

CRANE

Crane Pumps & Systems

Split Case Product Training

Jon Palmer
Application Engineer



CRANE
PUMPS & SYSTEMS

Split Case Pumps

Everyone. Everywhere. On Time Every Time.

WEINMAN®

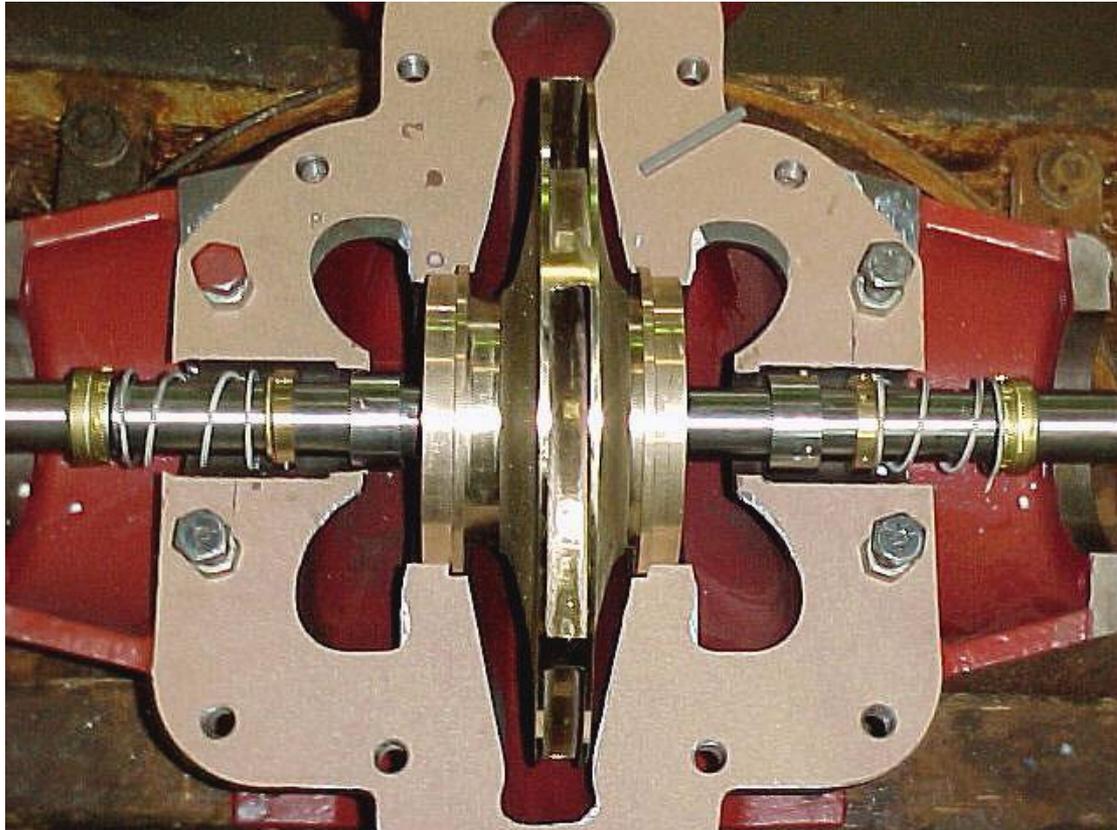


DEMING®



Horizontal Split Case Pumps

Everyone. Everywhere. On Time Every Time.



Split Case Design Features

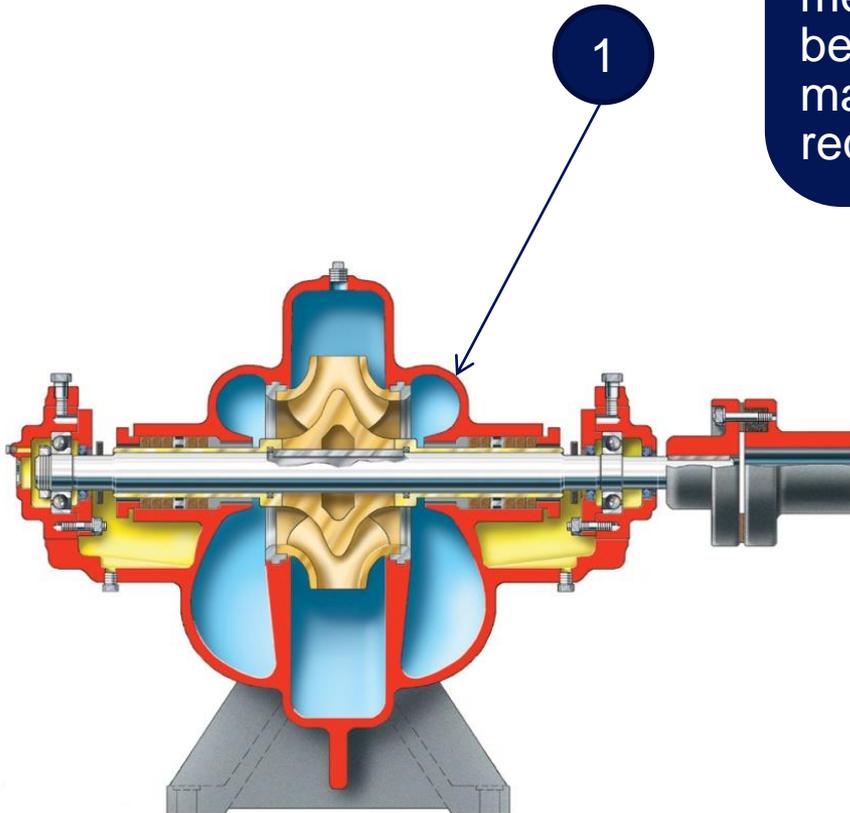
- Pumping is in-line, making piping layout easy
- Units are inherently hydraulically balanced
- Rotation can be changed
- Pumps can be horizontally and vertically mounted
- Low NPSH
- Easy maintenance on bearings, seals and impeller
- Designed for high pumping efficiencies and high volume
- Dependable service

Product Features

Horizontal Split Case Pumps

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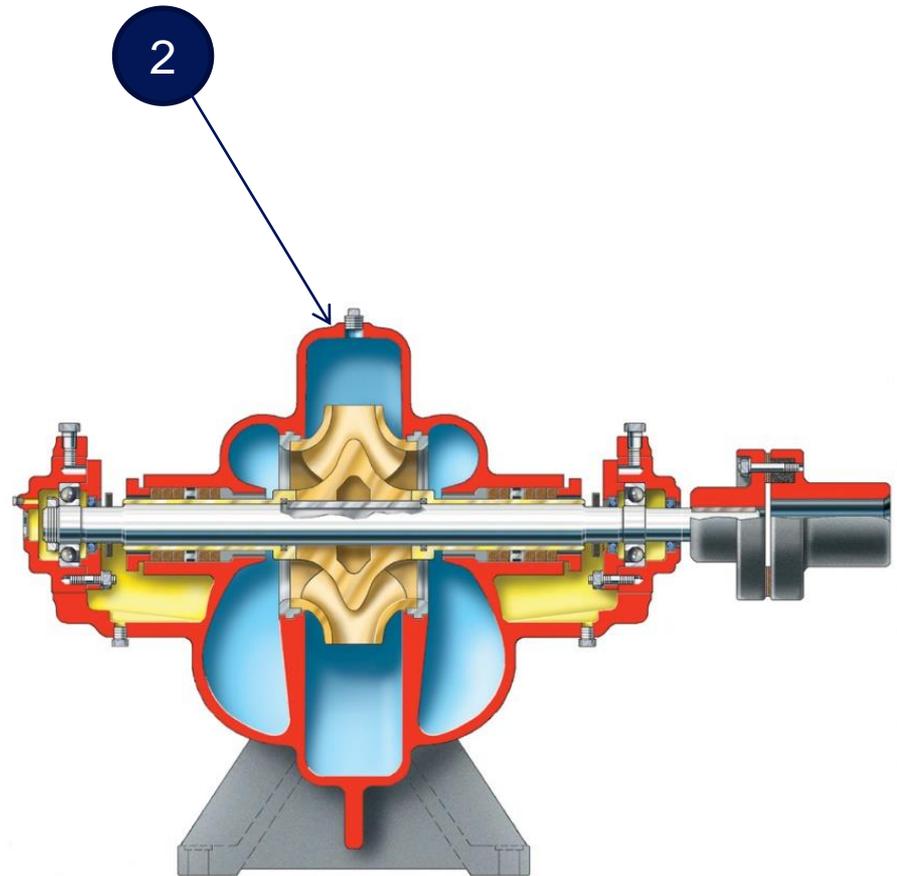
Compact Design –heavy shaft and short bearing span reduce shaft deflection, providing longer mechanical seal and bearing life, and lower maintenance cost. Also requires less floor space.



