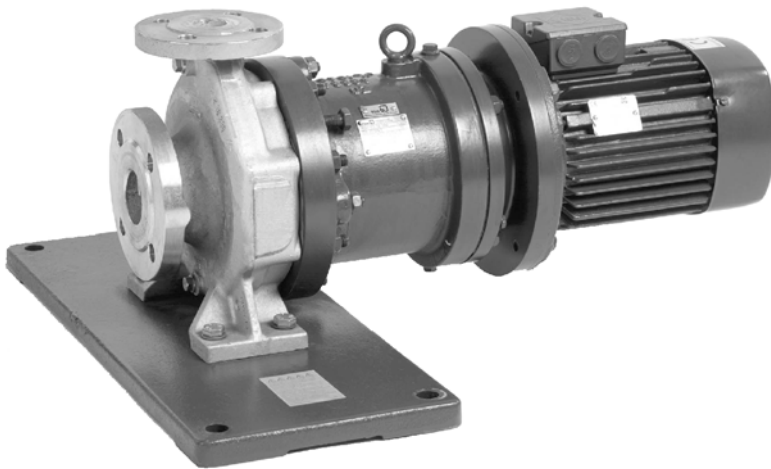


## Close-coupled Chemical Pumps

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

	Magnochem - Bloc C H 40 - 200/ 110-60
Type series	_____
Close-coupled design	_____
Material of wetted parts	_____
Additional code	_____
Discharge nozzle DN	_____
Nominal impeller dia. in mm	_____
Magnetic coupling	_____

Additional codes:

H = Heatable design

## Operating Data

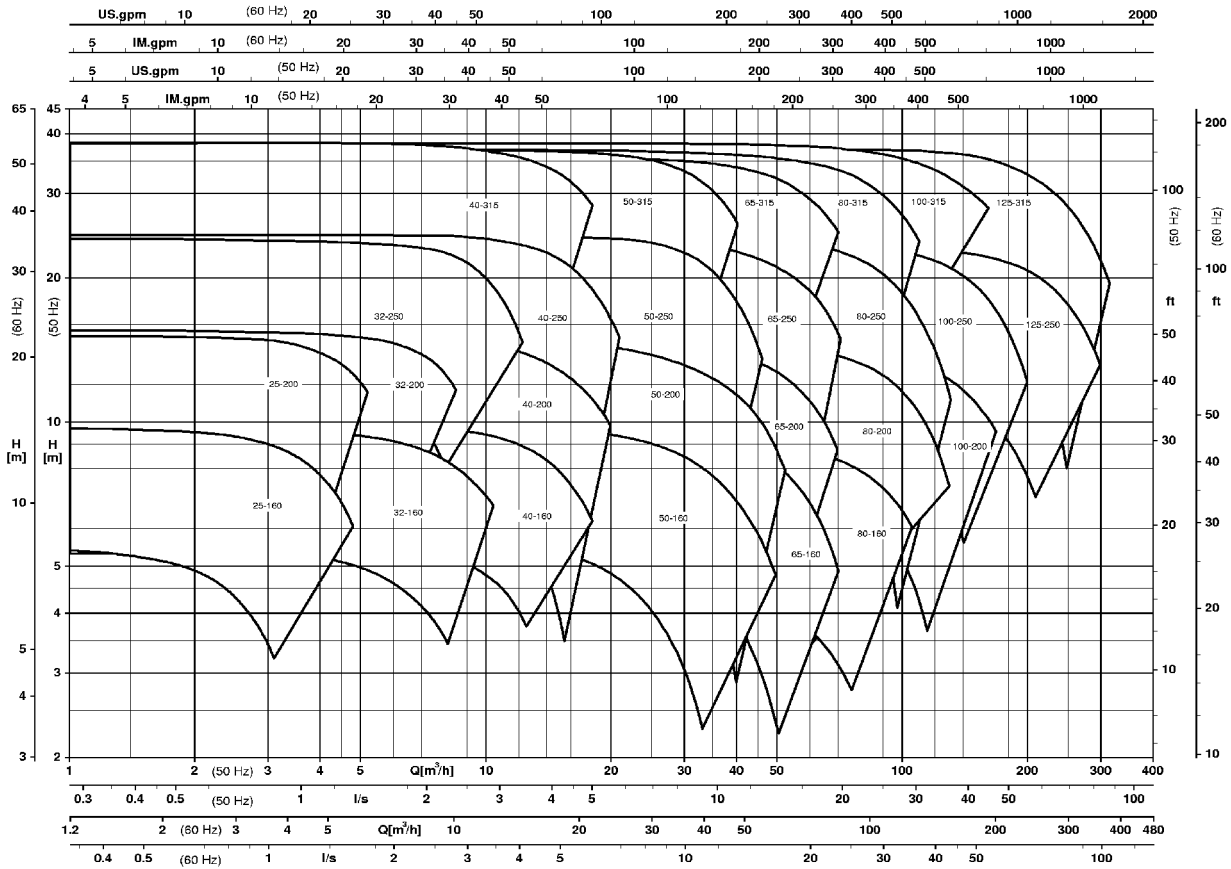
Capacities	Q	up to 240 m <sup>3</sup> /h (67 l/s)
Heads	H	up to 153 m
DN discharge nozzle	DN	from 25 to 125
Motor rating	P	from 1.1 to 22 kW

