radicon

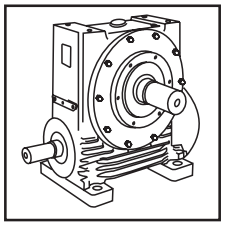
with you at every turn

Roloid Gear Pump

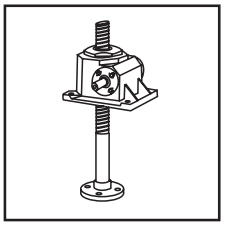
Gear Pump
CRP-2.00GB1211

PRODUCTS IN THE RANGE

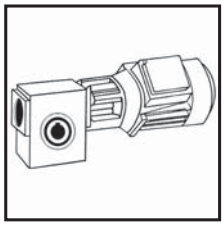
Serving an entire spectrum of mechanical drive applications from food, energy, mining and metal; to automotive, aerospace and marine propulsion, we are here to make a positive difference to the supply of drive solutions.



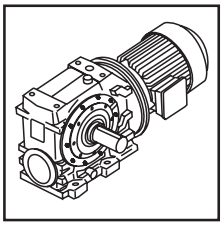
Series A
Worm Gear units and geared motors in single & double reduction types



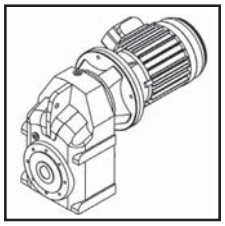
Series BD
Screwjack worm gear unit



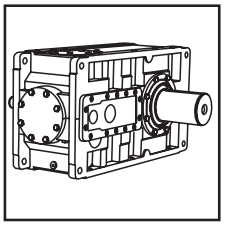
Series BS
Worm gear unit



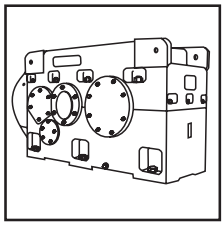
Series C
Right angle drive helical worm geared motors & reducers



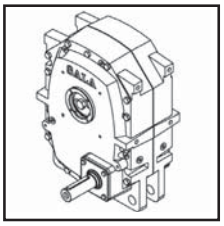
Series F
Parallel angle helical bevel helical geared motors & reducers



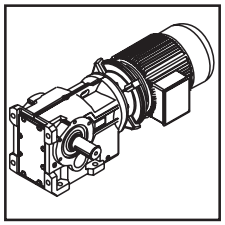
Series G
Helical parallel shaft & bevel helical right angle drive gear units



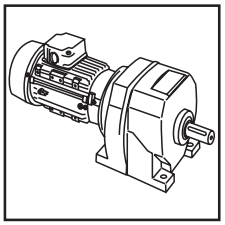
Series H
Large helical parallel shaft & bevel helical right angle drive units



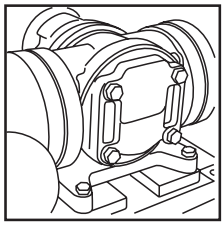
Series J
Shaft mounted helical speed reducers



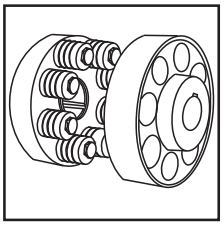
Series K
Right angle helical bevel helical geared motors & reducers



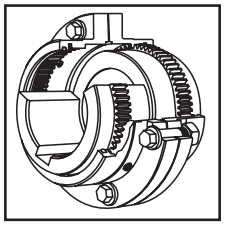
Series M
In-line helical geared motors & reducers



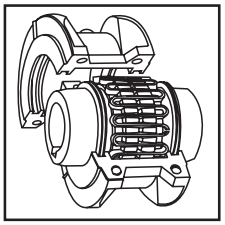
Roloid Gear Pump
Lubrication and fluid transportation pump



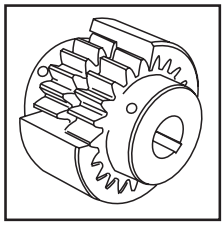
Series X
Cone Ring
Pin and bush elastomer coupling



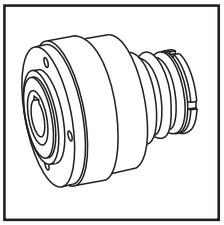
Series X
Gear
Torsionally rigid, high torque coupling



Series X
Grid
Double flexing steel grid coupling



Series X
Nylicon
Gear coupling with nylon sleeve



Series X
Torque Limiter
Overload protection device

We offer a wide range of repair services and many years experience of repairing demanding and highly critical transmissions in numerous industries.

We can create custom engineered transmission solutions of any size and configuration.

ROLOID GEAR PUMP

INTRODUCTION

The Roloid Gear Pump is robust, compact and versatile. It is easy to install, extremely reliable, and requires little maintenance during service.

The pump design and product range have matured over many years and in combination with Radicon excellence, represents an economic and reliable solution to lubrication and fluid transportation requirements.

Roloid Gear Pumps are suitable for pumping a wide variety of liquids which have some lubricating property.

Our application engineers will gladly assist in selecting a pump that will give trouble free operation.

Roloid Gear Pumps Can Be Used For Lubrication Of:

- Engines
- Compressors
- Gearboxes
- Rolling Mills
- Machine Tools
- Process Plant
- Pumping Sets
- Turbines

Roloid Gear Pumps Can Be Used For Pumping The Following Liquids:

- Fuel Oils
- Open Circuit Servo
- Quenching
- Cutting and Cooling Fluids
- Oil/Water Emulsions
- Viscous Vegetable and Animal Fats
- Bitumen
- Wax
- Paint
- Lacquers
- Viscose

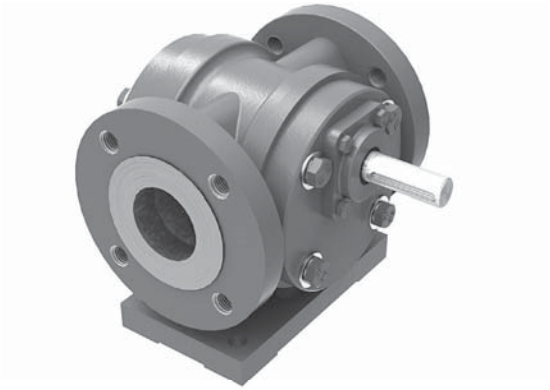
Features

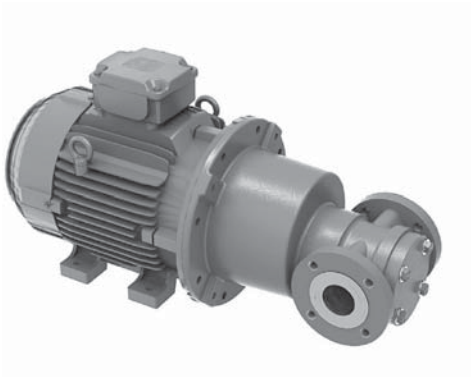
- Double helical rotors for low noise and non pulsating flow.
- Accurate manufacture of rotors and housings for high efficiency, providing self priming and discharge pressures up to 290 Psi.
- Robust journal roller bearings for long life and durability.
- Designed to rotate in either direction.
- Numerous attachments accessories and materials variants available for special orders. Motorised bracket base and flange mounted or pumps are available as standard.
- Housing motor or special baseplate or tank top designs are available.
- Special baseplate or tank top designs are available on request.