Horizontal Split Case Pumps

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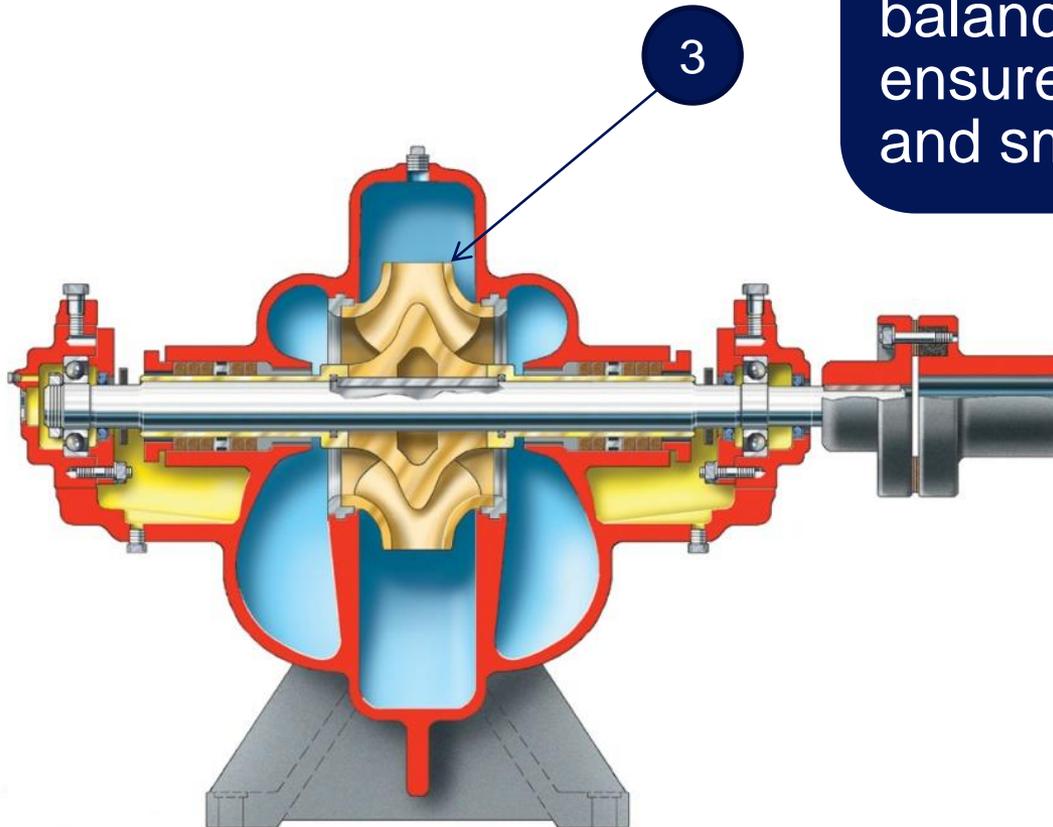
Casing - horizontally split, upper and lower half bolted & doweled to provide better alignment. Upper half easily removed for inspection of complete rotating assembly without disturbing bearings or alignment. Flanged suction and discharge connections located in the lower half casing, permit inspection and maintenance without disturbing piping or drive alignment.



Horizontal Split Case Pumps

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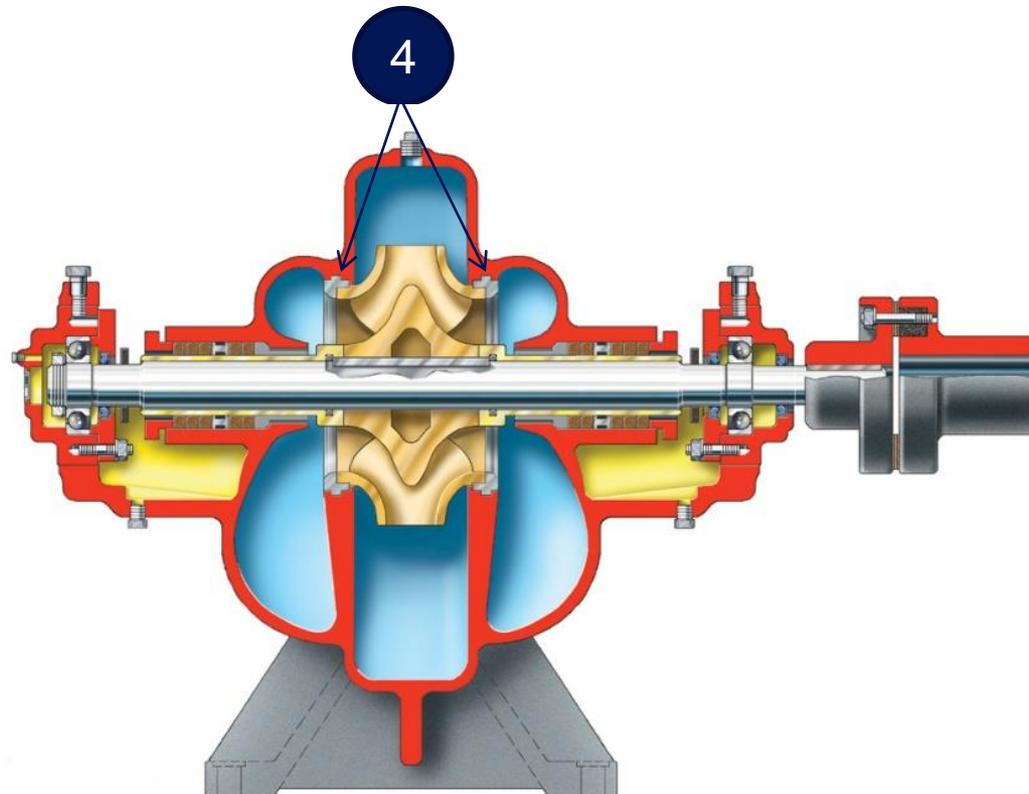
Impeller - enclosed, double suction type. Cast in one piece and hydraulically balanced to minimize thrust, ensure longer bearing life and smooth operation.



Horizontal Split Case Pumps

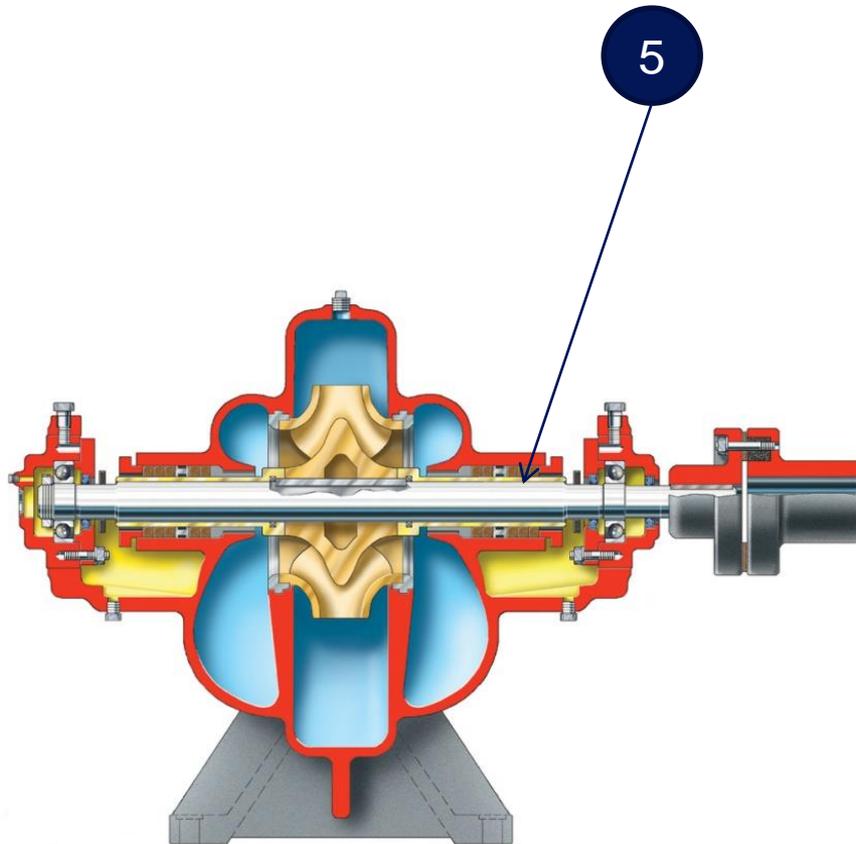
Everyone. Everywhere. On Time Every Time.

