

# HAIGHT

## Rotary Gear Positive Displacement Pumps



11 Stocked models

Options include  
Foot mount  
Base mount  
Flange mount  
Bypass relief valve  
Various elastomer seals  
Mechanical seals



**HAIGHT**  
Pumps that Perform

*cool running*



specialist power  
transmission and  
heat transfer  
engineers

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## HAIGHT – U Series Rotary Gear Positive Displacement Oil Pump

### Series U – Universal Pumps

The Universal pump design combines the innovation of the Universal shaft seal, the rugged simplicity of the Haight proven “gear within gear” internal gear configuration, with the flexibility of a bolt-on, integral relief valve. This combination of features offers users unsurpassed flexibility to adapt their pump to changing system requirements.

### Superior High Viscosity Rotary Gear Pump Features

Input drive at the inner gear provides a built in gear reduction which means less cavitation at standard motor speeds. The inner gear drive design also permits a bearing to be provided on either side of the drive shaft this provides a balanced rotor design. These features make the Haight pump superior for high viscosity pumping. The same features also offer increased life through lower rotor surface speeds and better bearing support. Most other rotary gear pumps have input drive at the rotor which increases the risk of cavitation, rotor wear, rotor side load and higher bearing loads.



<ol style="list-style-type: none"> <li>1. Patented Haight Gear and Rotor for more efficient Positive Displacement pumping.</li> <li>2. Three Tooth Contact for smoother uninterrupted pressure discharge.</li> <li>3. Extra Deep Meshing of Gears reduces noise and avoids trapping.</li> <li>4. “Bolt on” reversible relief valve system for greater bypass versatility and simple field conversion</li> </ol>		<ol style="list-style-type: none"> <li>5. Pipe Plug type auxiliary port for tank return relief or for extra circuit installations.</li> <li>6. Top quality cast ductile iron bodies are standard with Gramix iron bearings.</li> </ol> <p>“Universeal” design allows for simple and quick seal replacement or change to an alternative seal type.</p>
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We stock 11 basic model displacements are available ranging from 3.4 to 179.4 cc per rev (sizes 1UR through 80UR). Drive arrangements include base mount or flange mount. All models are available with internal or external bypass relief bypass valve systems.

In addition to our standard stocked 11 models of cast ductile iron internal gear pumps Haight offers an additional 10 models. These range in size from 12.87 cc per revolution (6EUR) to the largest 518.6 cc per revolution (240UR). For specialty applications Haight pumps can be upgraded with a wide range of seals, as well as various bearing materials and iron hardness. Plus for further application range they offer cast 316 SS internal gear pumps, Cast Bronze internal gear pumps, custom built dual flow pumps, skeleton pumps, magnetically coupled pumps, and barrier seal pumps. Haight also offer a range of centrifugal pumps in 316 SS, NI/AL/Bronze, and Duplex 2205 SS construction.

## Selection Information

For pumping high viscosity mineral oils or vegetable oils. The standard models feature cast iron casing and cover components, steel shaft and pinion gear, high tensile iron rotor, self-lubricating iron or bronze bearings and Buna-N lip seals. As a general rule, the Cast Iron pump will handle most liquids which have a reasonable level of lubricity providing that the liquid is compatible with ferrous components and shaft seal. These models are usually all available from Australian inventory with or without relief valves.

### Pressure Ratings.

Pressure rating for standard Buna-N shaft seals is 5.2 BAR for liquids less than 20 cSt and 7 BAR for liquids of higher viscosity not exceeding 1000 cSt. It is normal practice for lip seals to weep a small amount of liquid during operation. For pressures above 7 BAR, special mechanical seals are recommended. Maximum pressure with mechanical seal is 17 BAR.

### Temperature Ratings.

Temperature limitation for standard pumps is 150°C with Buna N seals. For higher temperatures a modified standard pump with wider running clearances and Viton seals is supplied.

### Viscosity vs Flow Rate & Pump Speed

With the Haight range of rotary gear pumps there is a direct relationship between fluid viscosity and allowable pump speed. Contact our sales team for information about for specific application.

Where fluids with high levels of abrasives and/or low levels of lubricity are to be pumped, please consult our sales engineers.

During start-up operations for brief peak periods, a 12% increase in viscosity is acceptable.

PUMP DISPLACEMENT Per REV			INPUT POWER kW*	
PUMP SIZE	CC PER REV	Flow @ 1500RPM L/min	Power @ 1500rpm Oil 43cSt	Power @ 1500rpm Oil 430cSt
1	3.41	5	0.13	0.24
3	7.20	11	0.13	0.32
5	10.03	15	0.22	0.48
8	18.17	27	0.37	0.63
10	26.12	39	0.52	1.04
15	34.07	51	0.63	1.38
20	43.53	65	0.89	1.60
24	51.85	78	0.82	1.41
30	68.13	102	1.00	1.75
40	89.70	134	1.50	2.16
80	179.4	268	1.80	5.90

\*Input power figures are based on use with oil at 50PSI (350kPa) pressure and suction at 5 ins HG. When viscosity exceeds 430cSt above, contact our sales office for revised power requirements

## Options

OEM manufacture and stock a wide range of mounting and sealing options for Haight Series U Universal Pumps.

- ❖ Foot mounts - for aligning your pump shaft with an electric motor,
- ❖ 2 hole SAE A Hydraulic flange - models 1 through 8
- ❖ 2 Hole SAE B Hydraulic - models 10 through 40
- ❖ Motor and pump packages – many motor and pump combinations
- ❖ Various elastomer seals
- ❖ Mechanical seals
- ❖ Relief Valve



For more information call our sales customer support centre on 0266818800  
visit our [website](#) or [request a quote](#)

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