# **Chemical Pumps**

For Highly Corrosive and Mildly Abrasive Service



# RamParts<sup>®</sup> Pumps

an ANDRONACO INDUSTRIES company





Centrifugal Ramparts Pumps Pro-Flo Elastomer-lined (vertically split) End Suction Centrifugal pumps are specially designed for Chemical process and mild slurry applications, offering outstanding resistance to a wide range of design incorporating tangential discharge which guarantees continuous pumping performance and efficiency. Pump, base, and guard are epoxy coated for external protection. Pumps are capable of handling up to 1" spherical solids, depending on pump size. Pumps are available in four sizes 2 x 1/2-81/2, 3 x 2 10 1/4, 4 x3 - 111/2, and 6 x 4 -12.



# PERMANENTLY BONDED LININGS ELIMINATE FLUTTER, CREEP, AND COLD FLOW.

Ramparts linings are permanently bonded to strong, rigid casing and covers eliminating lining flutter, creep, and cold flow found in other pumps. Lining and impellers are available in Natural Rubber (Hard). Neoprene, Nordel (EPDM), Buna N, Butyl, and Viton. Impellers are also molded in Kynar and Diall.

#### TYPICAL FLUIDS HANDLED

Sulfuric Acid • Sodium Hypochlorite • Hydrochloric Acid • Ammonium Hydroxide • Nitric Acid • Potassium Hydroxide • Phosphoric Acid • Calcium Hypochlorite • Chlorine Water • Ferric Trichloride • Zinc Chloride.

#### SHAFT SLEEVE

Materials offered: Kynar, Ceramic, 316 Stainless, Alloy 20, Hastelloy "B" or "C", and Titanium. The ceramic sleeve eliminates liquid to metal exposure when using standard packing, single external or double internal mechanical seals.

### LINED STUFFING BOX

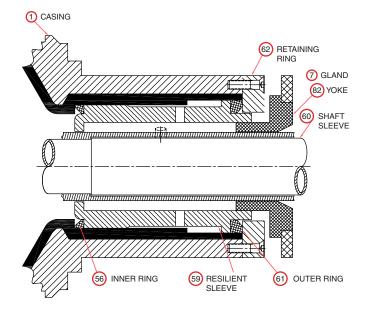
Internal protection continues into the stuffing area with the same lining material as the pump housing. All pump sizes can accommodate standard inside, outside, single or double mechanical seals without special adaptation. Flush lines are provided when required, to allow product or clean water flushing.

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an ANDRONACO INDUSTRIES company

#### **Contact Information**

4855 Broadmoor Ave. S.E. | Kentwood, MI 49512 Tel. (616) 656-2250 | Fax. (616) 656-2255 www.rampartspumps.com





# **PUMP SPECIFICATIONS**

Size: 2" x 1.5" (20mm x 38mm) Flanged. Will pass up to

5/16" (7.9 mm) diameter spherical solid.

**Pump Castings:** Gray Iron No. 30 Vertically Split; Lined. **Linings:** Neoprene; Nordel; Fluorocarbon (Viton); Nitrile (Buna-N). Consult Factory for additional lining materials. **Impeller:** Available In The Same Materials As Shown

Above For Pump Casing Linings.

**Shaft:** Stress proof Steel

Shaft Sleeve: Kynar, Ceramic, Alloy 20, 316 SST,

Hastelloy B or C, Titanium.

**Bearings:** Open Double Row with oil bath lubrication. **Gaskets/O-rings:** Neoprene; Nordel; Fluorocarbon (Viton);

Nitrile (Buna-N).

Standard Equipment: Constant Level Oiler, Standard

RamParts blue paint other paints available.

**Sealing Options:** 

Packing: PTFE or Grapholil with PTFE Lantern Ring.

Seals: Most major manufactures including Flowserve and John Crane.

Maximum Temperature: 285°F (140° C) Dependent on lining.



