

Standardised Chemical Pump

MegaCPK

Type Series Booklet



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Type Series Booklet MegaCPK

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Centrifugal Pumps with Shaft Seal

Standardised Chemical Pumps

MegaCPK



Main applications

Pump for handling aggressive liquids in the chemical and petrochemical industries.

- Paper and cellulose industry
- Seawater desalination/reverse osmosis
- Food and beverages industry
- Fossil-fuelled power stations
- Chemical industry
- Petrochemical industry
- Refineries
- Sugar industry
- Alcohol industry

Operating data

Operating properties

| Characteristic | | Value | |
|--------------------|----------|-------------|--------|
| | | 50 Hz | 60 Hz |
| Flow rate | Q [m³/h] | ≤ 1160 | ≤ 1400 |
| Head | H [m] | ≤ 162 | ≤ 233 |
| Fluid temperature | T [°C] | -40 to +400 | |
| Operating pressure | p [bar] | ≤ 25 | |

Designation

Example: MCPK 50-32-160 CDh

Designation key

| Code | Description |
|------|--|
| MCPK | Type series (full name: MegaCPK) |
| 50 | Nominal suction nozzle diameter [mm] |
| 32 | Nominal discharge nozzle diameter [mm] |

| Code | Description |
|------|--------------------------------|
| 160 | Nominal impeller diameter [mm] |
| C | Casing material |
| | G = cast iron |
| | C = stainless steel |
| | E = unalloyed steel |
| | V = stainless steel |
| | S = nodular cast iron |
| | D = duplex stainless steel |
| D | Impeller material |
| | G = cast iron |
| | C = stainless steel |
| | B = bronze |
| | E = unalloyed steel |
| | D = duplex stainless steel |
| | S = nodular cast iron |
| | X = chrome steel |
| h | Additional code |
| | h = heatable |
| | i = inducer |
| | x = special design |

Further information on the designation

(⇒ Page 23)

Design details

Design

- Volute casing pump
- Horizontal installation
- Back pull-out design
- Single-stage
- Meets the technical requirements to ISO 5199
- Dimensions and ratings to ISO 2858 complemented by pumps of nominal diameters DN 25, DN 200 and above

Pump casing

- Single or double volute, depending on the pump size
- Radially split volute casing
- Volute casing with integrally cast pump feet
- Replaceable casing wear rings (as required)

Impeller type

- Closed radial impeller with multiply curved vanes

Shaft seal

- Gland packing
- Commercial single and double mechanical seals
- Commercial cartridge seals
- Shaft fitted with a replaceable shaft protecting sleeve in the shaft seal area

Alternative:

- Version without shaft protecting sleeve, with "wet" shaft (Europe only)

Bearing assembly

Bearings:

- Medium-duty
 - Radial bearing: cylindrical roller bearing
 - Fixed bearing: paired angular contact ball bearings / double-row angular contact ball bearing
- Economy
 - Floating bearing assembly: deep groove ball bearings

Lubrication:

- Oil lubrication
- Grease lubrication

Bearing bracket designation

Example: CS50E

Bearing bracket designation

| Designation | Description |
|-------------|---|
| CS | Bearing bracket |
| 50 | Size code (based on dimensions of seal chamber and shaft end) |
| E | Bearing design |
| E | = Economy |
| ..1) | = Medium Duty |

Bearings used

Standard bearing assembly

| Design | Bearing bracket | Rolling element bearings | |
|--|-----------------|--------------------------|------------------------|
| | | Pump end | Drive end |
| Medium-duty (oil and grease lubrication) | CS40 | NU208-E | 3208 |
| | CS50 | NU310-E | 2 x 7310 ²⁾ |
| | CS60 | NU312-E | 2 x 7312 ²⁾ |
| | CS80 | NU216-E | 2 x 7216 ²⁾ |
| Economy (oil lubrication) | CS40E | 6208 C3 | 6208 C3 |
| | CS50E | 6310 C3 | 6310 C3 |
| | CS60E | 6312 C3 | 6312 C3 |
| | CS80E | 6216 C3 | 6216 C3 |
| Economy (grease lubrication) | CS40E | 6208-2Z C3 | 6208-2Z C3 |
| | CS50E | 6310-2Z C3 | 6310-2Z C3 |
| | CS60E | 6312-2Z C3 | 6312-2Z C3 |
| | CS80E | 6216-2Z C3 | 6216-2Z C3 |

Bearing life

The calculated minimum bearing life is:

- 17,500 h for economy bearing assemblies
- 25,000 h for medium-duty bearing assemblies or 40,000 h for operation between 0.7-1.1Q/Q_{opt}

Automation

Automation options:

- Hyamaster
- hyatronic
- PumpDrive

1) Blank

2) FAG designation: B-TVP-UA; SKF designation: BECBP

Materials

Overview of available materials (Europe)

| Description | Material variant | | | | | | | | | | |
|---|---------------------|------------------|------------------|--------|----|-----|----------|-----|----------------------|-----|-----|
| | GG ³⁾ | GC ³⁾ | GD ³⁾ | EG | EC | ED | CC | CD | VC | VD | DD |
| Volute casing | CI | | | CS | | | SS | | 1.4408 ⁴⁾ | | D |
| Casing cover | CI | | | CS | | | SS | | 1.4408 ⁴⁾ | | D |
| Impeller | CI | SS | D | CI | SS | D | SS | D | SS | D | D |
| Shaft | C45+N ⁵⁾ | | | | | | | | | | |
| Bearing bracket | DI | | | | | | | | | | |
| Support foot | Steel | | | | | | | | | | |
| Seal cover | CrNiMoSt | | | | | | | | | | DS |
| Casing wear ring | CI ⁶⁾ | | | _6)7) | | | _8) | | _8) | | _9) |
| Impeller wear ring | - | | | _10) | - | _9) | _8) | _9) | _8) | _9) | _9) |
| Shaft protecting sleeve (mechanical seal) | CrNiMoSt | | | | | | | | | | DS |
| Shaft protecting sleeve (gland packing) | 1.4122 | | | 1.4122 | | | CrNiMoSt | | CrNiMoSt | | DS |
| Impeller nut | CrNiMoSt | | | | | | | | | | D |

Overview of available materials (Asia)

| Description | Material variant | | | | | |
|---|------------------|---------------|----------------------------|------|----------------------------|------|
| | GG | GB | GC | EE | EC | CC |
| Volute casing | CI | CI | CI | CS | CS | SS |
| Casing cover | CI | CI | CI | CS | CS | SS |
| Impeller | CI | B | SS | CS | SS | SS |
| Shaft | IS 517 45C8 | | IS 517 45C8 ¹¹⁾ | | IS 517 45C8 ¹²⁾ | |
| Bearing bracket | CI | | | | | |
| Support foot | St (S235JR) | | | | | |
| Seal cover | CrNiMoSt | | | | | |
| Casing wear ring | CI | IS318 GR LTB4 | A743 GR CF8M | _13) | _14) | _14) |
| Impeller wear ring | - | - | - | _13) | _14) | _14) |
| Shaft protecting sleeve (mechanical seal) | A276 TYPE 316 | | | | | |
| Shaft protecting sleeve (gland packing) | A276 TYPE 316 | | A276 TYPE 410 COND. H | | A276 TYPE 316 | |
| Impeller nut | A743 GR CF8M | | | | | |

Overview of available materials (Americas)

| Description | Material variant | | | | | | | | | |
|-----------------|-----------------------------|----|----|----|----|----|----|----|----|----|
| | GG | GC | CC | CX | EE | EC | BB | SS | SC | DD |
| Volute casing | CI | | SS | | CS | | B | DI | | D |
| Casing cover | CI | | SS | | CS | | B | DI | | D |
| Impeller | CI | SS | SS | CR | CS | SS | B | DI | SS | D |
| Shaft | A576 GR 1045 ¹⁵⁾ | | | | | | | | | |
| Bearing bracket | CI | | | | | | | | | |

3) Sizes 040-160.1, 040-250.1 and 050-315.1 are not available in material variant G.

4) To VDMA 24276

5) T ≤ 10 °C : 1.4462 ; T > 250 °C : 1.7709.QT+SR ; wet shaft: 1.4462

6) Optional: VG434

7) Optional: CI

8) Optional: CrNiMo ST Int

9) Optional: DS

10) Optional: 1.4027+QT

11) Optional: A276 TYPE 410 COND. H

12) Optional: A276 TYPE 410 COND. H, A276 TYPE 316, 1.4462

13) Optional: casing wear ring in Chrome hard 400 in combination with impeller wear ring A743 GR CA15.09

14) Optional: casing wear ring A743 GR CF8M in combination with impeller wear ring A743 GR CF8M

15) Optionally 1.4021/ A276 TYPE 20 or A276 TYPE 316

| Description | Material variant | | | | | | | | | |
|---|------------------|----------|------|----|------|----|------|----|----|-----|
| | GG | GC | CC | CX | EE | EC | BB | SS | SC | DD |
| Support foot | Steel | | | | | | | | | |
| Seal cover | CrNiMoSt | | | | | | | | | DS |
| Casing wear ring | CI | | _16) | | _17) | | B16) | CI | | _9) |
| Shaft protecting sleeve (mechanical seal) | CrNiMoSt | | | | | | | | | DS |
| Shaft protecting sleeve (gland packing) | CI | CrNiMoSt | | | | | | | | DS |
| Impeller nut | CrNiMoSt | | | | | | | | | D |

Codes used

| Code | Material |
|----------|--|
| B | IS318 GR LTB2 or CC480K-G5 |
| CrNiMoSt | 1.4408/ 1.4404/ 1.4401/ 1.4571/ A743 GR CF-8M/ A276 TYPE 316/ A479 GR 316L |
| CI | JL1040/ A48CL35B |
| CR | A745 CA6NM |
| CS | GP240GH+N/ A216GRWCB |
| D | 1.4593/ 1.4517/ A995GR 1B |
| DI | JS1025 |
| DS | 1.4462/ UNS S31803 |
| SS | 1.4408/ A743 GR CF8M |

Coating and preservation

- Coating and preservation to KSB standard

Product benefits

- Hydraulic characteristics optimised for excellent efficiency and NPSH, ensuring energy-efficient and environmentally friendly use of resources
- Lower investment costs as duty points required can be achieved with smaller pump sizes
- Lower operating costs due to reduced energy consumption, optimised spare parts concept and hard-wearing, service-friendly design
- Optimised hydraulic systems for improved handling of gas-containing and solids-laden fluids

Acceptance tests / warranties

- Materials testing
 - Test report 2.2 on request
- Final inspection
 - Inspection certificate 3.1 to EN 10204 on request
- Hydraulic test

The operating point of each pump is guaranteed to ISO 9906/3B.

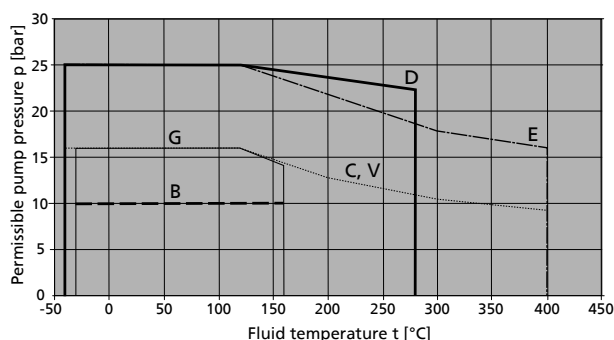
The following acceptance tests can be performed and certified at extra charge:

 - Performance test to ISO 9906
 - NPSH test
- Other inspections/tests on request
- Warranty

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

Pressure and temperature limits

Pressure and temperature limits of pump



Pressure and temperature limits of pump

Pressure and temperature limits for heating chamber (heatable version "h")

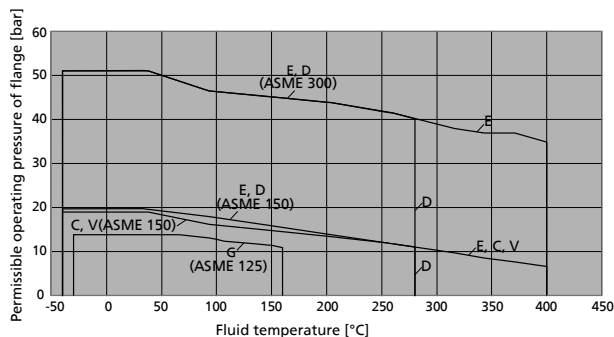
The following limits must be observed:

- Max. temperature: 300 °C
- Max. pressure: 20 bar

Pressure and temperature limits for shaft seals

The application limits of shaft seals depend on the circumferential speed, the material and the fluid handled. Verify the application limits in each individual case on the basis of manufacturers' catalogues, taking into account the actual operating conditions.

