

Close-coupled Chemical Pumps
sealless, with magnetic drive

Automation products available:

- PumpExpert
- Hyamaster
- hyatronic

Fields of Application

For handling aggressive, toxic, explosive, valuable, inflammable, malodorous or hazardous liquids in the chemical, petrochemical and general industries.

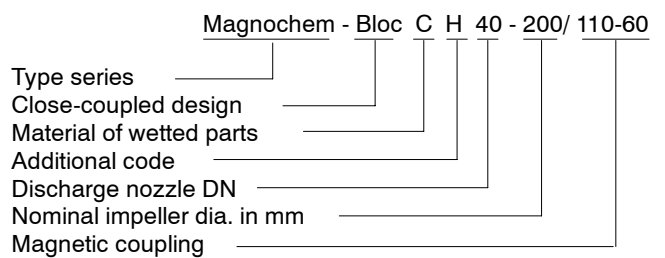
Any CPK pump with shaft seal can be converted easily, taking into account the motor height. The casing and the impeller of the original pump can be used again!

Design

Volute casing pump in close-coupled design, fitted with a radial impeller, single-entry, single-stage, sealless, with magnetic drive. Hydraulic end and casing dimensions are identical with standardized chemical pump CPK to EN 22 858 / ISO 2858 / ISO 5199.

Installation: horizontal and vertical.

Designation



Additional codes:

H = Heatable design

Operating Data

Capacities	Q	up to 240 m ³ /h (67 l/s)
Heads	H	up to 153 m
DN discharge nozzle	DN	from 25 to 125
Motor rating	P	from 1.1 to 22 kW

