



*Pumps That Perform*

**GEAR PUMPS**



**CUSTOM PUMPS**



**BED PLATE ASSEMBLIES**



Serving the Gas, Oil, Mining, Marine, Filtration, Power Transmission, Thermal Processing and Hot Oil Industries

# Haight® Pumps

## WHY HAIGHT?

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Today's complex processing environment demands greater integration of equipment and application. Haight is recognized as a leading manufacturer of high quality rotary gear, positive displacement pumps for use in a broad variety applications. As a member of the Baker Manufacturing family, our customers benefit from our:

- metallurgical expertise
- high tech foundry
- premier research and development capabilities
- our extensive technical knowledge of pump applications.

Now, more than ever, we can offer you a customized response to both:

- your operational needs
- cost requirements.

Haight's heavy-duty, positive displacement rotary gear pumps are truly "pumps that perform." All of our engineering, manufacturing, and application skills are focused on the development, production, and sales of dependable, versatile, and quiet products designed to meet the needs of our customers. The most reliable of today's rotary gear pumps are built on the "gear within the gear" principle that Haight pioneered.

Our current product line consists of the following:

- Internal Gear Pumps
- External Gear Pumps
- Custom Gear Pumps
- Centrifugal Pumps
- Bed Plate Assemblies

Here at Haight we pride ourselves on our quality customer service, excellent lead times, and the idea that the customer comes first! Look no further than Haight the next time you are in the market for a pump manufacturer for your application.

# Haight® Pumps

**PUMPS THAT FIT**  
**PUMPS THAT PERFORM**



## Distinguishing Pump Characteristics

### Standard Pump Attributes

Haight pumps are self-priming and will develop up to 27" of vacuum. NOTE: depending upon actual application conditions, it is sound engineering practice to keep vacuum to a minimum.

Although suction conditions are a factor in determining pump speed, normally for liquids with viscosity's over 2000 SSU, reduced speeds and larger line sizes are recommended to avoid cavitation and diminished pump capacity.

Capacity Range	1 GPM to 240 GPM
Viscosity Range	32 SSU to 500,000 SSU
Pressure Range:	
Non Lubricating	100 PSI
Lubricating	650 PSI*
Temperature Range	-80°F to 620°F*

### HAIGHT PUMP - Standard Configurations and Options Available

**Bearings:** Grammix iron bearings are standard.

**Following are optional:**

**DU** - Used mainly for higher pressures (above 100 psi.) or where little lubrication is available.

**Carbon Graphite** - Standard bearings in corrosion resistant pumps. Used in standard construction for higher temperatures, solvents, or acid pumping when standard bearings aren't compatible.

**Bronze** - Cost effective self-lubricating material for pressures below 150 PSI.

**Seals:** Buna-N lip seal is standard.

**Following are optional:**

**Lip Seals** - Viton, EPR, Neoprene, and Teflon.

**Teflon Packing Seal** - Used for higher temperatures and liquids which are not compatible with either Viton or Buna N.

**Grafoil Packing Seal** - Suitable for use with heat transfer fluids to 585°F.

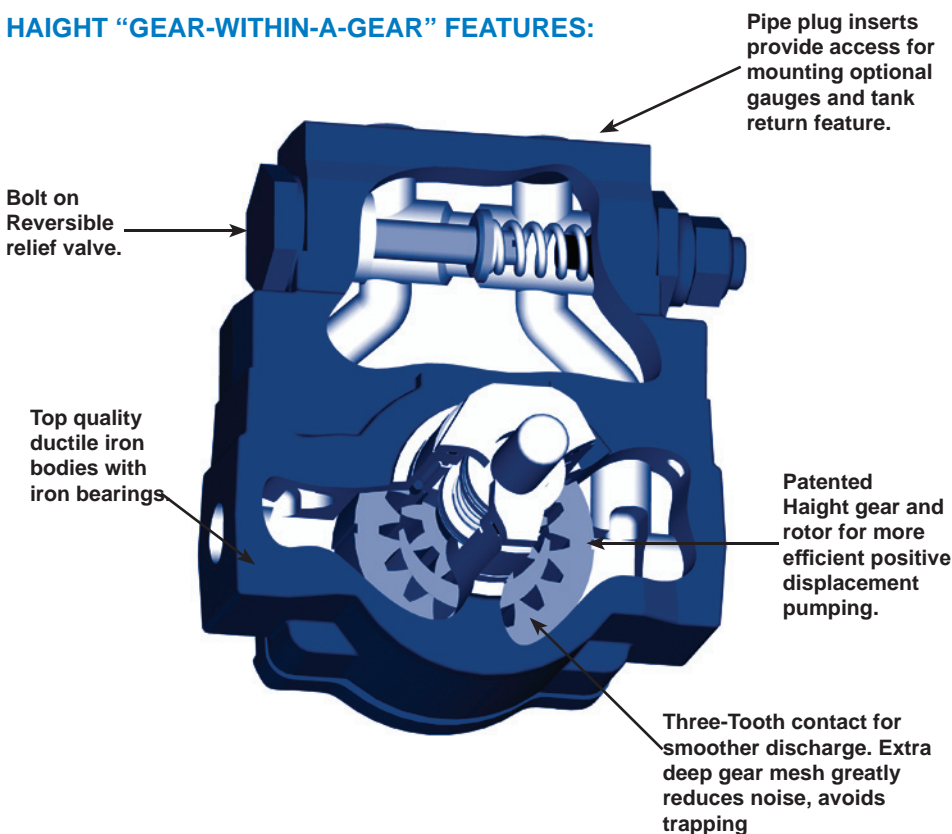
**Mechanical Seals** - Type 21 with Buna-N, Viton, EPR, or neoprene elastomers. Type 9 available with Teflon or Kalraz sealing elements for high temperature. Type 2 or Type 2B available for pressures exceeding 250 PSI.\*

**Mounting Configurations:**

bedplate, close-coupled, and hub mount are standard configurations. Special designs available upon request.

**Outboard Ball Bearing** - Used to provide extra stability for beltdrive or PTO assemblies.

### HAIGHT "GEAR-WITHIN-A-GEAR" FEATURES:



**Rotor Gears:** Cast iron rotor is standard.

**Following is optional:**

**Delrin** - Used with non-lubricating liquids, where noise reduction is desirable, or with abrasive fluids as a sacrificial member.

**Teflon** - Alternative material for highly corrosive liquids which are not compatible with Delrin.

**Ni-Resist #2** - Used in standard construction with mildly corrosive liquids.

### Optional Duralon Liner

**\*High temperature/high pressure applications** - require substantially more documentation than normal applications (400°F and/or 150psi). Haight has a number of possible solutions available to meet your specific requirements, which can be easily added to our Ductile Iron Universal pump design.

# Haight® Pumps

## HAIGHT PUMPS FIT THESE APPLICATIONS TO COMPLETE SOLUTIONS

	<b>Industries &amp; Applications</b>	<b>Liquids Pumped (2)</b>	<b>Features</b>
<b>Standard Iron</b>	Petroleum Products • Machine Manufacturing • Machine Tools • Crane • Speed Reducers • Hydraulic Equipment • Lubrication Systems • Diesel Engines • Food Processing • Restaurant Equipment • Misc. Chemical, Glue & Ink • Soap and Detergent Products • Drug • Building & Highway Contractors • Paper Products • Automotive • Shipbuilding • Beverage • Aircraft • Mining • Misc. Manufacturers • Primary Metal • Electrical Equipment & Supplies.	Fuel oils*, hydrocarbons, lube oils, syrups, diesel fuel, coolants, cooking oils*, wire drawing compounds, hydraulic fluids, quench oils, heat transfer oils*, tar*, ethylene glycol, varnish*, wax*, vegetable oils, detergents, lacquer*, soaps, calibration fluids, glycerin, adhesives*, molasses, transformer oil, ammonia, anhydrous ammonia.	Normal use: Cast iron casing and cover components: steel shaft and pinion gear; high tensile iron rotor; self-lubricating iron bearings; Buna-N lip seals.
<b>Hardened Iron</b>	Building & Highway Contractors • Textile Mill Products • Misc. Converted Paper Products • Printing and Publishing • Chemical • Plastics and Synthetics • Drug—Pharmaceuticals • Paint & Allied Products (Mfg. of paints, varnishes, lacquers & enamels) • Misc. Chemical, Glue & Ink • Soaps & Cleaners • Machine Manufacturing • Beverage.	Acetone*, turpentine*, alcohols (most grades), paints*, asphalt*, jet fuels, asphalt emulsions*, EDM oils, brines*, kerosene, caustics (sodium hydroxide)*, methyl ethyl ketone*, benzene*, latex*, methanol, gasoline, mineral spirits (naphthas), heptane, solvents*, hexane, styrene* printer's ink*, xylene*, isopropyl acetate*, ethylene acetate*, paper coatings*, toluene*.	Wear resistant: (1) All metal parts in contact with the liquid are hardened by a superior new nitriding process that makes metals tougher. Seals and bearings are the same as standard iron construction.
<b>Corrosion Resistant</b>	Food processing • Chemical • Pharmaceutical • Textile • Plastic • Paint • Tanning • Soap • Rubber • Photographic • Synthetic Fibre • Plating.	Acids—concentrated sulfuric, nitric, diluted phosphoric, chromic aqueous citric aqueous, acetic. Essential oils, syrups, chemicals, vegetable oils, ammonium sulfate, corrosive wax, brines, sodium bicarbonate, sodium hydroxide, plating solutions.	Note: Please see HP500 - FF Pump brochure for information on stainless steel design.

\*Although standard or hardened iron construction is used for these liquids, we normally recommend alternate seals or bearings due to temperature extremes or liquid compatibility. See listing of alternative seals and bearings on page 6.