# Spec - 2 x 1.5 11/7/13 PLIMP PUMP CASING COVER (MECHANICAL SHOWN BEARING IMPELLER SHAFT IMPELLER SLINGER BEARINGS PEDESTAL SLEEVE

2 x 1.5

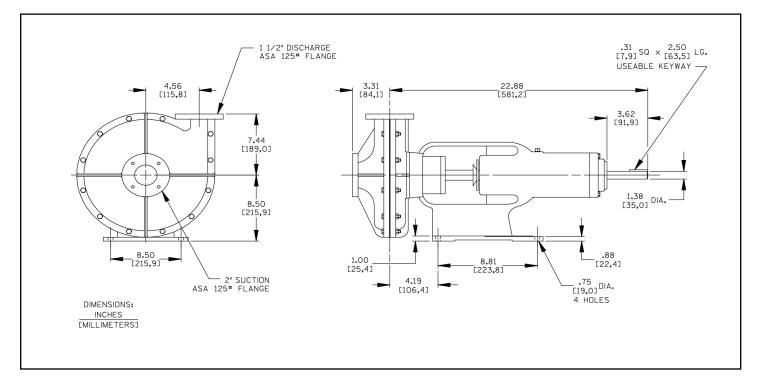
**APPROXIMATE DIMENSIONS** & WEIGHTS

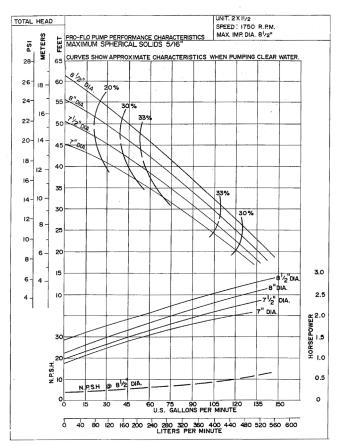
**NET WEIGHT: 175** LBS. ( **80** KG.)

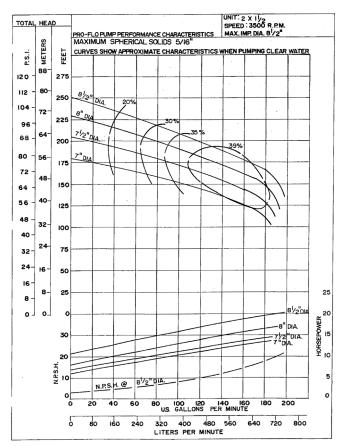
PRO-FLO End Suction Centrifugal

Model 3 x 2









# **PUMP SPECIFICATIONS**

Size: 3" x 2" (76mm x 50mm) Flanged. Will pass up to 1/2" (12.7 mm) diameter spherical solid.

Pump Castings: Gray Iron No. 30 Vertically Split; Lined. Linings: Neoprene; Nordel; Fluorocarbon (Viton); Nitrile (Buna-N). Consult Factory for additional lining materials.

Impeller: Available In The Same Materials As Shown

Above For Pump Casing Linings.

Shaft: Stress proof Steel

Shaft Sleeve: Kynar, Ceramic, Alloy 20, 316 SST,

Hastelloy B or C, Titanium.

Bearings: Open Double Row with oil bath lubrication

Gaskets/O-rings: Neoprene; Nordel; Fluorocarbon

(Viton); Nitrile (Buna-N).

Standard Equipment: Constant Level Oiler, Standard

RamParts blue paint other paints available.

**Sealing Options:** 

Packing: PTFE or Grapholil with PTFE Lantern Ring.

Seals: Most major manufactures including Flowserve and John Crane.

Maximum Temperature: 285°F (140° C) Dependent on lining.



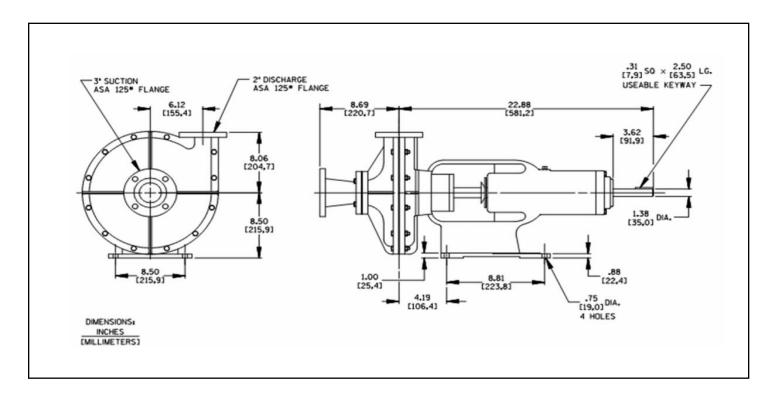
# **SPEC - 3 x 2** 11/7/13 **PUMP** PUMP LIP COVER CASING SEAL SEAL (MECHANICAL BEARING FLANGE **IMPELLER** SHAFT **IMPELLER** SLINGER SHAFT BEARINGS PEDESTAL SLEEVE

