



**A RUTHMAN COMPANY**

**Gusher Pumps is a Division of Ruthman Companies Corporate Headquarters**

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**BSM Pump Corp.**

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North Kingstown, RI 02852  
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**Nagle Pumps**

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Chicago Heights, IL 60411  
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**Fax:** 708-754-2944  
**Web:** www.naglepumps.com

**Ruthman...  
Another Word for Innovation**



reliable industrial pump.

In 1924, with the conception of the first vertical ball bearing sealless centrifugal pump, Ruthman Pump and Engineering furthered the design on a unit with a one piece motor driven shaft. The pump was called "Gusher", giving birth to the trade name Gusher Pumps, and the coining of the term "coolant pump".

Wanting to carry on the tradition of quality and reliability started by his father, Thomas R. Ruthman joined the company in 1949. In the early 1990's Thomas R. Ruthman's son, Thomas G. Ruthman joined the company, continuing this same tradition. Maintaining the reputation of Gusher Pumps by innovation and customer service, the company has grown to service companies worldwide.

It began in 1913, servicing mechanical components of the steamboats on the Ohio River. The company founder, Alois Ruthman, was a man of vision and saw part of the future of the company was in the development of a

**Wagner Processing - Bay Area**

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**Web:** www.wagnerprocess.com

**Great Lakes Pump & Supply Co.**

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**Phone:** 248-528-9100  
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**Web:** www.greatlakespump.com

**Worldwide:**

**Ruthmann Pumpen**

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**Birmingham Pump**

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**RUTHMAN  
COMPANIES**



**General Service  
Industrial  
Pumps**



**Vortex  
Non-Clog  
Series**



**RUTHMAN  
COMPANIES**

# Vortex Series



## Vortex Non-Clog Pumps

- Capacities to 2600 GPM
- Heads to 440 TDH (190 PSI)
- Temperatures to 500° F
- Pressures to 285 PSIG

## Performance Features For Vortex Non-Clog Pumps



### Pump Reliability

- Casing and Impeller Materials  
Cast Iron  
Hardened Ductile Iron  
CD4MCu or Alloy 20
- Concentric Vortex Casing for Non-Clog Minimum Wear
- Recessed Impeller for Minimum Solids Degradation

### Ease of Maintenance

- Top Pull Out Design Available
- NEMA or IEC/D Flange Motors
- Parts Interchangeability
- External Impeller Adjustments
- Easy Retrofit

The Vortex Non-Clog Impeller is designed to handle large diameter solids and fibrous material without clogging. The Vortex Non-Clog Pumps will handle solids up to the same diameter as the discharge. There is reduced radial loading for trouble free operation. Even with low flows, the Vortex Non-Clog design allows throttling to a low performance range unacceptable to many centrifugal pumps. The complete Vortex Non-Clog line has been designed to pump various liquids and oils containing up to 30% entrained air. They will operate 23% below its first critical speed at any point of operation. The Vortex Non-Clog Pump shaft is designed to have a maximum total indicated run-out not to exceed .008 inches.

### Services

- Filter slurries
- Latex
- Polystyrene beads
- Crystal suspensions
- Screen rejects
- Hydropulper pump
- Sodium chlorate slurry
- Fruit and vegetable suspensions
- Dye liquor
- Fibrous wastewater
- Long fiber white water
- Primary cleaner pump