## Certification

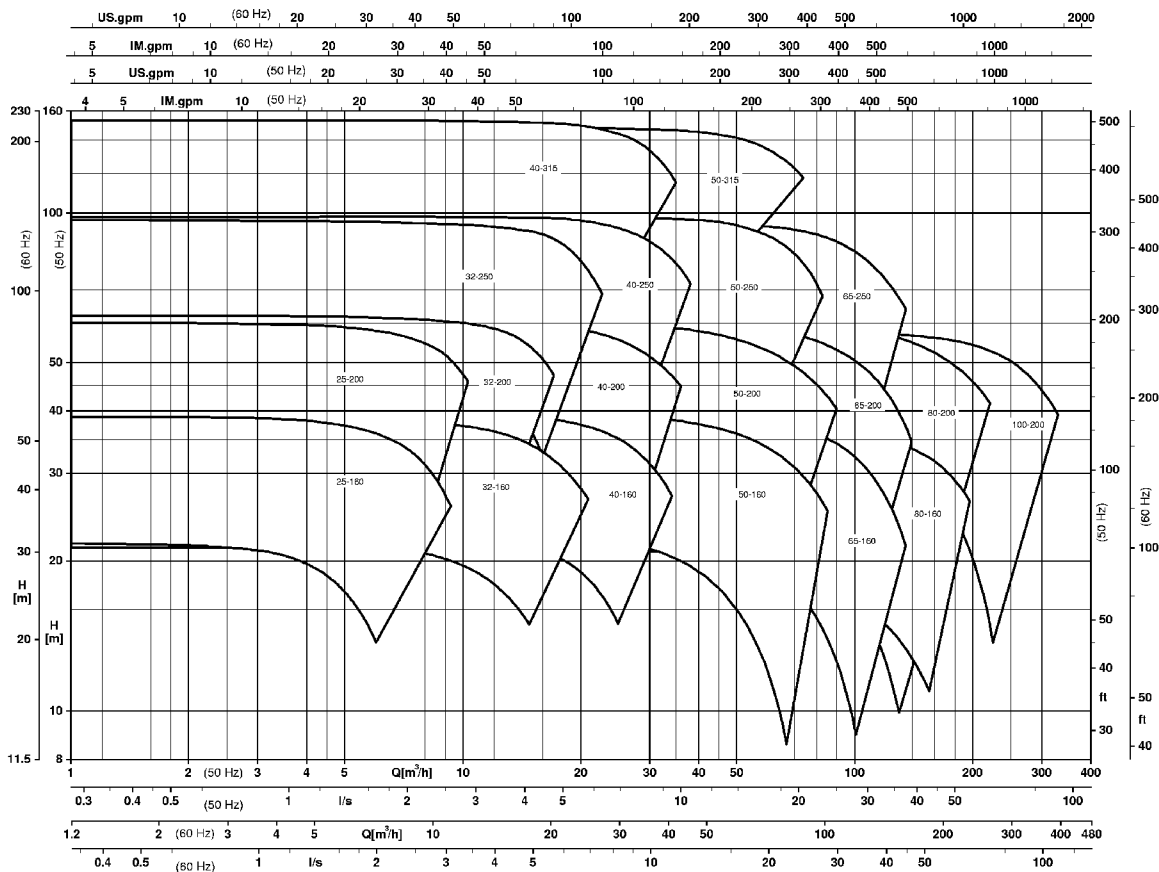
Certified quality management ISO 9001.

### Selection Charts

n = 1450/1750 1/min



n = 2900/3500 1/min



### Material Variants

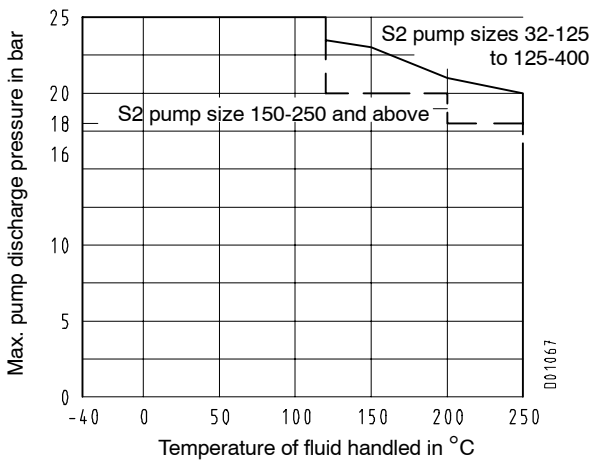
Part No.	Description	S2/S4	E	E4	C1/C1V <sup>4)</sup>	C3.1/C3.2
102	Volute casing	JS1025 <sup>6)</sup>	GP240GH+N	1.7706	1.4408	Noridur 1.4593
161	Casing cover	P250GH <sup>3)</sup>	P250GH <sup>3)</sup>	P250GH <sup>3)</sup>	1.4571/1.4408	1.4462
183	Support foot	S235JRG2	S235JRG2	S235JRG2	S235JRG2	S235JRG2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

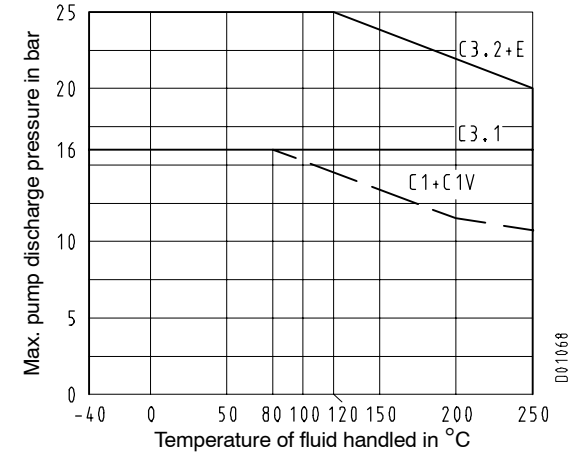
- Sicadur Supra coating (diamond coating of the SiC) optional
- to EN 1563 = GJS-400-18-LT
- to EN 1561 = GJL-250
- magnetic coupling 165: 1.4462
- Sicadur<sup>®</sup> = SiC<sup>5)</sup>/1.4462

### Pressure and Temperature Limits

Material variant S2



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



		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			
Bearing bracket	Size	$P_{max}$ 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
	80-315	-	-	-	-	-	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:**