Wearing Rings – close running clearance minimizes pressure leakage between suction and discharge cambers of the casing. Easily replaceable. Casing rings standard on all sizes are designed with labyrinth to prevent rotation. No need to worry about a pin shearing under load. The impeller is pressed on, then attached with double set screws.



Horizontal Split Case Pumps

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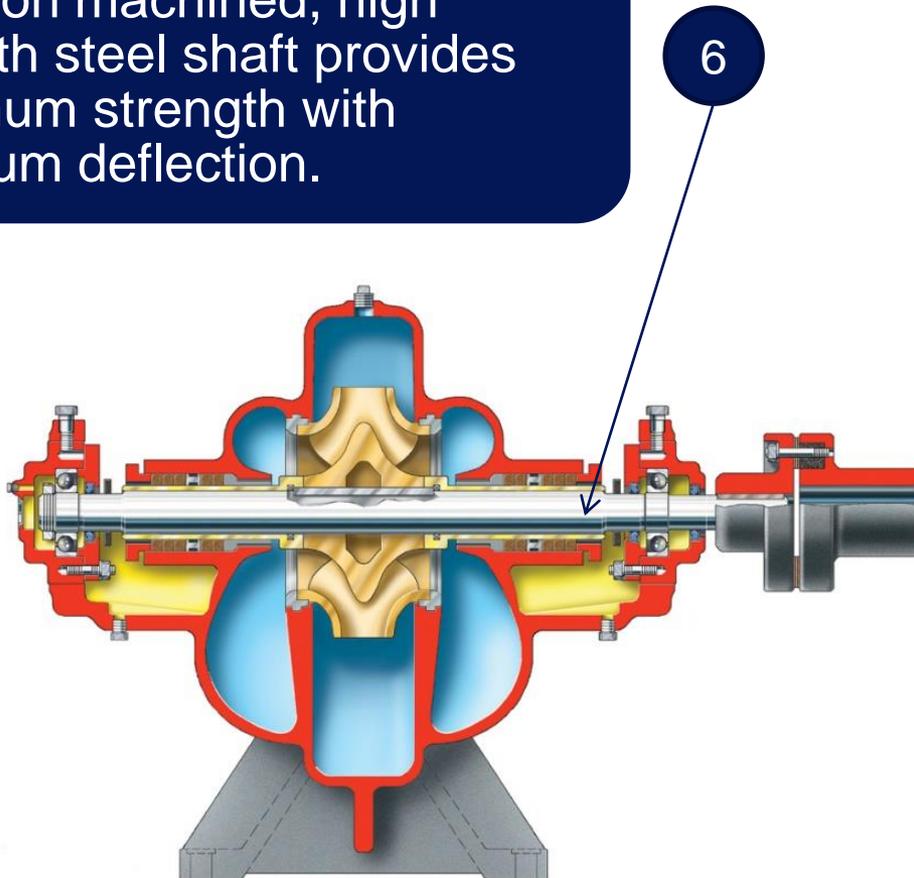


Shaft Sleeve - protects the shaft against corrosion and wear, extends through gland for maximum shaft protection. Optional with mechanical seals, standard with packed glands.

Horizontal Split Case Pumps

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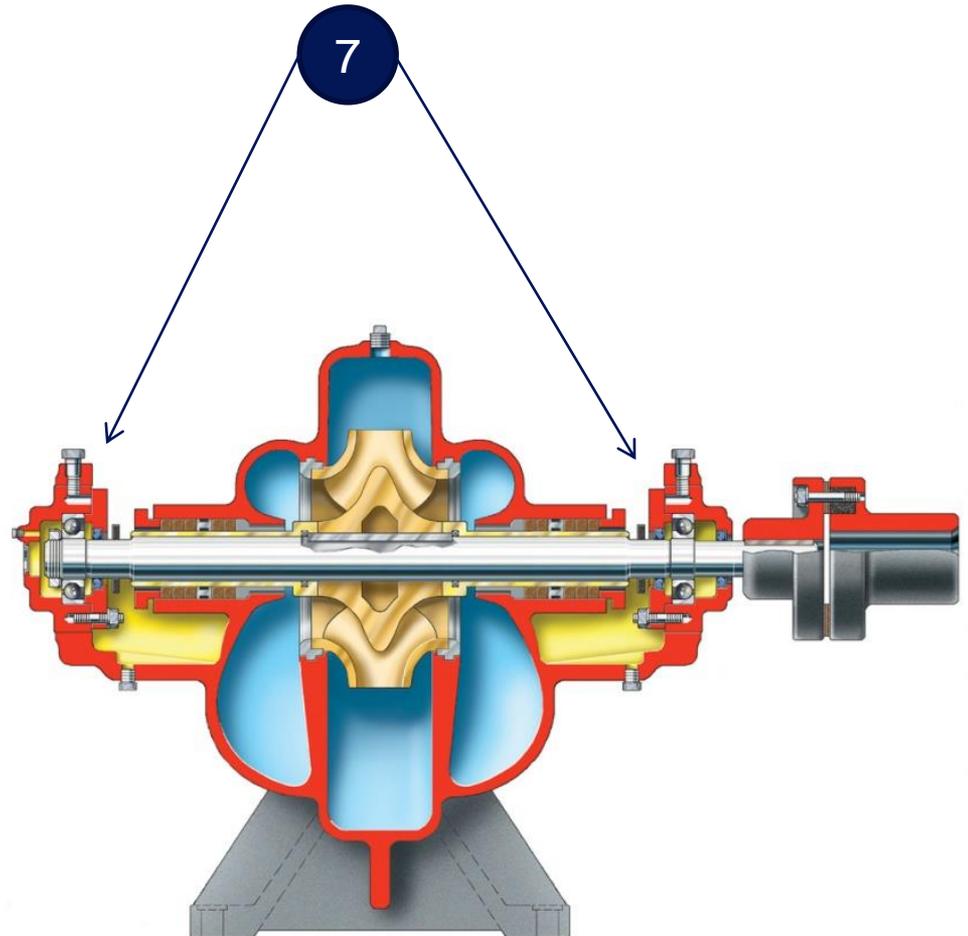
Shaft - large diameter, precision machined, high strength steel shaft provides maximum strength with minimum deflection.



Horizontal Split Case Pumps

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Bearings – outboard bearing is designed to accept radial and thrust loads. Inboard bearing is single row, to handle radial load, and is free to move axially in housing to compensate for shaft expansion due to temperature changes. Bearings are grease lubricated (Oil Lubrication Optional for Deming).