## Notes

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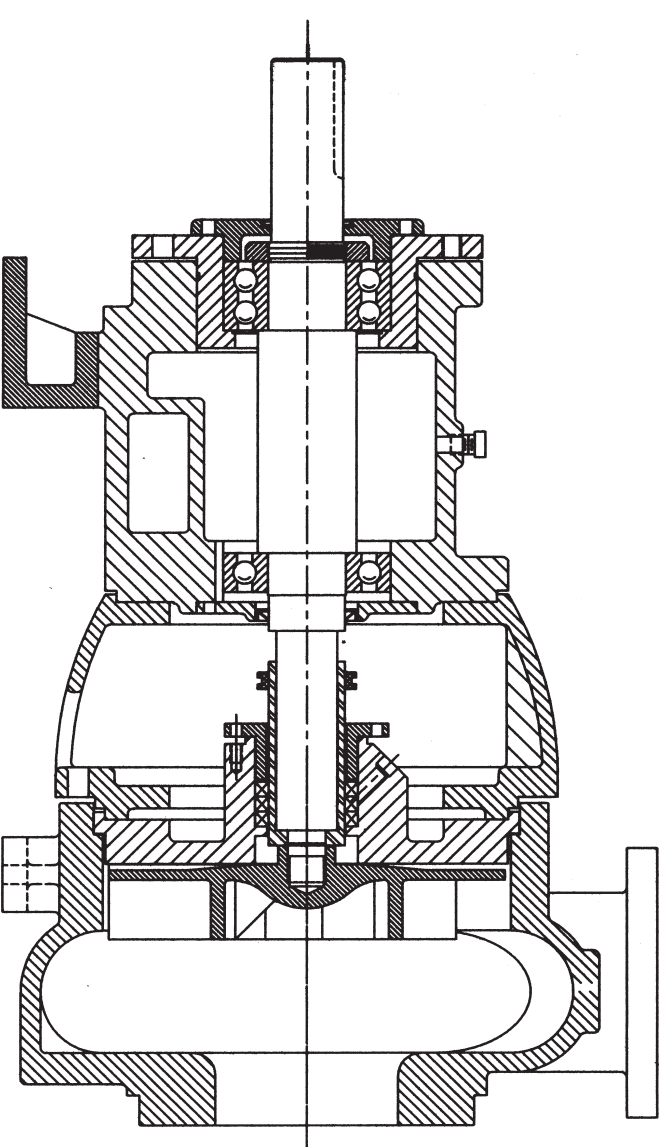
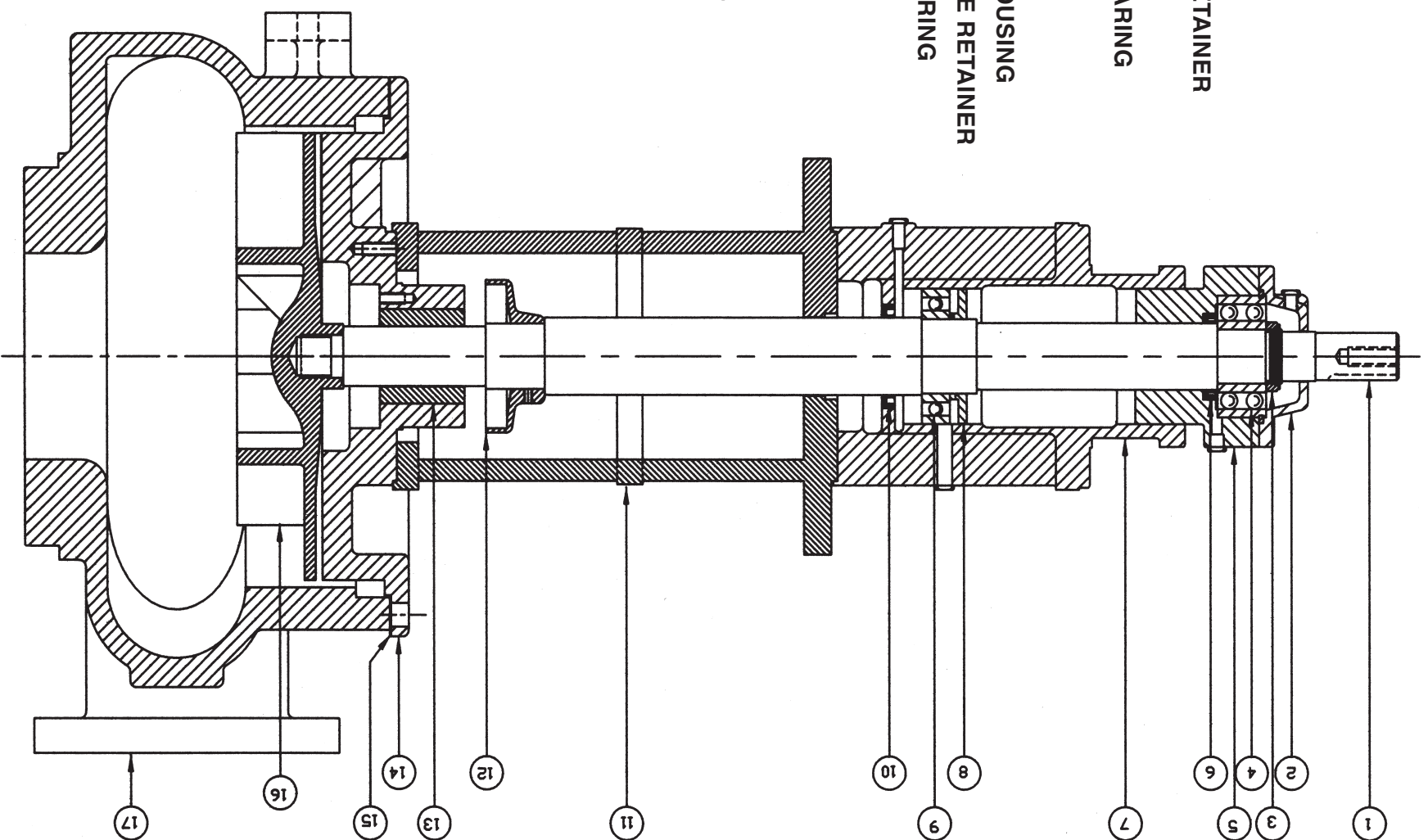
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# Power Frame Cross Section