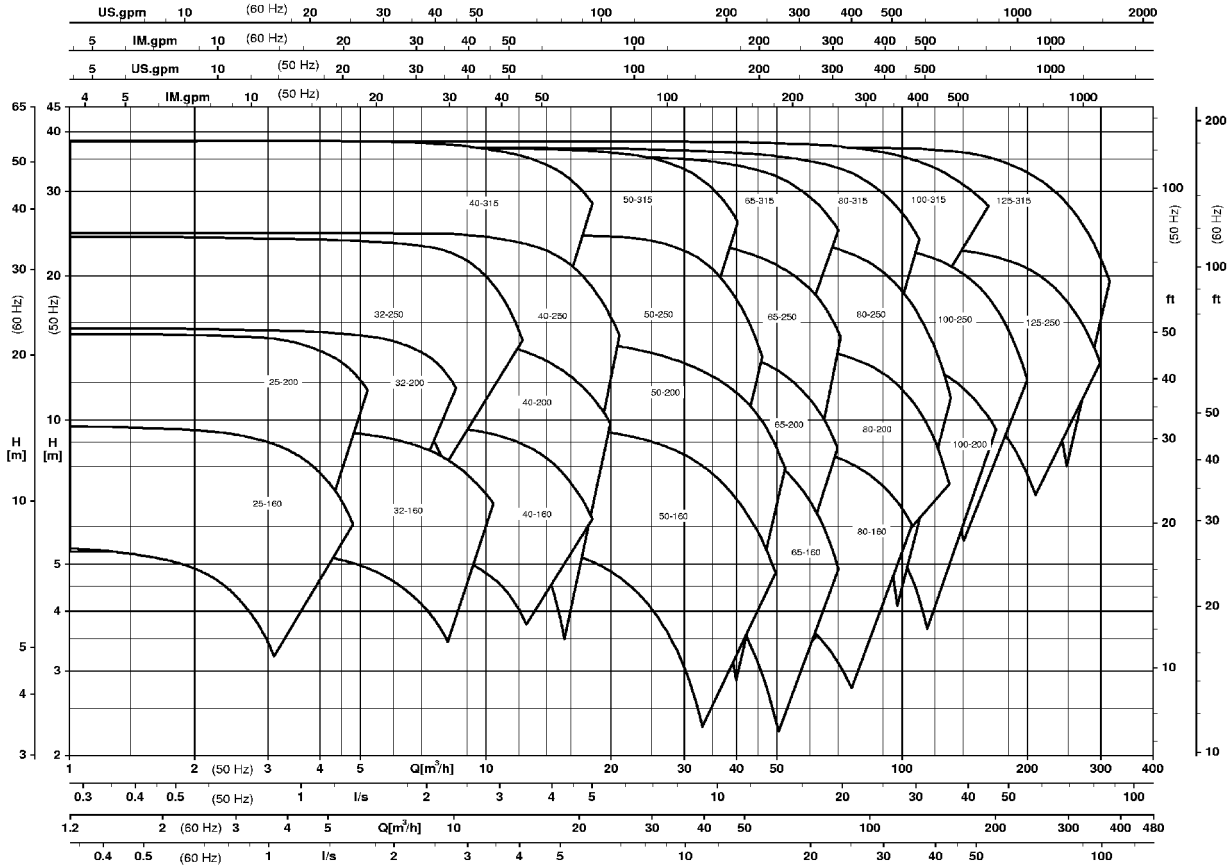
Certification

Certified quality management ISO 9001.