(1) Normally recommended for abrasive applications or for liquid with little or no lubricity.

(2) Liquids listed above do not include all of those that Haight pumps have been used for, rather, it is a selection of liquids taken from various applications where such pumps are normally used.

## APPLICATION SOLUTIONS BY TYPES OF SYSTEMS

Application Category	Typical Applications	Application Specific Adaptations
<b>Refrigeration Systems</b>	<ul style="list-style-type: none"> <li>• High pressure compressor lubrication</li> <li>• Liquefied refrigerant circulation</li> </ul>	<ul style="list-style-type: none"> <li>• Custom mounting</li> <li>• Contaminated lubricants</li> <li>• High inlet pressures</li> <li>• High pressure/thin fluid conditions</li> <li>• Custom seal configurations</li> </ul>
<b>Lubrication Systems</b>	<ul style="list-style-type: none"> <li>• Shipboard systems</li> <li>• Power transmission systems</li> <li>• Conveyor systems</li> <li>• Generator systems</li> <li>• Compressors</li> <li>• CNC machinery</li> <li>• Forming machinery</li> <li>• Lubricant cooling systems</li> </ul>	<ul style="list-style-type: none"> <li>• Corrosion resistant designs</li> <li>• Custom mounting</li> <li>• Special direct drive designs</li> <li>• Double pump designs</li> </ul>
<b>Filtration Systems</b>	<ul style="list-style-type: none"> <li>• Electric transformers</li> <li>• Cooking oil</li> <li>• Fuels</li> <li>• Hydraulic fluids</li> <li>• Lubrication products</li> <li>• Machine tool coolants</li> <li>• Process stream by-products</li> </ul>	<ul style="list-style-type: none"> <li>• High inlet vacuum designs</li> <li>• Special seals</li> <li>• Hardened and corrosion resistant construction</li> <li>• High temperature designs</li> <li>• Special pump designs</li> </ul>
<b>Fueling</b>	<ul style="list-style-type: none"> <li>• Aircraft refueling systems</li> <li>• Portable refueling systems</li> <li>• Engine or remote mounted fuel systems</li> </ul>	<ul style="list-style-type: none"> <li>• Direct drive</li> <li>• DC drive</li> <li>• Pneumatic drive</li> <li>• Hydraulic drive</li> <li>• Custom mounting</li> <li>• Special sealing designs</li> </ul>
<b>Injection Systems</b>	<ul style="list-style-type: none"> <li>• Expandable foams</li> <li>• Resins</li> <li>• Adhesives</li> <li>• Hot tar</li> <li>• Thin film lubrication for metal forming</li> <li>• Agricultural chemicals</li> <li>• Animal feed supplements</li> </ul>	<ul style="list-style-type: none"> <li>• Custom mounting designs</li> <li>• Hardened and corrosion resistant designs</li> <li>• High temperature conditions</li> <li>• Tractor and truck mounted PTO drives</li> </ul>
<b>Marine</b>	<ul style="list-style-type: none"> <li>• Main engine and drive train lubrication</li> <li>• Loading and unloading fuel &amp; lubrication products</li> <li>• Salt water wash-down systems</li> <li>• Winch lubrication</li> <li>• Fish processing waste</li> <li>• Bilge scavenging pumps</li> <li>• Aircraft/helicopter refueling systems</li> </ul>	<ul style="list-style-type: none"> <li>• Custom mounting and drive designs</li> <li>• Corrosion resistant materials</li> <li>• Spark resistant construction</li> </ul>
<b>Power Transmissions</b>	<ul style="list-style-type: none"> <li>• Gear box bearing and gear lubrication</li> <li>• Transmission lubrication</li> <li>• Drive shaft bearing lubrication</li> <li>• Lubricant cooling systems</li> <li>• Lubricant filtration</li> </ul>	<ul style="list-style-type: none"> <li>• Custom mounting and drive designs</li> </ul>
<b>Thermal Processing</b>	<ul style="list-style-type: none"> <li>• High temperature circulation</li> <li>• High temperature filtration</li> </ul>	<ul style="list-style-type: none"> <li>• Special construction features for elevated temperature operations</li> </ul>
<b>API Type Application</b>	<ul style="list-style-type: none"> <li>• Tank battery circulation</li> <li>• Sampling systems</li> <li>• LAC systems</li> <li>• Intermediate pressure pipeline transfer</li> </ul>	

# Haight® Pumps

## Series DIU - Ductile Iron Universal Pumps

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The Ductile Iron Universal Pump Design combines the innovation of our UniverSeal shaft seal, the rugged simplicity of Haight's proven "gear within a gear" internal gear configuration, with the flexibility of a bolt-on, integral Relief Valve assembly. This combination of pump features offers pump users unsurpassed flexibility to adapt their pumps to changing system requirements.

Ductile Iron Universal Relief Valve - the relief valve assembly can be added at any time, in the field, with no special tools. The valve can function in either the return to suction mode, or return to tank mode. Available with three different tension springs, the relief valve operates smoothly and effectively over a broad range of setting values.

"Gear within a gear" Internal gear design - For nearly seventy years, this design has demonstrated its effectiveness in handling a broad range of applications while operating at standard motor speeds, and reducing wear. Both of these operating characteristics play an important role in minimizing overall capital investment, and operating expenses.

Our UniverSeal shaft seal configuration represents a significant advance in gear pump design. The UniverSeal incorporates standard, easily available seal components with a readily adaptable pump geometry. The pump can be easily converted in the field from Lip to Mechanical to Packed Gland shaft seal type without even disconnecting the piping. Flow direction in the pump can also be changed without disrupting the attached piping, or special tools.



### All UniverSeal Shaft Seal Pumps feature:

- reduce maintenance expenses - simple, quick seal changes
- less production disruption and downtime - perform maintenance in place rather than in the shop
- reduce maintenance inventory - one pump can be adapted to meet many application requirements
- provide future adaptability - easily change the pump as your needs change
- reduce replacement parts costs, no special custom design parts
- interchangeable with existing Haight pumps without modification
- pumps specified with an integral relief valve can be quickly and easily changed to perform in either suction return, or tank return mode. The relief valve can be readily changed to operate in either clockwise or counterclockwise flow direction.

**Simple ideas . . .  
. . . Great results**

# Series DIU - Round Hub

## Sizes 1, 3, 5, 6, 7, 8 & 9 gpm Models

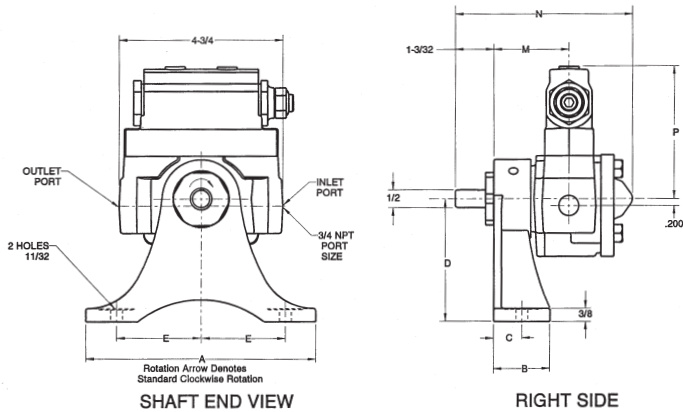
Haight offers seven sizes of pumps in the round hub DIU Series. All sizes are available with an optional bolt-on relief valve which can function in either the return to suction, or return to tank mode.

Compact rugged, and easy to maintain, these pumps are ideally suited to close-coupled mounting, or direct mounting to the motor (See pages 18 and 19 for complete dimensional information).

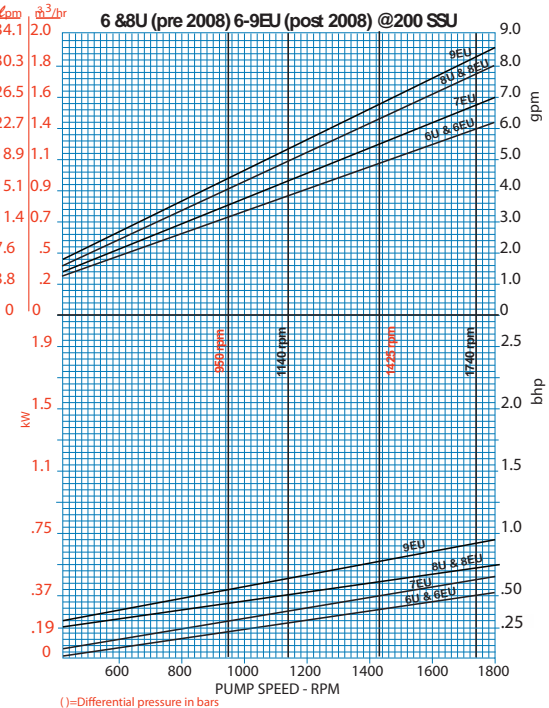
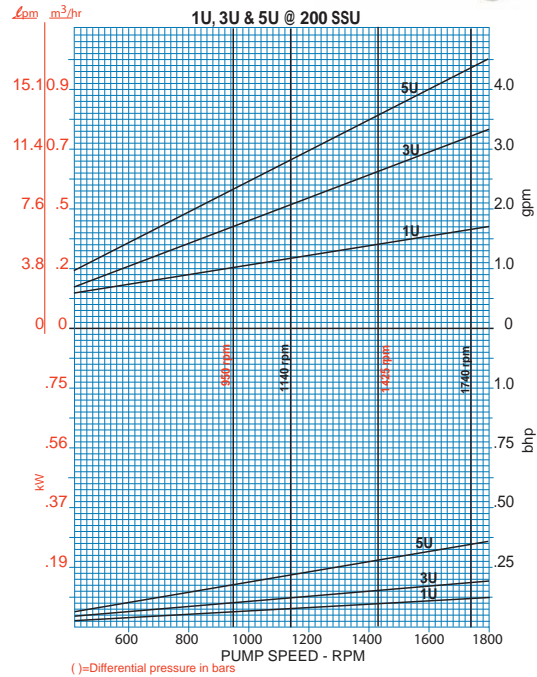


### Series DIU Round Hub Pump features:

- operate at standard motor speeds, eliminating the need for pulleys/gear reducers
- involute gear design offers excellent suction characteristics, minimizes noise and reduces internal bypassing
- self-lubricating gramix iron bearings
- easy to maintain Buna-N lip seals. Installed in the UniverSeal design for simple and quick replacement, or change to alternate seal style.
- optional mounting brackets which are designed for in-line mounting with standard NEMA frame size motors or
- bedplate mounting.
- optional bearing, rotor and seal materials which allow effective operation up to 620°F and 600 psi.