Pressure and temperature limits of ASME flanges



Pressure and temperature limits of ASME flanges

¹⁶⁾ Optional: SS
¹⁷⁾ Optional: 1.4021/AISI420

On models with ASME flanges, the pressure and temperature limits are determined by the lowest value given in the "Pressure and temperature limits of the pump" diagram and the "Pressure and temperature limits of ASME flanges" diagram.

Pressure and temperature limits for flanges **drilled to ASME 125** see diagram "Pressure and temperature limits of the pump", material variant G.

Technical data

Technical data

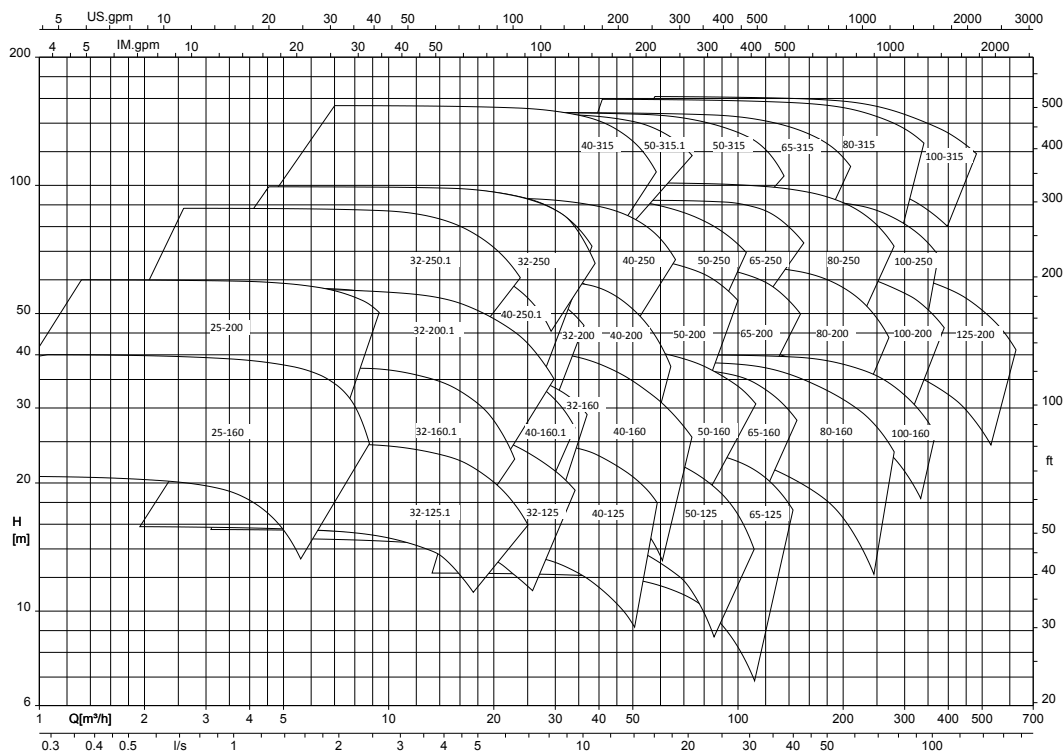
| Size | Bearing bracket | Impeller | | | | | Shaft diameter in seal chamber | | | Bearings | Coupling | Diameter of shaft protecting sleeve | | | | Volute casing design ¹⁸⁾ | Heatable casing |
|---------------|-----------------|-----------------------|--------------|-------------------------|-------------------|------|--------------------------------|-----------|----------|----------|----------|-------------------------------------|-----------------|----------|------|-------------------------------------|-----------------|
| | | Impeller outlet width | Free passage | Impeller inlet diameter | Impeller diameter | | Dry shaft | Wet shaft | | | | Gland packing | Mechanical seal | | | | |
| | | | | | Max. | Min. | | Europe | Americas | | | | Europe/Asia | Americas | | | |
| | | | | | | | | | | | | | | | [mm] | | |
| 040-025-160 | CS40 | 6 | 5,7 | 44 | 169 | 130 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 040-025-200 | CS40 | 6 | 5,7 | 44 | 209 | 160 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | - | |
| 050-032-125 | CS40 | 10 | 5,7 | 63 | 139 | 110 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 050-032-125.1 | CS40 | 7 | 6,0 | 52 | 139 | 114 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | - | |
| 050-032-160.1 | CS40 | 6 | 5,4 | 52 | 170 | 138 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 050-032-200.1 | CS40 | 6 | 5,3 | 54 | 204 | 138 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 050-032-250.1 | CS50 | 6 | 5,2 | 58 | 254 | 210 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | ✗ | |
| 050-032-160 | CS40 | 9 | 5,8 | 63 | 174 | 135 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 050-032-200 | CS40 | 7 | 6,7 | 62 | 209 | 170 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 050-032-250 | CS50 | 8 | 7,1 | 63 | 261 | 205 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | ✗ | |
| 065-040-125 | CS40 | 14 | 9,6 | 74 | 139 | 110 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | - | |
| 065-040-160 | CS40 | 13 | 11,5 | 70 | 174 | 135 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 065-040-160.1 | CS40 | 9 | 8,5 | 65 | 169 | 130 | 28 | 33 | - | 40 | 24 | 35 | 33 | - | E | - | |
| 065-040-200 | CS40 | 9 | 8,9 | 69 | 209 | 175 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 065-040-250 | CS50 | 8 | 8,0 | 73 | 260 | 200 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | ✗ | |
| 065-040-250.1 | CS50 | 7 | 6,6 | 68 | 260 | 200 | 38 | 43 | - | 50 | 32 | 45 | 43 | - | E | - | |
| 065-040-315 | CS50 | 8 | 7,1 | 75 | 326 | 278 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | ✗ | |
| 080-050-125 | CS40 | 20 | 11,6 | 88 | 142 | 114 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | - | |
| 080-050-160 | CS40 | 17 | 11,6 | 87 | 174 | 128 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 080-050-200 | CS40 | 14 | 11,9 | 83 | 219 | 170 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | ✗ | |
| 080-050-250 | CS50 | 11 | 10,0 | 84 | 260 | 220 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | ✗ | |
| 080-050-315 | CS50 | 10 | 9,5 | 86 | 323 | 260 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | ✗ | |
| 080-050-315.1 | CS50 | 8 | 7,6 | 85 | 320 | 260 | 38 | 43 | - | 50 | 32 | 45 | 43 | - | E | - | |
| 100-065-125 | CS40 | 26 | 12,9 | 99 | 141 | 114 | 28 | 33 | 35 | 40 | 24 | 35 | 33 | 35 | E | - | |
| 100-065-160 | CS50 | 21 | 12,2 | 92 | 174 | 132 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | - | |
| 100-065-200 | CS50 | 17 | 13,3 | 100 | 219 | 165 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | ✗ | |
| 100-065-250 | CS50 | 15 | 14,3 | 101 | 260 | 220 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | - | |
| 100-065-315 | CS60 | 14 | 13,0 | 107 | 320 | 245 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | - | |
| 125-080-160 | CS50 | 32 | 15,1 | 124 | 174 | 122 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | - | |
| 125-080-200 | CS50 | 25 | 15,2 | 115 | 219 | 165 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | ✗ | |
| 125-080-250 | CS50 | 19 | 15,8 | 115 | 269 | 220 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | ✗ | |
| 125-080-315 | CS60 | 19 | 17,8 | 115 | 334 | 281 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | ✗ | |
| 125-080-400 | CS60 | 15 | 14,3 | 129 | 398 | 265 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | ✗ | |
| 125-100-160 | CS50 | 38 | 16,4 | 135 | 185 | 155 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | - | |
| 125-100-200 | CS50 | 33 | 17,9 | 142 | 219 | 170 | 38 | 43 | 45 | 50 | 32 | 45 | 43 | 45 | E | - | |
| 125-100-250 | CS60 | 27 | 18,8 | 145 | 262 | 216 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | ✗ | |
| 125-100-315 | CS60 | 23 | 19,9 | 142 | 334 | 250 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | - | |

¹⁸⁾ E = single volute, D = double volute

| Size | Bearing bracket | Impeller | | | | | Shaft diameter in seal chamber | | | Bearings | Coupling | Diameter of shaft protecting sleeve | | | | Volute casing design ¹⁸⁾ | Heatable casing |
|-------------|-----------------|-----------------------|--------------|-------------------------|-------------------|------|--------------------------------|-----------|----------|----------|----------|-------------------------------------|-----------------|----------|---|-------------------------------------|-----------------|
| | | Impeller outlet width | Free passage | Impeller inlet diameter | Impeller diameter | | Dry shaft | Wet shaft | | | | Gland packing | Mechanical seal | | | | |
| | | | | | Max. | Min. | | Europe | Americas | | | | Europe/Asia | Americas | | | |
| | | | | | | | | | | | | | | | | | |
| [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | | | |
| 125-100-400 | CS60 | 18 | 17,1 | 142 | 401 | 329 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | - | |
| 150-125-200 | CS60 | 41 | 21,1 | 160 | 224 | 162 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | - | |
| 150-125-250 | CS60 | 37 | 22,4 | 162 | 269 | 218 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | - | |
| 150-125-315 | CS60 | 31 | 22,6 | 162 | 334 | 280 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | ✗ | |
| 150-125-400 | CS60 | 26 | 20,9 | 162 | 419 | 330 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | ✗ | |
| 200-150-200 | CS60 | 60 | 25,2 | 179 | 224 | 158 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | - | |
| 200-150-250 | CS60 | 49 | 23,0 | 191 | 269 | 220 | 48 | 53 | 55 | 60 | 42 | 55 | 53 | 55 | E | ✗ | |
| 200-150-315 | CS80 | 40 | 26,9 | 192 | 334 | 264 | 60 | 65 | 65 | 80 | 48 | 70 | 65 | 65 | E | ✗ | |
| 200-150-400 | CS80 | 33 | 23,8 | 191 | 419 | 330 | 60 | 65 | 65 | 80 | 48 | 70 | 65 | 65 | E | - | |
| 200-150-500 | CS80 | 23 | 19,1 | 190 | 504 | 400 | 60 | 65 | 65 | 80 | 48 | 70 | 65 | 65 | D | - | |
| 200-200-250 | CS80 | 62 | 37,2 | 190 | 260 | 200 | 60 | 65 | 65 | 80 | 48 | 70 | 65 | 65 | E | - | |
| 250-200-315 | CS80 | 50 | 20,8 | 222 | 320 | 260 | 60 | 65 | 65 | 80 | 48 | 70 | 65 | 65 | E | ✗ | |
| 250-200-400 | CS80 | 40 | 18,4 | 222 | 404 | 320 | 60 | 65 | 65 | 80 | 48 | 70 | 65 | 65 | D | ✗ | |
| 250-200-500 | CS80 | 32 | 20,6 | 222 | 504 | 400 | 60 | 65 | 65 | 80 | 48 | 70 | 65 | 65 | D | - | |
| 300-250-315 | CS80 | 73 | 26,7 | 270 | 324 | 260 | 60 | 65 | 65 | 80 | 48 | 70 | 65 | 65 | D | ✗ | |

