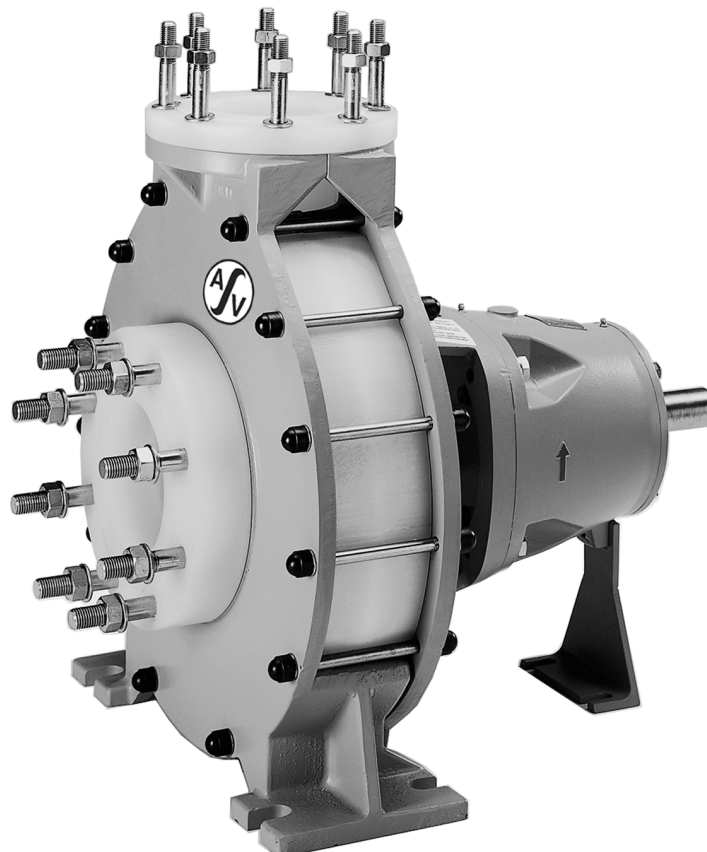


# Thermoplastic Centrifugal Pump, type NM

acc. to DIN 24256, EN 22858 and ISO 2858

|                          |                          |
|--------------------------|--------------------------|
| Size:                    | 32 - 125 up to 150 - 400 |
| Capacity Q:              | up to 450 m³/h           |
| Head H:                  | up to 100 m              |
| Operating temperature t: | PE up to + 60 °C         |
|                          | PP up to + 80 °C         |
|                          | PVDF up to +110 °C       |



## ASV Chemical Centrifugal Pump made of thermoplastic

- for transportation of aggressive fluids like acids, alkalines and solutions
- constructional components highly resistant



## Execution

### Construction

ASV chemical centrifugal pump made of thermoplastic is a single-stage spiral casing pump in horizontal construction with axial suction and radial pressure connection acc. to DIN 24256 and ISO 2858.

The modular concept of ASV thermoplastic pump allows an easy and fast exchange of all wear and tear parts.

Because of the use of a standard coupling it is possible to exchange impeller and mechanical seal without dismounting the motor or the pipeline on the suction side.

The hydraulic of ASV chemical pumps is made of only few thermoplastic parts in order to guarantee high operational reliability for which corrosion and wearing resistant thermoplastics like high molecular weight Polyethylene (PE), ultra high molecular weight low-pressure-Polyethylene (Hostalen GUR), Polypropylene (PP) or Polyvinylidene fluoride (PVDF) are used.

Absorption of external forces by rugged metal casing. Housing outflow on request.

### Suction

ASV pump is not self-priming. The fluid has to run freely into the pump. The pump can only selfprime in connection with a footvalve at the end of the suction-line or with an additionally installed ASV self-priming tank.

Documentation of the tanks are available on request.

### Impeller

- closed radial impeller
- axial-thrust-compensation by relief holes
- impeller mounting independent of direction of rotation because of in-moulded metal insert and groove and key connection between impeller and shaft
- seal of impeller mounting with thermoplastic impeller cap with internal O-ring

### Shaft and bearing carrier

Shaft bedding in an one-piece bearing carrier with greased roller bearing. Oil-lubrication on customer's request. A shaft of highly flexural strength made of special steel guarantees a trouble free operation and optimal conditions for the mechanical seal.

### Shaft protection sleeve

Standard is a resin impregnated carbon or depending on the fluid various materials like PP, PE or PVDF.