		A	B	C	D	E	M	N	P
Bracket	W48	3 1/8	1 7/16	2 3/32	3	1			
	E56	6 1/2	1 5/8	1 3/16	3 1/2	2 7/16			
Pumps w/ relief valve	1-3U						2 1/4	5 1/8	3 3/4
	5U						2 1/4	5 1/8	3 3/4
	6U						2 3/16	5 3/4	4 1/16
	6EU						2 3/16	5 25/32	4 1/8
	7EU						2 3/16	5 25/32	4 1/8
	8U						2 3/16	5 15/16	4 1/16
	8EU						2 3/16	5 25/32	4 1/8
	9EU						2 3/16	5 25/32	4 1/8





# Haight® Pumps

## Series DIU - Square Flange

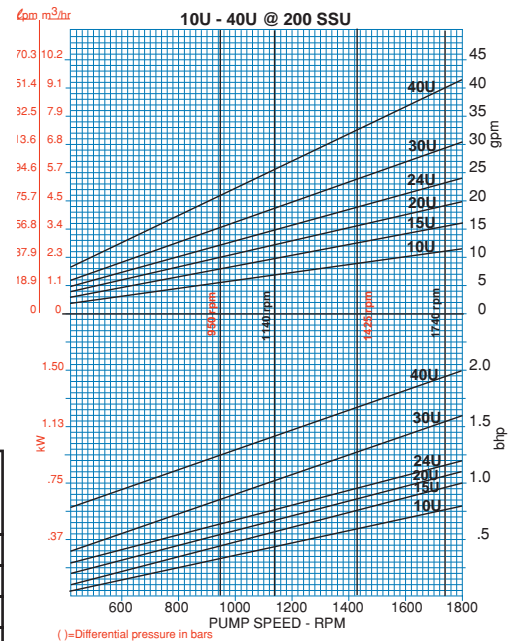
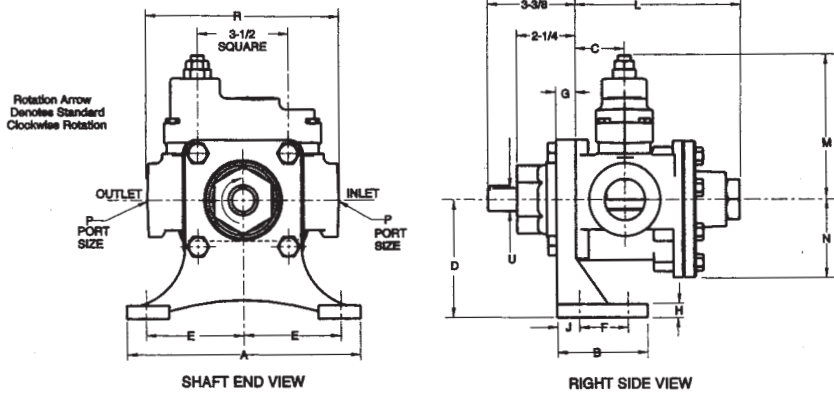
### Size 10, 15, 20, 24, 30, & 40 gpm Models

Haight offers six sizes of pumps in the square flange DIU-Series. All sizes are available with a bolt-on Relief Valve which can function in either a return to suction, or return to tank mode. All DIU-Series pumps are interchangeable with earlier D & DR Series pumps

Compact, rugged, and easy to maintain, these pumps are ideally suited to close-coupled mounting to the motor or footed mounting. Haight Pumps bolt-on footed brackets match standard NEMA motor height, eliminating pump or motor shimming. Each bracket size is designed to align the pump and motor shaft heights without shim blocks. (See pages 18 and 19 for complete dimensional information).

### All Series DIU Square Flange Pumps feature

- standard motor speeds, eliminating the need for pulleys or gear reducers.
- involute gear design to minimize noise.
- self-lubricating gramix iron bearings.
- easy to maintain Buna-N lip seals, installed in the UniverSeal design for simple and quick replacements or change to an alternate shaft seal type.
- optional mounting brackets which are designed for in-line mounting with standard NEMA frame size motors.
- optional bearing and seal materials which allow effective operation up to 625° F and 600 psi.
- simple field conversion on relief valve models to tank return mode.
- field reversible seal vent.



### Pump

With R.V.	W/O R.V.	P NPT	R	U	C	L	M with R.V.	M w/o R.V.	N
10U	10U	1	7	5/8	1 <sup>15</sup> / <sub>16</sub>	6 <sup>3</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>
15U	15U	1 <sup>1</sup> / <sub>4</sub>	7	5/8	1 <sup>15</sup> / <sub>16</sub>	6 <sup>3</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>
20U	20U	1 <sup>1</sup> / <sub>4</sub>	7	5/8	1 <sup>15</sup> / <sub>16</sub>	6 <sup>3</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>
24U	24U	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>	7/8	1 <sup>29</sup> / <sub>32</sub>	6 <sup>5</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3
30U	30U	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>	7/8	1 <sup>29</sup> / <sub>32</sub>	6 <sup>5</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3
40U	40U	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>	7/8	1 <sup>29</sup> / <sub>32</sub>	6 <sup>5</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	3

### Bracket

Size	D	A	B	E	F	H	G	J
H140	3 <sup>1</sup> / <sub>2</sub>	7	2 <sup>1</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>4</sub>	0	1/2	5/8	1 <sup>1</sup> / <sub>2</sub>
H182	4 <sup>1</sup> / <sub>2</sub>	9	3 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	1/2	3/4	7/8
H213	5 <sup>1</sup> / <sub>4</sub>	10	3 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>4</sub>	1 <sup>7</sup> / <sub>8</sub>	1/2	3/4	7/8
H254	6 <sup>1</sup> / <sub>4</sub>	12 <sup>1</sup> / <sub>8</sub>	4 <sup>5</sup> / <sub>8</sub>	5	1 <sup>1</sup> / <sub>2</sub>	1 <sup>1</sup> / <sub>16</sub>	3/4	1 <sup>1</sup> / <sub>16</sub>



## Series DIU - Double Pumps

### Size 44, 54, 60, 70, &80 gpm Models

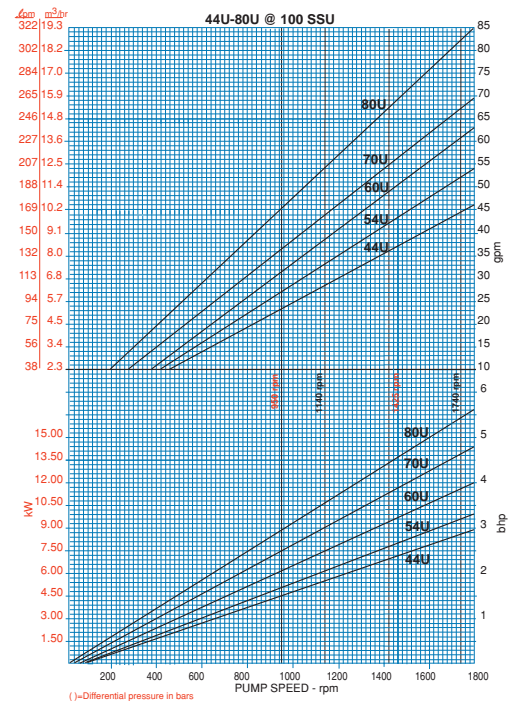
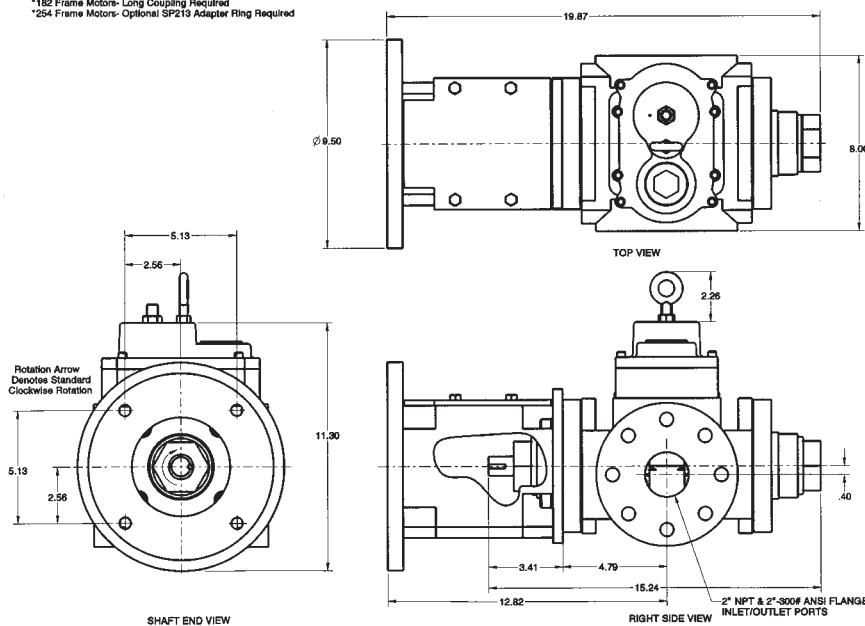
Haight offers five sizes of pumps in the Double Pump series. Available with a variety of optional seal, bearing and rotor materials. The Double Pump Series offers exceptionally compact design, plus low shear and noise characteristics. Compact, rugged and simple, these pumps are ideally suited for close-coupled mounting, which eliminates the need for expensive gear boxes, and prevents coupling alignment problems.