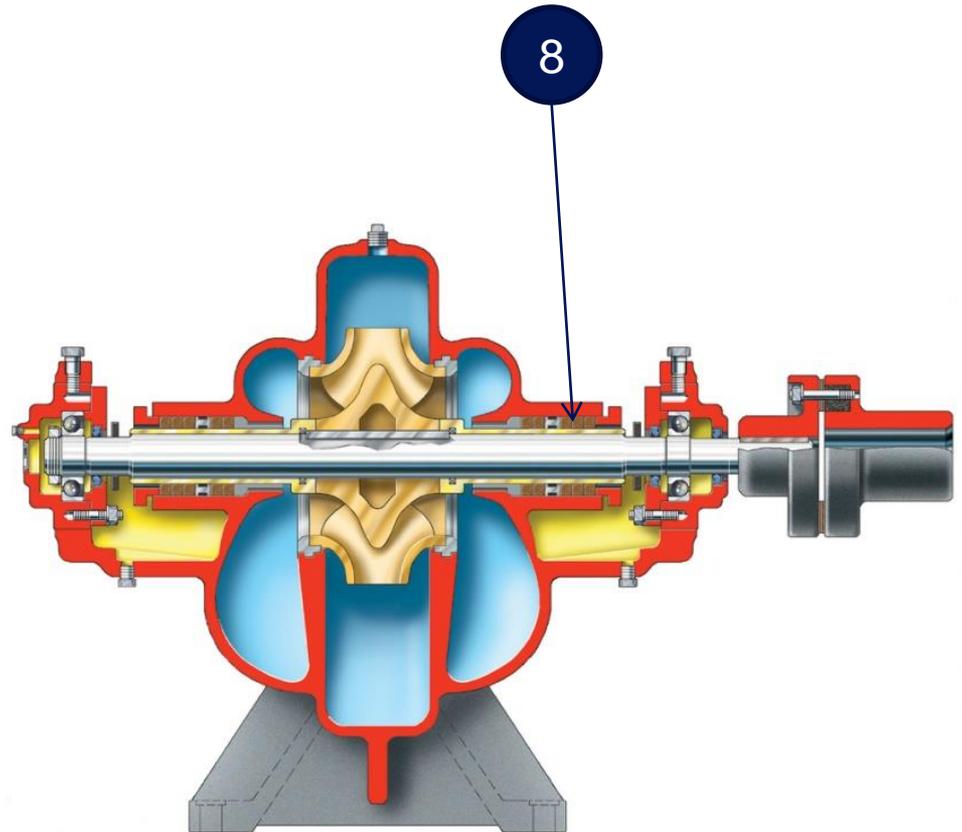


Horizontal Split Case Pumps

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Stuffing Box/Mechanical Seal -

stuffing box is extra deep to accept a minimum of 5 packing rings and lantern ring. Internally drilled liquid passage in upper half casing provides balanced pressure and lubrication to the packing/seal area. Also, eliminates the requirement for outside recirculation lines that can be pinched or bent. External lubrication, such as water under pressure, may be connected to upper half casing. Heavy split gland facilitates maintenance. Wide choices of mechanical seals available.



WEINMAN[®]

Single Stage - Model 1200

Casing – Cast Iron/Ductile Iron

Impeller – Bronze

Shaft – Stainless 416

Wear Rings – Bronze (Cast Iron on L7/L8)

Seal – Mechanical Seal

1750RPM – 7000GPM/450'

1150RPM – 5000GPM/200'

2" X 3" X 10" thru 12" X 12" X 14"



DEMING[®]

Single Stage - Model 5060

Casing – Cast Iron/Bronze/Stainless 316

Impeller – Cast Iron/Bronze/Stainless 316

Shaft – Steel

Wear Rings – Cast Iron/Bronze/Stainless 316

Seal – Packing or Mechanical Seal

3500RPM – 2000GPM/500'

1750RPM – 7000GPM/400'

1150RPM – 6000GPM/200'

870RPM – 4000GPM/120'

2" X 1-1/2" X 8" thru 14" X 12" X 14.5"



WEINMAN[®]

Multi Stage - Model 1310

Casing – Cast Iron

Impeller – Cast Iron/Bronze

Shaft – Steel

Wear Rings – Bronze/Steel

Seal – Packing or Mechanical Seal

3500RPM – 700GPM/900'

1750RPM – 300GPM/220'

3" X 1-1/2" X 10" thru 4" X 3" X 10"



DEMING[®]

Multi Stage - Model 5260

Casing – Cast Iron

Impeller – Cast Iron/Bronze

Shaft – Steel

Wear Rings – Bronze/Steel

Seal – Packing or Mechanical Seal

3500RPM – 700GPM/900'

1750RPM – 300GPM/220'

1150RPM - 575GPM/600'

870RPM – 300GPM/160'

3" X 1-1/2" X 10" thru 4" X 3" X 10"



WEINMAN®

Vertical - Model 1100

Casing – Cast Iron/Ductile Iron

Impeller – Bronze

Shaft – Steel

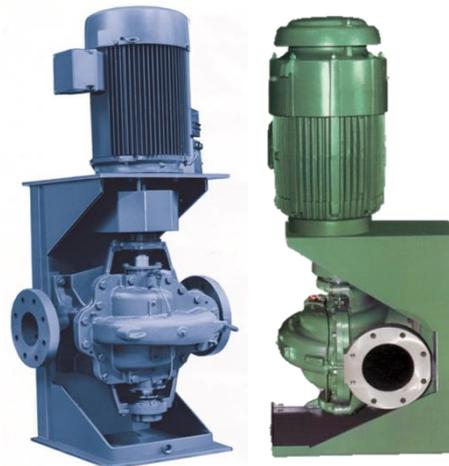
Wear Rings – Bronze (Cast Iron on L7/L8)

Seal – Mechanical Seal

1750RPM – 7000GPM/450'

1150RPM – 5000GPM/200'

2" X 3" X 10" thru 12" X 12" X 14"



DEMING®

Vertical - Model 5060

Casing – Cast Iron/Bronze/Stainless 316

Impeller – Cast Iron/Bronze/Stainless 316

Shaft – Steel

Wear Rings – Cast Iron/Bronze/Stainless 316

Seal – Packing or Mechanical Seal

3500RPM – 2000GPM/500'

1750RPM – 7000GPM/400'

1150RPM – 6000GPM/200'

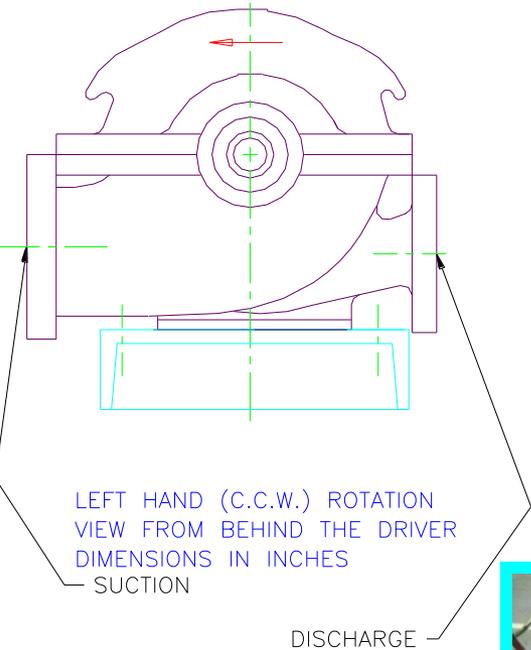
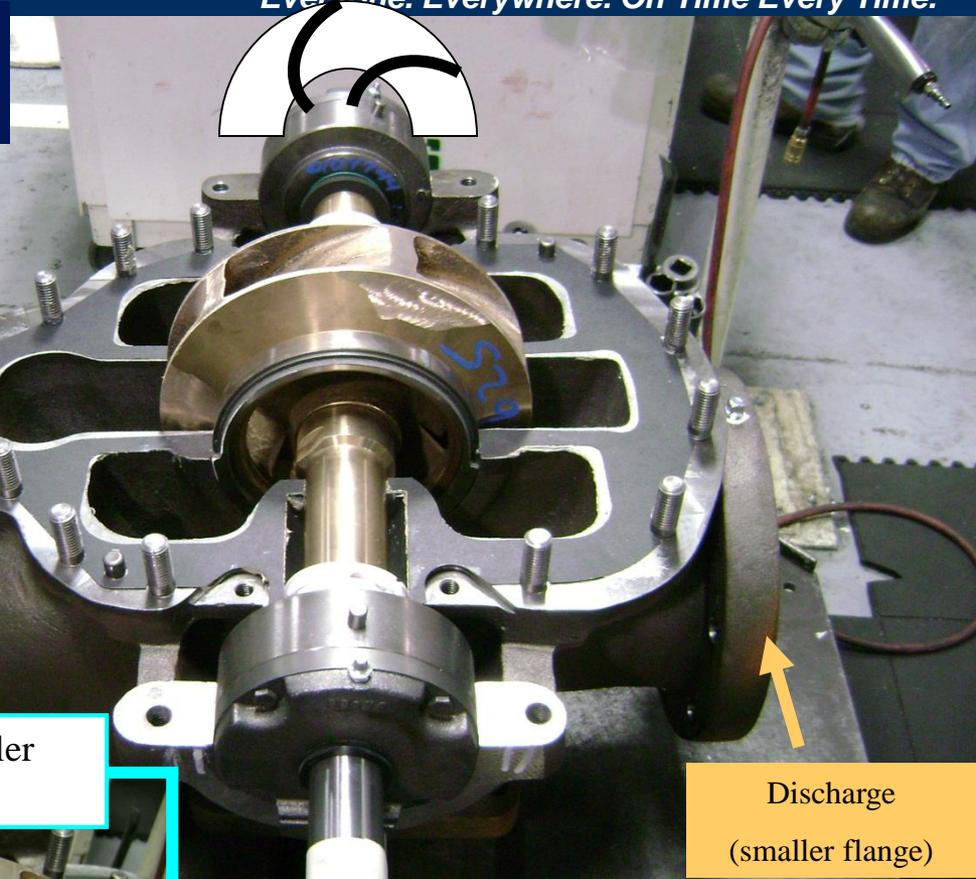
870RPM – 4000GPM/120'