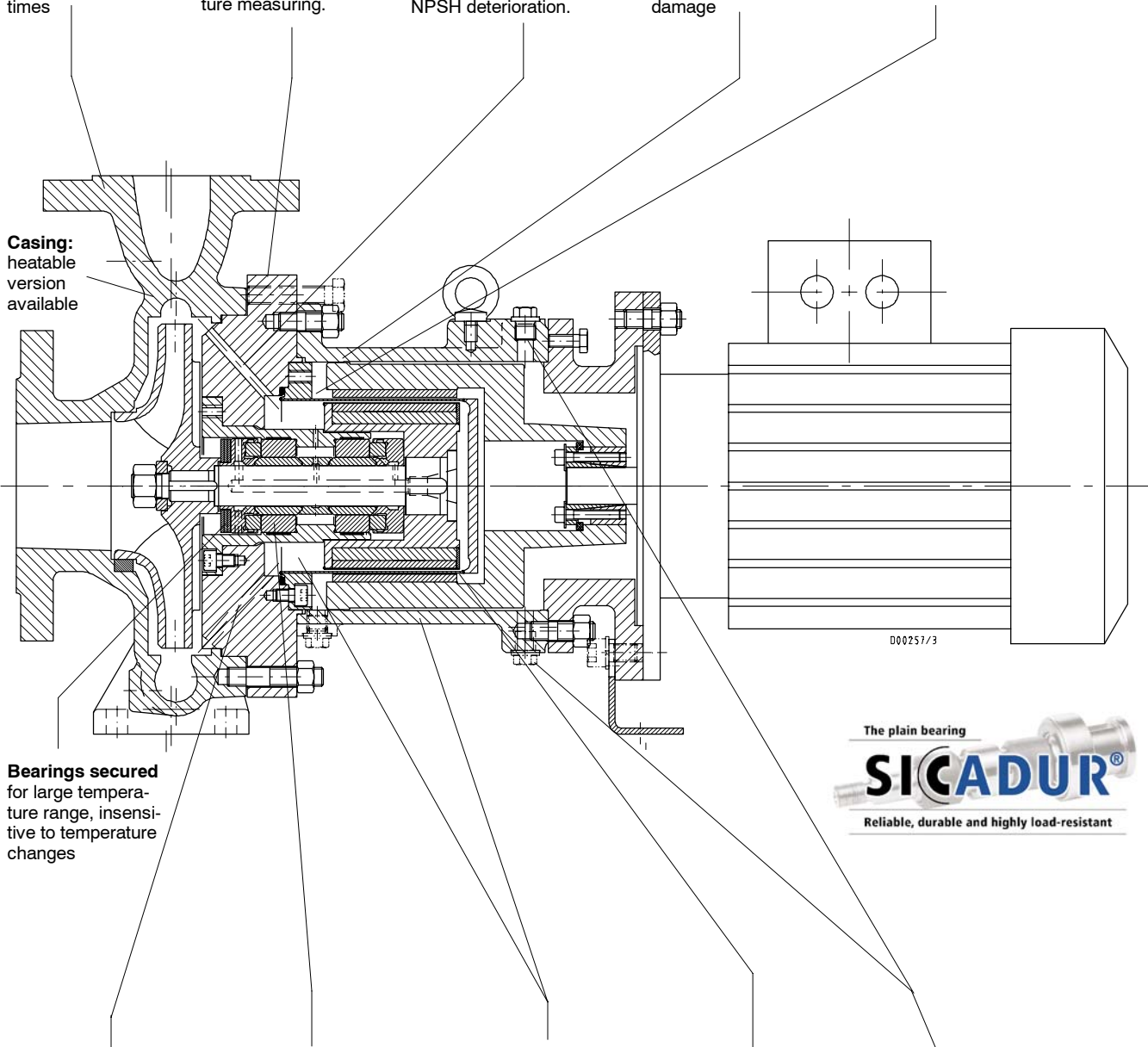
Pump with magnetic coupling, absolutely leakage-free, with containment shroud made of Hastelloy C4. Only 2 static seals. Temperature and leakage monitoring possible.

**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)



## Specifications

		Units	Pump sizes																									
			P 02								P 03								P 04									
General	corrosion allowance	mm	3								3								3									
	impeller outlet width	mm	6	6	7	7	9	7	15	12	6	7	8	10	8	20	16	13	27	22	17	29	10	14	23	19.5	32	26
	impeller inlet Ø	mm	45	45	52	52	65	65	82	82	52	65	65	84	84	89	96	96	100	114	114	122	96	129	129	135	154	154
	max. impeller Ø	mm	see individual curve																									
	min. impeller Ø	mm	see individual curve																									
Pressure limit	max. operating pressure	bar	see diagram																									
	max. test pressure	bar	1.5 x permissible pump discharge pressure																									
Temp. limit	min./max. temp. of medium handled	°C	-40/250																									

## Magnetic Coupling / Pump Size Combinations

Bearing bracket	Impeller Ø	Size of magnetic coupling	
		110-...	165-...
P 02	-160	X	
	-200	X	
P 03	-160	X	X
	-200	X	X
	-250	X	X
	-315	X	X
P 04	-250	X	X
	-315	X	X

110 - 80  
 Length of magnet (mm)  
 Containment shroud Ø (mm)

A computerized selection programme is used for dimensioning the magnetic coupling and determining the correct combination between magnetic coupling and pump size.