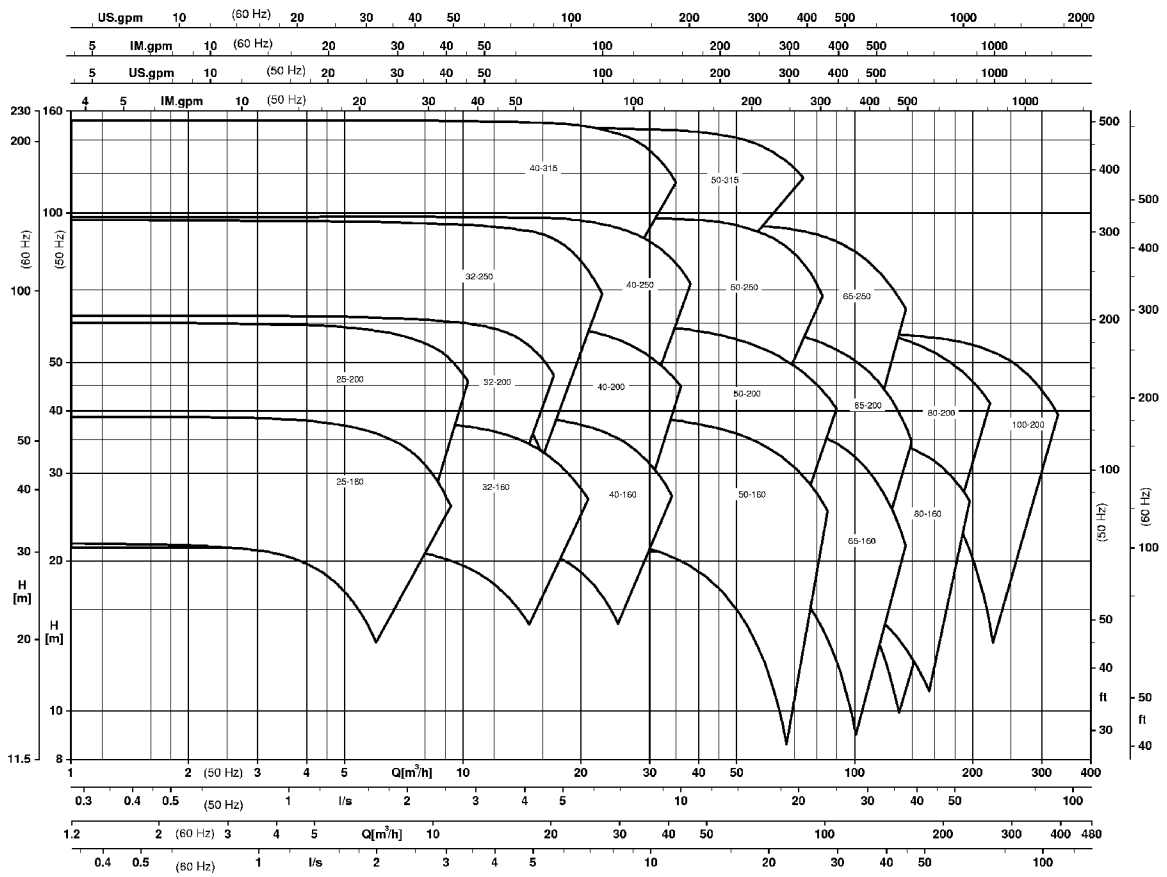


Selection Charts

n = 1450/1750 1/min



n = 2900/3500 1/min



Material Variants

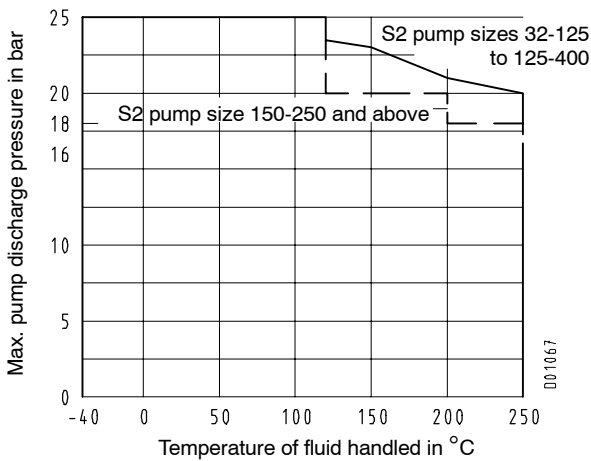
Part No.	Description	S2/S4	E	E4	C1/C1V ⁴⁾	C3.1/C3.2
102	Volute casing	JS1025 ⁶⁾	GP240GH+N	1.7706	1.4408	Noridur 1.4593
161	Casing cover	P250GH ³⁾	P250GH ³⁾	P250GH ³⁾	1.4571/1.4408	1.4462
183	Support foot	S235JRG2	S235JRG2	S235JRG2	S235JRG2	S235JRG2
210.03	Shaft (Plain bearings)	1.4462	1.4462	1.4462	1.4462	1.4462
230	Impeller	JL1040 ¹⁾⁷⁾	JL1040 ¹⁾⁷⁾	JL1040 ¹⁾⁷⁾	1.4408	Noridur 1.4593
310	Plain bearing with spring	Sicadur ^{® 9)}	Sicadur ^{® 9)}	Sicadur ^{® 9)}	Sicadur ^{® 9)}	Sicadur ^{® 9)}
344	Bearing bracket lantern	1.4571	1.4571	1.4571	1.4571	1.4462
817	Bearing bracket lantern	JL1040 ²⁾⁷⁾	JL1040 ²⁾⁷⁾	JL1040 ²⁾⁷⁾	JL1040 ²⁾⁷⁾	JL1040 ²⁾⁷⁾
817	Flange/ containment shroud/ containment shroud bottom	1.4571 ^{8)/} 2.4610/ 1.4462	1.4571 ^{8)/} 2.4610/ 1.4462	1.4571 ^{8)/} 2.4610/ 1.4462	1.4571/ 2.4610/ 1.4462	1.4462/ 2.4610/ 1.4462
818.01	Inner rotor	1.4571/1.4539	1.4571/1.4539	1.4571/1.4539	1.4571/1.4539	1.4462/1.4539
818.02	Outer rotor	St	St	St	St	St
920.95	Impeller nut	A4	A4	A4	A4	1.4462

- impeller tip speed $u > 48$ m/s and/or $t < -30$ °C: 1.4408; bearing bracket P 04/05: always JS1025 impellers
- steel version available
- $t < -10$ °C: 1.4571/1.4408
- C1V = 1.4408 as per VDMA 24 276

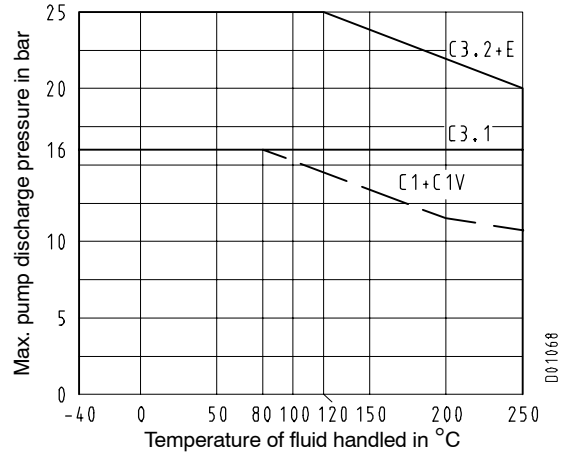
- Sicadur[®] Supra coating (diamond coating of the SiC) optional
- to EN 1563 = GJS-400-18-LT
- to EN 1561 = GJL-250
- magnetic coupling 165: 1.4462
- Sicadur[®] = SiC⁵⁾/1.4462