Selection charts

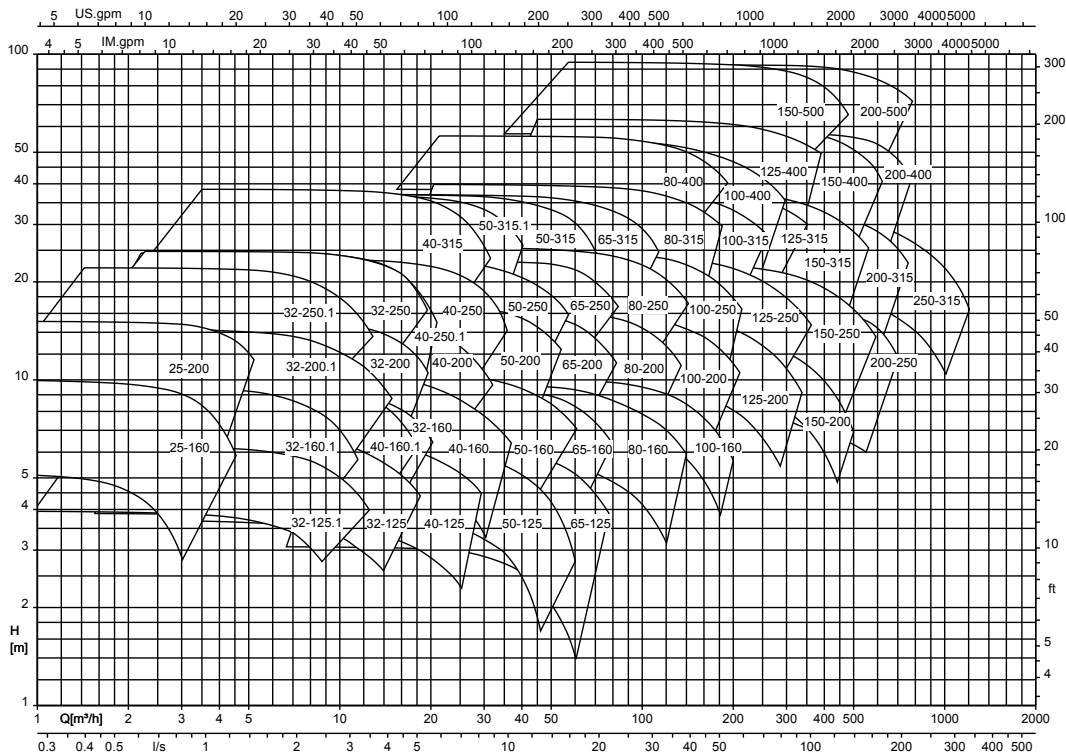
MegaCPK, n = 2900 rpm



Sizes 40-160.1, 40-250.1 and 50-315.1 are only available for Europe.

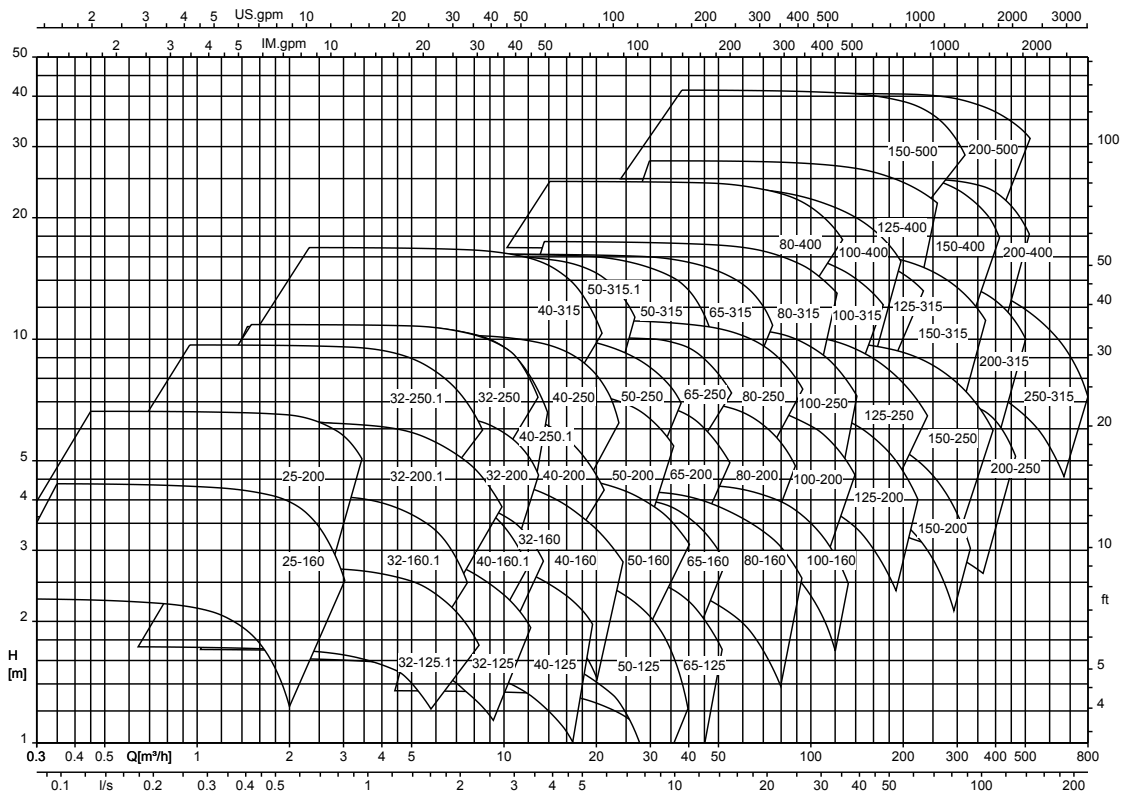
¹⁸⁾ E = single volute, D = double volute

MegaCPK, n = 1450 rpm



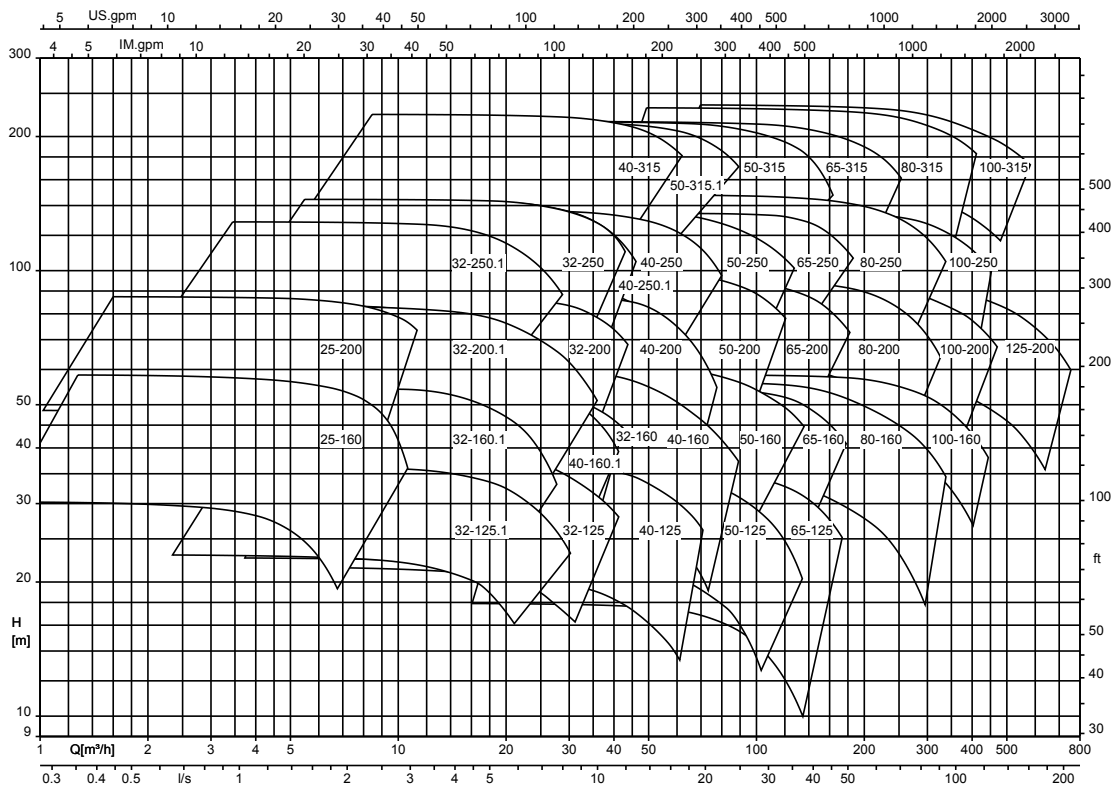
Sizes 40-160.1, 40-250.1 and 50-315.1 are only available for Europe.

MegaCPK, n = 960 rpm



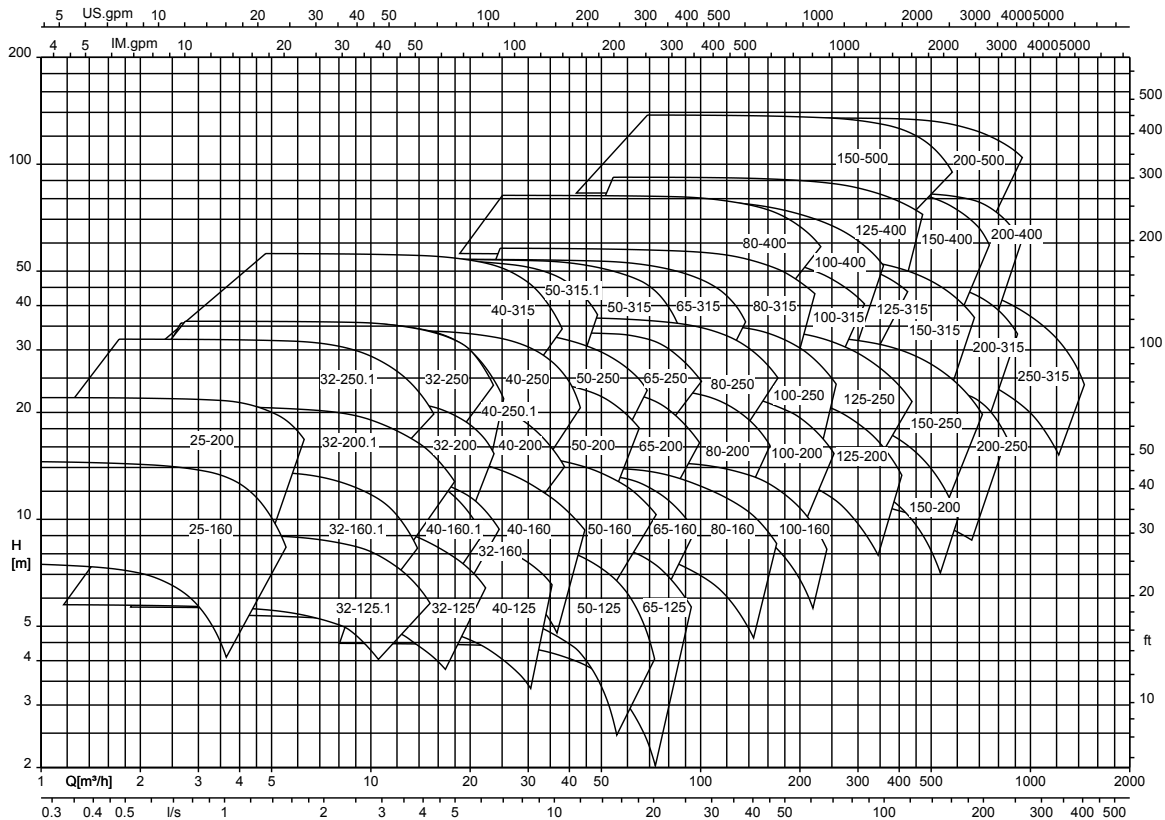
Sizes 40-160.1, 40-250.1 and 50-315.1 are only available for Europe.