## Motor/Pump Size Combinations (IEC standardized motors, type of construction B5)

Pump size	Motor power in kW										
	1.1	1.5	2.2	3.0	4.0	5.5	7.5	11.0	15.0	18.5	22.0
25-160	x	x	x	x	x	x	x	-	-	-	-
25-200	x	x	x	x	x	x	x	x	x	x	-
32-160	x	x	x	x	x	x	x	-	-	-	-
32-200	x	x	x	x	x	x	x	x	x	x	-
32-250	x	x	x	x	x	x	x	x	x	x	x
40-160	x	x	x	x	x	x	x	-	-	-	-
40-200	x	x	x	x	x	x	x	x	x	x	-
40-250	x	x	x	x	x	x	x	x	x	x	x
40-315	x	x	x	x	x	x	x	x	x	x	x
50-160	x	x	x	x	x	x	x	x	x	x	x
50-200	x	x	x	x	x	x	x	x	x	x	x
50-250	x	x	x	x	x	x	x	x	x	x	x
50-315	x	x	x	x	x	x	x	x	x	-	-
65-160	x	x	x	x	x	x	x	x	x	x	x
65-200	x	x	x	x	x	x	x	x	x	x	x
65-250	x	x	x	x	x	x	x	x	x	x	x
65-315	-	-	x	x	x	x	x	x	x	x	x
80-160	x	x	x	x	x	x	x	x	x	x	x
80-200	x	x	x	x	x	x	x	x	x	x	x
80-250	-	-	x	x	x	x	x	x	x	x	x
80-315	-	-	-	-	x	x	x	x	x	x	x
100-200	-	-	x	x	x	x	x	x	x	x	x
100-250	-	-	-	-	x	x	x	x	x	x	x
100-315	-	-	-	-	x	x	x	x	x	x	x
125-250	-	-	-	-	-	x	x	x	x	x	x
125-315	-	-	-	-	-	x	x	x	x	x	x

### Pump Sizes

Discharge nozzle DN	Nominal impeller Ø				Bearing bracket
	160	200	250	315	
					P 02
25	x	x			P 03
32	x	x	x		
40	x	x	x	x	
50	x	x	x	x	
65	x	x	x	x	P 04
80	x	x <sup>1)</sup>	x <sup>1)</sup>	x <sup>1)</sup>	
100		x <sup>1)</sup>	x <sup>1)</sup>	x <sup>1)</sup>	
125			x	x	

Casing with double volute  
 1) double volute; casing not available in material C1.

### Balancing

On Magnochem pumps, axial forces are reduced by back vanes or by a discharge-side sealing gap with balancing holes, depending on the pump size. The load acting on the thrust bearings is markedly reduced, which considerably increases operating reliability.

### Documentation

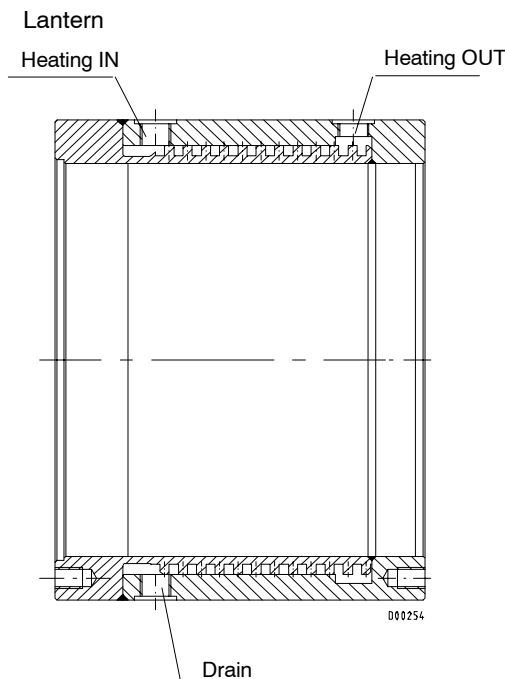
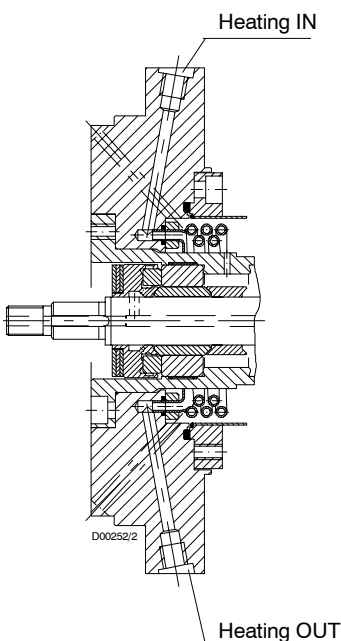
- Printed documentation adapted to CE requirements
- general assembly drawing with list of components
  - general arrangement drawing / dimensions table
  - operating instructions

### Forces and Moments

Magnochem pumps are designed for handling forces and moments in accordance with ISO 5199.

### Heating

(optional: rotor space and/or lantern)  
Rotor space



**Heated lantern**  
 $t_{max}$  120 °C  
 $p_{max}$  10 bar

### Casing

Radially split, consisting of volute casing (on Magnochem-S with casing wear ring) and casing cover.

The following pump sizes are available with heatable casing (Magnochem-CH):

Discharge nozzle DN	Nominal impeller Ø				Bearing bracket
	160	200	250	315	
					P 02
25	x				P 03
32	x	x	x		
40	x	x	x	x	
50	x	x	x	x	
65		x			P 04
80				x	
100					
125					

Casing with double volute

### Casing Cover Variants

- **Standard design with internal circulation** (flushing connection possible)
- **External liquid feed (barrier liquid)**
- **Filter design** (flushing connection possible)

The above variants can be combined with heating (rotor space) and with each other.

### Heating of Rotor Space

heating coil welded in			
hot water/saturated steam		heat transfer oil	
$t_{max}$	$p_{max}$	$t_{max}$	$p_{max}$
250 °C	20 bar	250 °C	6 bar

## Dry-running Protection

If there is a risk of the pumps running dry, protection against dry-running must be provided for. This can be achieved by appropriate measures on site (pump power monitoring, flow meter, level meter, etc.), depending on the site conditions.

## Accessories

- PT 100 (for monitoring the temperature at the containment shroud)
  - Pump power monitoring unit
- Other accessories on request.