PUMP VERSIONS

Base Mounted Unit

The Base Mounted Roloid Gear Pump is available as standard in 7 sizes (90 to 25) giving output flow rates between 1 gallons/minute to 278 gallons/minute, A further 2 sizes (20 and 15) are available upon special request for achieving flow rates up to 673 gallons/minute. All pumps come as standard with Ansi B16.5 Class 150 connection flanges and a base plate to give secure mounting to a flat surface.





Motor Mounted Unit

The Motor Mounted Roloid Gear Pump is available as standard in 7 sizes (90 to 25) giving output flow rates between 1 gallons/minute to 278 gallons/minute using IEC Motor frame sizes Between 90 and 250. A further 2 sizes (20 and 15) are available upon special request for achieving flow rates up to 673 gallons/minute. All pumps come as standard with Ansi B16.5 Class 150 connection flanges. The Motor Mounted Unit comes as an enclosed unit and utilises the motor feet to mount the unit on a flat surface. A motor ready option is also available to allow the end user to fit a specific motor of their choice.

Flange Mounted Unit

The Flange Mounted Roloid Gear Pump is available as standard in 7 sizes (90 to 25) giving output flow rates between 1 gallons/minute to 278 gallons/minute, A further 2 sizes (20 and 15) are available upon special request for achieving flow rates up to 673 gallons/minute. All pumps come as standard with Ansi B16.5 Class 150 connection flanges and is designed to be mounted directly to machinery using the IEC Sized input flange.

PUMP VERSIONS

HST 'T' RANGE ROLOID PUMPS

HST Unit
The HST Roloid Gear Pumps are available in 3 out of the 7 sizes (50, 40 & 30). They are an enhanced version of the standard gear pump with their design specifically engineered and manufactured for the arduous requirements of lubrication systems used for refrigeration compressors. The HST models cover flow rates between 7.5 gallons/minute to 161 gallons/minute and are designed to be configured as either base mounted, motor mounted or flange mounted. HST units come with input and output flanges made to ANSI B16.5 class 150

Design and Manufacturing Specifications

Sealing
Mechanical seals and 'O' rings are used due to high inlet pressures and to resist the corrosive nature of the refrigerant gasses.

Bearings
Special bearing arrangement - incorporating taper roller bearings to accommodate high thrust loads encountered due to high inlet pressures. All bearings are steel caged.

Copper-based Alloys
To achieve compatibility with the refrigerant gasses entrained in the lubrication oil, no copper or copper-based alloys are used in the construction of the pump.

Testing
All 'HST' pumps are hydrostatically tested at up to double the operating pressures to ensure reliable, leak-free operation.

Selection Guidelines - HST Roloid Pumps
In all cases selection of HST pumps should be referred to our application engineers.

API ROLOID PUMP ASSEMBLIES

Background

Special API Roloid pump assemblies are order pumps designed to meet the exacting standards of API 676 specification, the API version of the Roloid Pump is a special adaption of the HST range of pumps and shares the same extensive features and benefits.

Housings
All housings are manufactured from high quality steel.

Flanges
Flange interfaces conform to ANSI B16.5 class 150 standards.

Configuration
The pump assembly is baseplate mounted, with motor, coupling and guard. Membrane type couplings are used to facilitate replacement of the coupling without disturbing the pump or motor.

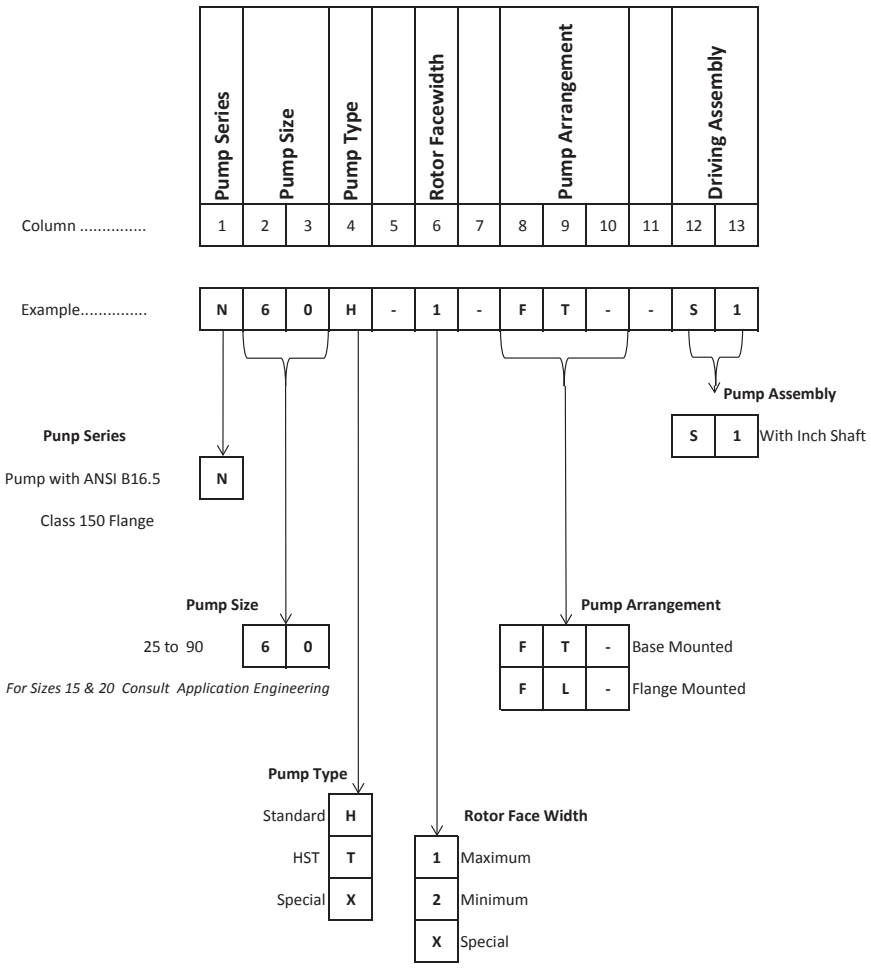
Sealing
Mechanical seals to API 614.

Bearings
All bearings selected to give in excess of 25,000 hours L10 life.

Quality Control & Documentation
Our quality systems ensure we can meet the exacting requirements for quality control and documentation called for by API 676. Each order is manufactured to its own specific quality plan, which can be audited at any stage by the customer. Full mechanical and chemical test certification can be supplied where required.

Selection Guidelines - API Roloid Pumps
In all cases selection of API pumps should be referred to our application engineers.