MegaCPK, n = 3500 rpm



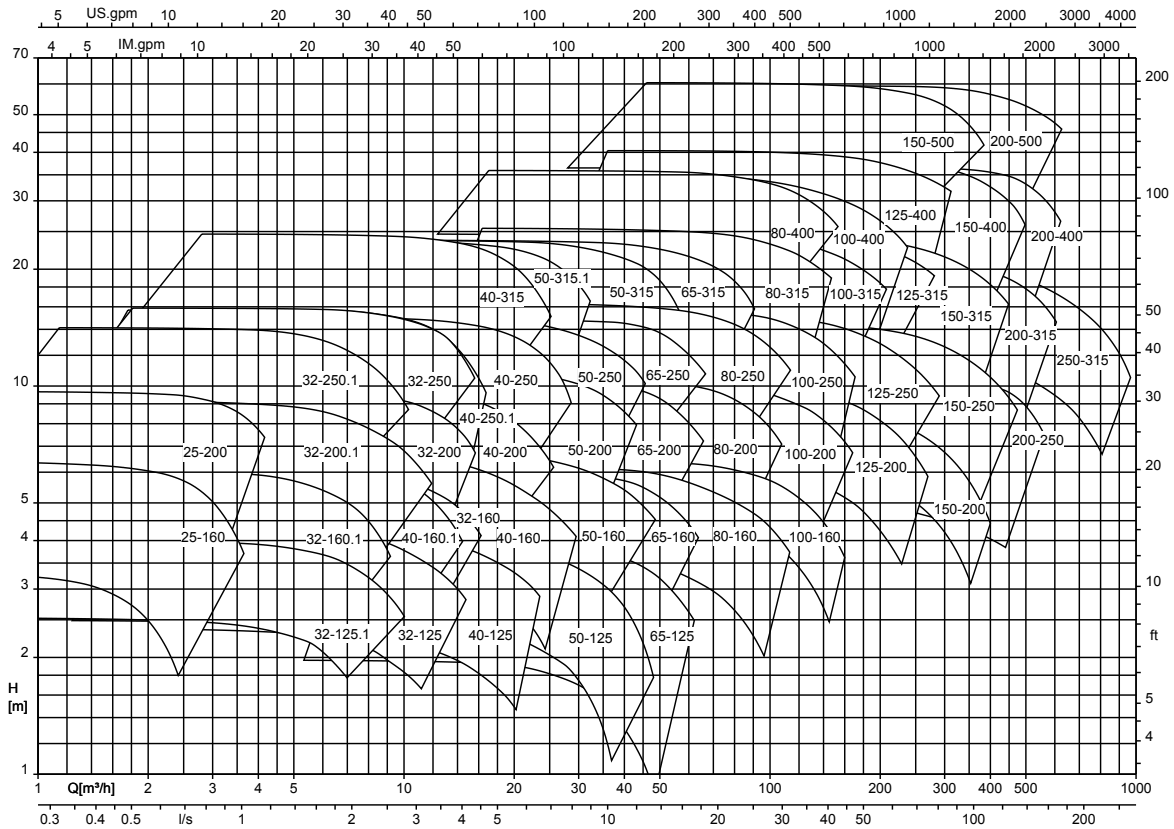
Sizes 40-160.1, 40-250.1 and 50-315.1 are only available for Europe.

MegaCPK, n = 1750 rpm



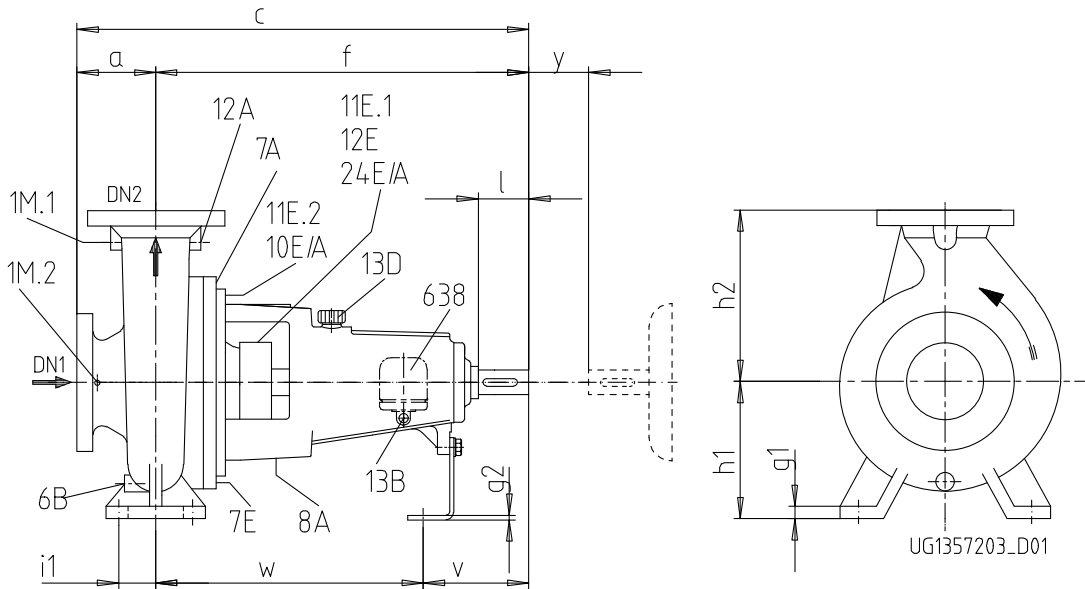
Sizes 40-160.1, 40-250.1 and 50-315.1 are only available for Europe.

MegaCPK, n = 1160 rpm

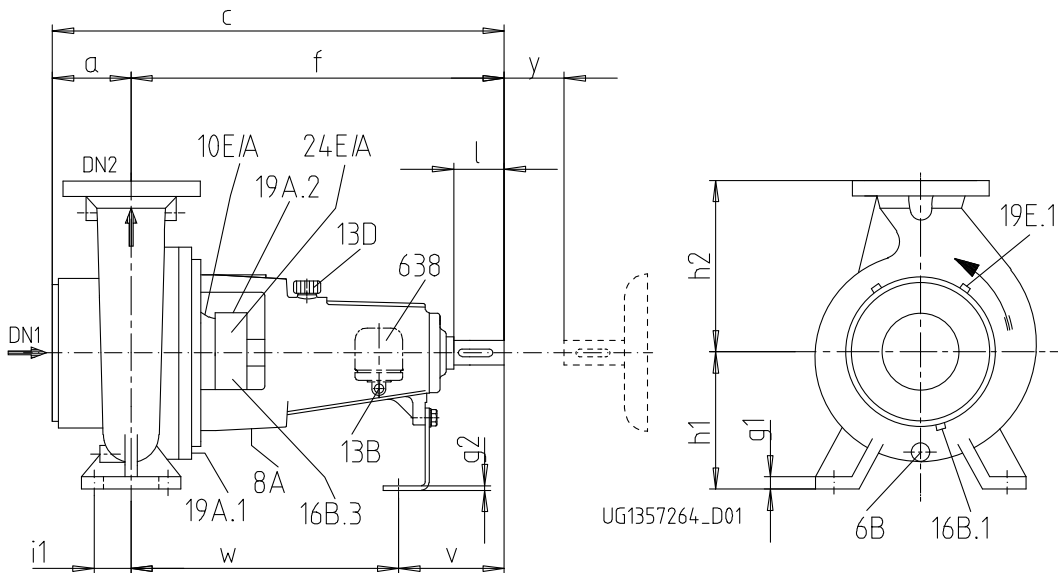


Sizes 40-160.1, 40-250.1 and 50-315.1 are only available for Europe.

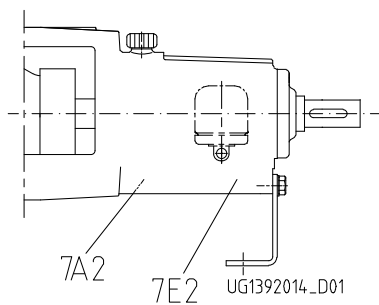
Dimensions and connections



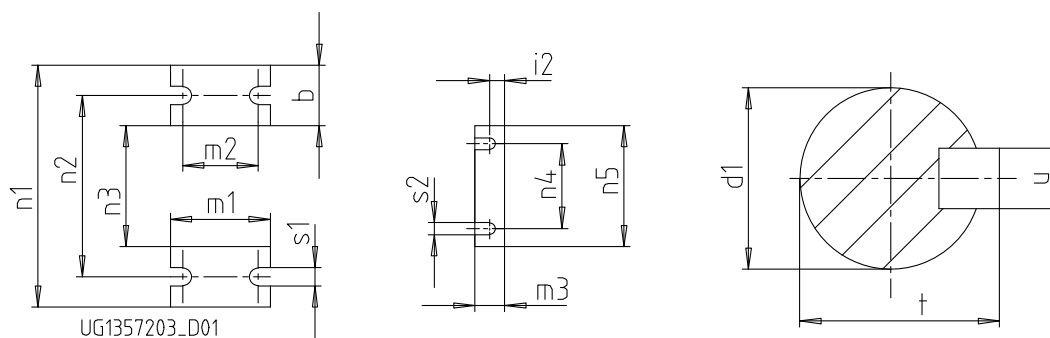
Pump dimensions



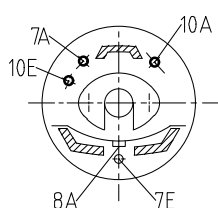
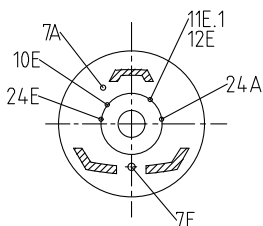
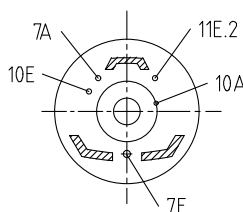
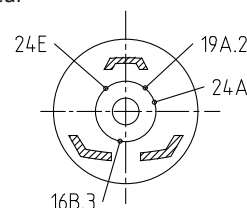
Dimensions of heatable version ("h" version)



Version with coolable bearing bracket



UG1357203_D01

Dimensions of pump feet and shaft end
Gland packing

Single mechanical seal

Double mechanical seal

Heatable single mechanical seal

Shaft seal connections
Connections, Europe

| Connection | Discharge nozzle | | | Description |
|------------------------|------------------|---------------|----------|------------------------|
| | ≤ DN 50 | DN 65 - DN 80 | ≥ DN 100 | |
| 1 M.1 | G1/4 | G3/8 | G1/2 | Pressure gauge |
| 1 M.2 | G1/4 | G3/8 | G1/2 | Pressure gauge |
| 6B | G1/4 | G3/8 | G1/2 | Fluid drain |
| 7 E/A ¹⁹⁾ | Ø 12 (CS40: Ø 8) | | | Cooling fluid IN/OUT |
| 7 E2/A2 ¹⁹⁾ | G1 (CS40: G3/4) | | | Cooling fluid IN/OUT |
| 8 A ¹⁹⁾ | Rp1/2 | | | Leakage drain |
| 10 E/A | G1/4 | | | Barrier fluid IN/OUT |
| 11 E.1 | G1/4 | | | Flushing liquid IN |
| 11 E.2 | G1/4 | | | Flushing liquid IN |
| 12 E | G1/4 | | | Circulation liquid IN |
| 12 A | G1/4 | G3/8 | G1/2 | Circulation liquid OUT |
| 13 B | G3/8 | | | Oil drain |
| 13 D | Ø 20 | | | Vent plug |
| 16 B.1 | G1/4 | | | Condensate drain |
| 16 B.3 | G1/4 | | | Condensate drain |
| 19 E.1 | G3/8 | | | Heating medium IN |
| 19 A.1 | Ø 12 (CS40: Ø 8) | | | Heating medium OUT |
| 19 A.2 | G3/8 | | | Heating medium OUT |
| 24 E/A | G1/4 | | | Quench fluid IN/OUT |
| 638 | Rp1/4 | | | Constant level oiler |