## Acceptance Tests / Guarantees

- **Materials tests**  
Test report 2.2 on request
- **Product tests**  
Inspection certificate 3.1 as per EN 10 204, on request, for: pressure test of complete pump
- **Hydraulic tests**

The following acceptance tests may be performed and certified at an extra charge:

Performance test ISO 9906  
NPSH test

Warranties are given within the scope of the valid delivery conditions.

## Coating and Preservation

(acc. to works standard AN 1865)

Magnochem-Bloc S, -E	< 150 °C	N 1 1 1 W
	≥ 150 °C	N 7 7 7 W
Magnochem-Bloc C1/C3	< 150 °C	N 0 1 1 U
	≥ 150 °C	N 0 7 7 U

Treatment of unmachined parts	_____	_____	_____	_____
Coating - pressure-retaining parts	_____	_____	_____	_____
Coating - bearing bracket, lantern, baseplate	_____	_____	_____	_____
Coating - motor	_____	_____	_____	_____
Preservation	_____	_____	_____	_____

- N = reaction primer, parts in contact with the fluid handled without finish coat.
- 0 = without top coat
- 1 = synthetic enamel RAL 5002, ultramarine blue
- 7 = heat resistant paint RAL 9007 gray aluminum
- U = untreated
- W = rinsed with water repellent agent; blank parts liable to rust with protective coating

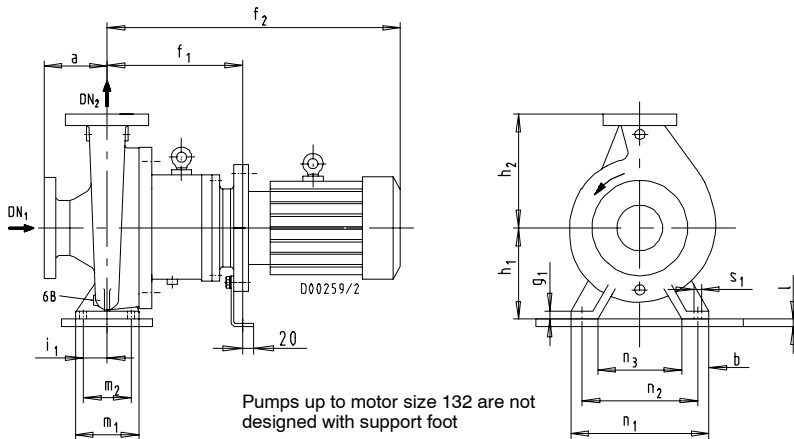
## First Spare Parts Stock Recommended for Two Years' Operation after Commissioning

Part No.	Description		No. of pumps (incl. standby pumps)						
			2	3	4	5	6+7	8+9	10 and more
	Set of gaskets comprising: U-ring/Joint ring 411.08 Joint ring 411.01/.03/.10	sets	2	2	3	3	3	4	50 %

## List of Selected Spare Parts Recommended for Operation to DIN 24296

Part No.	Description		No. of pumps (incl. standby pumps)						
			2	3	4	5	6+7	8+9	10 and more
210.03	Shaft (inner rotor)	pcs.	1	1	1	2	2	2	20 %
230	Impeller	pcs.	1	1	1	2	2	2	20 %
314.01	Thrust bearing	pcs.	1	1	2	2	3	4	50 %
314.02	Thrust bearing	pcs.	1	1	2	2	3	4	50 %
391.01	Bearing ring carrier	pcs.	1	1	2	2	3	4	50 %
411.08	U-ring/Joint ring	pcs.	2	2	3	3	3	4	50 %
411.01	Joint ring	pcs.	4	6	8	8	9	12	150 %
411.03	Joint ring	pcs.	4	6	8	8	9	12	150 %
411.10	Joint ring	pcs.	4	6	8	8	9	12	150 %
502.01	Casing wear ring (only for S variant)	pcs.	2	2	2	3	3	4	50 %
529.21/.22	Bearing sleeve	pcs.	1	1	2	2	3	4	50 %
509.21	Intermediate ring	pcs.	1	1	2	2	3	4	50 %
82-15	Containment shroud	pcs.	1	1	2	2	2	3	25 %
950.23	Cup spring	pcs.	1	1	2	2	3	4	50 %

## Dimensions of Non-heatable Pump



### Flanges

Magnochem-Bloc	Design	DN <sub>1</sub>	DN <sub>2</sub>
-C1	EN 1092-1, PN 16		
-S	EN 1092-2, PN 25		
-E	EN 1092-1, PN 25		
-C3.1	EN 1092-1, PN 16		
-C3.2	EN 1092-1, PN 25		