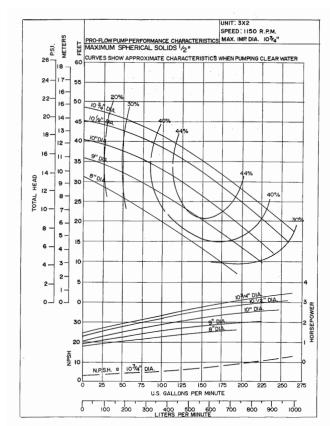
APPROXIMATE **DIMENSIONS** 3x2 & WEIGHTS

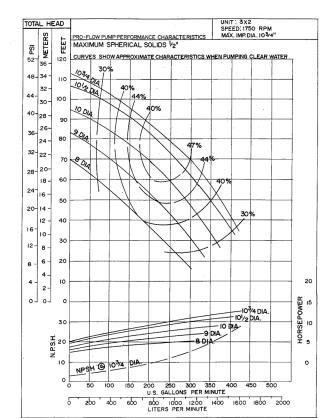
NET WEIGHT: **175** LBS. ( **80** KG.) SHIPPING WEIGHT: 205 LBS. (90 KG.) EXPORT CRATE: **3.0** CU. FT. (**0.09** CU.M.)

PRO-FLO End Suction Centrifugal Model - 4 x 3









# **PUMP SPECIFICATIONS**

Size: 4" x 3" (102mm x 76mm) Flanged. Will pass up to 3/4" (19.0 mm) diameter spherical solid.

Pump Castings: Gray Iron No. 30 Vertically Split; Lined. Linings: Neoprene; Nordel; Fluorocarbon (Viton); Nitrile (Buna-N). Consult Factory for additional lining materials. Impeller: Available In The Same Materials As Shown

Above For Pump Casing Linings.

Shaft: Stress proof Steel

Shaft Sleeve: Kynar, Ceramic, Alloy 20, 316 SST,

Hastelloy B or C, Titanium.

Bearings: Open Double Row with oil bath lubrication.

Gaskets/O-rings: Neoprene; Nordel; Fluorocarbon (Viton);

Nitrile (Buna-N).

Standard Equipment: Constant Level Oiler, Standard

RamParts blue paint other paints available.

## **Sealing Options:**

Packing: PTFE or Grapholil with PTFE Lantern Ring.

Seals: Most major manufactures including Flowserve and John Crane.

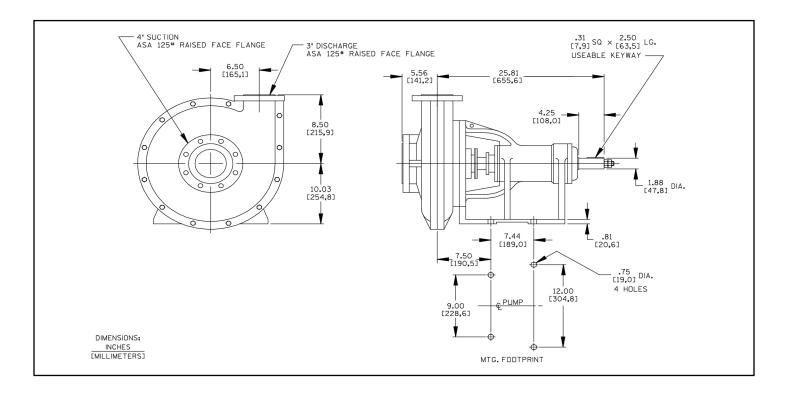
Maximum Temperature: 285°F (140° C) Dependent on lining.



