The design has so many inherent features and benefits that our traditional customers are also seeing the advantages. The excellent performance of the 1000 series pumps are solving problems in many industries and varying applications. Contact us to review your application and determine if the 1000 series pump is your engineered solution.

## Features

- **Materials of construction**

Body: Grade 220 cast iron

Rotor: Carbon steel

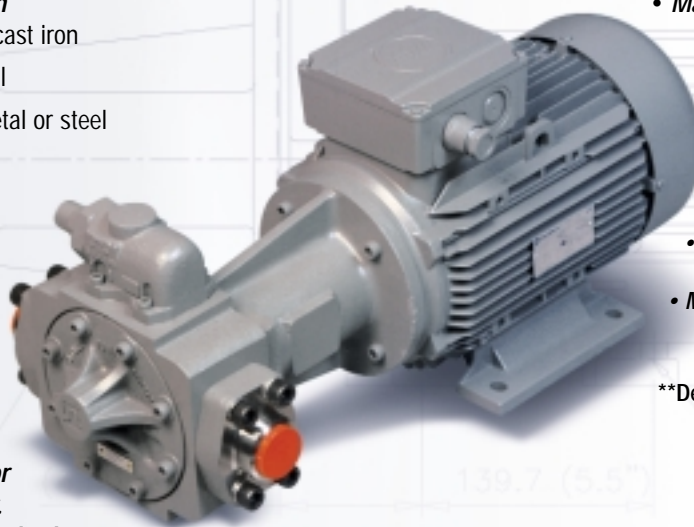
Idler Gear: Sintered metal or steel

- **Self priming**

- **Non pulsating flow**

- **Mechanical seal fitted as standard (lipseal option only on direct mounted pumps)**

- **Choice of ball bearing or carbon bearings in body. Carbon Bush Idler is standard**



- **Max Speed**

1008 – 1010 3600rpm

1012 – 1022 1800rpm

1024 - 1200rpm

- **Max differential pressure 18 bar\* (265 psi)**

- **Max inlet pressure 26 bar\*\* (380 psi)**

- **Max temperature 200°C (390° F)**

\*For higher pressure consult the factory

\*\*Dependent on type of mechanical seal fitted

Flow rate at 50 Hz.  
Imperial Gallons per minute  
Litres per minute

720 RPM                      960 RPM                      1425 RPM

3.45 bar (50psi)

	720 RPM		960 RPM		1425 RPM	
	GPM	LPM	GPM	LPM	GPM	LPM
1008	0.88	4.02	1.30	5.91	2.00	9.09
1010	1.92	8.71	2.60	11.82	3.92	17.81
1012	3.20	14.55	4.20	19.09	6.00	27.28
1014	5.20	23.50	6.90	31.50	10.35	47.00
1015	5.83	26.52	7.75	35.23	11.53	52.43
1017	11.98	54.48	16.03	72.89	23.75	107.97
1020	18.67	84.86	25.83	117.44	39.58	179.95
1022	25.67	116.68	36.25	164.79	55.83	253.82
1024	66.00	300.00	88.75	403.00		

Flow rate at 60 Hz.  
U.S. Gallons per minute  
Litres per minute

860 RPM                      1150 RPM                      1750 RPM

3.45 bar (50psi)

