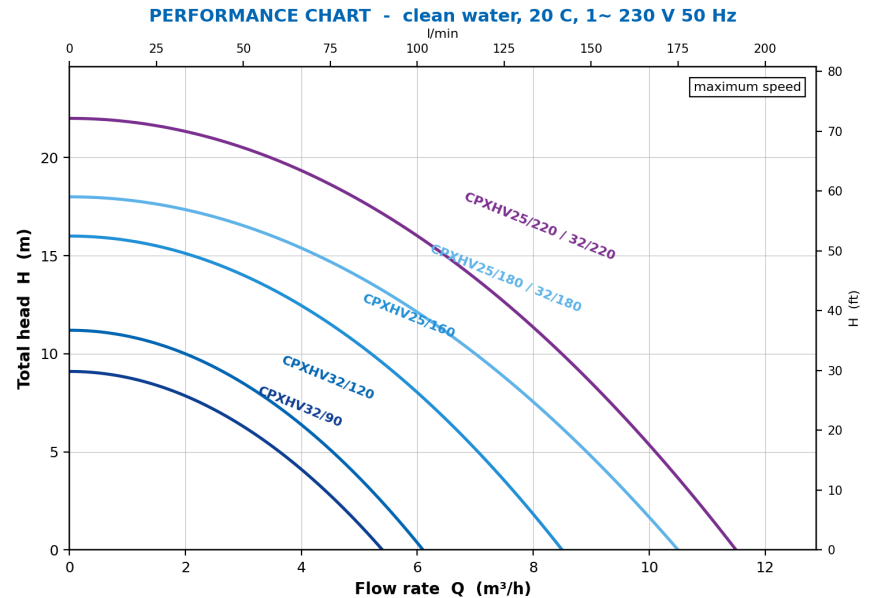


SATTE CPXHV

High-Head / High-Flow Variable-Speed Circulator Pump (VFD)



SATTE CPXHV



Curves show the published flow range for each model. Clean water at 20 C, tolerances to ISO 9906 Annex A.

Typical Applications

- Larger residential and commercial hydronic heating circuits with high pipe-friction losses.
- Boiler, buffer-tank and calorifier primary circuits requiring flow up to 11.5 m³/h.
- Air-conditioning and chilled-water secondary circulation.
- Multi-zone and long-run systems with variable demand.
- Replacement of large fixed-speed circulators where energy saving is required.

Operating Conditions

- Suitable fluids: heating water (to VDI 2035), clean water, water/glycol mixtures to a maximum mixing ratio of 1:1. Not for solids-bearing, aggressive or explosive liquids.
- Liquid temperature range -10 C to +110 C; maximum ambient temperature +40 C.
- Maximum system working pressure 10 bar.
- Power supply 1~ 220-240 V, 50 Hz; enclosure class IP44, insulation class F.
- Integrated frequency inverter with automatic (proportional-pressure) mode, constant-pressure and constant-speed modes selected on the control panel; LED display of actual input power.
- Wet-rotor, glandless canned-motor design: the pumped liquid lubricates the ceramic bearings and cools the motor. Never run dry.
- Install with the pump shaft horizontal and the terminal box / control panel not facing downwards; maintain a minimum inlet pressure to prevent cavitation noise at high liquid temperatures.

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High-Head / High-Flow Variable-Speed Circulator Pump (VFD)

Materials of Construction

- **Pump body:** Cast iron
- **Impeller:** PP (polypropylene)
- **Shaft:** Ceramic
- **Bearings:** Ceramic
- **Rotor can / motor:** Stainless steel can, wet-rotor canned motor
- **Connection:** Threaded union (BSP)

Technical Data

	W	Voltage	Current (A)		m ³ /h	l/min	m	Inch	mm	mm
Model	P1 max	Supply	In	Ist	Max Q	Max Q	Max H	Connection	Port to port	Packing L x W x H
CPXHV32/90	90	1~230 V	0.43	0.43	5.4	90	9.1	G2	180	410x294x384
CPXHV32/120	120	1~230 V	0.58	0.58	6.1	102	11.2	G2	180	410x294x384
CPXHV25/160	180	1~230 V	0.87	0.87	8.5	142	16.0	G1 1/2	180	410x294x384
CPXHV25/180	280	1~230 V	1.35	1.35	10.5	175	18.0	G1 1/2	180	410x294x384
CPXHV25/220	370	1~230 V	1.79	1.79	11.5	192	22.0	G1 1/2	180	410x294x384
CPXHV32/180	280	1~230 V	1.35	1.35	10.5	175	18.0	G2	180	410x294x384
CPXHV32/220	370	1~230 V	1.79	1.79	11.5	192	22.0	G2	180	410x294x384

Max. flow and max. head are the published values at maximum speed. Flow is the free-delivery (zero-head) flow; head is the shut-off (zero-flow) head. P1 max is the maximum motor input power; consumption falls with speed under inverter control. Tolerances to ISO 9906 Annex A.

Currents are calculated nominal values at 1~ 230 V: In is the full-load running current at maximum speed (P1 max / 230 V x 0.90 power factor). The inverter soft-starts the motor, so the starting current Ist does not exceed In. Confirm against the motor nameplate before sizing cable, fuse and protection.

Select the duty point within the published range: operating at free delivery (far right) gives no useful head and operating near shut-off causes heat build-up in the pump.

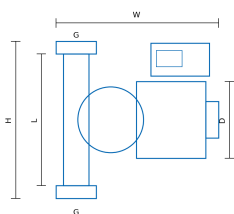
Performance Table

Total head H (m) against flow rate Q (m³/h), clean water at 20 C, tolerances to ISO 9906 Annex A.

Model	Power	Q (m ³ /h)											
	W	0	1	2	3	4	5	6	7	8	9	10	11
CPXHV32/90	90	9.1	8.8	7.9	6.3	4.1	1.3						
CPXHV32/120	120	11.2	10.9	10.0	8.5	6.4	3.7	0.4					
CPXHV25/160	180	16.0	15.8	15.1	14.0	12.5	10.5	8.0	5.1	1.8			
CPXHV25/180	280	18.0	17.8	17.3	16.5	15.4	13.9	12.1	10.0	7.6	4.8	1.7	
CPXHV25/220	370	22.0	21.8	21.3	20.5	19.3	17.8	16.0	13.8	11.4	8.5	5.4	1.9
CPXHV32/180	280	18.0	17.8	17.3	16.5	15.4	13.9	12.1	10.0	7.6	4.8	1.7	
CPXHV32/220	370	22.0	21.8	21.3	20.5	19.3	17.8	16.0	13.8	11.4	8.5	5.4	1.9

Blank cells indicate flows beyond the free-delivery flow of that model / speed. Not suitable for solids-bearing liquids.

Dimensions



Model	L port-port	H over unions	W to motor end	D motor dia.	G union
CPXHV32/90	180	165	130	105	G2
CPXHV32/120	180	165	130	105	G2
CPXHV25/160	180	185	150	120	G1 1/2
CPXHV25/180	180	185	150	120	G1 1/2
CPXHV25/220	180	185	150	120	G1 1/2
CPXHV32/180	180	185	150	120	G2
CPXHV32/220	180	185	150	120	G2

Dimensions in mm; two values = 130 mm / 180 mm body. H, W and D are nominal for this size class of wet-rotor circulator; certified dimension drawings are available on request.