DESIGNATIONS



This designation series may be used only for standard pumps sizes 25 to 90

For non-standard and pump sizes 15 and 20 consult our Application Engineering

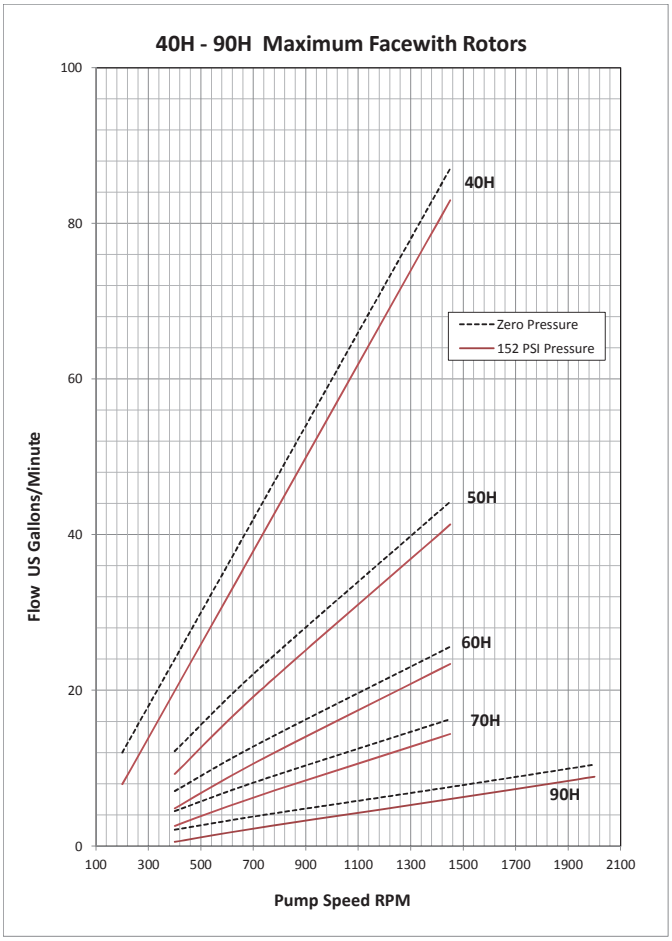
To ensure correct selection, please contact our Application Engineers

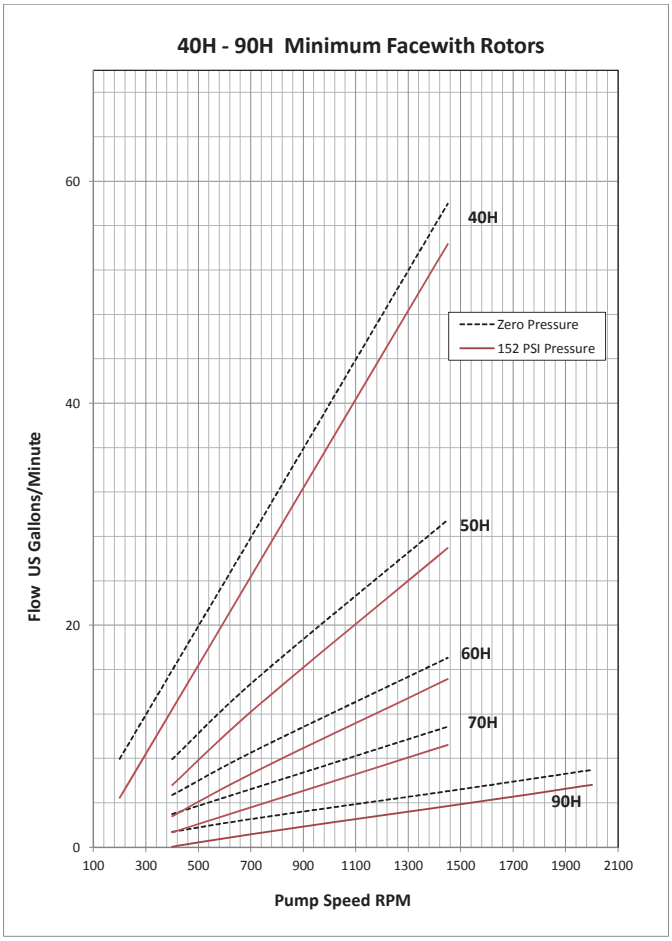
Please provide the following information:

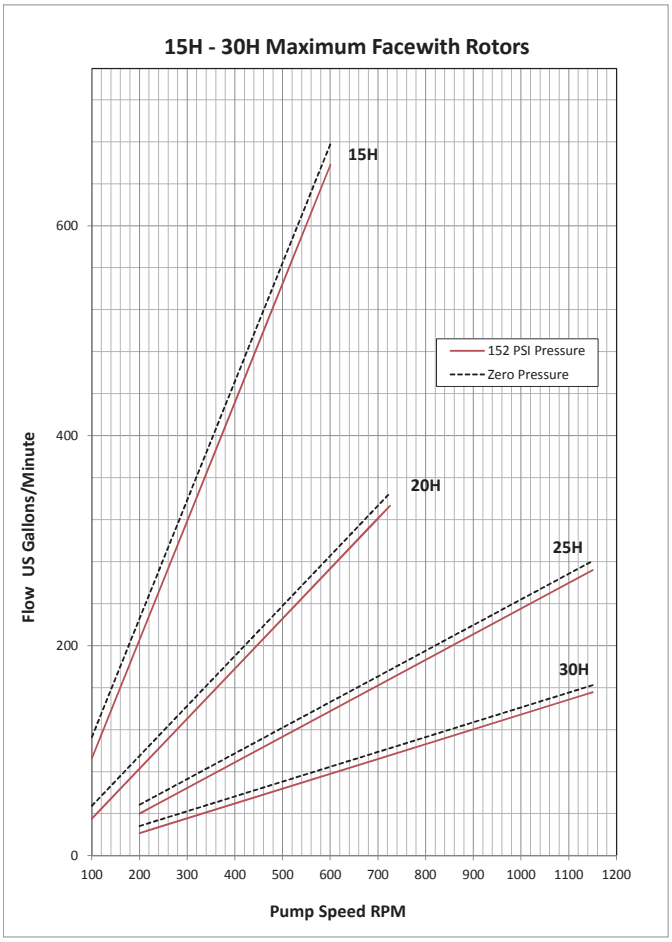
1. Discharge (Flow) Rate
2. Pump Speed
3. Details of Operating Environment (Ambient Temp, Application, Location etc..)
4. Operating Pressure
5. Inlet Pressure or Suction Lift
6. Operating Temp max/min
7. Pumped Fluid Type and Viscosity
8. Input Drive arrangement (Electric Motor, Gear Driven etc…)
9. Special Mounting Instructions, (Flanges, Brackets, Other etc…)