2" X 1-1/2" X 8" thru 14" X 12" X 14.5"

Horizontal Split Case Pumps

Everyone. Everywhere. On Time Every Time.

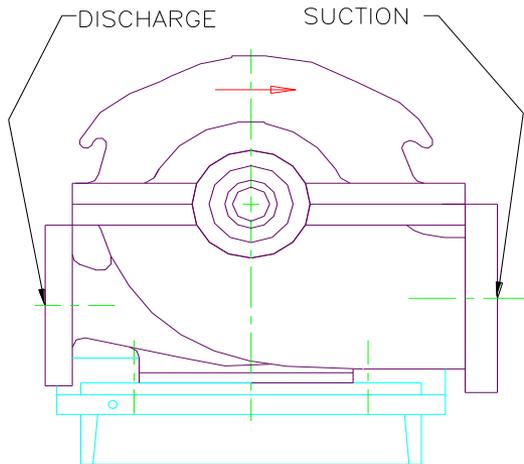
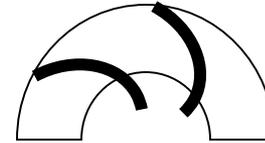
LH (CCW) Rotation



Horizontal Split Case Pumps

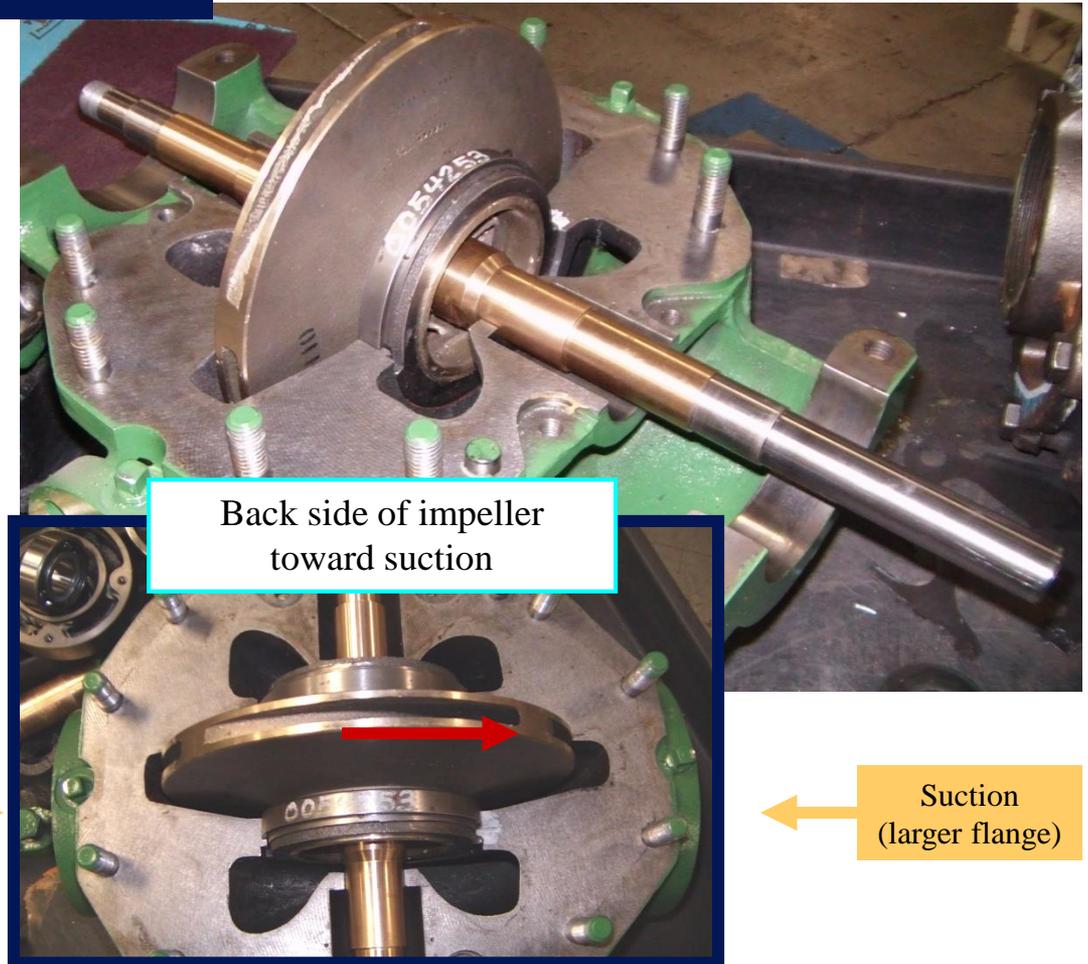
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RH (CW) Rotation



RIGHT HAND (C.W.) ROTATION
VIEW FROM BEHIND THE DRIVER
DIMENSIONS IN INCHES

Discharge
(smaller flange)