#### All Series DIU, Double Pumps feature

- operation at standard motor speeds, eliminating the need for pulleys and gear reducers.
- involute gear design to reduce noise.
- easy to maintain Buna-N lip seals, installed in the UniverSeal design for simple and quick replacements or change to an alternate shaft seal type.
- close-coupled mounting to eliminate motor and pump difficulty.
- 300# ANSI flange and NPT inlet/outlet connection.
- reversible flow, plus field convertible seal venting.
- Ductile 65 construction.



Note: Z213D Bracket Will Accept:  
 \*182 Frame Motors- Long Coupling Required  
 \*254 Frame Motors- Optional SP213 Adapter Ring Required



# Haight® Pumps

## Series DIU - Double Pumps

### Size 120, 180, & 240 gpm Models

Haight Pump is proud to announce the new large flow DIU series pumps. The “Universal” design has been extended to handle flow rates from 120-240 gpm! Flexible, quick, and incredibly reliable; everything you have come to expect from Haight Pump.

#### Key Features:

- ❑ 3 sizes ranging from 120 gpm to 240 gpm
- ❑ Built in Shaft Seal Flexibility
- ❑ Less moving Parts reduces Maintenance and Wear
- ❑ Close Coupled design eliminates shaft misalignment and related failures
- ❑ 250 PSI Discharge Pressure Capability
- ❑ 300# ANSI Flange; Inlet & Outlet Ports
- ❑ “Gear within a Gear” design for quiet operation
- ❑ Direct Drive - speeds to 1800 RPM

#### Standard Construction Features:

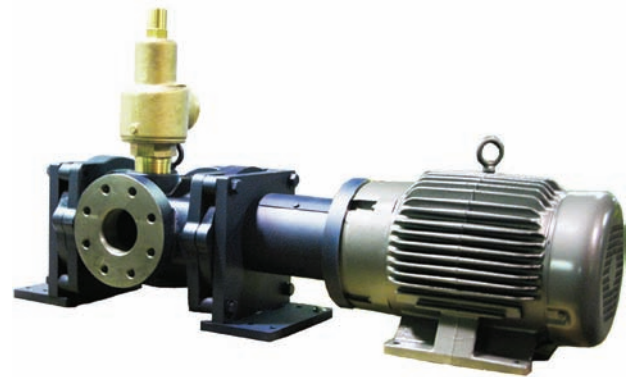
- Ductile Iron Housing
- Steel Shaft and Pinion Gears
- Iron Rotor and Bearings
- Buna N Lip Seals and Elastomers

#### Options:

- Alternate Shaft Seal and O-ring Elastomer Materials – Neoprene, Silicone, Teflon or Viton
- Lip seals
- Type 21, 2B, and 2 mechanical seals
- Venting options include: clockwise, counter-clockwise, and bi-rotational
- Duralon Liner
- Optional Relief Valve

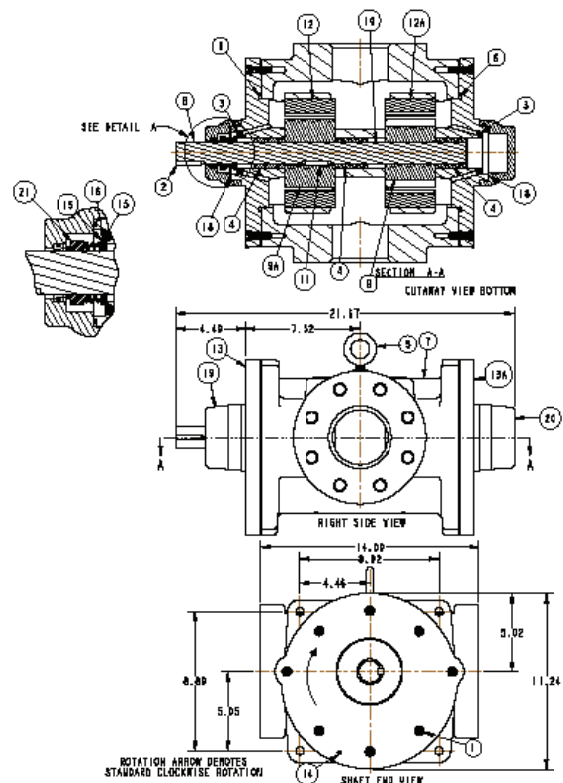
#### Applications:

- Petroleum Products (fuel transfer/bulk transfer)
- Lubrication Systems • Food Processing • Soap
- Detergent Products • Paper Products • Ship building
- Mining

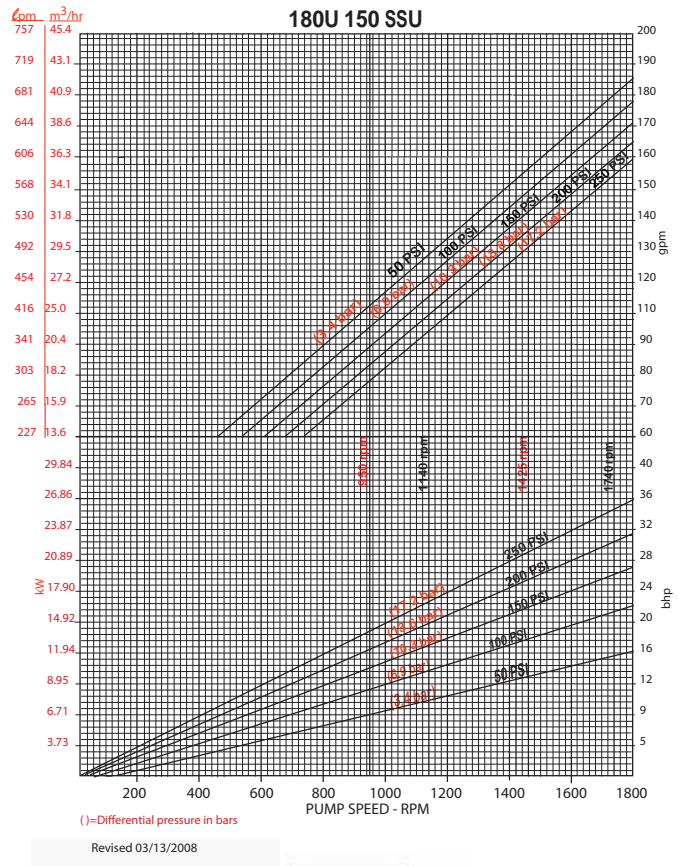
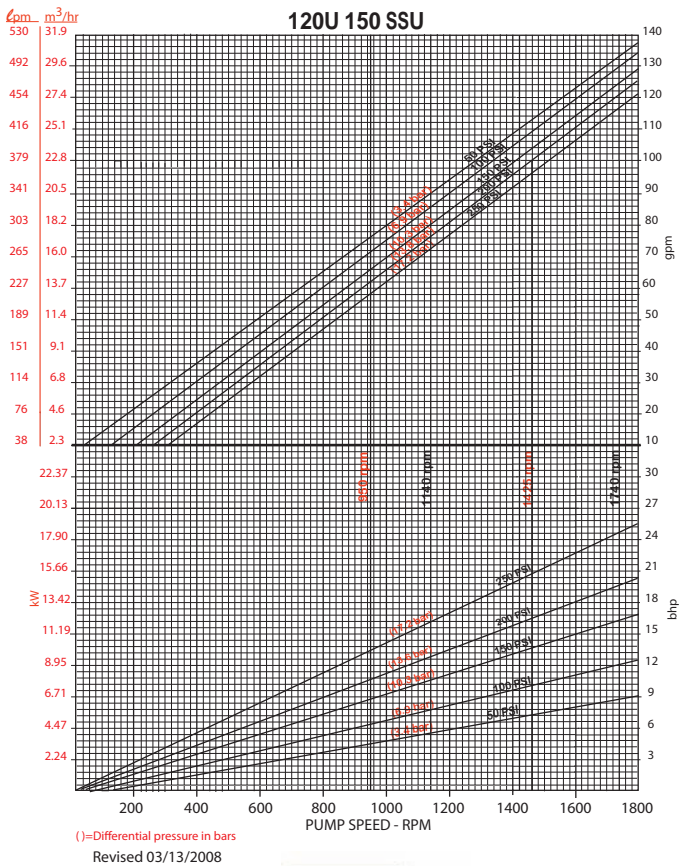


120U Pump with Z184 Bracket

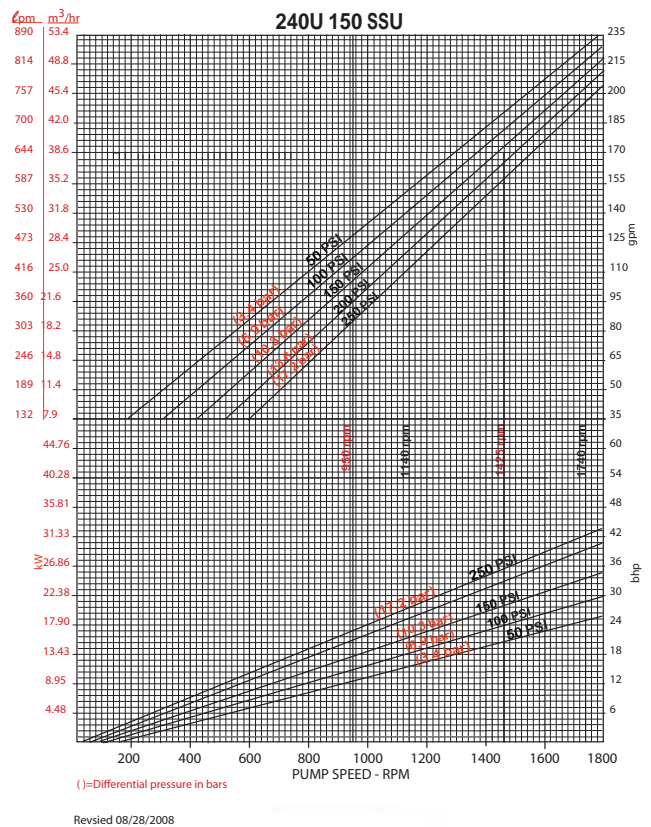
120U Dimensional Drawing



# Pumps That Fit...Pumps That Perform



additional sizes and flow rates available upon request.