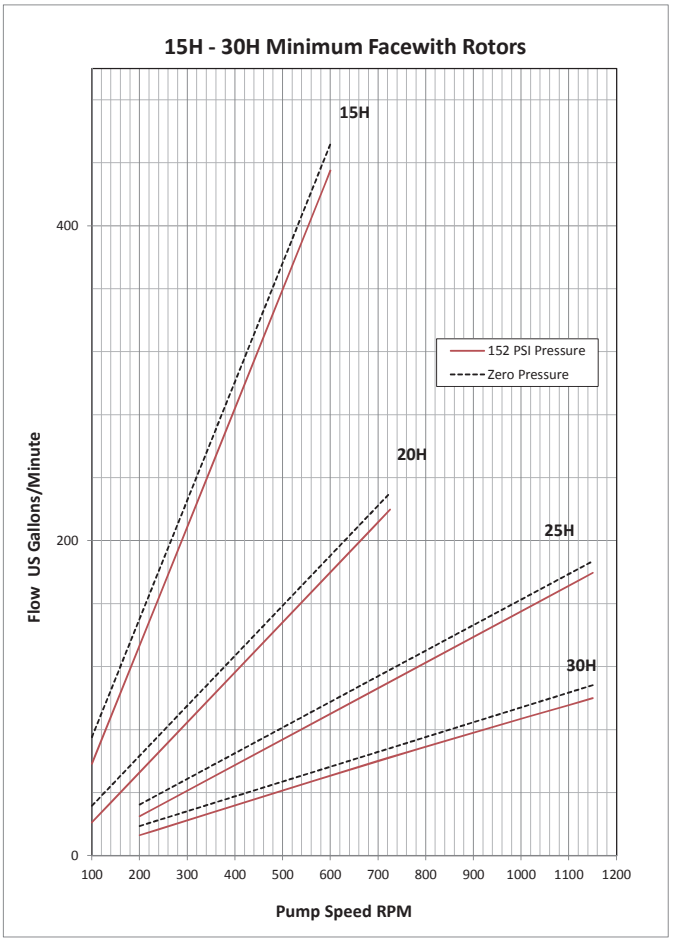
ROLOID GEAR PUMP

NOMINAL FLOW SELECTION GUIDE



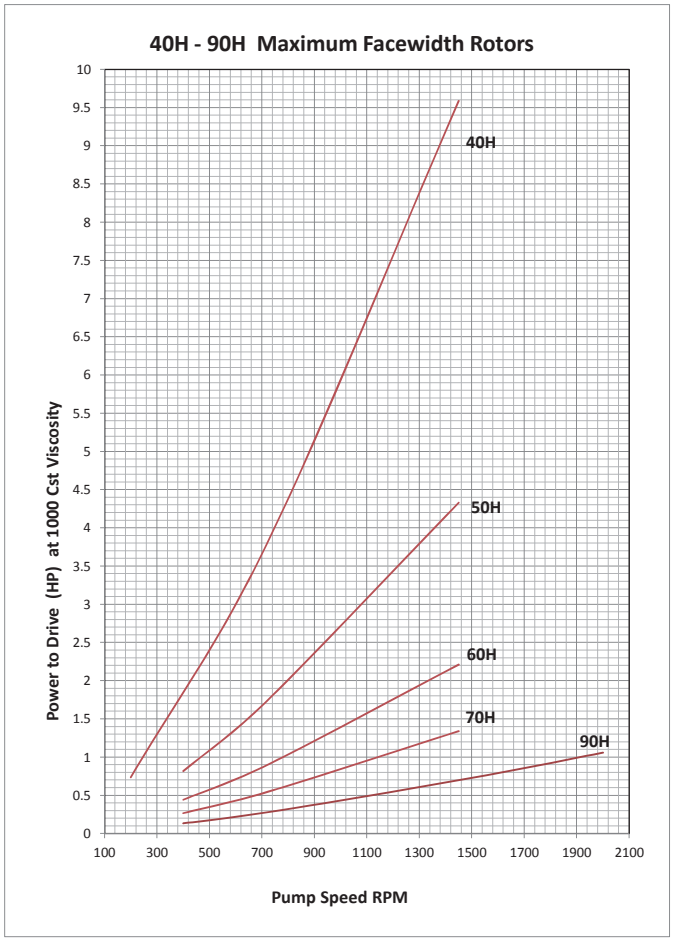


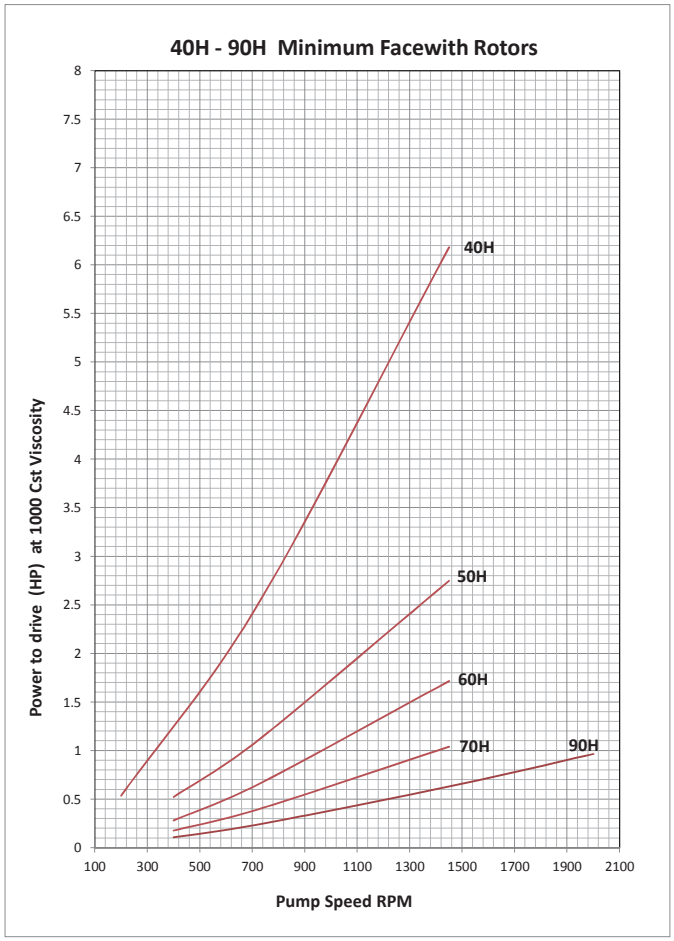


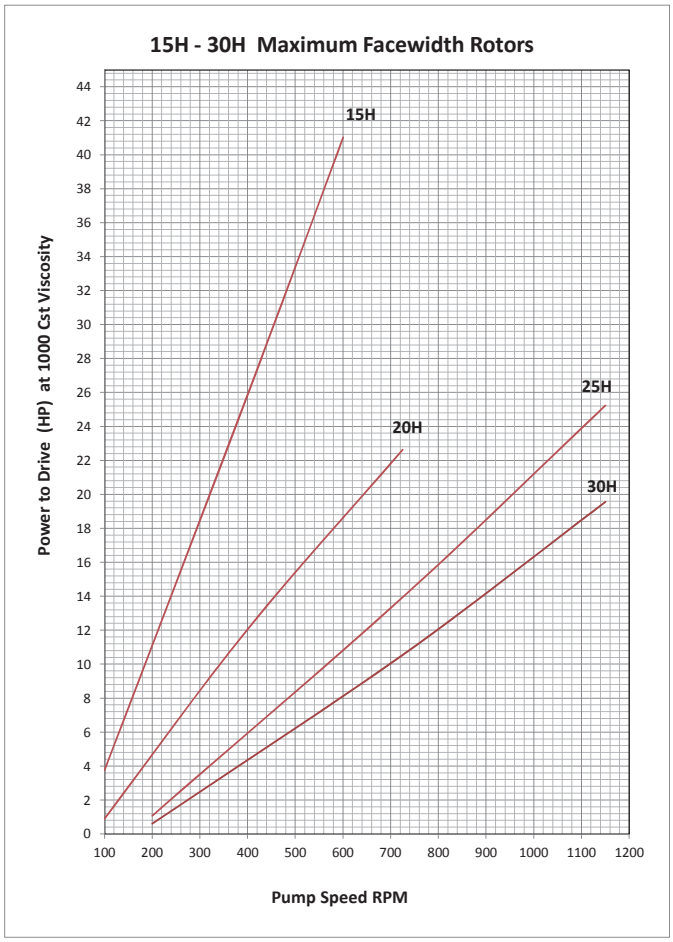


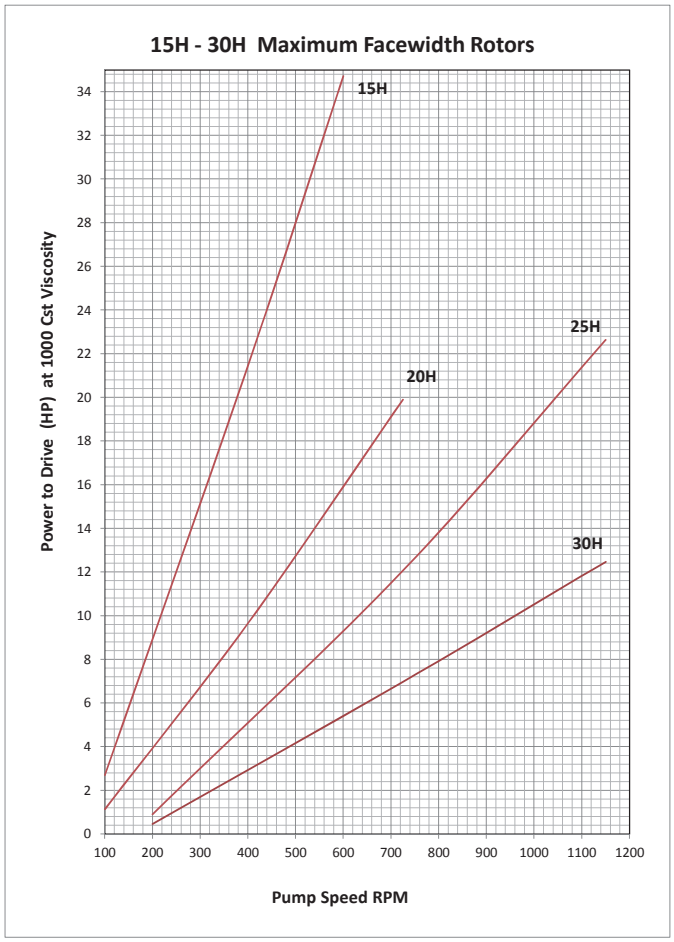
ROLOID GEAR PUMP

POWER TO DRIVE AT 3 BAR



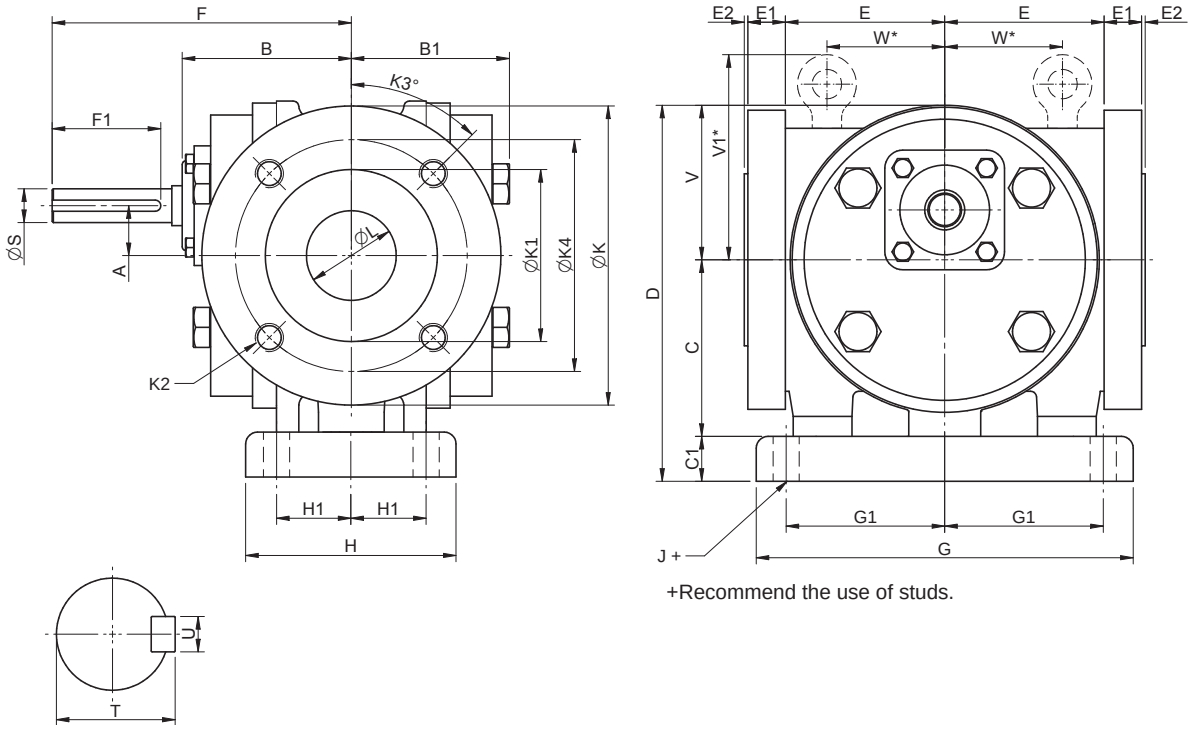






ROLOID GEAR PUMP

DIMENSIONS
BASE MOUNTED STANDARD PUMP TYPE - H

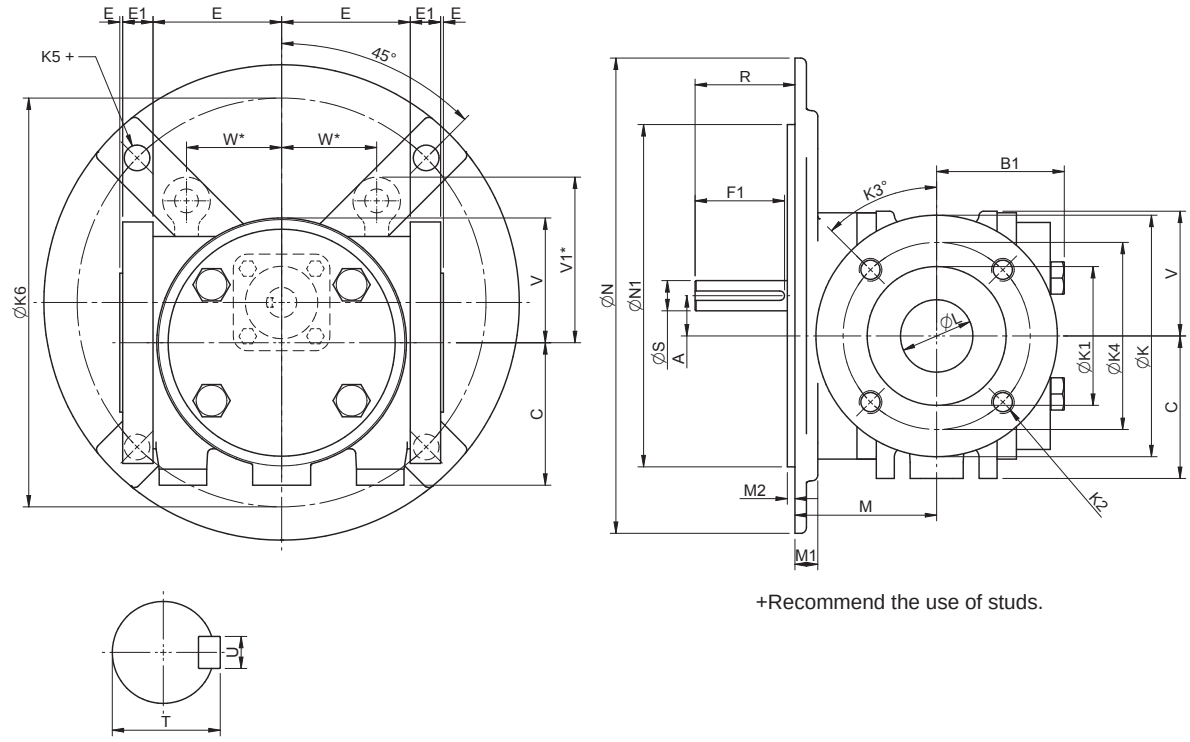


+Recommend the use of studs.

Pump Size	Ansi Flange Size	A	B	B1	C	C1	D	E	E1	E2	F	G	G1	H	H1	J	øK	øK1	øK2	K3°	øK4	øL	V
N90H	1.00	0.56	2.44	2.17	2.56	0.56	5.00	1.97	0.56	0.06	4.0	5	2.13	2.76	1.00	4 x 0.375	4.25	2.00	4 x M12	45°	3.13	1.00	1.875
