

H & HV SERIES

Hard Metal Slurry Pumps

Coming Soon:
www.TuffPumps.com

Standardization: With 12 horizontal pump sizes built around 4 power frames (designated as pump groups), the **H Series** maximizes bareshaft pump and spare parts interchangeability, and additionally reduces inventory requirements. In addition to the horizontal configuration, the **HV Series** provides a vertical cantilever (tank type mounting) option that covers all of the 12 available pump sizes. Each vertical cantilever pump is tailored to suit customer requirements.

Greater Wear Life: By utilizing only the hardest and toughest of materials; namely 28% high chrome iron (HCl) or equal ~ with a BHN of +/- 600, extra thick material sections, and sacrificial wear plates within casing volutes, the **H Series** maximizes wear life and reduces life-time costs. Where specifically requested or deemed a process necessity, the **H Series** can be supplied with ductile iron, polyurethane and/or stainless steel impellers and wear plates in place of or in conjunction with hard metal parts. Pumps can also be tailored made to suit specific slurries/sludges. All pump fasteners are in 304 or 316SS unless otherwise specified.

Ease of Maintenance: Simplified and faster maintenance is facilitated by the incorporation of a back pullout spacer type coupling design within the entire **H Series** pump range ~ with the ability to remove the complete bearing frame/rotating assembly without disturbing the pump casing, suction and discharge pipework, or the electric motor/diesel engine driver.

Compact Drive Design: Although direct coupled drives are commonly applied, v-belt drives are highly recommended for speed variations, as the **H Series** additionally allows for more compact, space saving configurations by incorporating (optional) overhead motor mounting plate supports within the bearing frame, thereby allowing drive motors to be directly mounted above the bearing assembly.

High Performance: All **H Series** pumps have been designed with volutes and impellers that optimize abrasive solids handling abilities with high efficiencies and lower power costs. Impeller adjustment is facilitated by a lockable rotating element jacking screw arrangement on the bearing frame that enables the end user to counter normal (suction side) suction wear plate/impeller wear and improve/restore pump efficiency whilst leaving the complete pump in situ.

High Pressure: Specific sizes of the **H Series** pump range ~ with details available upon request, can be furnished with special high pressure "ribbed" and "extra thick" casings for particular use on high pressure, series pumping applications.

Variable Discharge Nozzle Positions: Having separate casing feet, the **H Series** pump casings can be rotated through 360 degrees, thereby providing the end user with up to 8 (standard) discharge nozzle positions and maximization/optimization of discharge pipework.

High Shaft & Bearing Strength: Over and above wear part strengths and planned longevity of life, the **H Series** range of pumps has taken this design philosophy farther, by incorporating oversized high tensile or stainless steel alloy shafts and similarly oversized bearings; with the outboard, drive end bearing designed to take high radial loads ~ such as those imposed by v-belt drives, whilst the inboard, impeller end bearing is designed to take a combination of radial and axial (thrust) loads.

Maximum Bearing Protection: All **H Series** pump bearings are double protected against the ingress of liquids and/or solid particles by an effective combination of outer deflectors or labyrinth seals and inner double lip oil or grease seals with other, more complex options available should the duty and/or application necessitate same. Bearing condition and general pump health can be remotely analyzed by the incorporation of optional electronic bearing sensors.

Lubrication: The **H Series** pump range can be supplied with oil bath, oil mist, or grease lubricated bearings; with the standard default system being oil mist. Extra large oil sight glasses or constant oil levelers are fitted as standard, with electronic oil detectors available as an optional extra. Bearing housing oil cooling systems are also available upon request and/or should the application operating temperature dictate necessary.

Rotodynamic Sealing: The **H Series** pump range is fitted ~ as standard ~ with 316SS gland plates and high grade GFO packing, however, should the application and/or customer require otherwise, the **H Series** pump range can be fitted with the following options:-

- Single or Double Mechanical Seals
- Single or Double Dynamic Seals (otherwise known as Expellers)
- Auxiliary/External Sealing Systems
- Oversized Parallel and Oversized Tapered Stuffing Boxes for Mechanical Seals ~ providing superior cooling/lubrication and/or self-venting.

H & HV Series Pump Range ~ Maximum Performance Guide

Pump Size **Flow Rate = m³/hour & Head = metres & Speed = rpm**

Group 1 Pumps:

H4/3-12	Maximum	125 / 60	Maximum	2200
H5/4-12	Flow / Head =	280 / 55	Speed =	2200

Group 2 Pumps:

H5/4-17		460 / 110		2000
H6/5-17	Maximum	490 / 120	Maximum	2000
H8/6-17	Flow / Head =	1030 / 95	Speed =	1800
H10/8-17		1300 / 90		1800
H12/10-17		1800 / 60		1600

Group 3 Pumps:

H8/6-21		1000 / 100		1600
H10/8-21	Maximum	1300 / 75	Maximum	1300
H14/12-21	Flow / Head =	2600 / 65	Speed =	1300
H16/14-21		3500 / 50		1200

Group 4 Pumps:

H8/6-25	Maximum		Maximum	
	Flow / Head =	950 / 130	Speed =	1500

Key Note: H8/6-17 = Hard Metal Slurry Pump (H) with 8" N/B Dia. Suction Nozzle, 6" N/B Dia. Discharge Nozzle, and 17" (full) Dia. Impeller.



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