



CORNELL PUMP COMPANY

Refrigerant Pump

Hermetic Pump Technology

DESIGN EXPERIENCE

Enhanced vapor handling and NPSHR characteristics are central to Cornell's latest liquid overfeed and transfer pump innovations. Cornell Pump Company has coupled our extensive refrigerant pump experience with an industry leading hermetic motor technology. In fact, the hydraulic design innovations associated with our standard refrigerant pumps with **Refrigerant Emission Free™** Sealing Technology, are exactly the same as the design innovations associated with our hermetic pump products.

Cornell Pump Company maintains over 35 years of proven hydraulic refrigerant pump design and manufacturing experience. Cornell Pump Company has developed our products based on the refrigeration industries needs, not by using existing generic pump products. There is no need to compromise your requirement for enhanced hermetic performance with multistage high-speed refrigerant pumps. Cornell design protocols require the use of single stage impellers with large eye areas to minimize the effects of entrained vapor and four pole or six pole operating speed to enhance NPSHR characteristics throughout the entire range of performance.

HYDRODYNAMIC BEARINGS

Cornell's hermetic pumps maintain a proven and extremely reliable hydrodynamic bearing design. The hydrodynamic bearings maintain large grooved channels, which enhances the flow of pumpage throughout the bearing assemble and ensure a free floating non-mechanical interface on the rotating components of the motor, virtually eliminating bearing wear.

The practical and efficient hydrodynamic bearing design does not rely on complex tapered spring loaded bearings and dated design features to compensate for bearing wear. Axial thrust loads are minimized by the incorporation of balance holes during the manufacture of the single stage impeller and axial thrust bearings associated with the hermetic pump. Radial thrust loads are minimized by the incorporation of a modified concentric volute, compact shaft arrangement and minimal dimensional width associated with the single stage impeller.