N70H	1.25	0.71	2.52	2.36	2.76	0.65	5.79	2.46	0.63	0.06	4.5	6	2.55	3.50	1.30	4 x 0.43	4.63	2.50	4 x M12	45°	3.50	1.25	2.375
N60H	1.50	0.83	2.83	2.68	2.95	0.75	6.30	2.66	0.63	0.06	5.0	6.3	2.66	3.52	1.24	4 x 0.43	5.00	2.88	4 x M12	45°	3.88	1.50	2.583
N50H	2.00	1.00	3.41	3.23	3.54	0.80	7.24	3.00	0.75	0.06	5.5	7	2.90	4.10	1.45	4 x 0.5	6.00	3.62	4 x M16	45°	4.75	2.00	3.060
N40H	2.50	1.25	3.90	3.66	3.94	0.90	8.35	3.64	0.83	0.06	6.5	8.6	3.70	5.00	1.90	4 x 0.55	7.00	4.12	4 x M16	45°	5.50	2.50	3.500
N30H	3.50	1.67	4.92	4.76	4.72	1.15	10.40	4.65	1.19	0.06	8.0	10.7	4.65	6.70	2.65	4 x 0.67	8.50	5.50	8 x M16	22.5°	7.00	3.50	4.550
N25H	4.00	2.00	5.45	5.51	5.59	1.40	12.50	5.83	1.10	0.06	9.0	13	5.60	8.00	3.10	4 x 0.83	9.00	6.18	8 x M16	22.5°	7.50	4.00	5.500