# Haight® Pumps

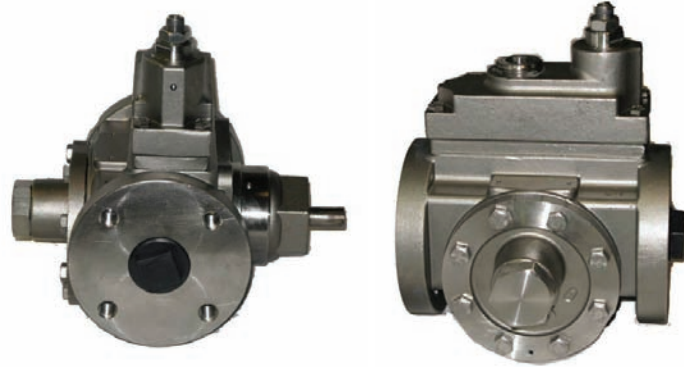
## Series US - Stainless Steel

### Sizes 6, 7, 8, 9, 10, 15 & 20 gpm Models

We've combined our versatile DIU Ductile Iron Universal Series pump design with stainless steel and corrosion resistant materials to meet the needs of our customers ever changing process systems.

#### Key Features:

- “Gear within a Gear” design for quiet operation
- built in gear reduction, fully supported, through-shaft design, utilizes standard motor speeds
- **UniverSeal** built in shaft seal flexibility
- only two moving parts reduces maintenance and wear
- closed coupled or foot mounted bracket designs
- readily accepts magnetic drive option
- inlet/outlet ports accept 1”, 1.25” and 1.5” NPT and 150# flange connections
- 250 PSI discharge pressure capability
- Non-Metallic Rotor eliminates galling problems, even with thin fluids including water
- integral relief valve with “No Leak” adjustment, and tank return operation capability



- 316L, (CF3M) Stainless Steel housing for maximum corrosion resistance
- Waukesha 88 pinion gear and 440C hardened, polished shaft assembly
- Delrin® AF rotor gear
- carbon graphite shaft sleeve bearings
- Viton® elastomers

#### Options:

- Alternate shaft seal and o-ring elastomer materials – Neoprene, Silicone, Teflon or Kalraz®
- PTFE Teflon rotor gear
- Teflon or Vespel shaft sleeve bearings
- 316L integral relief valve up to 230PSI
- magnetic drive and barrier seal available on all models

Additional Brackets for closed coupled mountings are available for motor frames up to 256TC. See “Mounting Options” on our web site [www.haightpump.com](http://www.haightpump.com).

#### Applications:

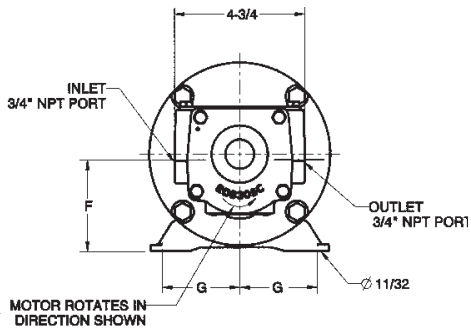
- Chemical Processing
- Pharmaceutical
- Wastewater Treatment • Textile
- Plastic
- Tanning • Soap • Rubber
- Photographic
- Plating
- Injection and Transfer of acidic, corrosive fluids and solvents.

#### Standard Construction Features:

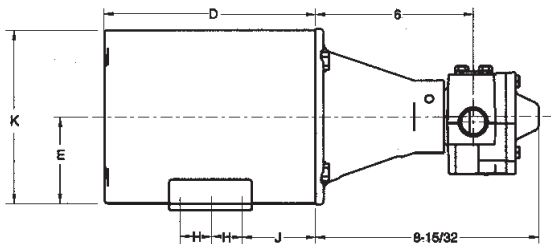
# Pumps That Fit...Pumps That Perform

**Z56RO Bracket for 6-9 GPM Universal Stainless Series Round Hub Pumps**

Frame	D	E	F	G	H	J	K
48	9-3/8	3	2-13/16	2-1/8	1-3/8	2-5/16	5-13/16
56	9-3/4	3-1/2	3-5/16	2-7/16	1-1/2	2-9/16	6-3/4



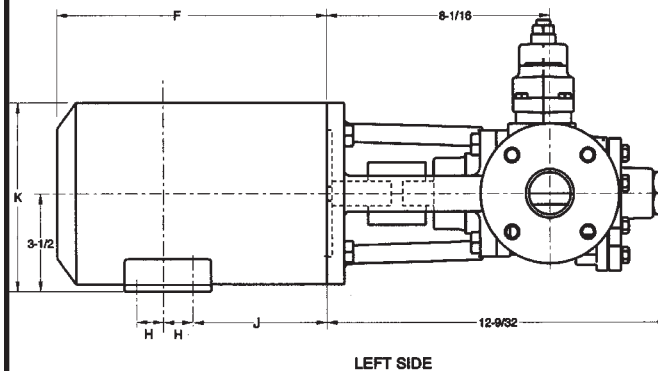
**FRONT VIEW**



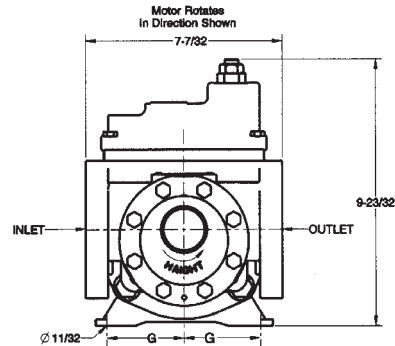
**LEFT SIDE**

**Z56SO Bracket For 10-40 GPM Square Flanged Pumps**

Frame	F	G	H	J	K
56	9-3/4	2-7/16	1-1/2	2-9/16	6-3/4
143	10	2-3/4	2-1/2	2-3/4	6-13/16

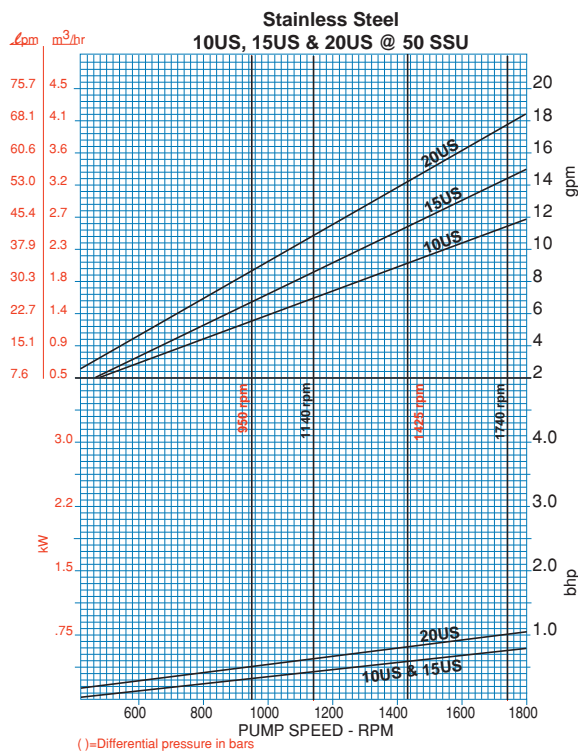
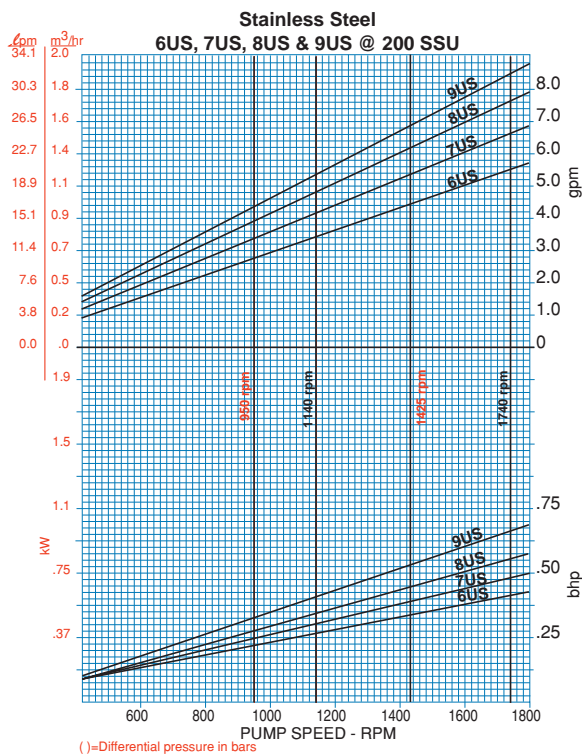


**LEFT SIDE**



**FRONT VIEW**

Additional Brackets for closed coupled mountings are available for motor frames up to 256TC. See "Mounting Options" on our web site [www.haightpump.com](http://www.haightpump.com).