¹⁹⁾ Optional

Connections Asia

| Connection | Discharge nozzle | | | Description |
|------------------------|--------------------------------|---------------------|---------------------|------------------------|
| | ≤ DN 50 | DN 65 - DN 80 | ≥ DN 100 | |
| 1 M.1 | G1/4 ²⁰⁾ | G3/8 ²⁰⁾ | G1/2 ²⁰⁾ | Pressure gauge |
| 1 M.2 | G1/4 ²⁰⁾ | G3/8 ²⁰⁾ | G1/2 ²⁰⁾ | Pressure gauge |
| 6B | G1/4 ²⁰⁾ | G3/8 ²⁰⁾ | G1/2 ²⁰⁾ | Fluid drain |
| 7 E/A ¹⁹⁾ | Ø 12 (CS40: Ø 8) | | | Cooling fluid IN/OUT |
| 7 E2/A2 ¹⁹⁾ | G1 (CS40: G3/4) ²⁰⁾ | | | Cooling fluid IN/OUT |
| 8 A ¹⁹⁾ | Rp1/2 | | | Leakage drain |
| 10 E/A | G1/4 ²⁰⁾ | | | Barrier fluid IN/OUT |
| 11 E.1 | G1/4 ²⁰⁾ | | | Flushing liquid IN |
| 11 E.2 | G1/4 ²⁰⁾ | | | Flushing liquid IN |
| 12 E | G1/4 ²⁰⁾ | | | Circulation liquid IN |
| 12 A | G1/4 ²⁰⁾ | G3/8 ²⁰⁾ | G1/2 ²⁰⁾ | Circulation liquid OUT |
| 13 B | G3/8 | | | Oil drain |
| 13 D | Ø 20 | | | Vent plug |
| 16 B.1 | G1/4 | | | Condensate drain |
| 16 B.3 | G1/4 | | | Condensate drain |
| 19 E.1 | G3/8 | | | Heating medium IN |
| 19 A.1 | Ø 12 (CS40: Ø 8) | | | Heating medium OUT |
| 19 A.2 | G3/8 | | | Heating medium OUT |
| 24 E/A | G1/4 ²⁰⁾²¹⁾ | | | Quench fluid IN/OUT |
| 638 | Rp1/4 | | | Constant level oiler |

Connections Americas

| Connection | Discharge nozzle | | | Description |
|------------------------|-----------------------|---------------|----------|------------------------|
| | ≤ DN 50 | DN 65 - DN 80 | ≥ DN 100 | |
| 1 M.1 | NPT1/4 | NPT1/4 | NPT1/4 | Pressure gauge |
| 1 M.2 | NPT1/4 | NPT1/4 | NPT1/4 | Pressure gauge |
| 6B | NPT1/4 | NPT3/8 | NPT1/2 | Fluid drain |
| 7 E/A ¹⁹⁾ | Ø 12 (CS40: Ø 8) | | | Cooling fluid IN/OUT |
| 7 E2/A2 ¹⁹⁾ | NPT1 (CS40: NPT3/4) | | | Cooling fluid IN/OUT |
| 8 A ¹⁹⁾ | Rp1/2 | | | Leakage drain |
| 10 E/A | NPT1/4 | | | Barrier fluid IN/OUT |
| 11 E.1 | NPT1/4 | | | Flushing liquid IN |
| 11 E.2 | NPT1/4 | | | Flushing liquid IN |
| 12 E | NPT1/4 | | | Circulation liquid IN |
| 12 A | NPT1/4 | NPT1/4 | NPT1/4 | Circulation liquid OUT |
| 13 B | NPT1/4 (CS80: NPT1/2) | | | Oil drain |
| 13 D | Ø 20 | | | Vent plug |
| 16 B.1 | G1/4 | | | Condensate drain |
| 16 B.3 | G1/4 | | | Condensate drain |
| 19 E.1 | G3/8 | | | Heating medium IN |
| 19 A.1 | Ø 12 (CS40: Ø 8) | | | Heating medium OUT |
| 19 A.2 | G3/8 | | | Heating medium OUT |
| 24 E/A | NPT1/4 | | | Quench fluid IN/OUT |
| 638 | NPT1/4 | | | Constant level oiler |

Pump dimensions

| Size | Bearing bracket | Pump dimensions [mm] | | | | | | | | | | | | | | |
|-------------|-----------------|----------------------|-----|----|----|-----|-----|----|----|-----|-----|-----|----|-----|-----|-----|
| | | DN1 | DN2 | a | b | c | f | g1 | g2 | h1 | h2 | m1 | m3 | n1 | n3 | n5 |
| 040-025-160 | CS40 | 40 | 25 | 80 | 50 | 465 | 385 | 15 | 4 | 132 | 160 | 100 | 48 | 240 | 140 | 160 |
| 040-025-200 | CS40 | 40 | 25 | 80 | 50 | 465 | 385 | 15 | 4 | 160 | 180 | 100 | 48 | 240 | 140 | 160 |

²⁰⁾ Material variant G is designed with a G thread; material variant C is designed with an NPT thread.

²¹⁾ Cartridge mechanical seals generally with NPT thread

| Size | Bearing bracket | Pump dimensions [mm] | | | | | | | | | | | | | | |
|---------------|-----------------|----------------------|-----|-----|-----|-----|-----|----|----|-----|-----|-----|----|-----|-----|-----|
| | | DN1 | DN2 | a | b | c | f | g1 | g2 | h1 | h2 | m1 | m3 | n1 | n3 | n5 |
| 050-032-125.1 | CS40 | 50 | 32 | 80 | 50 | 465 | 385 | 15 | 4 | 112 | 140 | 100 | 48 | 190 | 90 | 160 |
| 050-032-160.1 | CS40 | 50 | 32 | 80 | 50 | 465 | 385 | 15 | 4 | 132 | 160 | 100 | 48 | 240 | 140 | 160 |
| 050-032-200.1 | CS40 | 50 | 32 | 80 | 50 | 465 | 385 | 18 | 4 | 160 | 180 | 100 | 48 | 240 | 140 | 160 |
| 050-032-250.1 | CS50 | 50 | 32 | 100 | 65 | 600 | 500 | 18 | 4 | 180 | 225 | 125 | 48 | 320 | 190 | 160 |
| 050-032-125 | CS40 | 50 | 32 | 80 | 50 | 465 | 385 | 15 | 4 | 112 | 140 | 100 | 48 | 190 | 90 | 160 |
| 050-032-160 | CS40 | 50 | 32 | 80 | 50 | 465 | 385 | 15 | 4 | 132 | 160 | 100 | 48 | 240 | 140 | 160 |
| 050-032-200 | CS40 | 50 | 32 | 80 | 50 | 465 | 385 | 18 | 4 | 160 | 180 | 100 | 48 | 240 | 140 | 160 |
| 050-032-250 | CS50 | 50 | 32 | 100 | 65 | 600 | 500 | 18 | 4 | 180 | 225 | 125 | 48 | 320 | 190 | 160 |
| 065-040-125 | CS40 | 65 | 40 | 80 | 50 | 465 | 385 | 15 | 4 | 112 | 140 | 100 | 48 | 210 | 110 | 160 |
| 065-040-160.1 | CS40 | 65 | 40 | 80 | 50 | 465 | 385 | 15 | 4 | 132 | 160 | 100 | 48 | 240 | 140 | 160 |
| 065-040-160 | CS40 | 65 | 40 | 80 | 50 | 465 | 385 | 15 | 4 | 132 | 160 | 100 | 48 | 240 | 140 | 160 |
| 065-040-200 | CS40 | 65 | 40 | 100 | 50 | 485 | 385 | 18 | 4 | 160 | 180 | 100 | 48 | 265 | 165 | 160 |
| 065-040-250.1 | CS50 | 65 | 40 | 100 | 65 | 600 | 500 | 18 | 4 | 180 | 225 | 125 | 48 | 320 | 190 | 160 |
| 065-040-250 | CS50 | 65 | 40 | 100 | 65 | 600 | 500 | 18 | 4 | 180 | 225 | 125 | 48 | 320 | 190 | 160 |
| 065-040-315 | CS50 | 65 | 40 | 125 | 65 | 625 | 500 | 18 | 6 | 200 | 250 | 125 | 48 | 345 | 215 | 160 |
| 080-050-125 | CS40 | 80 | 50 | 100 | 50 | 465 | 385 | 18 | 4 | 132 | 160 | 100 | 48 | 240 | 140 | 160 |
| 080-050-160 | CS40 | 80 | 50 | 100 | 50 | 485 | 385 | 18 | 4 | 160 | 180 | 100 | 48 | 265 | 165 | 160 |
| 080-050-200 | CS40 | 80 | 50 | 100 | 50 | 485 | 385 | 18 | 4 | 160 | 200 | 100 | 48 | 265 | 165 | 160 |
| 080-050-250 | CS50 | 80 | 50 | 125 | 65 | 625 | 500 | 18 | 4 | 180 | 225 | 125 | 48 | 320 | 190 | 160 |
| 080-050-315.1 | CS50 | 80 | 50 | 125 | 65 | 625 | 500 | 18 | 6 | 225 | 280 | 125 | 48 | 345 | 215 | 160 |
| 080-050-315 | CS50 | 80 | 50 | 125 | 65 | 625 | 500 | 18 | 6 | 225 | 280 | 125 | 48 | 345 | 215 | 160 |
| 100-065-125 | CS40 | 100 | 65 | 100 | 65 | 485 | 385 | 18 | 4 | 160 | 180 | 125 | 48 | 280 | 150 | 160 |
| 100-065-160 | CS50 | 100 | 65 | 100 | 65 | 600 | 500 | 18 | 4 | 160 | 200 | 125 | 48 | 280 | 150 | 160 |
| 100-065-200 | CS50 | 100 | 65 | 100 | 65 | 600 | 500 | 18 | 4 | 180 | 225 | 125 | 48 | 320 | 190 | 160 |
| 100-065-250 | CS50 | 100 | 65 | 125 | 80 | 625 | 500 | 20 | 6 | 200 | 250 | 160 | 48 | 360 | 200 | 160 |
| 100-065-315 | CS60 | 100 | 65 | 125 | 80 | 655 | 530 | 20 | 6 | 225 | 280 | 160 | 48 | 400 | 240 | 160 |
| 125-080-160 | CS50 | 125 | 80 | 125 | 65 | 625 | 500 | 18 | 4 | 180 | 225 | 125 | 48 | 320 | 190 | 160 |
| 125-080-200 | CS50 | 125 | 80 | 125 | 65 | 625 | 500 | 18 | 4 | 180 | 250 | 125 | 48 | 345 | 215 | 160 |
| 125-080-250 | CS50 | 125 | 80 | 125 | 80 | 625 | 500 | 18 | 6 | 225 | 280 | 160 | 48 | 400 | 240 | 160 |
| 125-100-160 | CS50 | 125 | 100 | 125 | 80 | 625 | 500 | 18 | 6 | 200 | 280 | 160 | 48 | 360 | 200 | 160 |
| 125-100-200 | CS50 | 125 | 100 | 125 | 80 | 625 | 500 | 18 | 6 | 200 | 280 | 160 | 48 | 360 | 200 | 160 |
| 125-080-315 | CS60 | 125 | 80 | 125 | 80 | 655 | 530 | 20 | 6 | 250 | 315 | 160 | 48 | 400 | 240 | 160 |
| 125-080-400 | CS60 | 125 | 80 | 125 | 80 | 655 | 530 | 20 | 6 | 280 | 355 | 160 | 48 | 435 | 275 | 160 |
| 125-100-250 | CS60 | 125 | 100 | 140 | 80 | 670 | 530 | 18 | 6 | 225 | 280 | 160 | 48 | 400 | 240 | 160 |
| 125-100-315 | CS60 | 125 | 100 | 140 | 80 | 670 | 530 | 18 | 6 | 250 | 315 | 160 | 48 | 400 | 240 | 160 |
| 125-100-400 | CS60 | 125 | 100 | 140 | 100 | 670 | 530 | 20 | 6 | 280 | 355 | 200 | 48 | 500 | 300 | 160 |
| 150-125-200 | CS60 | 150 | 125 | 140 | 80 | 670 | 530 | 20 | 6 | 250 | 315 | 160 | 48 | 400 | 240 | 160 |
| 150-125-250 | CS60 | 150 | 125 | 140 | 80 | 670 | 530 | 20 | 6 | 250 | 355 | 160 | 48 | 400 | 240 | 160 |
| 150-125-315 | CS60 | 150 | 125 | 140 | 100 | 670 | 530 | 20 | 6 | 280 | 355 | 200 | 48 | 500 | 300 | 160 |
| 150-125-400 | CS60 | 150 | 125 | 140 | 100 | 670 | 530 | 20 | 6 | 315 | 400 | 200 | 48 | 500 | 300 | 160 |
| 200-150-200 | CS60 | 200 | 150 | 180 | 100 | 710 | 530 | 20 | 6 | 280 | 400 | 200 | 48 | 550 | 350 | 160 |
| 200-150-250 | CS60 | 200 | 150 | 160 | 100 | 690 | 530 | 20 | 6 | 280 | 375 | 200 | 48 | 500 | 300 | 160 |
| 200-150-315 | CS80 | 200 | 150 | 160 | 100 | 830 | 670 | 20 | 8 | 315 | 400 | 200 | 60 | 550 | 350 | 200 |
| 200-150-400 | CS80 | 200 | 150 | 160 | 100 | 830 | 670 | 20 | 8 | 315 | 450 | 200 | 60 | 550 | 350 | 200 |
| 200-150-500 | CS80 | 200 | 150 | 180 | 100 | 850 | 670 | 22 | 8 | 375 | 500 | 200 | 60 | 550 | 350 | 200 |
| 200-200-250 | CS80 | 200 | 200 | 180 | 100 | 850 | 670 | 22 | 8 | 355 | 425 | 200 | 60 | 550 | 350 | 200 |
| 250-200-315 | CS80 | 250 | 200 | 200 | 100 | 870 | 670 | 22 | 8 | 355 | 450 | 200 | 60 | 550 | 350 | 200 |
| 250-200-400 | CS80 | 250 | 200 | 180 | 100 | 850 | 670 | 22 | 8 | 355 | 500 | 200 | 60 | 550 | 350 | 200 |
| 250-200-500 | CS80 | 250 | 200 | 200 | 100 | 870 | 670 | 22 | 8 | 425 | 560 | 200 | 60 | 660 | 460 | 200 |
| 300-250-315 | CS80 | 300 | 250 | 250 | 130 | 920 | 670 | 26 | 8 | 400 | 560 | 260 | 60 | 690 | 430 | 200 |