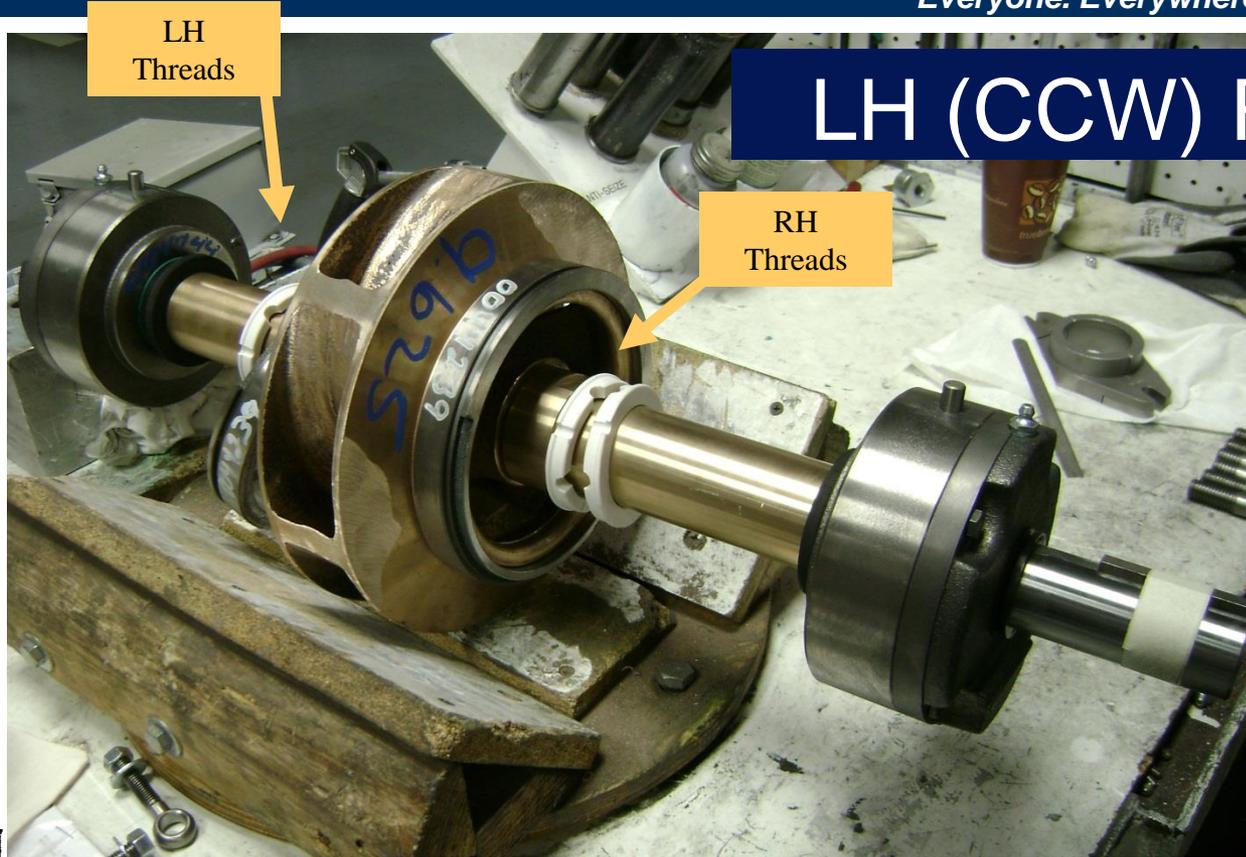
Suction
(larger flange)



Deming Split Case Pumps

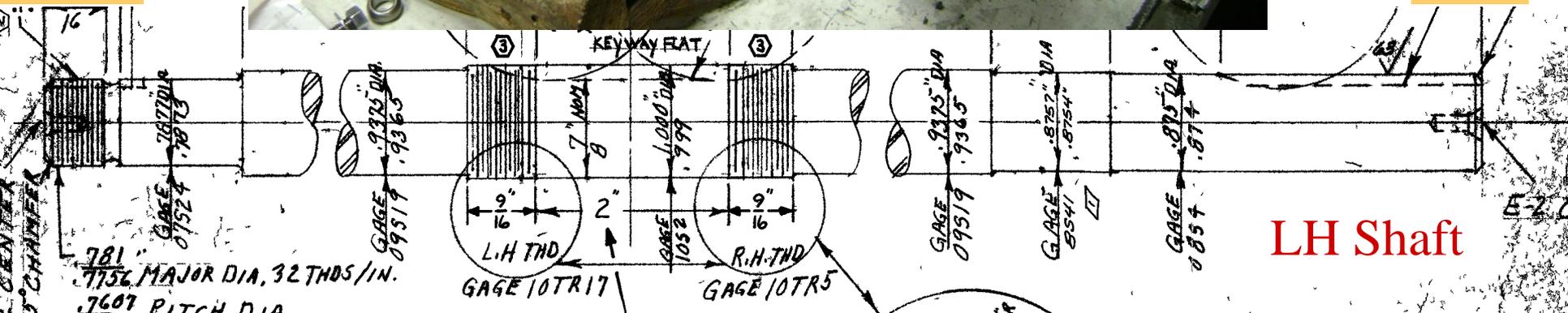
Everyone. Everywhere. On Time Every Time.

