

A RUTHMAN COMPANY

General Service Industrial Pumps







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 IECD 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





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





MODEL	INTAKE	DISCHARGE	SHAFT DIA.	Α	В	С	D	E	SUCTION FLANGE
PV2X2-8	2	2	7/8"	2 3/4"	4 3/8"	6 1/2"	6"	17 1/2"	4 Holes 5/8-11 Tap
PV2X2-10	2	2	1 1/8"	3 1/2"	5 1/4"	8 1/2"	8 1/4"	23 1/2"	4 Holes 5/8-11 Tap
PV3X3-10	3	3	1 1/8"	4 1/4"	5 1/4"	9"	8 1/4"	23 1/2"	4 Holes 5/8-11 Tap
PV2X3-13	3	2	1 1/8"	4 1/8"	6 3/4"	10 1/2"	10"	23 1/2"	4 Holes 5/8-11 Tap
PV3X4-13	4	3	1 1/8"	4 1/8"	6 3/4"	10 1/2"	10"	23 1/2"	8 Holes 5/8-11 Tap
PV4X6-13	6	4	2 3/8"	4 3/4"	6 3/4"	11 1/2"	10"	33 7/8"	8 Holes 3/4-10 Tap
PV6X8-15	8	6	2 3/8"	5 1/2"	7 7/8"	14"	14 1/2"	33 7/8"	8 Holes 3/4-10 Tap
NEMA Frm.	BASE	М	F	G	Н	J	K	L	HH
56-145	1S	13 1/2	10	35	3	32 1/2	4 1/2	8	3/4
182-215	2S	19 1/2	12	39	3 1/4	36 1/2	4 1/2	9	3/4
254-286	3S	27	15	46	4 1/8	43 1/2	4 1/2	12	3/4
143-215	1M	19 1/2	12	45	3 3/4	42 1/2	4 1/2	9	3/4
254-286	2M	27	15	52	4 1/8	49 1/2	4 1/2	12	1
324-326	3M	30	18	58	4 3/4	55 1/2	4 1/2	15	1
364-365	3M	34	18	58	5 3/4 ¹ -4 3/4 ²	55 1/2	4 1/2	15	1
404-405	4M	35 1/2	18	60	6 3/4 ¹ -5 ²	57 1/2	4 1/2	15	1
440	4M	46 1/2	18	60	7 3/4 ¹ -6 ²	57 1/2	4 1/2	15	1
213-256	1L	24	22	62	4	59 1/2	6 1/2	19	1
284-365	2L	34	22	68	4 3/4	65 1/2	6 1/2	19	1
404-445	3L	46 1/2	22	80	4 3/4	77 1/2	6 1/2	19	1
447	4L	46 1/2	26	74	4	71 1/2	6 1/2	19	1

7550 52HD







*VARIES WITH MOTOR MANUFACTURER

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



Model	Discharge	Intake	Α	В	D	E	F	J	JA	R	Т	U
V2x2-8	2	2	7	20.90	8.5	18.40	2.75	18	24	6	8.5	12.75
V2x2-10	2	2	9.75	26	13	18.10	3.5	24	36	6	10.5	15
V3x3-10	3	3	9.63	28.43	15	18.80	4.25	24	36	6	10.5	17.06
V2x3-13	2	3	8.25	26.81	15	18.80	4.13	24	36	6	10.5	17.38
V3x4-13	3	4	9	29.75	15	18.75	4.13	24	36	6	10.5	19
V4x6-13	4	6	9.5	33.38	15	19.70	4.75	24	36	6	10.5	21.63

Power Frame Cross Section



1	SHAFT	100098-V
2	BEARING RETAINER	14003
3	LOCKNUT	68100
4	THRUST BEARING	41308-DR
5	CARTRIDGE	51019
6	OIL SEAL	83000
7	BEARING HOUSING	51231
8	BRG/GREASE RETAINER	14079
9	RADIAL BEARING	41211
10	OIL SEAL	83006
11	STEM	17005-13
12	SLINGER	58002
13	BUSHING	71508
14	STEM PLATE	21173-H-8
15	GASKET	61116
16	IMPELLER	25803
17	VOLUTE	27804











A RUTHMAN COMPANY www.gusher.com

Gusher Pumps of Dry Ridge

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Gusher Pumps of Williamstown

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Gusher Pumps of New Castle

403 North Ninth Street New Castle, IN 47362 Phone: 765-529-5624 Fax: 765-521-0008 Email: gusherpump@insightbb.com

Additional Ruthman Company Partners:

BSM Pump Corp.

180 Frenchtown Road North Kingstown, RI 02852 Phone: 401-471-6350 Fax: 401-471-6370 Web: www.bsmpump.com

FPI Pumps, Inc.,

814 Hammondville Road Pompano Beach, FL 33060 Phone: 954.946.3066 Fax: 954.946.3111 E-Mail: sales@fpipumps.com

Fulflo Specialties

459 East Fancy Street Blanchester, Ohio 45107 Phone: 937-783-2411 Fax: 937-783-4983 Web: www.fulflo.com

Great Lakes Pump & Supply Co.

1075 Naughton Troy, MI 48083 Phone: 248-528-9100 Fax: 248-528-9015 Web: www.greatlakespump.com

Ruthman... Another Word for Innovation



It began in 1912, serving the 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 the development of a reliable industrial pump.

In 1924, with the conception of the first 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 named "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, Ruthman Companies has grown to service companies worldwide.

Great Southern Pump

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Vulcan Tool Corporation

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