# Haight® Pumps

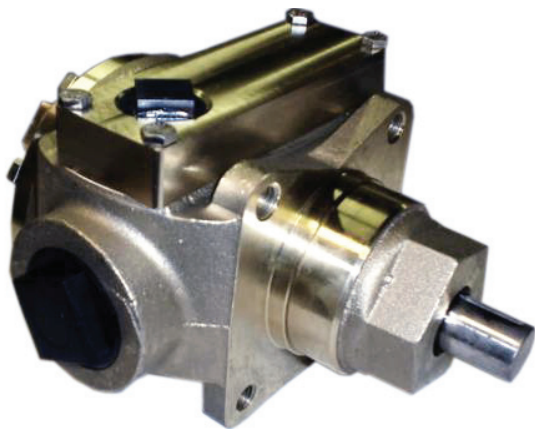
## Series UB - Bronze

### Sizes 24-240 gpm Models

Haight® Pump is proud to introduce the first installment in our newest addition to the Haight® product family of Pumps That Perform, continuing a 70 year old tradition of supplying our customers with Rugged, Reliable, and Innovative Pumps. We've combined our versatile Ductile Iron Universal Series pump design with bronze and corrosion resistant materials to meet the needs of our customers ever changing process systems.

#### **Key Features:**

- “Gear within a Gear” Design for Quiet Operation
- Built In Gear Reduction, Fully Supported, Through-Shaft Design, utilizes Standard Motor Speeds
- UniverSeal built in Shaft Seal Flexibility
- Only Two Moving Parts reduces Maintenance and Wear
- Closed Coupled or Foot Mounted Bracket Designs
- Readily Accepts Magnetic Drive Option
- Inlet/Outlet Ports accept 1.5” NPT and 150# Flange Connections (24-40gpm) and 2” NPT, 150#& 300# Flange Connections (44-80gpm)
- 250 PSI Discharge Pressure Capability
- Non-Metallic Rotor eliminates galling problems, even with thin fluids including water
- Integral Relief Valve with “No Leak” Adjustment, and Tank Return Operation Capability



#### **Standard Construction Features:**

- 863 Bronze Housing for Maximum Corrosion Resistance
- Bronze C905 Pinion Gear and 440C Hardened, Polished Shaft Assembly
- Bronze C905 Rotor Gear
- Carbon Graphite Shaft Sleeve Bearings
- Viton® Elastomers

#### **Options:**

- Alternate Shaft Seal and O-ring Elastomer Materials – Neoprene, Silicone, Teflon or Kalraz®
- PTFE Teflon Rotor Gear
- Teflon or Vespel Shaft Sleeve Bearings
- 863 Bronze Integral Relief Valve up to 230PSI
- Magnetic Drive Available on all Models

#### **Applications:**

- Chemical Processing
- Pharmaceutical
- Wastewater Treatment
- Textile • Plastic
- Tanning
- Soap
- Rubber
- Photographic
- Plating
- Marine

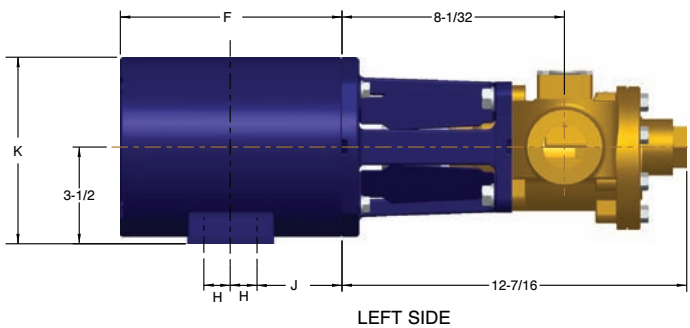
Delrin®, Kalraz® and Viton® are registered trademarks of DuPont Dow Elastomers



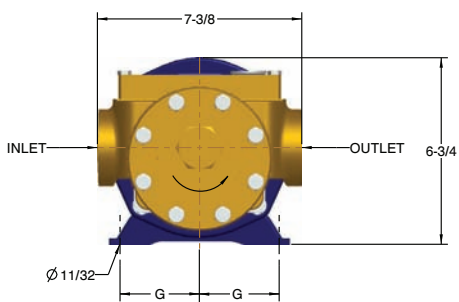
# Pumps That Fit...Pumps That Perform

Z56S0 Bracket For 24-40 GPM Square Flanged Bronze Pumps

	F	G	H	J	K	
FRAME	56	9-3/4	2-7/16	1-1/2	2-9/16	6-3/4
	143	10	2-3/4	2	2-3/4	6-13/16
	10	2-3/4	2-1/2	2-3/4	6-13/16	



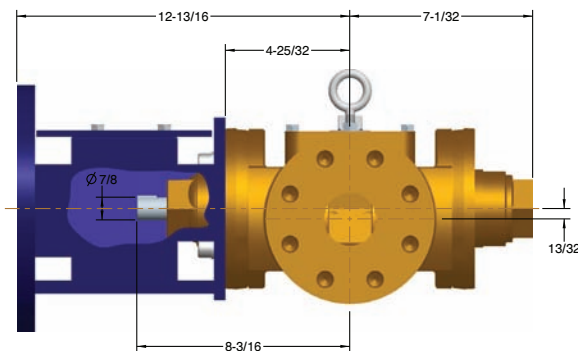
LEFT SIDE



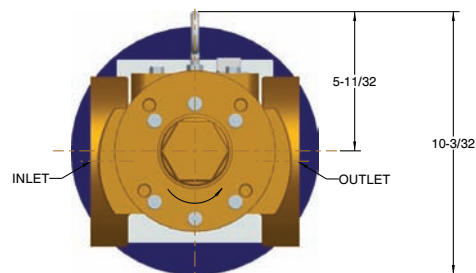
Motor Rotates  
In Direction Shown

FRONT VIEW

44-80 gpm Bronze Pump with Z213D Bracket



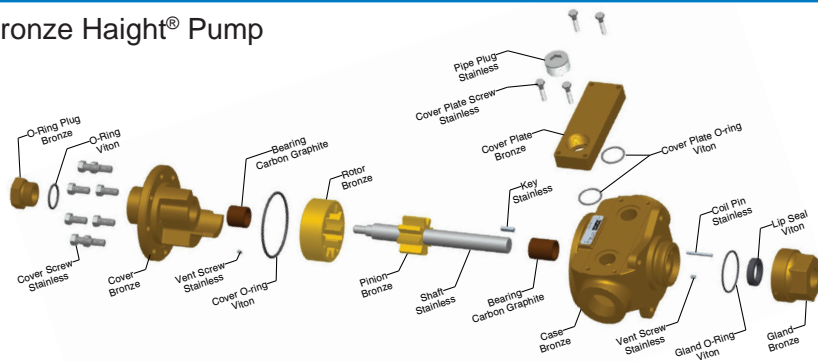
LEFT SIDE



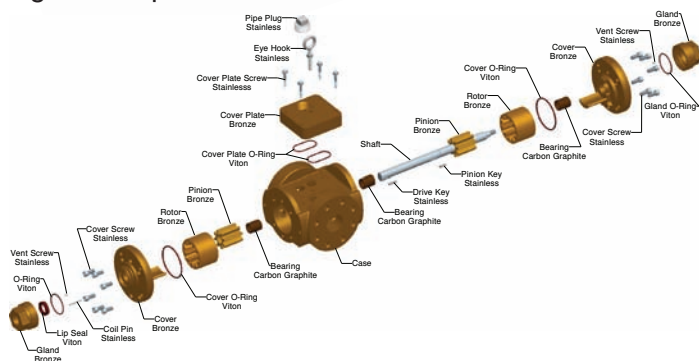
Motor Direction  
In Direction Shown

FRONT SIDE

24-40 gpm Bronze Haight® Pump



44-80 gpm Bronze Haight® Pump



# Haight® Pumps

## Unique Pump Configurations Developed for OEM Customer Applications



### • Series X Skeleton Pumps:

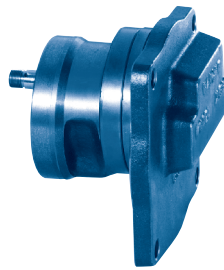
These custom-designed pumps are ideal for built-in lubrication applications on air compressors, gear boxes, engines, and other rotating equipment. Series X pumps feature compactness, positive displacement, through drive and no casing is required.

The Series X Skeleton pump shown is an example of the Haight Pump Division's ability to meet a customer's job specifications and production requirements. Haight engineers will meet with you to determine your specific needs for a non-standard design. They will then translate your needs into a positive displacement pump to meet your requirements.



### •Dual Pumps:

Dual Pumps on a common shaft are available in 15 possible flow combinations, up to 8gpm flow capacity, for each pump. Dual pump designs save valuable space and cost for system designers.



### • Flange Mounted Pumps:

Ideal for use on diesel engines, fuel oil boosters, gear reducers, or for lubricating oil pumps on engines and compressors. Flange mounted pumps are compact, lightweight and designed to mount directly on your equipment.