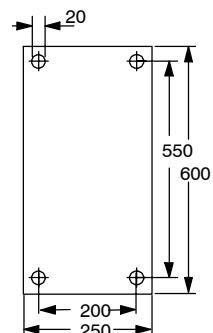
## Pump Dimensions

in mm

Pump size	Pump dimensions																for motors		for motors <sup>4)</sup>										Weight <sup>3)</sup> kg
	DN <sub>1</sub>	DN <sub>2</sub>	a	b	g <sub>1</sub>	h <sub>1</sub>	h <sub>2</sub>	i <sub>1</sub>	m <sub>1</sub>	m <sub>2</sub>	n <sub>1</sub>	n <sub>2</sub>	n <sub>3</sub>	s <sub>1</sub>	f <sub>1</sub>	f <sub>1</sub>	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L			
25-160 <sup>1)</sup>	40	25	80	50	14	132	160	35	100	70	240	190	140	14	304	-	586	637	670	672	739	739	-	-	-	-	-	78	
25-200 <sup>2)</sup>	40	25	80	50	14	160	180	35	100	70	240	190	140	14	304	338	586	637	670	672	739	739	869	869	-	-	87		
32-160 <sup>1)</sup>	50	32	80	50	14	132	160	35	100	70	240	190	140	14	304	-	586	637	670	672	739	739	-	-	-	-	78		
32-200 <sup>2)</sup>	50	32	80	50	14	160	180	35	100	70	240	190	140	14	304	338	586	637	670	672	739	739	869	869	-	-	88		
32-250	50	32	100	65	16	180	225	47.5	125	95	320	250	190	14	389	423	671	722	755	757	824	824	954	954	1033	1033	159		
40-160 <sup>1)</sup>	65	40	80	50	14	132	160	35	100	70	240	190	140	14	304	-	586	637	670	672	739	739	-	-	-	-	80		
40-200 <sup>2)</sup>	65	40	100	50	14	160	180	35	100	70	265	212	165	14	304	338	586	637	670	672	739	739	869	869	-	-	91		
40-250	65	40	100	65	16	180	225	47.5	125	95	320	250	190	14	389	423	671	722	755	757	824	824	954	954	1033	1033	165		
40-315	65	40	125	65	18	200	250	47.5	125	95	345	280	215	14	389	423	671	722	755	757	824	824	954	954	1033	1033	191		
50-160 <sup>2)</sup>	80	50	100	50	14	160	180	35	100	70	265	212	165	14	304	338	586	637	670	672	739	739	869	869	-	-	86		
50-200 <sup>2)</sup>	80	50	100	50	14	160	200	35	100	70	265	212	165	14	304	338	586	637	670	672	739	739	869	869	948	948	102		
50-250	80	50	125	65	16	180	225	47.5	125	95	320	250	190	14	389	423	671	722	755	757	824	824	954	954	1033	1033	167		
50-315	80	50	125	65	18	225	280	47.5	125	95	345	280	215	14	389	423	671	722	755	757	824	824	954	954	1033	1033	194		
65-160 <sup>2)</sup>	100	65	100	65	15	160	200	47.5	125	95	280	212	150	14	389	423	671	722	755	757	824	824	954	954	1033	1033	144		
65-200	100	65	100	65	16	180	225	47.5	125	95	320	250	190	14	389	423	671	722	755	757	824	824	954	954	1033	1033	160		
65-250	100	65	125	80	18	200	250	60	160	120	360	280	200	18	389	423	671	722	755	757	824	824	954	954	1033	1033	173		
65-315	100	65	125	80	18	225	280	60	160	120	400	315	240	18	389	423	-	-	755	757	824	824	954	954	1033	1033	206		
80-160	125	80	125	65	15	180	225	47.5	125	95	320	250	190	14	389	423	671	722	755	757	824	824	954	954	1033	1033	153		
80-200	125	80	125	65	16	180	250	47.5	125	95	345	280	215	14	389	423	671	722	755	757	824	824	954	954	1033	1033	177		
80-250	125	80	125	80	18	225	280	60	160	120	400	315	240	18	389	423	-	-	755	757	824	824	954	954	1033	1033	207		
80-315	125	80	125	80	18	250	315	60	160	120	400	315	240	18	389	423	-	-	-	757	824	824	954	954	1033	1033	224		
100-200	125	100	125	80	16	200	280	60	160	120	360	280	200	18	389	423	-	-	755	757	824	824	954	954	1033	1033	182		
100-250	125	100	140	80	18	225	280	60	160	120	400	315	240	18	389	423	-	-	-	757	824	824	954	954	1033	1033	213		
100-315	125	100	140	80	18	250	315	60	160	120	400	315	240	18	389	423	-	-	-	757	824	824	954	954	1033	1033	246		
125-250	150	125	140	80	18	250	355	60	160	120	400	315	240	18	389	423	-	-	-	-	-	824	954	954	1033	1033	228		
125-315	150	125	140	100	20	280	355	75	200	150	500	400	300	23	389	423	-	-	-	-	-	824	954	954	1033	1033	252		

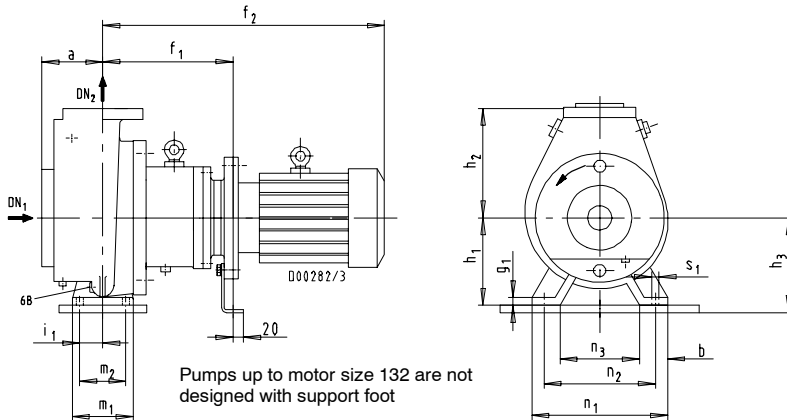
- 1) Mounting plate required for motor size 132
- 2) Mounting plate required for motor size 160/180
- 3) Max. weight without motor (depending on magnetic drive)
- 4) Motor dimensions are for construction type B5, max. overall length (make Siemens)

### Mounting Plate

 (not generally included in KSB's scope of supply; see <sup>1)</sup> and <sup>2)</sup>)

 Height I: 25 mm  
 Weight: 24 kg



## Dimensions of Heatable Pump



### Flanges

Magnochem-Bloc	Design	DN <sub>1</sub>	DN <sub>2</sub>
-CH	EN 1092, PN 16		

Casing heatable

$h_3$  = Dimension between top edge of foundation and middle of suction nozzle, incl. any additional pump shims, etc.