N20H	Consult Application Engineering																						
N15H																							

Pump Size	Shaft Details				Eyebolt		Net	Gross
	øS	T	U	F1	V1*	W*	LB	LB
N90H	0.4375/ 0.4370	0.48	3/32	1.00	n/a	n/a	14.1	24.3
N70H	0.5625/ 0.5620	0.62	1/8	1.75	n/a	n/a	22.0	37.5
N60H	0.6250/ 0.6200	0.71	3/16	1.75	n/a	n/a	30.9	46.3
N50H	0.7500/ 0.7495	0.83	3/16	1.75	n/a	n/a	39.7	57.3
N40H	0.8750/ 0.8745	0.96	3/16	2.25	3.35	2.46	70.5	88.2
N30H	1.2500/ 1.2495	1.36	1/4	2.50	3.70	2.76	163.1	205.0
N25H	1.3750/ 1.3745	1.51	5/16	2.75	4.02	3.78	244.7	330.7
N20H	Consult Application Engineering							
N15H								

DIMENSIONS
FLANGE MOUNTED STANDARD PUMP TYPE - H

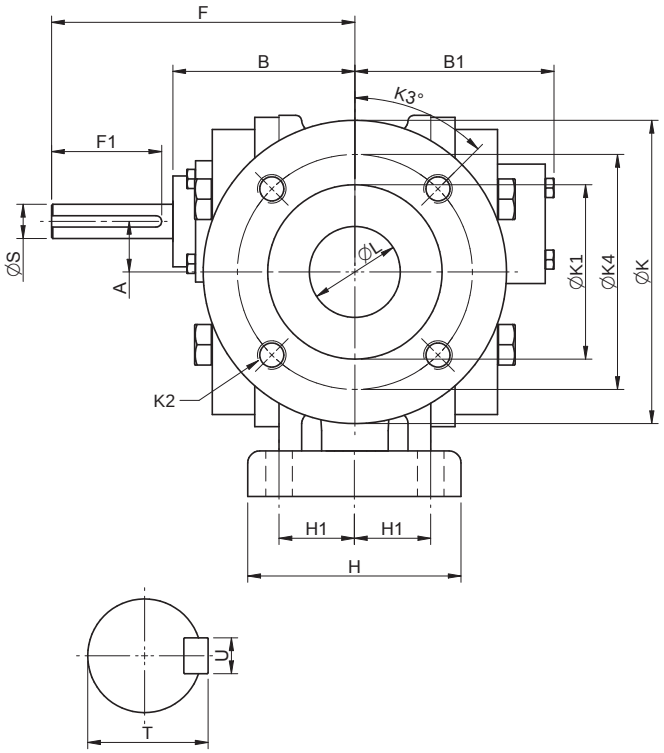


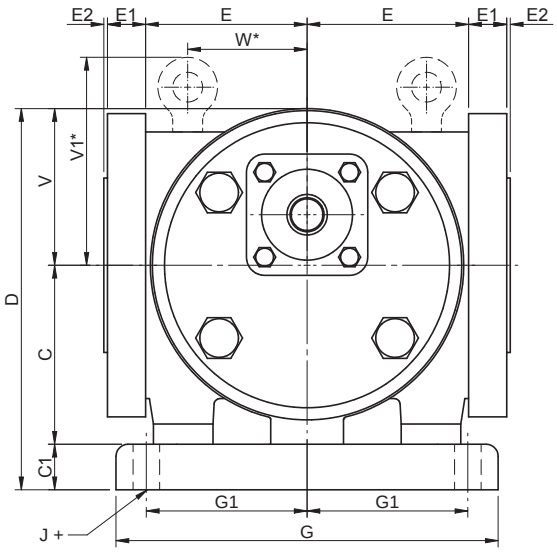
+Recommend the use of studs.