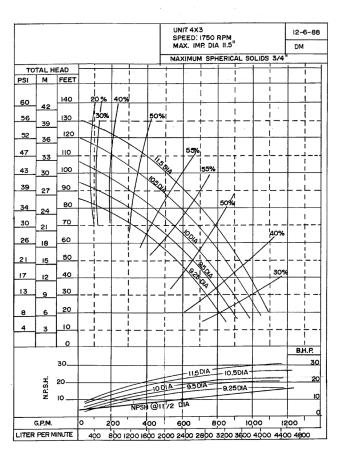
# Spec - 4 x 3 11/7/13 PUMP PUMP CASING COVER SEAL SEAL BEARING (MECHANICAL IMPELLER SHAFT IMPELLER SLINGER SHAFT PEDESTAL BEARINGS SLEEVE

APPROXIMATE DIMENSIONS & WEIGHTS

NET WEIGHT: **470** LBS. ( **213.2** KG.) SHIPPING WEIGHT: **525** LBS. ( **238** KG.) EXPORT CRATE: **3.3** CU. FT. (**0.09** CU.M.)



	UNIT: 4 X 3 SPEED: II50 RPM MAX. IMP. DIA. II.5"	DATE : 2-22-85 TEST DATE : 2-15-85 TEST : BY : B.C.H.
TOTAL HEAD MAXIM	MUM SPHERICAL SOLID	S 3/4"
PSI METERS FEET CURVES	SHOW APPROXIMATE CHARACTERISTIC	CS WHEN PUMPING WATER
32—	47 %	
70	55%	
28 20	58%	
18 60	60%	
16—	60%	
20 14 50	55%	
- <sub>12</sub> 40		5%42%
16		42%
10 30	'- XXXX	
8-		E.
8- 6- 20		
- 4-		ì
4 2 10		
o		11.5* DIA
30		10" DIA. 5 H
		—— 11° DIA. —— 10.5° DIA. —— 10° DIA. —— 9.5° DIA. —— 9.5° DIA. —— 9.5° DIA. —— 9.5° DIA.
20		o <sup>+</sup>
H PSH		
-1 10	NPSH @ II1/2 DIA	
_	NIFSH &	
0 10	0 200 300 400 50 U.S. GALLONS PER MI	00 600 700 800 NUTE



# PUMP SPECIFICATIONS

Size: 6" x 4" (152mm x 102mm) Flanged. Will pass up to

1" (25.4 mm) diameter spherical solid.

**Pump Castings:** Gray Iron No. 30 Vertically Split; Lined. **Linings:** Neoprene; Nordel; Fluorocarbon (Viton); Nitrile (Buna-N). Consult Factory for additional lining materials.

Impeller: Available In The Same Materials As Shown

Above For Pump Casing Linings.

Shaft: Stress proof Steel

Shaft Sleeve: Kynar, Ceramic, Alloy 20, 316 SST,

Hastelloy B or C, Titanium.

**Bearings:** Open Double Row with oil bath lubrication.

**Gaskets/O-rings:** Neoprene; Nordel; Fluorocarbon (Viton);

Nitrile (Buna-N).

**Standard Equipment:** Constant Level Oiler, Standard

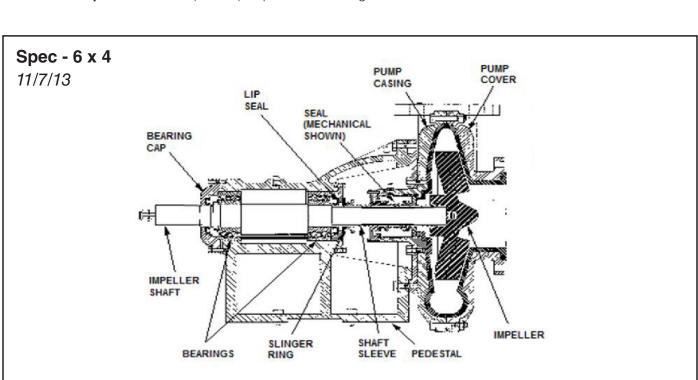
RamParts blue paint other paints available.

## **Sealing Options:**

Packing: PTFE or Grapholil with PTFE Lantern Ring.

Seals: Most major manufactures including Flowserve and John Crane.

Maximum Temperature: 285°F (140° C) Dependent on lining.



T. 616.656.2250 • www.RamPartsPumps.com • F. 616.656.2255

6x4

APPROXIMATE DIMENSIONS & WEIGHTS

NET WEIGHT: **572** LBS. ( **260.8** KG.) SHIPPING WEIGHT: **625** LBS. ( **283.5** KG.) EXPORT CRATE: **3.3** CU. FT. (**0.09** CU.M.)