LH (CCW) Rotation



OB

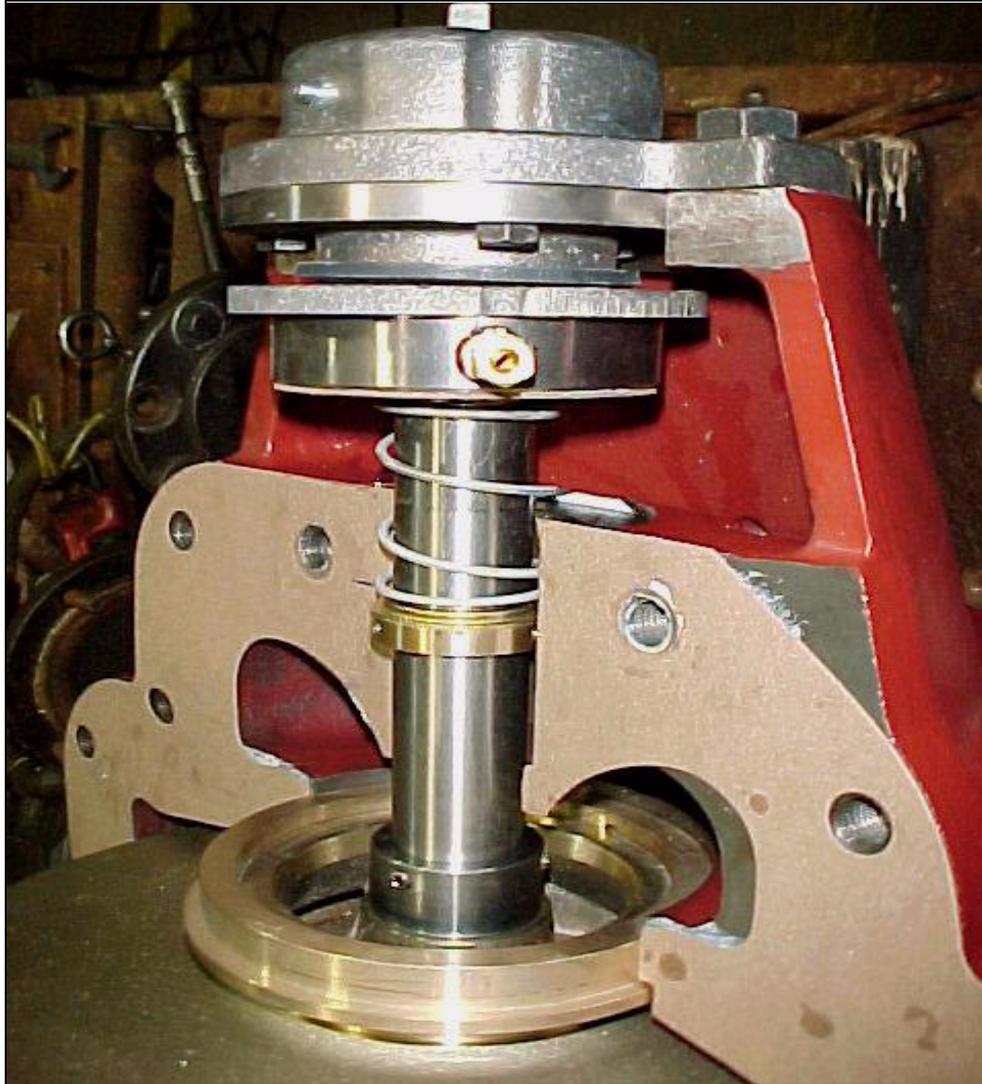
IB



LH Shaft

Weinman Split Case Pumps

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Applications

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Raw Water Intake



Water Distribution



Drainage

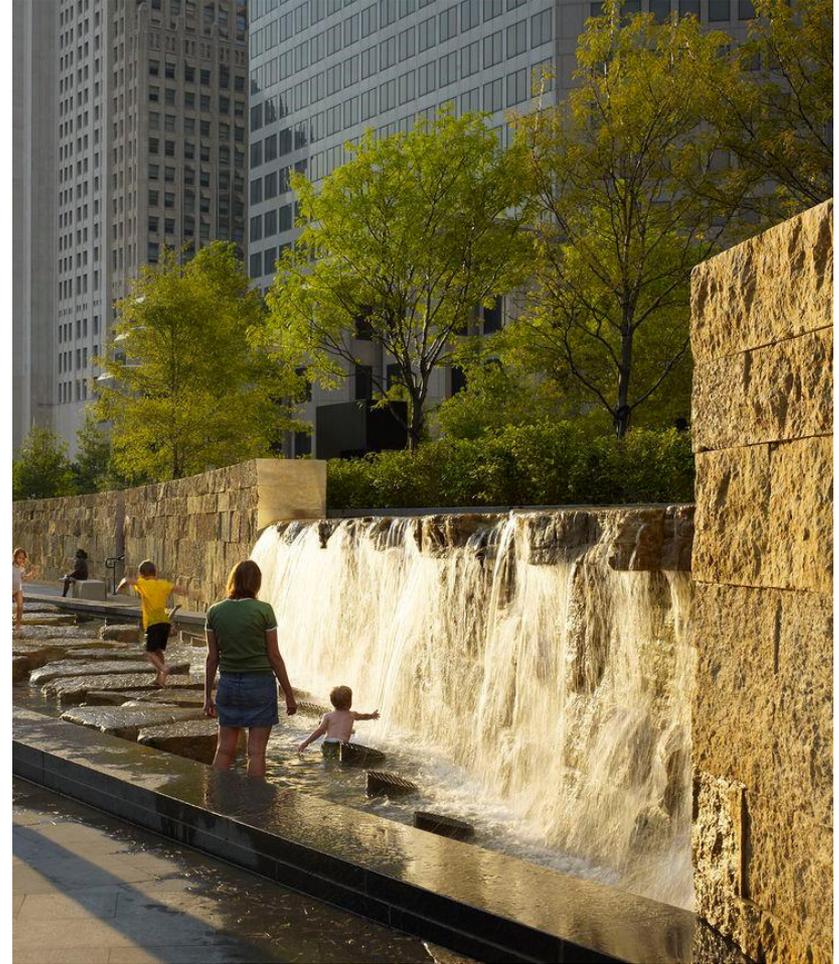


Horizontal Split Case Pumps

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Fire Fighting Barges, Louisiana



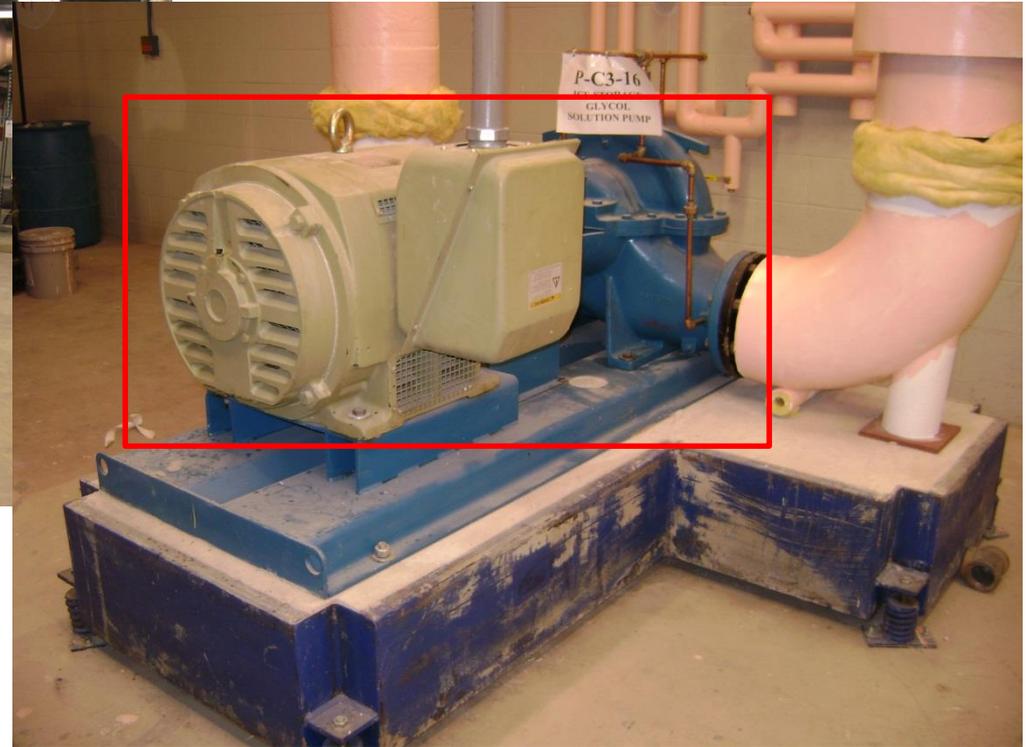
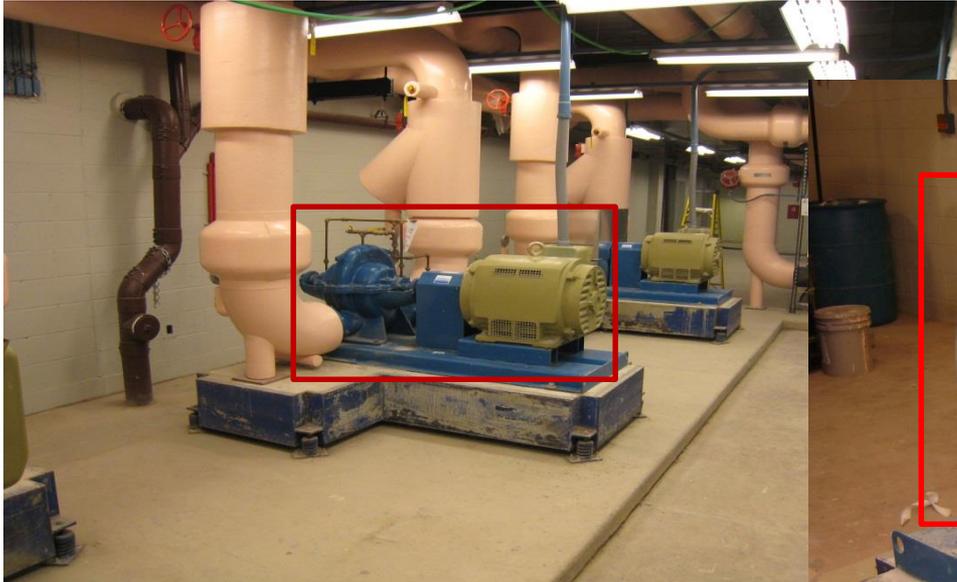
The wave pool
Geauga Lake, Ohio

Waterfall by Hydro
Dramatics, St. Louis



Horizontal Split Case Pumps

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HVAC application for GA FLEET– Glycol water mixture for cooling. Bank of America Building

Product Selection & Pricing

Obtain primary design conditions

- Design flow rate
- Design total head
- Solids Size

Select pump size & type

- Configuration type
- Suction & discharge size

Use On-Line

- Draw system curve for minimum static head
- Determine HP at intersection of curves and select motor

Selling Against the Competition

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PACO

Aurora

Peerless

Chicago



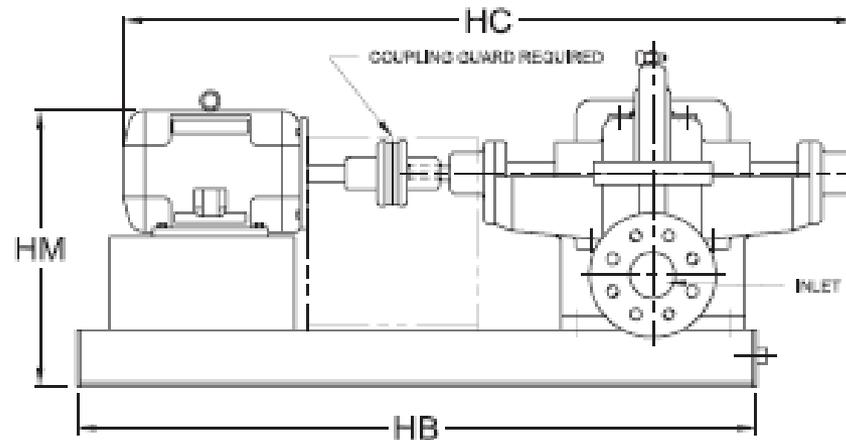
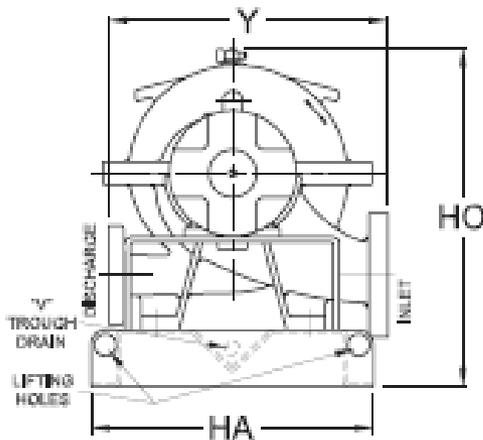
Weinman - Hydraulics well positioned

Deming - Smaller size flange to flange for easier installation

Competitive Lead times

Competitive Pricing

Legacy Installed Base



Sales & Marketing Tools

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Industrial Solutions

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#11

2014

IN BRIEF:

LEAD CONTRACTOR: Weimer, the primary contractor project to increase the amount of crude oil that can be recovered from the oil field.

