APPLICATION

Those pumps are intended for hydraulic conveying of sand, gravel, stone, coal, slag, ores, clay, whitewash and tailings as well as for pumping other heavily abrasive water mixtures with solid particles with a grain size to 60 mm and of mixture density to 1700 kg/m^3.

Typical applications

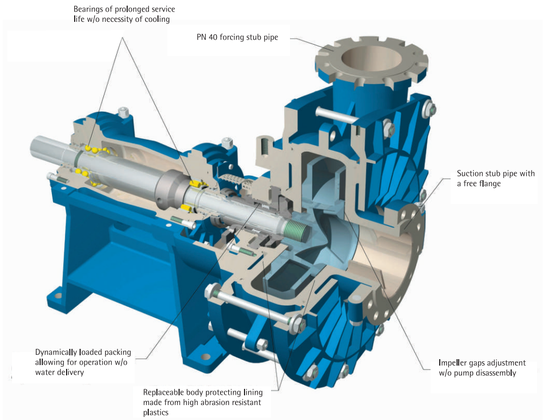
- Mining plants - for hydraulic conveying of coal and tailings
- Ore and mineral raw materials mines - for hydraulic conveying of ores, gravel, sand and stone
- Power industry - for hydraulic conveying of slag and ash
- Steelworks - for pumping water with scale
- Cement plants - for pumping sand and production raw materials
- Sugar factories - for pumping industrial waste
- Sewage treatment plants - for forcing non treated sewage

RATED PRAMETERS at n = 1500 min^{-1}

Pump type	Q	H	P	s*
	[m^3/h]	[m]	[kW]	[mm]
HC - 125	275	45	50	25 (do 30)**
HC - 150	400	63	100	20 (do 60)**
HC - 150W	400	108	184	20 impeller A 30 impeller B***
HC - 200	600	120	300	60

* s - maximal size of solid particles in pumped utility
** values specified in brackets refer to single grains for fine grained mixtures.
*** special execution: HC-150W pump with B impeller

Note:
Due to specificity of operation with heavily abrasive utilities the pumps type HC are adopted to operation at the speeds different from synchronous, via a belt transmission or with a frequency inverter.



DESIGN DESCRIPTION

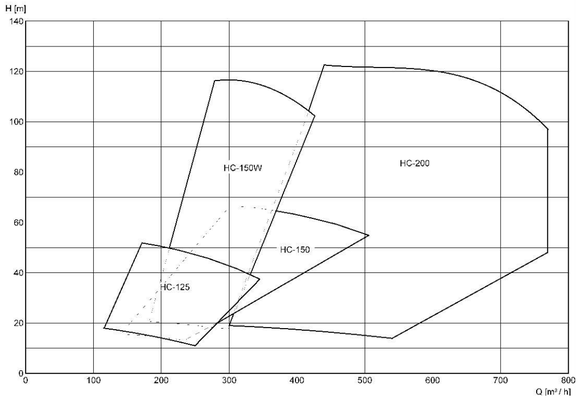
Stationary, single-stage, centrifugal, horizontal pumps with closed impellers. The suction stub pipe is positioned horizontally along the shaft axis while the forcing stub pipe vertically upwards. The pump body is protected from the outside with replaceable abrasive resistant lining. The axial force is transmitted via a thrust bearing. Anti-friction bearings are lubricated in machine oil bath. The oil chamber of the bearing sleeve does not need additional water cooling. Oil in the chamber is made up via a special filler filter. The shaft is sealed with a cord type packing with a grease (or water) seal. Additional unloading impeller reduces pressure on the packing. Grease is delivered to the packing seal from a manual cup greaser (or from automatic greaser). The rotary assembly can be shifted along axial direction to adjust a choking gap on the front impeller disk.

Marking

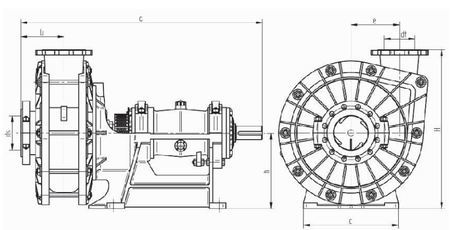
HC - 150 W / 580 - Ex

- HC - 150 : series of type name
- W : forcing stub pipe diameter [mm]
- / : pump design version
- 580 : impeller outside diameter [mm]
- Ex : explosion proof execution

PUMP OPERATING RANGE



OVERALL DIMENSIONS OF PUMPS



Pump type	a	b	c	d_s	d_t	e	H	h	Mass [kg]
HC-125	1132	220,5	600	150	125	253	880	450	913
HC-150	1536	229	625	175	150	280	982	500	1447
HC-150W	1516	229	625	175	150	338	1052	500	1547
HC-200	1577	283	625	225	200	319	1050	500	1848

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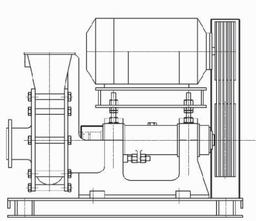
USED MATERIALS

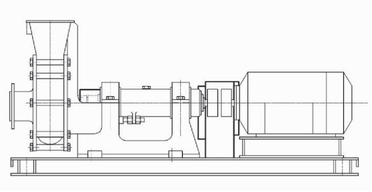
Flow system components in standard execution:
MTL-26 - high-alloy cast steel of higher abrasion-resistance

Special execution:
- Mechanical packing

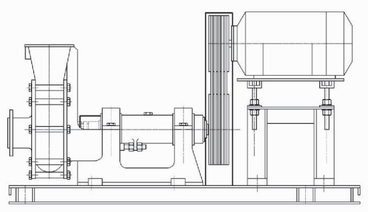
TYPICAL INSTALLATION METHODS



Pump set in A-execution
-power feed via a belt transmission
(motor situated above the pump)



Pump set in C-execution
- direct power feed via a flexible coupling



Pump set in D-execution
- power feed via a belt transmission
(motor situated on a separate rack) .

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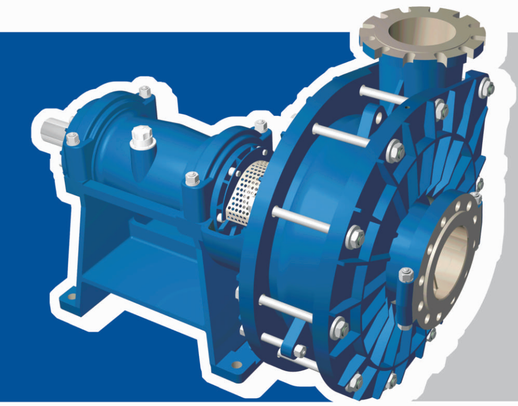
PUMPS
TYPE HC

Grupa Powen-Wafapomp SA



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