The flange mounted pump shown was developed for us with a gear reducer. Haight engineers later applied this design principle to fit other customer requirements. When your project plans call for a custom-built positive displacement pump, Haight can analyze your needs and design a pump to meet them.



3D CAD rendered drawing

### •Encased, Flange Mounted, Reversible Pumps:

These custom pumps provide an enclosed gear set coupled with flange mounted, direct drive design features. System designers save space, weight, and cost by incorporating the pump into their system. The durable and simple internal gear design has been proven to be a reliable system component for nearly 70 years



### • E - Series:

The E - Series pumps are an economical, high performance modification of our proven D-Series model. These pumps are particularly well suited for use in direct drive, hub mounted configurations where size, weight, and cost are crucial performance criteria in an application. The rugged simplicity of the E - Series is proven thousands of times every year in high temperature applications throughout the world. Available with limited option selection, contact your local distributor for additional information.



### • G - Series:

The G - Series pumps are an affordable, high performance design series which utilizes the dynamic crescent, Gerotor gear configuration. This internal gear configuration offers exceptional suction capability, and compact size at a competitive price. Currently available in two sizes, with limited options, these pumps are physically interchangeable with existing D and E series pumps.



### • X - Series:

-A proven selection of different internal gear designs, each optimized for specific operating characteristics, all NSF approved.

- More efficient (less amp draw)

- Motor variations with US, CSA, or CE approval to meet application specifications - RoHS Compliant

- Performs at or slightly above competitors pump and is more debris tolerant

- No bearings to fail, alignment issues, or tolerance stacking

- Easily serviced with illustrated instructions

- Product Warranty that is the best in the industry

PLEASE CALL FOR ASSISTANCE

## HAIGHT'S UNIQUE "GEAR WITHIN A GEAR" PUMPING PRINCIPLE

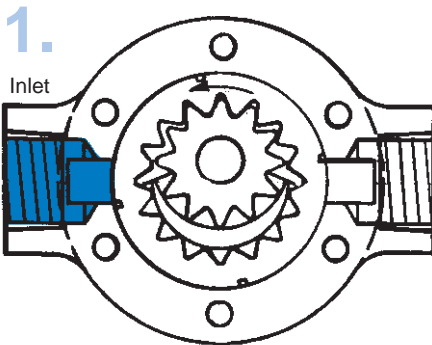
The most reliable of today's internal gear pumps are based on the "gear within a gear" principle pioneered Haight Pumps, nearly seventy years ago. While the differences may seem insignificant at first glance, the benefits for the end user are substantial.

The smaller, inner drive gear (pinion), and shaft assembly are supported by bearings on **both** sides of the pinion to resist movement, unlike other designs. The larger gear (rotor) is hydraulically balanced within the pump housing, finding its optimal position, naturally. The user benefits in several important ways:

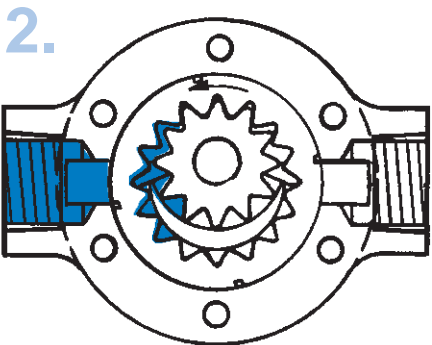
- Lower initial investment, Haight pumps operate at standard motor speeds, thus eliminating the need for expensive gear boxes, even for heavier fluids
- Fewer parts and adjustments means less maintenance time, no thrust bearings and end plates to maintain
- Close-coupled motor mounting eliminates pump and motor alignment problems, bedplate installation costs, and they use less space than conventional gear pumps designs
- Because the rotor is rotating at a fraction of the motor speed, wear and noise are reduced, and fluid flow into the gears is more effective. This keeps the pump head size and resulting cost, to a minimum while simultaneously extending the service life of the pump.
- True, three tooth engagement between the rotor and pinion provides superior flow characteristics
- Greater freedom to select the best rotor, pinion, and shaft materials for the individual customer application, without extravagant cost.

Simple idea, great results!

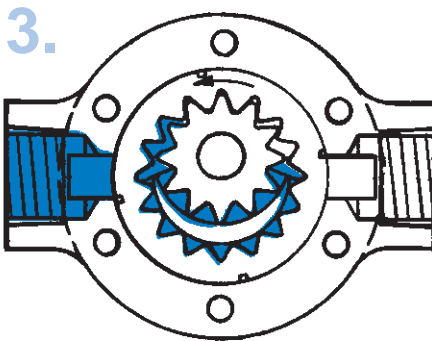
The liquid being pumped (dark blue)



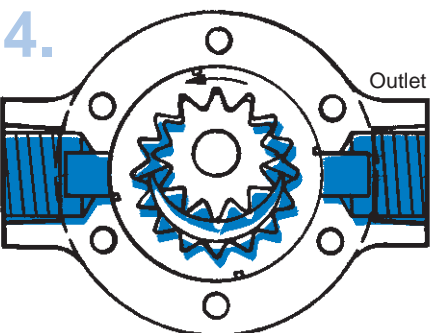
enters the pump through the inlet (suction) port. In this example, the inlet (suction) port is on the left.



As the inner (pinion) and outer (rotor) gears rotate, the liquid flows around both sides of the rotor into the gears. The crescent divides this flow and serves as a positive seal between the inlet (suction) and outlet (discharge) ports.



In this illustration, the pump is almost completely filled with the liquid which is about to be discharged through the outlet (discharge) port on the right. Note that the exclusive Haight three-tooth gear contact assures smooth discharge flow.



The pump is now completely filled. The liquid being pumped flows in through the inlet (suction) port, moves through the pump, and leaves through the outlet (discharge) port in a continuous flow.

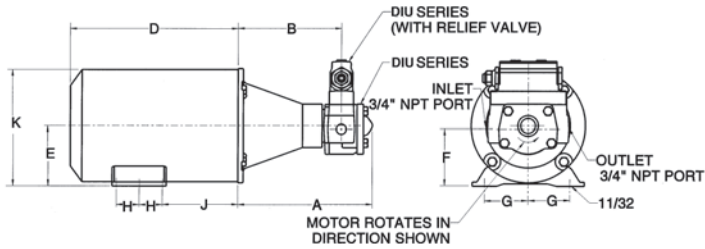


# Haight® Pumps

## Close Coupled Mounting Dimensions

Description: Designed for compactness, these Closed Coupled pumps require less space and have lower overall height. This permits their use in designs where space is at a premium. All Haight Series D Round Hub pumps (described on Page 7) and Square Flange Pumps (described on Page 8) are available for close coupling.

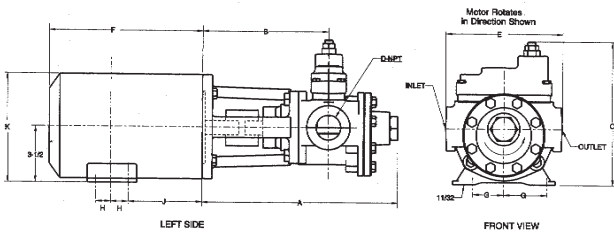
Haight Close Coupled pumps may be used with all NEMA "C" faced motors as shown in the drawings and charts below, "Z" brackets utilize footed motors, "Y" brackets utilize footless motors. Pump, bracket, coupling and electric motor can be furnished. Drip-proof, totally enclosed, wash down duty and explosion-proof motor enclosures are available.



**Z56RO Bracket For 1 - 9 gpm Pumps - 56-145 frame footed motor**

	A	B	D	E	F	G	H	J	K
Model	1U	7 13/16	5 15/16						
	3U	7 13/16	5 15/16						
	5U	8	5 15/16						
	6EU	8 15/32	6						
	6U	8 5/16	6						
	7EU	8 15/32	6						
	8EU	8 15/32	6						
	8U	8 7/16	6						
	9EU	8 15/32	6						
	9U	8 15/32	6						
Frame	48		9 3/8	3	2 13/16	2 1/8	1 3/8	2 5/16	5 13/16
	56		9 3/4	3 1/2	3 5/16	2 7/16	1 1/2	2 9/16	6 3/4

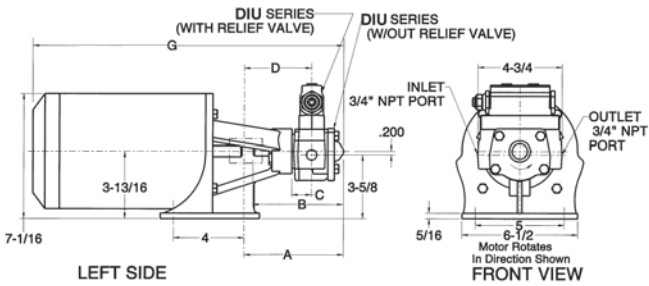
"D" Dimension will vary with motor enclosure



**Z56SO Bracket For 10 - 40 gpm Pumps - footed motor**

	Model	A	B	C	D	E	F	G	H	J	K
Model	10U	12 <sup>5</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>6</sub>	8 <sup>31</sup> / <sub>32</sub>	1	7					
	15U	12 <sup>5</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>6</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>4</sub>	7					
	20U	12 <sup>5</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>6</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>4</sub>	7					
	24U	12 <sup>7</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>32</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>					
	30U	12 <sup>7</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>32</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>					
Frame	40U	12 <sup>7</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>32</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>					
	56						9 <sup>3</sup> / <sub>4</sub>	2 <sup>7</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>2</sub>	2 <sup>9</sup> / <sub>16</sub>	6 <sup>3</sup> / <sub>4</sub>
	143						10	2 <sup>3</sup> / <sub>4</sub>	2	2 <sup>3</sup> / <sub>4</sub>	6 <sup>13</sup> / <sub>16</sub>
	145						10	2 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>2</sub>	2 <sup>3</sup> / <sub>4</sub>	