PROBLEM: Weimer could not find a carbon dioxide (CO₂) injection system during design. The first CO₂ injection compressor was not able to be installed in the carbon dioxide (CO₂) compressor bay. It was not being heated.

SOLUTION: The Weimer pumps contribute the Northward Series oil recovery operations increased revenue and stability to \$4.7.



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#22

2014

IN BRIEF:

SITE LOCATION: Nassau, Bahamas
The Bahamas Water and Sewerage Corporation (WSC) provides potable water distribution service to all of the Bahamas.

SITUATION: Water and Sewerage Corporation of Nassau, Bahamas was frustrated with frequent maintenance on aging pumps. The parts were hard to acquire, and the complicated pump design were difficult to work on.

SOLUTION: Due to the corporation's positive experience with the Deming 5060 series split case pump they worked with the local distributor, Jack Klein Pump Association, to develop a plan to replace all other manufacturer's pumps with the Deming 5060 Series.



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Commercial Building Solutions

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#8

2011

IN BRIEF:

SITE LOCATION: Boston, MA
High-rise office building in Boston's financial district. HVAC, hot water, conditioned hot water and chilled water application retrofit with 21 Weinman Pumps, combination of BL2 1200 Series, BL2 1200 Series and 500 Series.

PROJECT FEATURES:
Large capacity, 2.5 acre footprint
High traffic, downtown location

WEINMAN 1200 & 500 SERIES FEATURES:
• High Efficiency
• Long Pump Life
• Economical Cost
• Quiet Operation
• Easy Routine Maintenance
• Quality Construction



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#20

2014

Applications & Systems

72 Weinman Split Case Pumps Still Operating to Today's Specifications

Applications & Systems

72 Weinman Split Case Pumps Still Operating to Today's Specifications

1972 three Weinman Model BL2A pumps were installed in the Cornell University Veterinary Medical Center to pump chilled water. The contractor work on an object fell on and cracked the upper case of the three original installed Weinman Split Case pumps. The crack was repairable and the pump needed to be replaced. Up until this time, the pump had no repairs. One of the other pumps has only had one seal permit since installation and the other pump is also still operating to the manufacturer's specifications and has not required any maintenance.

Klein from Crane Pumps & Systems' channel partner, Midway Industrial Inc, suggested doing an exact replacement of the original pump purchase. The damaged Weinman split case pump had 41 years of service with no major problems.

If University purchased a new Weinman Model BL2A split case pump the expectation of running it for another 40 or so years!

nan split case pumps are recognized for quality, efficiency and low costs combine mechanical simplicity with sophisticated hydraulic design.

Clearly, I suggested to replace the damaged Weinman with another Weinman. Long term quality shows on the Weinman Split Case pumps!"

Larry Klein,
Midway Industrial Supply



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INDUSTRIAL
Weinman Whiting
Oil and Gas Oil
Recover, TX

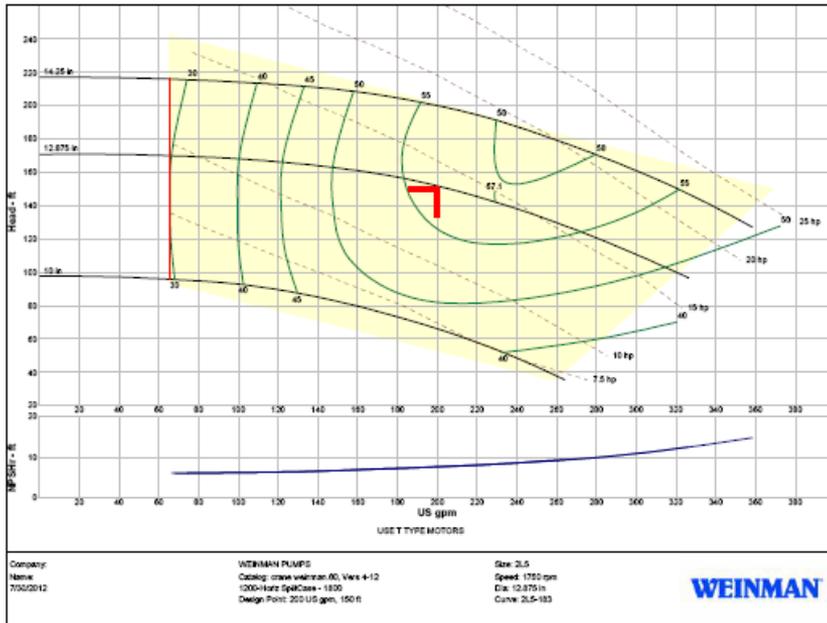
MUNICIPAL
Deming Water and
Sewerage Corp. of Nassau,
Bahamas

COMMERCIAL
Weinman Boston 125 High St.
AND
Weinman Cornell University

On-line Success Stories are located on CP&S Connect as selling aids.

Everyone. Everywhere. On Time Every Time.

- Curves in Mentor
- Brochures



WEINMAN

brands you trust.

Split Case Pumps

L, LVM, and JD Series Centrifugal Pumps
For High Capacity Commercial, Municipal, And Industrial Applications

Weinman split case pumps meet a wide variety of service needs. The L Series single-stage and LVM vertically mounted pumps provide large capacity general service pumping. Rugged and reliable, they combine mechanical simplicity with sophisticated hydraulic design.

JD Series multi-stage pumps offer reliable, low cost high head pumping for applications such as boiler feed or booster service.

Recognized for their quality, efficiency and economy Weinman split case pumps meet the design criteria of: ASTM, H, ANSI, AG, SAE, and ASME.

	L / LVM	JD
Heads to (ft.)	450	800
Flows to (gal.)	6000	600

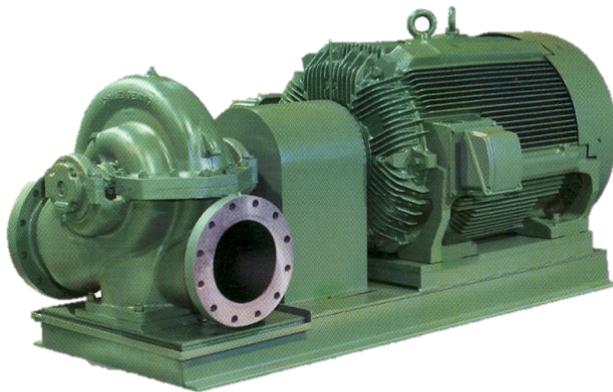
CRANE PUMPS & SYSTEMS

WEINMAN 1100/1200/1310 SERIES

Key Takeaways

Everyone. Everywhere. On Time Every Time.

- Split case pumps meet a wide variety of service needs.
- Offers vertical mounting pumps that occupies less space for small or restricted areas than its horizontal mounting pumps.
- The pumps physical design makes it easier to perform routine maintenance and replacement of rotating assemblies.
- The pumps are rugged and are designed for reliable performance.
- Repair parts are the same between horizontal and vertical except for the bottom bearing housing assembly.



Q&A



Thank You!