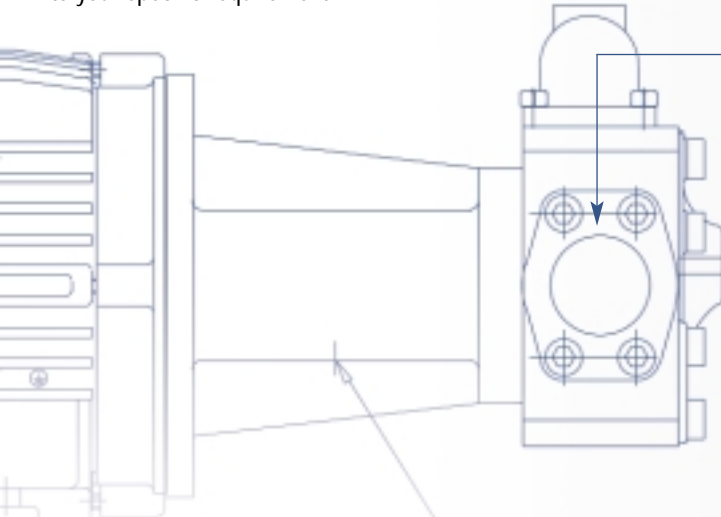
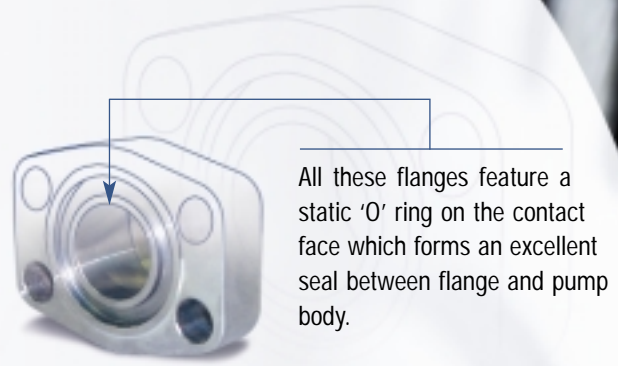
	860 RPM		1150 RPM		1750 RPM	
	USGPM	LPM	USGPM	LPM	USGPM	LPM
1008	1.26	4.80	1.87	7.09	2.88	10.88
1010	2.76	10.46	3.74	14.18	5.64	21.37
1012	4.61	17.46	6.05	22.91	8.64	32.73
1014	7.49	28.20	9.94	37.80	14.90	56.40
1015	8.40	31.82	11.16	42.28	16.61	62.92
1017	17.26	65.37	23.09	87.47	34.20	129.56
1020	26.88	101.83	37.20	140.93	57.00	215.94
1022	36.96	140.02	52.20	197.75	80.40	304.58
1024	95.04	360.00	127.80	483.60		

Flow rates are calculated based on pumping 50cstks at 20°C.

## 1000 Series Porting

The pumps are fitted with S.A.E/D.I.N flanged ports which enable Tuthill to offer various ports options.

We have the ability to build your pump with threaded ports, butt weld port, socket weld port, or a blank flange. The blank flange can be tapped to your specific requirement.



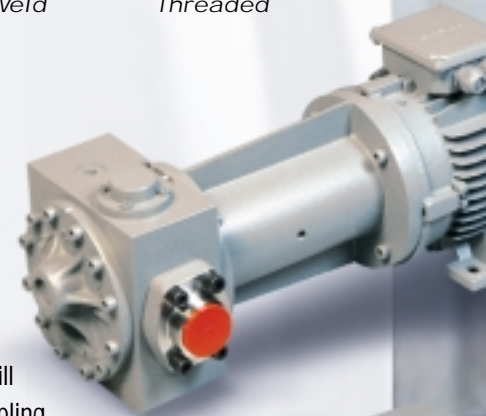
## 1000 Series Mounting

1000 Series pumps can be coupled to either IEC or NEMA standard motors via an aluminum adapter.

Models 1008-1022 are usually supplied fitted to C face motors, however the 1024 pump is too heavy to fit on a C face motor so we supply this model on a steel adapter which utilizes a D flange motor. The 1020 & 1022 will also fit on this adapter if a D flange motor is required. The pumps can also be supplied with adapter and coupling if the user wants to supply their own motors.

All pumps are designed to be suitable for vertical mounting with the pump facing down. This is usually a requirement in the refrigeration industry. It is recommended that if the pumps are to be mounted in this manner, it is indicated at the enquiry stage of the buying process.

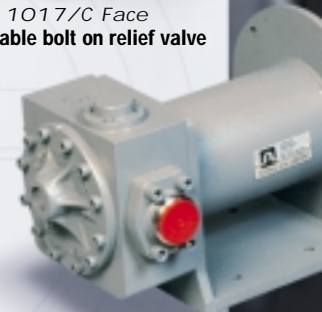
All the adapters can be supplied with a tapped port to facilitate fitting of a clear bottle. The clear bottle is used as a sight glass to determine seal status.