- 1 — SHAFT
- 2 — BEARING RETAINER
- 3 — LOCKNUT
- 4 — THRUST BEARING
- 5 — CARTRIDGE
- 6 — OIL SEAL
- 7 — BEARING HOUSING
- 8 — BRG/GREASE RETAINER
- 9 — RADIAL BEARING
- 10 — OIL SEAL
- 11 — STEM
- 12 — SLINGER
- 13 — BUSHING
- 14 — STEM PLATE
- 15 — GASKET
- 16 — IMPELLER
- 17 — VOLUTE



## Pumps Designed to handle Solids

### Caution, Not All Pumps Are Designed To Handle Bulky/Fibrous or Shear Sensitive Solids

When handling certain bulky, fibrous solids, clogging can occur. Standard end suction pumps have close clearances between the impeller and casing to maintain efficiency and performance. High velocities in the casing will cause increased wear, and can degrade or shear pumpage.

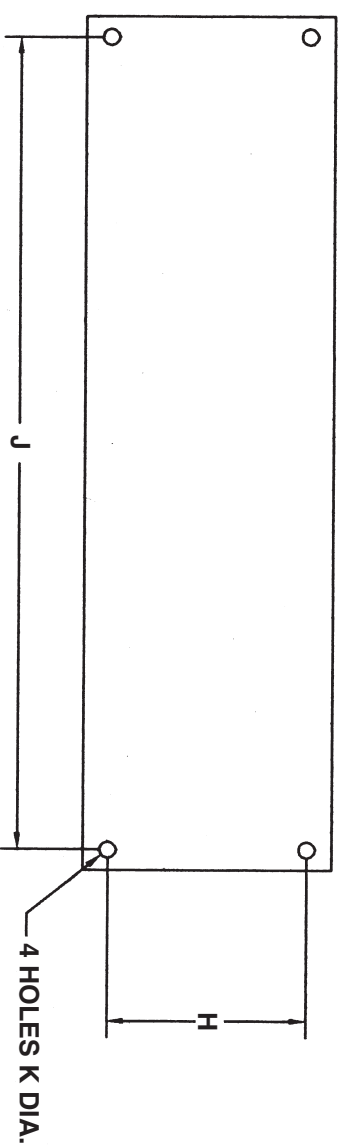
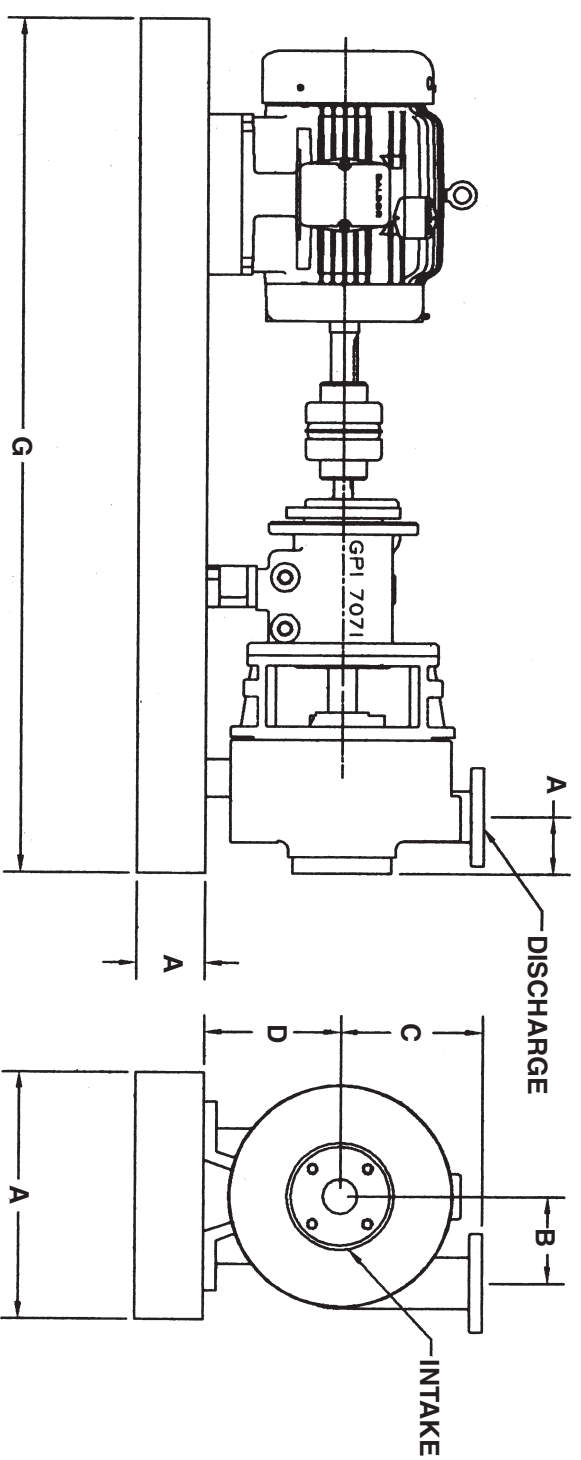
### Trouble-Free Operation At Low Flows