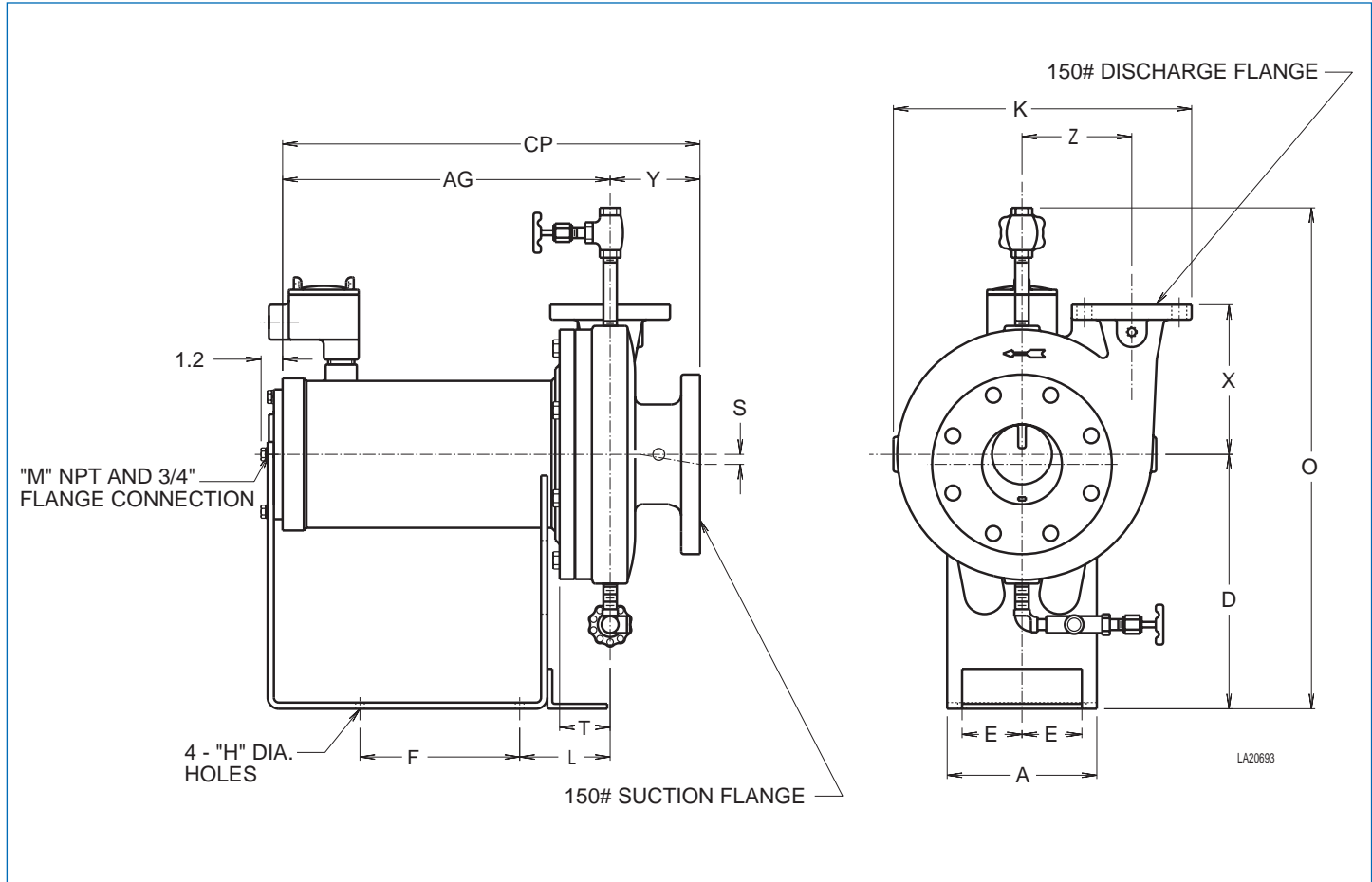


DOUBLE CONTAINMENT

Cornell's hermetic pumps maintain a stainless steel, reinforced, heliarc welded stator can and hermetically sealed motor casing, providing the security of double containment to ensure a leak free unit. The conduit box is potted eliminating the requirement for condensation drain holes and potential for external leakage due to catastrophic failure of the inner can.

INTERCHANGEABILITY

Cornell's hermetic product offering was specifically designed to be interchangeable with our standard refrigerant pumps with **Refrigerant Emission Free™** Sealing Technology. Interchangeability is achievable between hermetic and standard Cornell refrigerant pumps counterparts with minor centerline and base bolting adjustments. The intent was to maximize the product installation options for the end user and provide a low cost option for retrofit activities.



Notes:

1. Flange connection dimension can vary $\pm .12$ inch.
2. Do not use for construction unless certified.
3. Overall dimensions can vary $\pm .12$ inch.

PUMP DIMENSIONS

Model	HP	RPM	Disch	Suct.	A	AG	CP	D	E	F	H	K	L	M	S	O	T	X	Y
1.5HT	5	1800	1.5	4	7.50	15.38	20.12	11	3	8	0.44	17.75	4.5	0.75	0.5	25.16	2.75	8	4.75
	7.5	1800	1.5	4	7.50	16.38	21.12	12.75	3	8	0.44	17.75	4.5	0.75	0.5	26.91	2.75	8	4.75
	15	1800	1.5	4	8.25	18	22.75	12.75	3.38	10	0.75	17.75	4.5	0.75	0.5	26.91	2.75	8	4.75
2HT/2HTS	3	1800	2	4	7.50	14	18.50	11	3	8	0.44	15	4.5	0.75	0.5	23.35	2.50	7.5	4.5
	5	1800	2	4	7.50	15.50	20	11	3	8	0.44	15	4.5	0.75	0.5	23.35	2.50	7.5	4.5
2.5HT	10	1800	2.5	5	9.50	17.88	23.38	13.75	4	10	0.75	19.25	5	0.75	0.61	27.85	2.62	9	5.5
	15	1800	2.5	5	9.50	18.88	24.38	13.75	4	10	0.75	19.25	5	0.75	0.61	27.85	2.62	9	5.5
3HT	10	1200	3	6	10.50	18.75	25.75	13.75	4.50	10	0.75	22.50	6	0.75	0.44	29.50	3.50	10	7
	15	1200	3	6	10.50	19.75	26.75	14.50	4.50	10	0.75	22.50	6	0.75	0.44	29.50	3.50	10	7

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ISO9001 CERTIFIED