Dimensions of pump feet and shaft end

| Size | Bearing bracket | Shaft end [mm] | | | | | Pump feet [mm] | | | | | | | | |
|---------------|-----------------|----------------|-----|----|----|-----|----------------|----|-----|-----|-----|----|----|-----|-----|
| | | d1 | l | t | u | y | i1 | i2 | m2 | n2 | n4 | s1 | s2 | v | w |
| 040-025-160 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 190 | 110 | 14 | 14 | 100 | 285 |
| 040-025-200 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 190 | 110 | 14 | 14 | 100 | 285 |
| 050-032-125.1 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 140 | 110 | 14 | 14 | 100 | 285 |
| 050-032-160.1 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 190 | 110 | 14 | 14 | 100 | 285 |
| 050-032-200.1 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 190 | 110 | 14 | 14 | 100 | 285 |
| 050-032-250.1 | CS50 | 32 | 80 | 35 | 10 | 100 | 47,5 | 20 | 95 | 250 | 110 | 14 | 14 | 130 | 370 |
| 050-032-125 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 140 | 110 | 14 | 14 | 100 | 285 |
| 050-032-160 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 190 | 110 | 14 | 14 | 100 | 285 |
| 050-032-250 | CS50 | 32 | 80 | 35 | 10 | 100 | 47,5 | 20 | 95 | 250 | 110 | 14 | 14 | 130 | 370 |
| 050-032-200 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 190 | 110 | 14 | 14 | 100 | 285 |
| 065-040-125 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 160 | 110 | 14 | 14 | 100 | 285 |
| 065-040-160.1 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 190 | 110 | 14 | 14 | 100 | 285 |
| 065-040-160 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 190 | 110 | 14 | 14 | 100 | 285 |
| 065-040-200 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 212 | 110 | 14 | 14 | 100 | 285 |
| 065-040-250.1 | CS50 | 32 | 80 | 35 | 10 | 100 | 47,5 | 20 | 95 | 250 | 110 | 14 | 14 | 130 | 370 |
| 065-040-250 | CS50 | 32 | 80 | 35 | 10 | 100 | 47,5 | 20 | 95 | 250 | 110 | 14 | 14 | 130 | 370 |
| 065-040-315 | CS50 | 32 | 80 | 35 | 10 | 100 | 47,5 | 20 | 95 | 280 | 110 | 14 | 14 | 130 | 370 |
| 080-050-125 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 190 | 110 | 14 | 14 | 100 | 285 |
| 080-050-160 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 212 | 110 | 14 | 14 | 100 | 285 |
| 080-050-200 | CS40 | 24 | 50 | 27 | 8 | 100 | 35 | 20 | 70 | 212 | 110 | 14 | 14 | 100 | 285 |
| 080-050-250 | CS50 | 32 | 80 | 35 | 10 | 100 | 47,5 | 20 | 95 | 250 | 110 | 14 | 14 | 130 | 370 |
| 080-050-315.1 | CS50 | 32 | 80 | 35 | 10 | 100 | 47,5 | 20 | 95 | 280 | 110 | 14 | 14 | 130 | 370 |
| 080-050-315 | CS50 | 32 | 80 | 35 | 10 | 100 | 47,5 | 20 | 95 | 280 | 110 | 14 | 14 | 130 | 370 |
| 100-065-125 | CS40 | 24 | 50 | 27 | 8 | 100 | 47,5 | 20 | 95 | 212 | 110 | 14 | 14 | 100 | 285 |
| 100-065-160 | CS50 | 32 | 80 | 35 | 10 | 100 | 47,5 | 20 | 95 | 212 | 110 | 14 | 14 | 130 | 370 |
| 100-065-200 | CS50 | 32 | 80 | 35 | 10 | 140 | 47,5 | 20 | 95 | 250 | 110 | 14 | 14 | 130 | 370 |
| 100-065-250 | CS50 | 32 | 80 | 35 | 10 | 140 | 60 | 20 | 120 | 280 | 110 | 18 | 14 | 130 | 370 |
| 100-065-315 | CS60 | 42 | 110 | 45 | 12 | 140 | 60 | 20 | 120 | 315 | 110 | 18 | 14 | 160 | 370 |
| 125-080-160 | CS50 | 32 | 80 | 35 | 10 | 140 | 47,5 | 20 | 95 | 250 | 110 | 14 | 14 | 130 | 370 |
| 125-080-200 | CS50 | 32 | 80 | 35 | 10 | 140 | 47,5 | 20 | 95 | 280 | 110 | 14 | 14 | 130 | 370 |
| 125-080-250 | CS50 | 32 | 80 | 35 | 10 | 140 | 60 | 20 | 120 | 315 | 110 | 18 | 14 | 130 | 370 |
| 125-080-315 | CS60 | 42 | 110 | 45 | 12 | 140 | 60 | 20 | 120 | 315 | 110 | 18 | 14 | 160 | 370 |
| 125-080-400 | CS60 | 42 | 110 | 45 | 12 | 140 | 60 | 20 | 120 | 355 | 110 | 18 | 14 | 160 | 370 |
| 125-100-160 | CS50 | 32 | 80 | 35 | 10 | 140 | 60 | 20 | 120 | 280 | 110 | 19 | 14 | 130 | 370 |
| 125-100-200 | CS50 | 32 | 80 | 35 | 10 | 140 | 60 | 20 | 120 | 280 | 110 | 18 | 14 | 130 | 370 |
| 125-100-250 | CS60 | 42 | 110 | 45 | 12 | 140 | 60 | 20 | 120 | 315 | 110 | 18 | 14 | 160 | 370 |
| 125-100-315 | CS60 | 42 | 110 | 45 | 12 | 140 | 60 | 20 | 120 | 315 | 110 | 18 | 14 | 160 | 370 |
| 125-100-400 | CS60 | 42 | 110 | 45 | 12 | 140 | 75 | 20 | 150 | 400 | 110 | 23 | 14 | 160 | 370 |
| 150-125-200 | CS60 | 42 | 110 | 45 | 12 | 140 | 60 | 20 | 120 | 315 | 110 | 19 | 14 | 160 | 370 |
| 150-125-250 | CS60 | 42 | 110 | 45 | 12 | 140 | 60 | 20 | 120 | 315 | 110 | 18 | 14 | 160 | 370 |
| 150-125-315 | CS60 | 42 | 110 | 45 | 12 | 140 | 75 | 20 | 150 | 400 | 110 | 23 | 14 | 160 | 370 |
| 150-125-400 | CS60 | 42 | 110 | 45 | 12 | 140 | 75 | 20 | 150 | 400 | 110 | 23 | 14 | 160 | 370 |
| 200-150-200 | CS60 | 42 | 110 | 45 | 12 | 180 | 75 | 20 | 150 | 450 | 110 | 24 | 14 | 160 | 370 |
| 200-150-250 | CS60 | 42 | 110 | 45 | 12 | 180 | 75 | 20 | 150 | 400 | 110 | 23 | 14 | 160 | 370 |
| 200-150-315 | CS80 | 48 | 110 | 51 | 14 | 180 | 75 | 39 | 150 | 450 | 140 | 23 | 18 | 170 | 500 |
| 200-150-400 | CS80 | 48 | 110 | 51 | 14 | 180 | 75 | 39 | 150 | 450 | 140 | 23 | 18 | 170 | 500 |
| 200-150-500 | CS80 | 48 | 110 | 51 | 14 | 180 | 75 | 39 | 150 | 450 | 140 | 23 | 18 | 170 | 500 |
| 200-200-250 | CS80 | 48 | 110 | 51 | 14 | 180 | 75 | 39 | 150 | 450 | 140 | 23 | 18 | 170 | 500 |
| 250-200-315 | CS80 | 48 | 110 | 51 | 14 | 180 | 75 | 39 | 150 | 450 | 140 | 23 | 18 | 170 | 500 |
| 250-200-400 | CS80 | 48 | 110 | 51 | 14 | 180 | 75 | 39 | 150 | 450 | 140 | 23 | 18 | 170 | 500 |
| 250-200-500 | CS80 | 48 | 110 | 51 | 14 | 180 | 75 | 39 | 150 | 560 | 140 | 23 | 18 | 170 | 500 |
| 300-250-315 | CS80 | 48 | 110 | 51 | 14 | 180 | 95 | 39 | 190 | 560 | 140 | 28 | 18 | 170 | 500 |