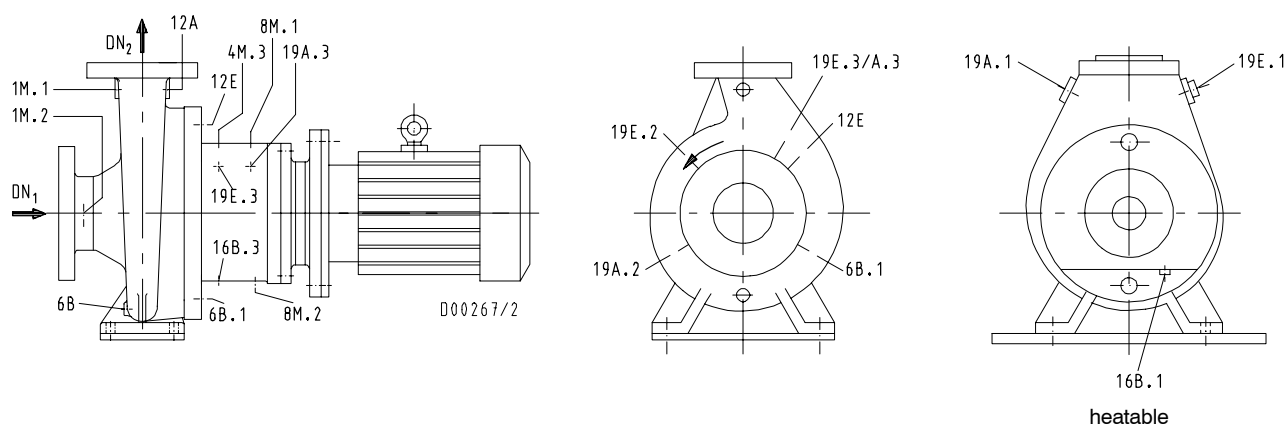
## Pump Dimensions

in mm

Pump size	Pump dimensions																for motors		for motors <sup>2)</sup>										Weight <sup>1)</sup> kg
	DN <sub>1</sub>	DN <sub>2</sub>	a	b	g <sub>1</sub>	h <sub>1</sub>	h <sub>2</sub>	h <sub>3</sub>	i <sub>1</sub>	m <sub>1</sub>	m <sub>2</sub>	n <sub>1</sub>	n <sub>2</sub>	n <sub>3</sub>	s <sub>1</sub>	up to 132M	above 160M	90S	90L	100L	112M	132S	132M	160M	160L	180M	180L		
25-160	40	25	80	50	14	132	160	160	35	100	70	240	190	140	14	304	-	586	637	670	672	739	739	-	-	-	-	-	83
32-160	50	32	80	50	14	132	160	160	35	100	70	240	190	140	14	304	-	586	637	670	672	739	739	-	-	-	-	-	81
32-200			80	50	14	160	180	180	35	100	70	240	190	140	14	304	338	586	637	670	672	739	739	869	869	-	-	-	91
32-250			100	65	16	180	225	180	47.5	125	95	320	250	190	14	389	423	671	722	755	757	824	824	954	954	1033	1033	1033	1033
40-160	65	40	80	50	14	132	160	160	35	100	70	240	190	140	14	304	-	586	637	670	672	739	739	-	-	-	-	-	88
40-200			100	50	14	160	180	180	35	100	70	265	212	165	14	304	338	586	637	670	672	739	739	869	869	-	-	-	96
40-250			100	65	16	180	225	200	47.5	125	95	320	250	190	14	389	423	671	722	755	757	824	824	954	954	1033	1033	1033	172
40-315			125	65	18	200	250	225	47.5	125	95	345	280	215	14	389	423	671	722	755	757	824	824	954	954	1033	1033	1033	210
50-160			80	50	100	50	14	160	180	180	35	100	70	265	212	165	14	304	338	586	637	670	672	739	739	869	869	-	-
50-200	100	50			14	160	200	180	35	100	70	265	212	165	14	304	338	586	637	670	672	739	739	869	869	948	948	948	201
50-250	125	65			16	180	225	200	47.5	125	95	320	250	190	14	389	423	671	722	755	757	824	824	954	954	1033	1033	1033	177
50-315	125	65			18	225	280	225	47.5	125	95	345	280	215	14	389	423	671	722	755	757	824	824	954	954	1033	1033	1033	115
65-200	100	65	100	65	16	180	225	180	47.5	125	95	320	250	190	14	389	423	671	722	755	757	824	824	954	954	1033	1033	1033	237
80-250	125	80	125	80	18	225	280	225	60	160	120	400	315	240	18	389	423	-	-	755	757	824	824	954	954	1033	1033	1033	217
80-315			125	80	18	250	315	250	60	160	120	400	315	240	18	389	423	-	-	-	757	824	824	954	954	1033	1033	1033	244
100-250	125	100	140	80	18	225	280	250	60	160	120	400	315	240	18	389	423	-	-	-	757	824	824	954	954	1033	1033	1033	281
125-315	150	125	140	100	20	280	355	280	75	200	150	500	400	300	23	389	423	-	-	-	-	-	824	954	954	1033	1033	1033	287