1020/C Face  
Preset integral relief valve



1017/C Face  
Adjustable bolt on relief valve

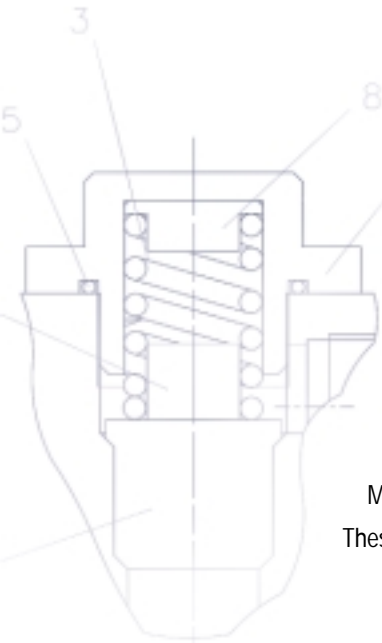


1022/D Flange  
Preset integral relief valve

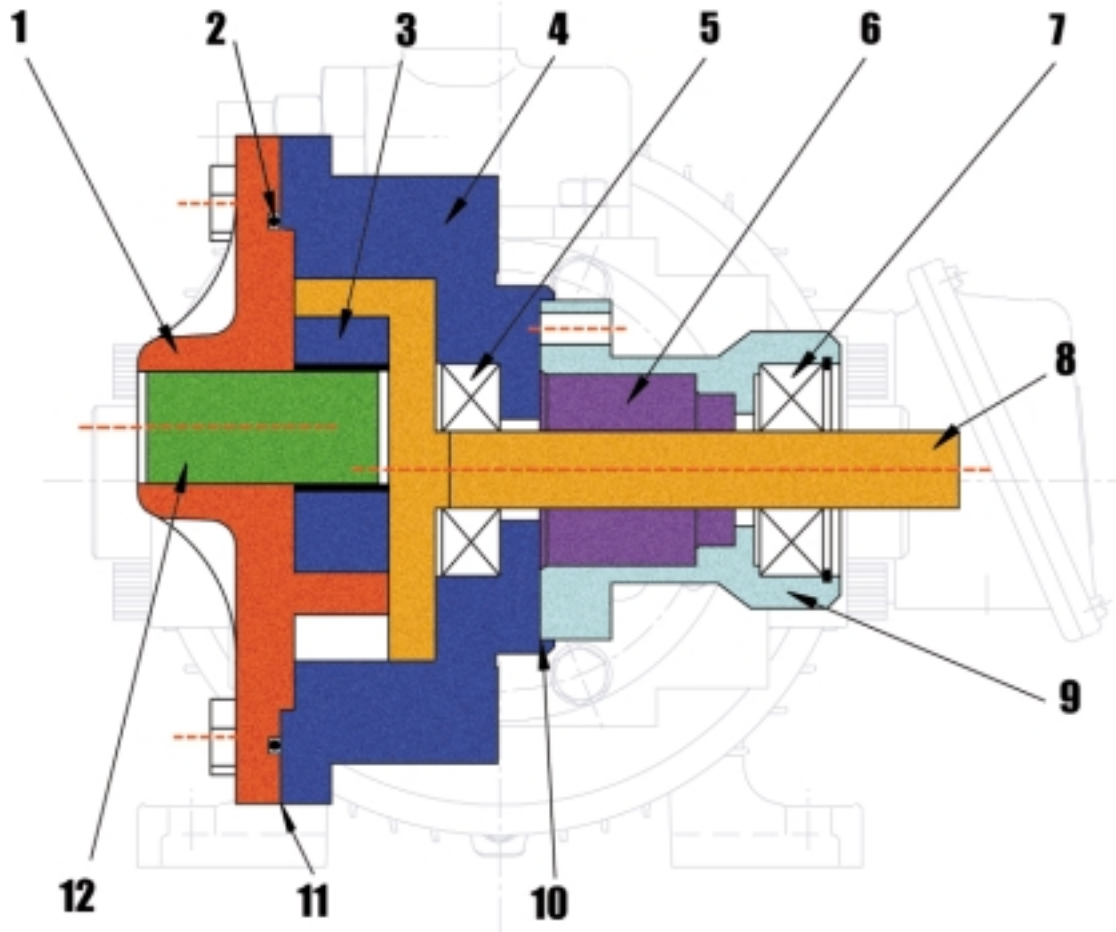
## 1000 Series Relief Valves

All pumps can be fitted with safety relief valves which can be configured for either a "return to tank" or "return to suction" feature. The valve caps have either an O ring seal (standard relief valve), or PTFE or fibre gaskets (bolt-on relief valve type).

Models 1008-1022 can be supplied with a preset tamper-proof relief valve that is gas tight. These valves are usually a "return to suction" type, but can be vented to tank if required



# Assembly 1012-1017



- |               |                    |                 |               |
|---------------|--------------------|-----------------|---------------|
| 1. Cover      | 4. Body            | 7. Bearing      | 10. Gasket    |
| 2. "O" Rings  | 5. Bearing         | 8. Rotor        | 11. Gasket    |
| 3. Idler Gear | 6. Mechanical Seal | 9. Seal Housing | 12. Idler Pin |

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