Flange design

Flange design by material

| Material | Europe/Asia/Americas | Americas |
|----------|---|---|
| G | EN 1092-2 PN 16 Drilled to ASME B16.1 Class 125 | ASME B16.1 Class 125 ASME B16.1 Class 250 ²²⁾ |
| C | EN 1092-1 PN 16 Drilled to ASME B16.5 Class 150 | ASME B16.5 Class 150 |
| V | EN 1092-1 PN 16 Drilled to ASME B16.5 Class 150 | - |
| D | EN 1092-1 PN 25 Drilled to ASME B16.5 Class 150 Drilled to ASME B16.5, Class 300 ²³⁾ | - |
| E | EN 1092-1 PN 25 Drilled to ASME B16.5 Class 150 Drilled to ASME B16.5, Class 300 ²³⁾ | ASME B16.5 Class 150 ASME B16.5 Class 300 ²²⁾ |

Scope of supply

Depending on the model, the following items are included in the scope of supply:

- Pump

Drive

- Surface-cooled IEC frame three-phase squirrel-cage motor

Shaft coupling

- Flexible coupling with or without spacer

Contact guard

- Coupling guard

Baseplate

- Baseplate (Europe: to ISO 3661), cast or welded, for pump and motor, in torsion-resistant design
- Channel section steel or folded steel plate

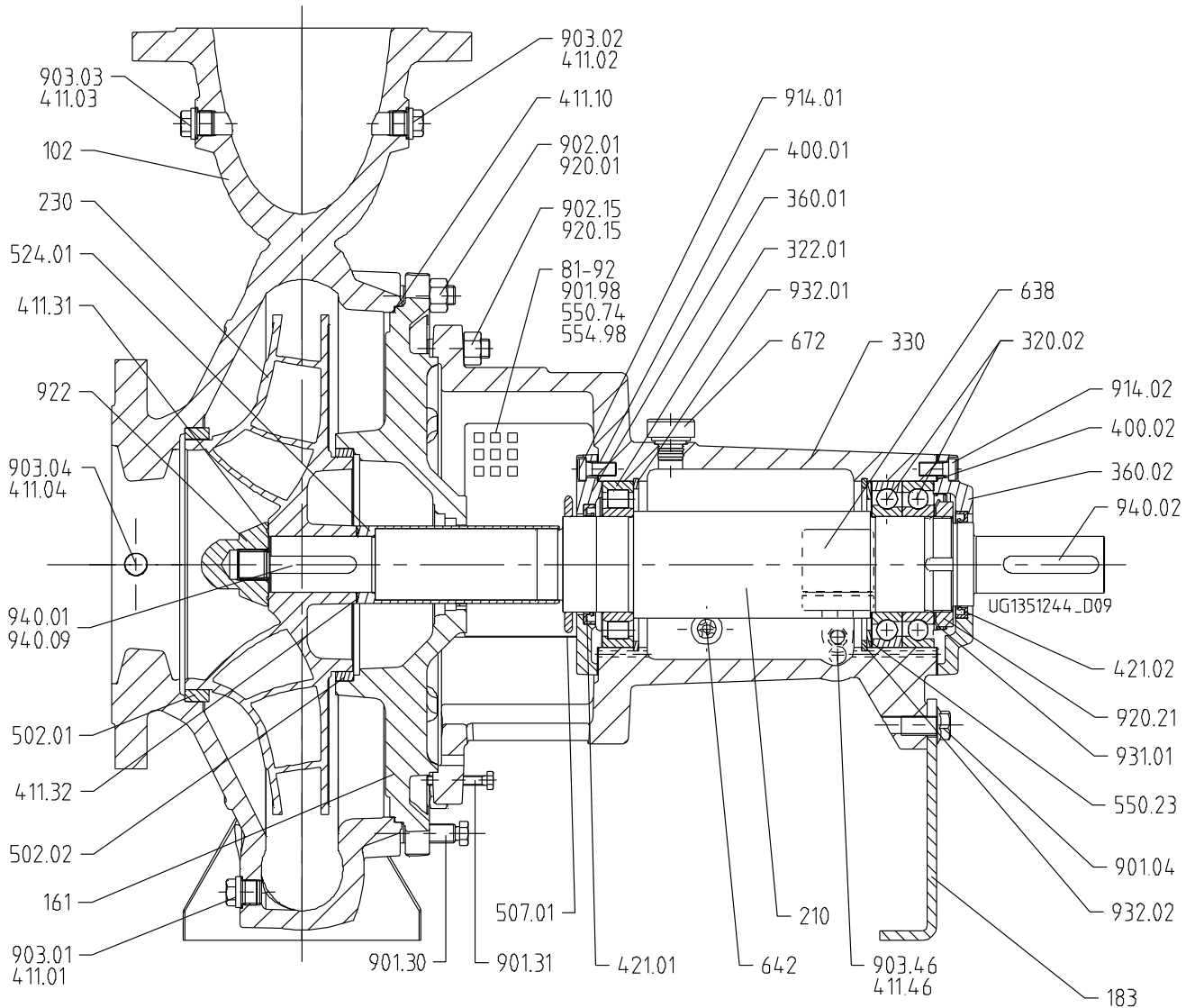
Special accessories

- As required

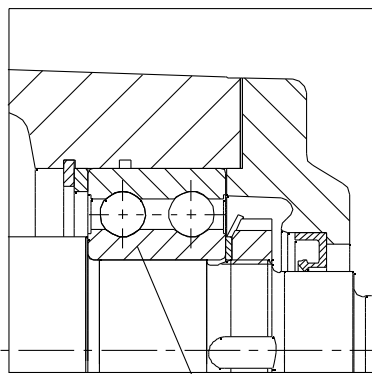
²²⁾ Depending on the size

²³⁾ Not possible for size 100-065-125

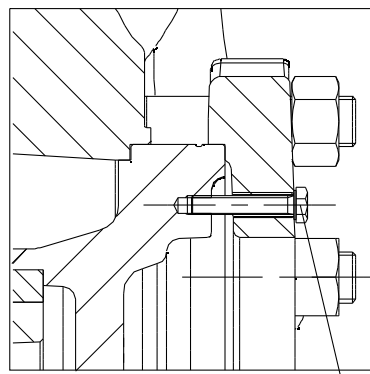
General assembly drawing with list of components



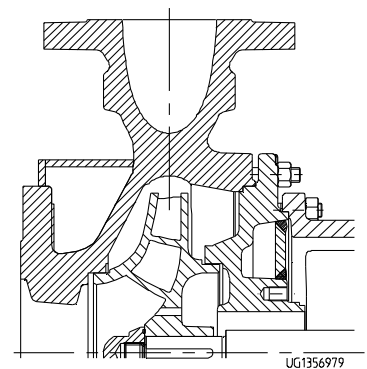
General assembly drawing of standard version (oil-lubricated)



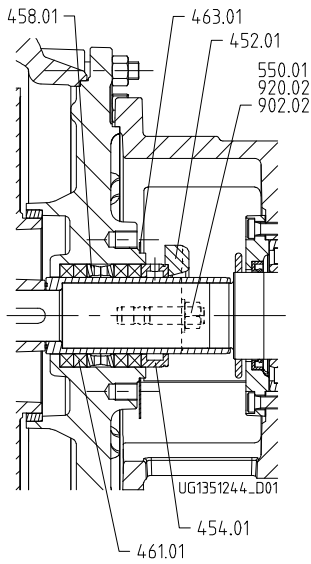
Version with bearing bracket CS40



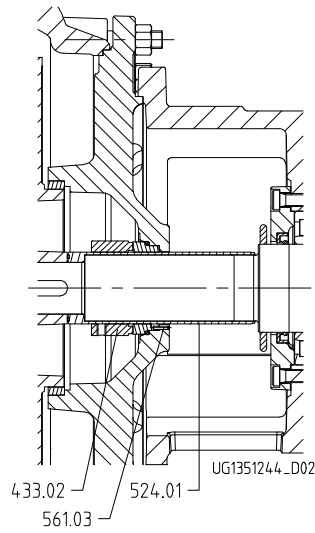
Variant with clamped casing cover



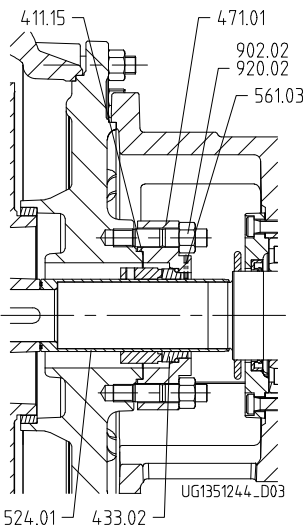
Heatable version ("h" version)



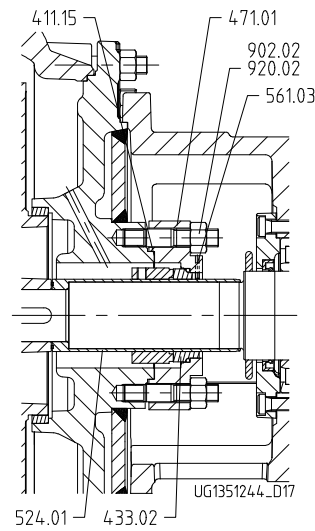
Version with gland packing



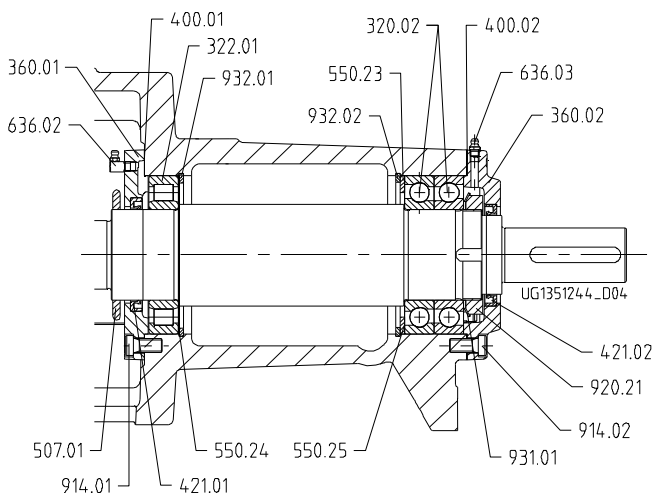
Mechanical seal with conical casing cover



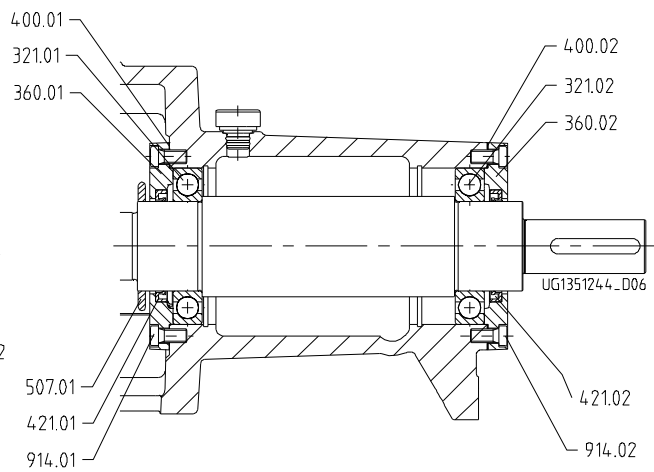
Mechanical seal with cylindrical casing cover