Pump Size	Ansi Flange Size	A	B1	C	D	E	E1	E2	F	øK	øK1	K2	K3°	øK4	øL	V	Shaft Details			
																	øS	T	U	F1
N90H	1.00	0.56	2.17	2.56	0.56	5.00	1.97	0.06	4.00	4.25	2.00	4 x M12	45°	3.13	1.00	1.87	0.4375/ 0.4370	0.48	3/32	1.00
N70H	1.25	0.71	2.36	2.76	0.65	5.79	2.46	0.06	4.50	4.63	2.50	4 x M12	45°	3.50	1.25	2.37	0.5625/ 0.5620	0.62	1/8	1.75
N60H	1.50	0.83	2.68	2.95	0.75	6.30	2.66	0.06	5.00	5.00	2.88	4 x M12	45°	3.88	1.50	2.58	0.6250/ 0.6200	0.71	3/16	1.75
N50H	2.00	1.00	3.23	3.54	0.80	7.24	3.00	0.06	5.50	6.00	3.62	4 x M16	45°	4.75	2.00	3.06	0.7500/ 0.7495	0.83	3/16	1.75
N40H	2.50	1.25	3.66	3.94	0.90	8.35	3.64	0.06	6.50	7.00	4.12	4 x M16	45°	5.50	2.50	3.50	0.8750/ 0.8745	0.96	3/16	2.25
N30H	3.50	1.67	4.76	4.72	1.15	10.40	4.65	0.06	8.00	8.50	5.50	8 x M16	22.5°	7.00	3.50	4.55	1.2500/ 1.2495	1.36	1/4	2.50
N25H	4.00	2.00	5.51	5.59	1.40	12.50	5.83	0.06	9.00	9.00	6.18	8 x M16	22.5°	7.50	4.00	5.50	1.3750/ 1.3745	1.51	5/16	2.75
N20H	Consult Application Engineering																			
N15H																				

Pump Size	Flange Details								Eyebolt		Net	Gross
	M	M1	M2	øN	øN1	K5	øK6	R	V1*	W*	LB	LB
N90H	2.64	0.47	0.14	6.30	4.33	4 x 0.35	5.12	1.36	n/a	n/a	30.90	19.80
N70H	3.02	0.47	0.14	7.87	5.12	4 x 0.43	6.50	1.48	n/a	n/a	40.70	25.30
N60H	2.93	0.47	0.16	9.84	7.09	4 x 0.51	8.46	2.07	n/a	n/a	54.00	38.60
N50H	3.59	0.63	0.16	9.84	7.09	4 x 0.53	8.46	1.91	n/a	n/a	61.70	44.10
N40H	4.25	0.79	0.16	11.81	9.06	4 x 0.53	10.43	2.25	3.35	2.46	95.90	78.30
N30H	5.08	0.79	0.20	15.75	11.81	4 x 0.69	13.78	2.92	3.70	2.76	216.10	174.20
N25H	5.41	0.79	0.24	17.72	13.78	4 x 0.71	15.75	3.59	4.02	3.78	338.40	252.40
N20H	Consult Application Engineering											
N15H												

DIMENSIONS
HST BASE MOUNTED STANDARD PUMP TYPE - T



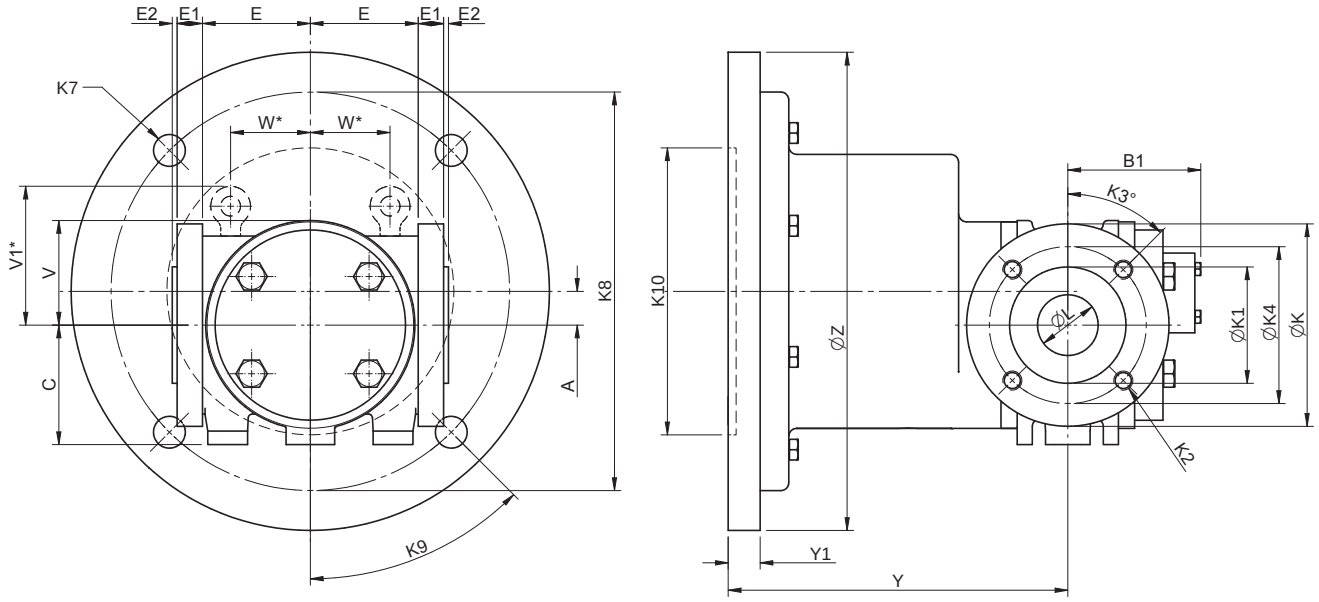


+Recommend the use of studs.