Recessed impeller pumps are reliable when operating at low flows. Gusher's Vortex Non-Clog Pumps use a concentric casing reducing radial loads up to 85%. Bearing, seal and overall pump life are optimized.

### Non-Clog Pumping With Minimum Solids Degradation

With the induced flow of Non-Clog Vortex impeller being recessed from the casing, velocities are low. Contact by solids with the impeller is reduced. Wear rate, solids degradation and shearing of liquid are greatly minimized. The Vortex Non-Clog casing design is able to handle solids in liquid suspension. Any substance that can exit the discharge will pass through the pump without clogging.

# Vortex Horizontal

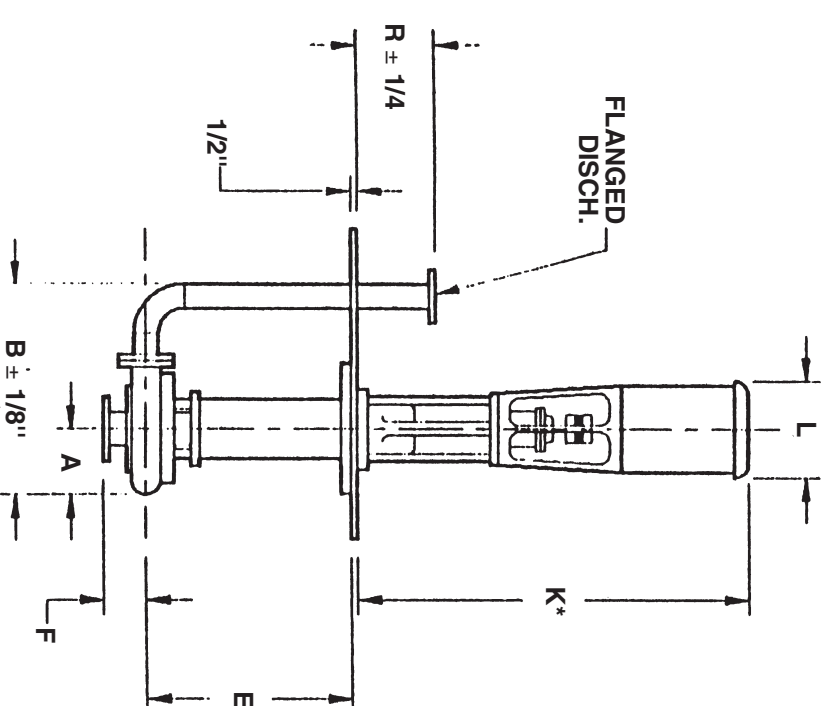
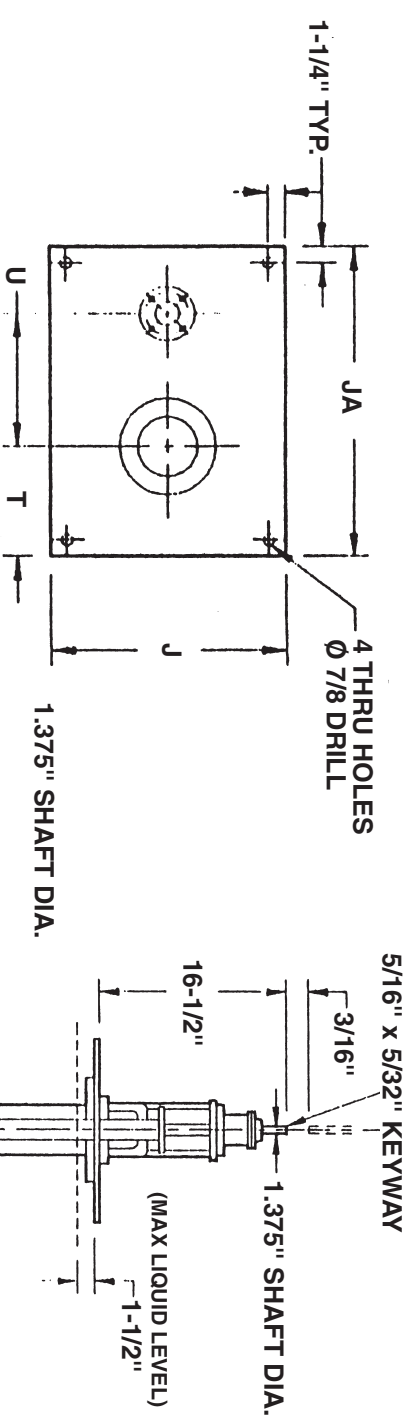


## Dimensions

MODEL	INTAKE	DISCHARGE	A	B	C	D
PV2X2-8SEH	2	2	2.75	4.38	6.5	6
PV2X2-10SEH	2	2	3.5	5.25	8.5	8.25
PV3X3-10SEH	3	3	4.25	5.25	9.0	8.25