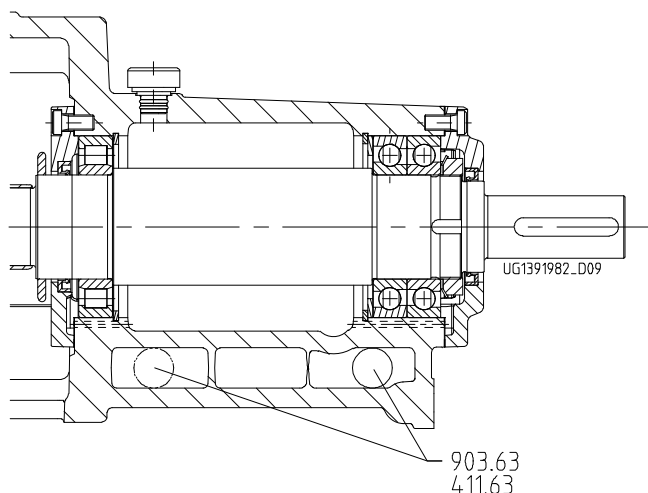
Mechanical seal with cylindrical casing cover
(heatable version "h")



Grease-lubricated version (medium-duty bearing assembly)



Oil-lubricated version (economy bearing assembly)



Version with coolable bearing bracket

List of components

| Part No. | Comprising | Description |
|-----------------------|--|---|
| 102 | 102 | Volute casing |
| | 411.01/.02 ²⁴⁾ /03 ²⁴⁾ /.04 ²⁴⁾ /.10 ²⁵⁾ | Joint ring |
| | 502.01 ²⁴⁾ | Casing wear ring |
| | 902.01 | Stud |
| | 903.01/.02 ²⁴⁾ /.03 ²⁴⁾ /.04 ²⁴⁾ | Screw plug |
| | 920.01 | Hexagon nut |
| 161 | 161 | Casing cover |
| | 502.02 ²⁴⁾ | Casing wear ring |
| | 901.22 ²⁶⁾ /31 | Hexagon head bolt |
| | 902.02 | Stud |
| | 920.02 | Hexagon nut |
| 183 | 183 | Support foot |
| 210 | 210 | Shaft |
| | 920.21 ²⁷⁾ | Slotted round nut |
| | 931.01 ²⁷⁾ | Lock washer |
| | 940.01/.02/.09 ²⁸⁾ | Key |
| 230 | 230 | Impeller |
| | 503.01/.02 ²⁴⁾ | Impeller wear ring |
| 320.02 ²⁷⁾ | 320.02 | Angular contact ball bearing (double-row in CS40) |
| 321.01 ²⁹⁾ | 321.01 | Deep groove ball bearing |
| 321.02 ²⁹⁾ | 321.02 | Deep groove ball bearing |
| 322.01 ²⁷⁾ | 322.01 | Cylindrical roller bearing |
| 330 | 330 | Bearing bracket |
| 360.01 | 360.01 | Bearing cover |
| 360.02 | 360.02 | Bearing cover |
| 400.01 | 400.01 | Gasket |
| 400.02 | 400.02 | Gasket |
| 411.15 ²⁵⁾ | 411.15 | Joint ring |
| 411.31 | 411.31 | Joint ring |
| 411.32 | 411.32 | Joint ring |
| 421.01 | 421.01 | Lip seal |
| 421.02 | 421.02 | Lip seal |

²⁴⁾ Not on all versions.

²⁵⁾ Joint rings 411.10 and 411.15 (411.5 for versions with mechanical seal with seal cover only) depending on the operating temperature. To be ordered separately in spare parts order.

²⁶⁾ Only for clamped cover

²⁷⁾ Not fitted on versions with economy bearing assembly

²⁸⁾ From CS 60

²⁹⁾ On versions with economy bearing assembly only

| Part No. | Comprising | Description |
|-----------------------|---------------------------------------|-------------------------------|
| 433.02 | 433.02 | Mechanical seal (complete) |
| 452.01 | 452.01 | Gland follower |
| 454.01 | 454.01 | Stuffing box ring |
| 458.01 | 458.01 | Lantern ring |
| 461.01 | 461.01 | Gland packing |
| 463.01 | 463.01 | Drip plate |
| 471.01 | 471.01 | Seal cover |
| 502.01 ²⁴⁾ | 502.01 | Casing wear ring |
| 502.02 ²⁴⁾ | 502.02 | Casing wear ring |
| 503.01 ²⁴⁾ | 503.01 | Impeller wear ring |
| 503.02 ²⁴⁾ | 503.02 | Impeller wear ring |
| 507.01 | 507.01 | Thrower |
| 524.01 | 524.01 | Shaft protecting sleeve |
| 550.01 | 550.01 | Disc |
| 550.23 | 550.23 | Disc |
| 550.24 ³⁰⁾ | 550.24 | Disc |
| 550.25 ³⁰⁾ | 550.25 | Disc |
| 550.74 | 550.74 | Disc |
| 554.98 | 554.98 | Washer |
| 561.03 | 561.03 | Grooved pin |
| 636.02 ³⁰⁾ | 636.02 | Lubricating nipple |
| 636.03 ³⁰⁾ | 636.03 | Lubricating nipple |
| 638 ³¹⁾ | 638 | Constant level oiler |
| 642 ³¹⁾ | 642 | Oil level sight glass |
| 672 ³¹⁾ | 672 | Vent plug |
| 81-92 | 81-92 | Cover plate |
| 99-9 | 411.01/.02/.03/.04/.10/.15/31/.32/.46 | Joint ring |
| | 400.01/02 | Gasket |
| 901.04 | 901.04 | Hexagon head bolt |
| 901.30 | 901.30 | Hexagon head bolt |
| 901.31 | 901.31 | Hexagon head bolt |
| 901.32 | 901.32 | Hexagon head bolt |
| 901.98 | 901.98 | Hexagon head bolt |
| 902.15 | 902.15 | Stud |
| 903.46 | 903.46 | Screw plug |
| 914.01 | 914.01 | Hexagon socket head cap screw |
| 914.02 | 914.02 | Hexagon socket head cap screw |
| 920.15 | 920.15 | Hexagon nut |
| 922 | 922 | Impeller nut |
| 932.01 | 932.01 | Circlip |
| 932.02 | 932.02 | Circlip |

The relevant version is indicated in the documentation supplied.

³⁰⁾ On grease-lubricated versions only

³¹⁾ Not applicable for grease-lubricated versions

Detailed designation

Designation example

| Position | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 |
| M | C | P | K | 0 | 5 | 0 | - | 0 | 3 | 2 | - | 1 | 2 | 5 | 1 | C | D | H | I | X | N | C | E | D | 1 | 3 | 2 | 0 | 6 | A | P | D | 2 | E | M |
| See name plate and data sheet | | | | | | | | | | | | | | | | | | | | | See data sheet | | | | | | | | | | | | | | |

Designation key

| Position | Code | Description |
|----------|----------------------|--|
| 1-4 | Pump type | MegaCPK |
| 5-16 | Size | 200 Nominal suction nozzle diameter [mm] 150 Nominal discharge nozzle diameter [mm] 4001 Nominal impeller diameter [mm] |
| 17 | Pump casing material | G Cast iron JL 1040/A48CL35B C Stainless steel 1.4408/ A743CF8M E Unalloyed steel GP240GH+N/WCB V Stainless steel 1.4408 S Nodular cast iron D Duplex Noridur 1.4593/1.4517/A995 CD4MCuN |
| 18 | Impeller material | G Cast iron JL 1040/A48CL35B C Stainless steel 1.4408/ A743CF8M E Unalloyed steel GP240GH+N/WCB D Duplex Noridur 1.4593/1.4517/A995 CD4MCuN S Nodular cast iron X Chrome steel A 743 GR CA6NM |
| 19 | Heatable model | _32) Standard H Heatable casing |
| 20 | Hydraulic system | _32) Standard I With auxiliary impeller |
| 21 | Special design | _32) Standard X Special design |
| 22 | Bearing bracket | N Normal (economy bearings) M Normal (medium-duty bearings) C Normal, coolable (medium-duty bearings) F Fire-fighting system |
| 23-25 | Seal variants | P1 Gland packing variant with internal barrier fluid (Na) P2 Gland packing variant without barrier fluid (Nb) P3 Gland packing variant with external barrier fluid (Nc) E External circulation EQ External circulation with lip seal as quench seal ED External circulation with throttling bush as quench seal I Internal circulation IQ Internal circulation with lip seal as quench seal ID Internal circulation with throttling bush as quench seal IH Internal circulation with heatable casing cover IQH Internal circulation with heatable casing cover and lip seal as quench seal IDH Internal circulation with heatable casing cover and throttling bush as quench seal ES Internal circulation with heatable seal cover |

32) Blank

| Position | | Code | Description |
|----------|--------------------|------|---|
| | | EB | Internal circulation with heatable seal cover and throttling bush as quench seal |
| | | A | "A" casing cover (with conical casing cover) |
| | | AQ | "A" casing cover with lip seal as quench seal |
| | | AD | "A" casing cover with throttling bush as quench seal |
| | | B | Dead-end |
| | | BQ | Dead-end, with lip seal as quench seal |
| | | BD | Dead-end, with throttling bush as quench seal |
| | | F | External flushing |
| | | FQ | External flushing with lip seal as quench seal |
| | | FD | External flushing with throttling bush as quench seal |
| | | CA | Cartridge mechanical seal ("A" casing cover) |
| | | CE | Cartridge mechanical seal with external circulation |
| | | CI | Cartridge mechanical seal with internal circulation |
| | | CED | Cartridge mechanical seal with external circulation and throttling bush as quench seal |
| | | CID | Cartridge mechanical seal with internal circulation and throttling bush as quench seal |
| | | CEQ | Cartridge mechanical seal with external circulation and lip seal as quench seal |
| | | CIQ | Cartridge mechanical seal with internal circulation and lip seal as quench seal |
| | | CQA | Cartridge mechanical seal with lip seal as quench seal ("A" casing cover) |
| | | CDA | Cartridge mechanical seal with throttling bush as quench seal ("A" casing cover) |
| | | DB | Double mechanical seal (back-to-back) |
| | | DR | Double mechanical seal (back-to-back) with pumping screw |
| | | TM | Tandem mechanical seals, with barrier fluid and jacket cooling |
| | | TR | Tandem mechanical seals, outboard with pumping screw |
| | | TS | Tandem mechanical seals, supplied with barrier fluid pressure |
| | | CBA | Double cartridge mechanical seal, supplied with barrier fluid pressure ("A" casing cover) |
| | | CTA | Double cartridge mechanical seal, with unpressurised quench fluid ("A" casing cover) |
| | | CB | Double cartridge mechanical seal, supplied with barrier fluid pressure |
| | | CT | Double cartridge mechanical seal, with unpressurised quench fluid |
| 26-29 | Motor rating | | |
| | | 1320 | 132 kW |
| | | 0075 | 7.5 kW |
| | | 0007 | 0.75 kW |
| 30 | Motor rating | | |
| 30 | Number of poles | | |
| | | 2 | 2 poles |
| | | 4 | 4 poles |
| | | 6 | 6 poles |
| 31 | Product generation | | |
| | | A | Product generation MegaCPK 2012 |
| 32-35 | PumpDrive | | |
| | | PDB | With PumpDrive 1st generation, Basic |
| | | PDA | With PumpDrive 1st generation, Advanced |
| | | PD2 | With PumpDrive 2nd generation |
| | | PD2E | With PumpDrive 2nd generation, Eco |
| | | PDS | With PumpDrive 1st generation, Advanced, with KSB Supreme |
| 36 | PumpMeter | | |
| | | M | With PumpMeter |



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