Pump Size	Ansi Flange Size	A	B	B1	C	C1	D	E	E1	E2	F	G	G1	H	H1	J	øK	øK1	K2	K3°	øK4	øL	V
N50T	2	1.00	3.86	3.54	3.54	0.80	7.24	3.00	0.75	0.06	5.50	7.00	2.90	4.1	1.45	4 x 0.5	6.00	3.62	4 x M16	45°	4.75	2.00	3.06
N40T	2.5	1.25	4.33	3.94	3.94	0.90	8.35	3.64	0.83	0.06	6.50	8.60	3.70	5.00	1.90	4 x 0.55	7.00	4.12	4 x M16	45°	5.50	2.50	3.50
N30T	3.5	1.67	5.91	5.12	4.72	1.15	10.4	4.65	1.19	0.06	8.00	10.70	4.65	6.70	2.65	4 x 0.67	8.50	5.50	8 x M16	22.5°	7.00	3.50	4.55
N25T	Consult Application Engineering																						

Pump Size	Shaft Details				Eyebolt		Net LB	Gross LB
	øS	T	U	F1	V1*	W*		
N50T	0.7500/ 0.7495	0.83	3/16	1.50	n/a	n/a	39.7	57.3
N40T	0.8750/ 0.8745	0.96	3/16	1.85	3.35	2.46	70.5	88.2
N30T	1.2500/ 1.2495	1.36	1/4	1.85	3.70	2.76	163.1	205.0
N25T	Consult Application Engineering							

DIMENSIONS
HST FLANGE MOUNTED STANDARD PUMP TYPE - T



Pump Size	Ansi Flange Size	A	B1	C	D	E	E1	E2	F	øK	øK1	K2	K3°	øK4	øL	V	Shaft Details			
																	øS	T	U	F1
N50T	2.00	1.00	3.54	3.54	7.24	3.00	0.75	0.06	5.50	6.00	3.62	4 x M16	45°	4.75	2.00	3.06	0.7500/ 0.7495	0.83	3/16	1.50
N40T	2.50	1.25	3.94	3.94	8.35	3.64	0.83	0.06	6.50	7.00	4.12	4 x M16	45°	5.50	2.50	3.50	0.8750/ 0.8745	0.96	3/16	1.85
N30T	3.50	1.67	5.12	4.72	10.4	4.65	1.19	0.06	8.00	8.50	5.50	8 x M16	22.5°	7.00	3.50	4.55	1.2500/ 1.2495	1.36	1/4	1.85
N25T	Consult Application Engineering																			

Pump Size	Flange Details								Eyebolt		Net LB	Gross LB
	M	M1	M2	øN	øN1	K5	øK6	R	V1*	W*		
N50T	3.59	0.63	0.16	9.84	7.09	4 x 0.53	8.46	1.91	n/a	n/a	44.1	61.7
N40T	4.25	0.79	0.16	11.81	9.06	4 x 0.53	10.43	2.25	3.35	2.46	78.3	95.9
N30T	5.08	0.79	0.2	15.75	11.81	4 x 0.69	13.78	2.92	3.7	2.76	174.2	216.1
N25T	Consult Application Engineering											

PRODUCT SAFETY

IMPORTANT

Product Safety Information

General - The following information is important in ensuring safety. It must be brought to the attention of personnel involved in the selection of the equipment, those responsible for the design of the machinery in which it is to be incorporated and those involved in its installation, use and maintenance.

Our equipment will operate safely provided it is selected, installed, used and maintained properly. As with any equipment proper precautions must be taken as indicated in the following paragraphs, to ensure safety.

Potential Hazards - these are not necessarily listed in any order of severity as the degree of danger varies in individual circumstances. It is important therefore that the list is studied in its entirety:-

1) Fire/Explosion
   (a) Oil mists and vapour are generated within pump units. It is therefore dangerous to use naked lights in the proximity of openings, due to the risk of fire or explosion.
   (b) In the event of fire or serious overheating (over 300 °C), certain materials (rubber, plastics, etc.) may decompose and produce fumes. Care should be taken to avoid exposure to the fumes, and the remains of burned or overheated plastic/rubber materials should be handled with rubber gloves.
2) Guards - Rotating shafts and couplings must be guarded to eliminate the possibility of physical contact or entanglement of clothing. It should be of rigid construction and firmly secured.
3) Noise - Pumps and driving machinery may produce noise levels which are damaging to the hearing with prolonged exposure. Ear defenders should be provided for personnel in these circumstances. Reference should be made to the Department of Employment Code of Practice for reducing exposure of employed persons to noise.
4) Lifting - Where provided (on larger units) only the lifting points or eyebolts must be used for lifting operations (see maintenance manual or general arrangement drawing for lifting point positions). Failure to use the lifting points provided may result in personal injury and/or damage to the product or surrounding equipment. Keep clear of raised equipment.
5) Lubricants and Oil
   (a) Prolonged contact with lubricants and oils can be detrimental to the skin. The manufacturer's instruction must be followed when handling.
   (b) The lubrication status of the equipment must be checked before commissioning. Read and carry out all instructions in the installation and maintenance literature. Heed all warning tags. Failure to do so could result in mechanical damage and in extreme cases risk of injury to personnel.
6) Electrical Equipment - Observe hazard warnings on electrical equipment and isolate power before working on the pump or associated equipment, in order to prevent the machinery being started.
7) Installation, Maintenance and Storage
   (a) In the event that equipment is to be held in storage, for a period exceeding 6 months, prior to installation or commissioning, we must be consulted regarding special preservation requirements. Unless otherwise agreed, equipment must be stored in a building protected from extremes of temperature and humidity to prevent deterioration.

   The rotating components must be turned a few revolutions once a month (to prevent bearings brinelling).
   (b) External components may be supplied with preservative materials applied, in the form of a "waxed" tape overwrap or wax film preservative. Gloves should be worn when removing these materials. The former can be removed manually, the latter using white spirit as a solvent.

   Preservatives applied to the internal parts of the pump do not require removal prior to operation.
   (c) Installation must be performed in accordance with the manufacturer's instructions and be undertaken by suitably qualified personnel.
   (d) Before working on a pump or associated equipment, ensure that the load has been removed from the system to eliminate the possibility of any movement of the machinery and isolate power supply. Where necessary, provide mechanical means to ensure the machinery cannot move or rotate. Ensure removal of such devices after work is complete.
   (e) Ensure the proper maintenance of pumps in operation. Use only the correct tools and our approved spare parts for repair and maintenance. Consult the Maintenance Manual before dismantling or performing maintenance work.
8) Hot Surfaces and Oils
   (a) During operation, pump units may become sufficiently hot to cause skin burns. Care must be taken to avoid accidental contact.
   (b) After extended running the pump and systems may reach temperatures sufficient to cause burns. Allow equipment to cool before servicing or performing adjustments.
9) Selection and Design
   (a) The driving equipment must be correctly selected to ensure that the complete machinery installation will perform satisfactorily, avoiding system critical speeds, system torsional vibration, etc.
   (b) The equipment must not be operated in an environment or at speeds, powers, and pressures or with external loads beyond those for which it was designed.
   (c) As improvements in design are being made continually the contents of this catalogue are not to be regarded as binding in detail, and drawings and capacities are subject to alterations without notice.

The above guidance is based on the current state of knowledge and our best assessment of the potential hazards in the operation of the gear units.

Any further information or clarification required may be obtained by contacting our Application Engineers.

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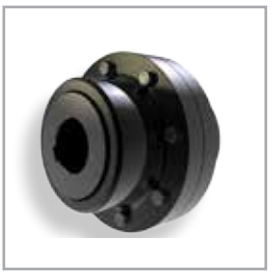

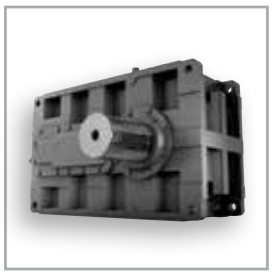



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