PV2X3-13SEH	3	2	4.13	6.75	10.5	10.0
PV3X4-13SEH	4	3	4.13	6.75	10.5	10.0
PV4X6-13SEH	6	4	4.75	6.75	11.5	10.0

BASE PLATE DIMENSIONS VARY WITH MOTOR

# 7550 52HHD



\*VARIES WITH MOTER MFG

NEMA	K	L
56UC		
182/184UC	32	9.5
213/215UC	36	11.5
254/256UC	42.13	13.25
284/286UC	44.94	15.31
324/326UC	47.44	16.5
364/365UC	49.94	18.25
143/145TC	30	7.38
182/184TC	31.88	9.5
213/215TC	35.75	10.88
254/256TC	41.75	12.56
284/286TC	44.06	13.75
324/326TC	46.81	15.75
364/365TC	49.31	18

Model	Discharge	Intake	A	B	D	E	F	J	JA	R	T	U
V2X2-8	2	2	7	20.90	8.5	18.4	2.75	18	24	6	8.5	12.75
V2X2-10	2	2	9.75	26	13	18.1	3.5	24	36	6	10.5	15
V3X3-10	3	3	9.63	28.43	15	18.8	4.25	24	36	6	10.5	17.06
V2X3-13	2	3	8.25	26.81	15	18.8	4.13	24	36	6	10.5	17.38
V3X4-13	3	4	9	29.75	15	18.8	4.13	24	36	6	10.5	19
V4X6-13	4	6	9.5	33.38	15	19.7	4.75	24	36	6	10.5	21.63

All Gusher Curves are available on Gusher Select CD. Gusher's Paper Curves are available upon request.