Pressure and Temperature Limits

Material variant S2



Material variants C1, C1V, C3.1/C3.2 and E



Bearing bracket	Size	Material variant: S4 Pump casing in JS1025 $\sigma_{0.2}$ values to EN 1563					Material variant: E4 Pump casing in 1.7706 $\sigma_{0.2}$ values to EN 10213-2			
		P_{max} at 50 °C	P_{max} at 120 °C	P_{max} at 150 °C	P_{max} at 200 °C	P_{max} at 250 °C	P_{max} at 20 °C	P_{max} at 150 °C	P_{max} at 200 °C	P_{max} at 250 °C
P02	32-160	-	-	-	-	-	40.0	40.0	40.0	40.0
	32-200	-	-	-	-	-	40.0	38.5	37.4	36.5
	40-160	40.0	40.0	40.0	36.6	34.9	40.0	40.0	40.0	40.0
	40-200	40.0	39.1	38.5	37.2	35.4	40.0	38.5	37.4	36.5
	50-160	40.0	40.0	40.0	38.6	36.8	40.0	40.0	40.0	40.0
P03	50-200	40.0	39.1	38.5	37.2	35.4	40.0	38.5	37.4	36.5
	32-250	-	-	-	-	-	40.0	40.0	40.0	40.0
	40-250	40.0	40.0	40.0	37.6	35.8	40.0	40.0	40.0	40.0
	40-315	-	-	-	-	-	40.0	40.0	40.0	40.0
	50-250	40.0	40.0	40.0	36.8	35.0	40.0	40.0	40.0	40.0
	50-315	-	-	-	-	-	40.0	40.0	40.0	40.0
	65-160	40.0	40.0	40.0	36.5	34.8	40.0	40.0	40.0	40.0
	65-200	38.2	36.0	35.5	34.5	33.5	39.0	35.4	34.4	33.6
	65-250	40.0	40.0	40.0	36.7	34.9	40.0	40.0	40.0	40.0
	80-160	40.0	40.0	40.0	37.0	35.2	40.0	40.0	40.0	40.0
P04	80-200	38.2	36.0	35.5	34.5	33.5	40.0	40.0	40.0	40.0
	80-250	40.0	40.0	40.0	37.3	35.5	40.0	40.0	40.0	40.0
	100-200	38.2	36.0	35.5	34.5	33.5	39.0	35.4	34.4	33.6
	125-250	40.0	40.0	40.0	37.5	35.7	40.0	40.0	40.0	40.0
P04	125-315	-	-	-	-	-	40.0	40.0	40.0	40.0
	65-315	-	-	-	-	-	40.0	40.0	40.0	40.0
	80-315	-	-	-	-	-	40.0	40.0	40.0	40.0
	100-250	40.0	40.0	40.0	37.7	35.9	40.0	40.0	40.0	40.0
	100-315	-	-	-	-	-	40.0	40.0	40.0	40.0

Casing bolts: spot-faced
admissible pressures in bar at °C

Calculation of casing to TFFSC without TRD
Limit conditioned by type series 40 bar $p/p' = 1.5$

Magnochem-Bloc at a Glance

Hydraulics:

From the CPK pump series, well-proven more than 200,000 times

Casing cover:

available in variants for heating, external liquid feed and direct temperature measuring.

Cooling/lubrication:

forced circulation; minor temperature rise at the containment shroud, no NPSH deterioration.

Backup ring and assembling aid:

Protects the containment shroud from damage

Temperature monitoring at the containment shroud with PT 100 (option)

Casing:
heatable version available

Bearings secured
for large temperature range, insensitive to temperature changes

Drain:
Product drains off automatically at the lowest point of the containment shroud

Bearing assembly (rotor)
Sturdy plain bearings made of silicon carbide, product lubricated, for maximum service life.
Diamond-coated bearings Sicodur Supra are optional

Heating:
Available for rotor space and/or lantern (option)

Containment shroud:
Containment shroud up to PN 25 in Hastelloy, for optimum corrosion resistance at minimal eddy current losses

Leakage monitoring:
Facilities provided at the highest (vapour) and at the lowest (condensate) point (optional)

Safety:
Pump with magnetic coupling, absolutely leakage-free, with containment shroud made of Hastelloy C4. Only 2 static seals. Temperature and leakage monitoring possible.

Handling:
Easy to assemble.
When the drive unit is removed, the can remains bolted to the casing, thus sealing off the medium (pump need not be drained).

Economic viability:
Any existing CPK pump within the Magnochem selection range can be converted without any problems (Please refer to Magnochem-Bloc selection chart)