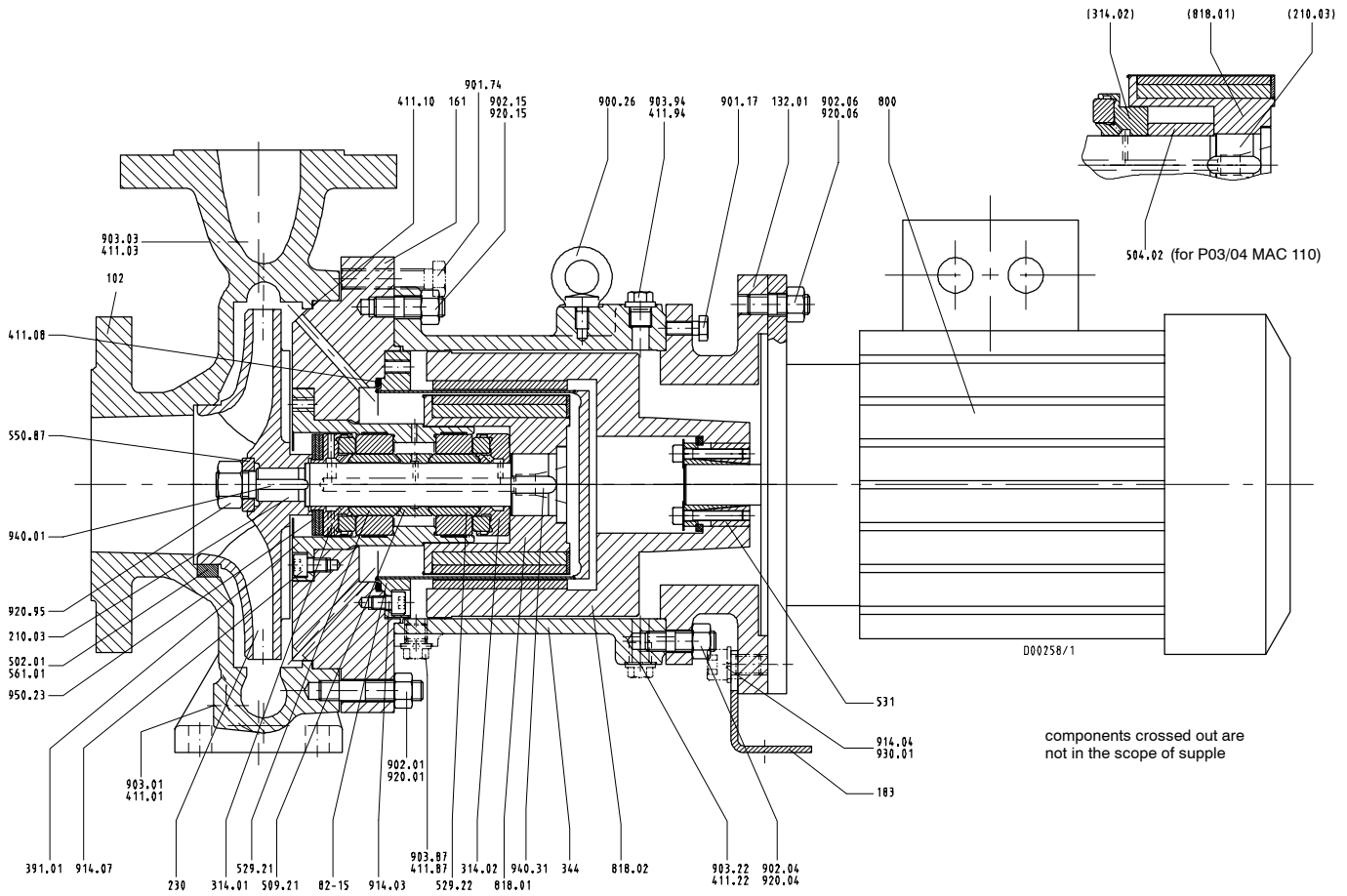
1) Max. weight without motor (depending on magnetic drive)

2) Motor dimensions are for construction type B5, max. length (make Siemens)

**Connections**

**Connections**

Connections	Size			Description	Connection by		Quantity required l/min	Pressure required bar	Max. pressure bar
	P02	P03	P04		customer	KSB			
1 M.1 <sup>1)</sup>	G 1/4	G 1/4	G 1/2	Pressure gauge					
1 M.2 <sup>1)</sup>	G 1/4	G 1/4	G 1/2	Pressure gauge					
4 M.3	G 1/4			Temperature sensor, can					
6 B	G 1/4	G 3/8	G 1/2	Casing drain					
6 B.1	G 1/4			Shroud drain / Sealing liquid IN					
8 M.1	G 1/4			Leakage sensor (gas, vapour)					
8 M.2	G 1/4			Leakage sensor (liquid)					
12 E	G 1/4			Circulation liquid IN / Venting for external supply					
12 A	G 1/4			Circulation liquid OUT					
16 B.1	G 1/4			Condensate drain (heatable casing)					
16 B.3	G 1/4			Condensate drain (heatable lantern)					
19 E.1	G 3/8			Heating IN (casing)					
19 A.1	G 3/8			Heating OUT (casing)					
19 E.2	G 3/8			Heating IN (casing cover)					
19 A.2	G 3/8			Heating OUT (casing cover)					
19 E.3	G 3/8			Heating IN (lantern)					
19 A.3	G 3/8			Heating OUT (lantern)					

1) not applicable for heatable casing

**General Drawing**


When ordering spare parts please always specify the type series/pump size, works No. (stamped on the name plate and on the suction nozzle flange), motor No. (serial No.), year of construction, quantity required, part No., part description, material, medium handled, sectional drawing No. and mode of dispatch.

Part No.	Description	Scope of Supply
102	Volute casing	with joint ring 411.01/.03/.10, casing wear ring 502.01 <sup>1)</sup> , grooved pin 561.01 <sup>1)</sup> , stud 902.01, screwed plug 903.01/.03, hex. nut 920.01
132.01	Intermediate piece	with hex. head bolt 901.17, stud 902.06, hex. nut 920.06
161	Casing cover	with U-ring 411.08, joint ring 411.10, hex. head bolt 901.74, stud 902.15, hex. nut 920.15
183	Support foot	with socket head cap screw 914.04, lockwasher 930.01 (if any)
210.03	Shaft	with spacer ring 504.02, disc 550.87, hex. nut 920.95, key 940.01/.31
230	Impeller	
310	Bearing assembly	consisting of axial plain bearing 314.01/.02, bearing ring carrier 391.01, intermediate ring 509.21, bearing sleeve 529.21/.22, socket head cap screw 914.07, cup spring 950.23
344	Bearing bracket lantern	with joint ring 411.22/.87/.94, eyebolt 900.26, stud 902.04, screwed plug 903.22/.87/.94, hex. nut 920.04
531	Locking element	complete
800	Motor	without key
82-15	Shroud	with socket head cap screw 914.03
818.01	Internal rotor	complete
818.02	External rotor	complete with hex. head bolt 901.58, lockwasher 930.58

1) only on Magnochem-Bloc S2