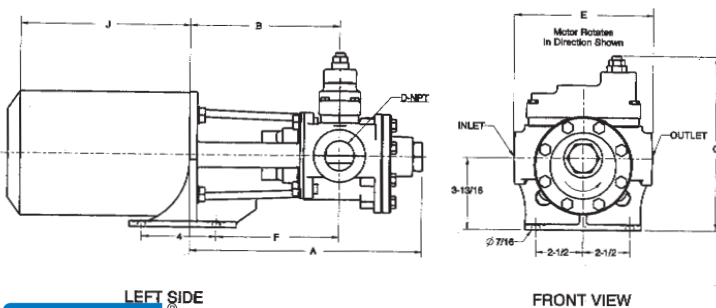
6<sup>13</sup>/<sub>16</sub>



**Y56R Bracket For 1 - 9 gpm Pumps - 56-145 frame unfooted motor**

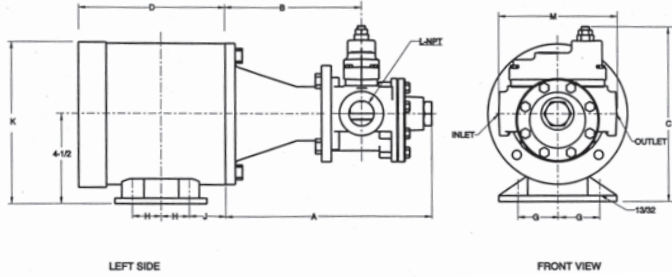
Model	A	B	C	D	G	
					48	56
1U	5 5/8	5 1/8	1 3/16	3 7/8	17 3/16	17 9/16
3U	5 5/8	5 1/8	1 3/16	3 7/8	17 3/16	17 9/16
5U	5 13/16	5 5/16	1 3/16	3 7/8	17 3/8	17 7/16
6EU	7 1/32	5 25/32	1 1/8	4 9/16	17 11/16	18 1/2
6U	6 1/4	5 3/4	1 1/8	3 13/16	17 13/16	18 3/16
7EU	7 1/32	5 25/32	1 1/8	4 9/16	17 11/16	18 1/2
8EU	7 1/32	5 25/32	1 1/8	4 9/16	17 11/16	18 1/2
8U	6 7/16	5 15/16	1 1/8	3 13/16	18	18 3/8
9EU	7 1/32	5 25/32	1 1/8	4 9/16	17 11/16	18 1/2

**Y56S Bracket For 10 - 40 gpm Pumps - 56-143 frame unfooted motor**



Model	A	B	C	D	E	F	J
10U	12 <sup>5</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>16</sub>	8 <sup>31</sup> / <sub>32</sub>	1	7	6 <sup>5</sup> / <sub>8</sub>	
15U	12 <sup>5</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>16</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>4</sub>	7	6 <sup>5</sup> / <sub>8</sub>	
20U	12 <sup>5</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>16</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>4</sub>	7	6 <sup>5</sup> / <sub>8</sub>	
24U	12 <sup>7</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>32</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>	6 <sup>19</sup> / <sub>32</sub>	
30U	12 <sup>7</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>32</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>	6 <sup>19</sup> / <sub>32</sub>	
40U	12 <sup>7</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>32</sub>	8 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>	6 <sup>19</sup> / <sub>32</sub>	
Frame							
56							9 <sup>3</sup> / <sub>4</sub>
143							10
145							

## Close Coupled Mounting Dimensions (continued)



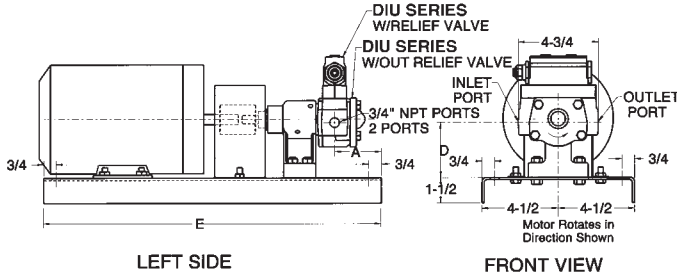
Z182S Bracket - 10-40 gpm Pumps for 182/184 frame footed motors

Model	A	B	C	L	M	D	G	H	J	K
10U	12 <sup>7</sup> / <sub>8</sub>	8 <sup>19</sup> / <sub>32</sub>	9 <sup>31</sup> / <sub>32</sub>	1	7					
15U	12 <sup>7</sup> / <sub>8</sub>	8 <sup>19</sup> / <sub>32</sub>	9 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>4</sub>	7					
20U	12 <sup>7</sup> / <sub>8</sub>	8 <sup>19</sup> / <sub>32</sub>	9 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>4</sub>	7					
24U	13	8 <sup>9</sup> / <sub>16</sub>	9 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>					
30U	13	8 <sup>9</sup> / <sub>16</sub>	9 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>					
40U	13	8 <sup>9</sup> / <sub>16</sub>	9 <sup>31</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>					
Frame*	182					*	3 <sup>3</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub>	8 <sup>3</sup> / <sub>4</sub>
	184					*	3 <sup>3</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>	3 <sup>1</sup> / <sub>2</sub>	8 <sup>3</sup> / <sub>4</sub>

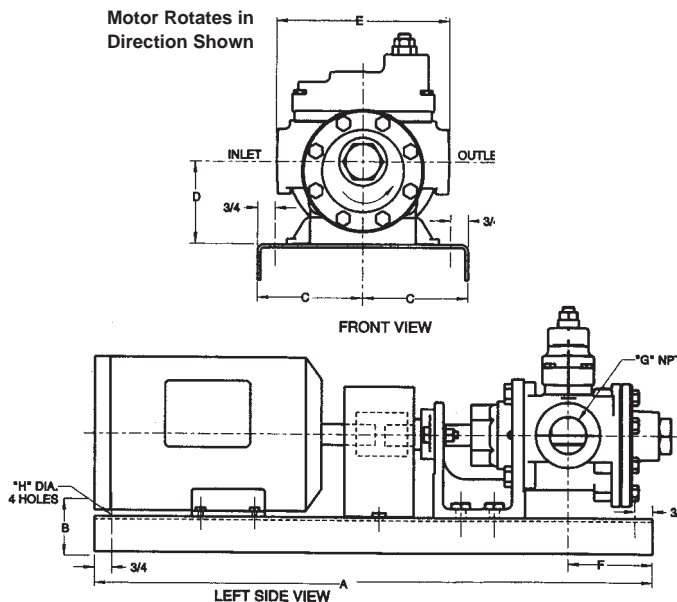
\*D Varies with Frame Used

Designed specifically for mounting on bedplate or machinery plate. Motor height brackets eliminate the need for mounting blocks. These pumps are coupled to the motor with flexible couplings. In addition to the flexible coupling, bedplate assemblies include mounting bracket, coupling guard, and rigid steel bedplate. These mountings are available to meet a wide variety of requirements utilizing the Haight pumps described on pages 7 and 8.

## Bed Plate Assemblies



BEDPLATE	FRAME	A	D	E
1-5U		2 13/16		
6 & 8 U		2 3/4		
6-9EU		2 3/4		
	S56B	48 56, 143, 145	3 3 1/2	20
	S140B	182, 184	3 1/2	24



Model 10U

Bedplate	Frame	A	B	C	D	E	F	G	H
S140B	56, 143 145	24	1 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	7	3 <sup>7</sup> / <sub>8</sub>	1	1 <sup>17</sup> / <sub>32</sub>
S180B	182, 184	26	1 <sup>5</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	7	3 <sup>7</sup> / <sub>8</sub>	1	2 <sup>1</sup> / <sub>32</sub>
S213B	213, 215	30	1 <sup>5</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>4</sub>	7	3 <sup>7</sup> / <sub>8</sub>	1	2 <sup>1</sup> / <sub>32</sub>

Model 15U - 20U

S140B	56, 143 145	24	1 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	7	3 <sup>7</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	1 <sup>17</sup> / <sub>32</sub>
S180B	182, 184	26	1 <sup>5</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	7	3 <sup>7</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>32</sub>
S213B	213, 215	30	1 <sup>5</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>4</sub>	7	3 <sup>7</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>32</sub>

Model 24U - 40U

S140B	56, 143 145	24	1 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	3 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>	3 <sup>5</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	1 <sup>17</sup> / <sub>32</sub>
S180B	182, 184	26	1 <sup>5</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	4 <sup>1</sup> / <sub>2</sub>	7 <sup>3</sup> / <sub>8</sub>	3 <sup>5</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>32</sub>
S213B	213, 215	30	1 <sup>5</sup> / <sub>8</sub>	5 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>4</sub>	7 <sup>3</sup> / <sub>8</sub>	3 <sup>5</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>2</sub>	2 <sup>1</sup> / <sub>32</sub>

# Haight® Pumps

## ORDERING/QUOTATION INFORMATION

We want to serve you quickly and efficiently. When you order, please be sure to give us the pump model number and quotation reference number. For quotations please provide as much of the following information as possible:

- liquids you will be pumping
- flow rate
- operating pressure
- suction conditions
- temperature
- duty cycle
- seal type
- bearing information
- operating speed
- pump rotation
- port position
- alternative rotor
- special instructions



## PUMPS THAT FIT PUMPS THAT PERFORM

### If You Have Any Questions

Please call Baker Manufacturing at (800) 871-9250 or visit our web site at [www.haightpump.com](http://www.haightpump.com) for our nearest distributor.

## Baker Manufacturing Company, LLC

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