### Shaft-seal

- seal of the shaft by single or double mechanical seal of various systems and manufacturers
- circulation, flushing, quenching or flushing fluid depending on operation (see illustration)
- sliding surface combination in silicon carbide against silicon carbide (SiC/SiC). O-rings and liner of Viton (FPM) or Hypalon (CSM), metal parts of stainless steel 1.4571 or Hastelloy as standard execution. This combination offers trouble-free operation and allows a wide range of application.
- materials in other combinations are also possible

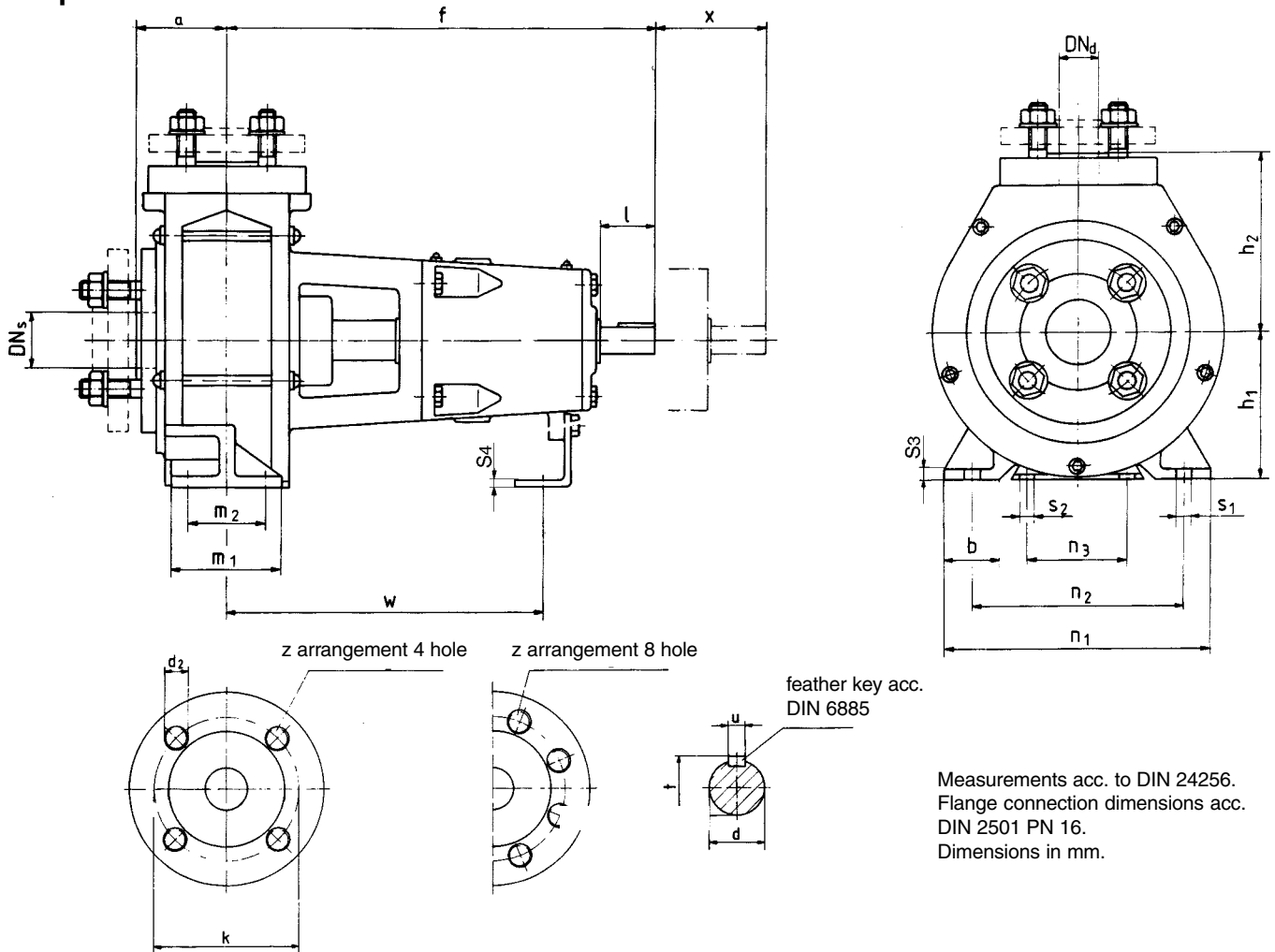
### Base Plate

On customer's request ASV chemical centrifugal pumps made of thermoplastic can be delivered completely mounted on a base plate acc. DIN 24259 made of steel and with a motor acc. IEC-standard. Details see installation drawing.

### Painting

Several coatings with an acid-proof paint protect all metal parts not made of special steel against corrosion.

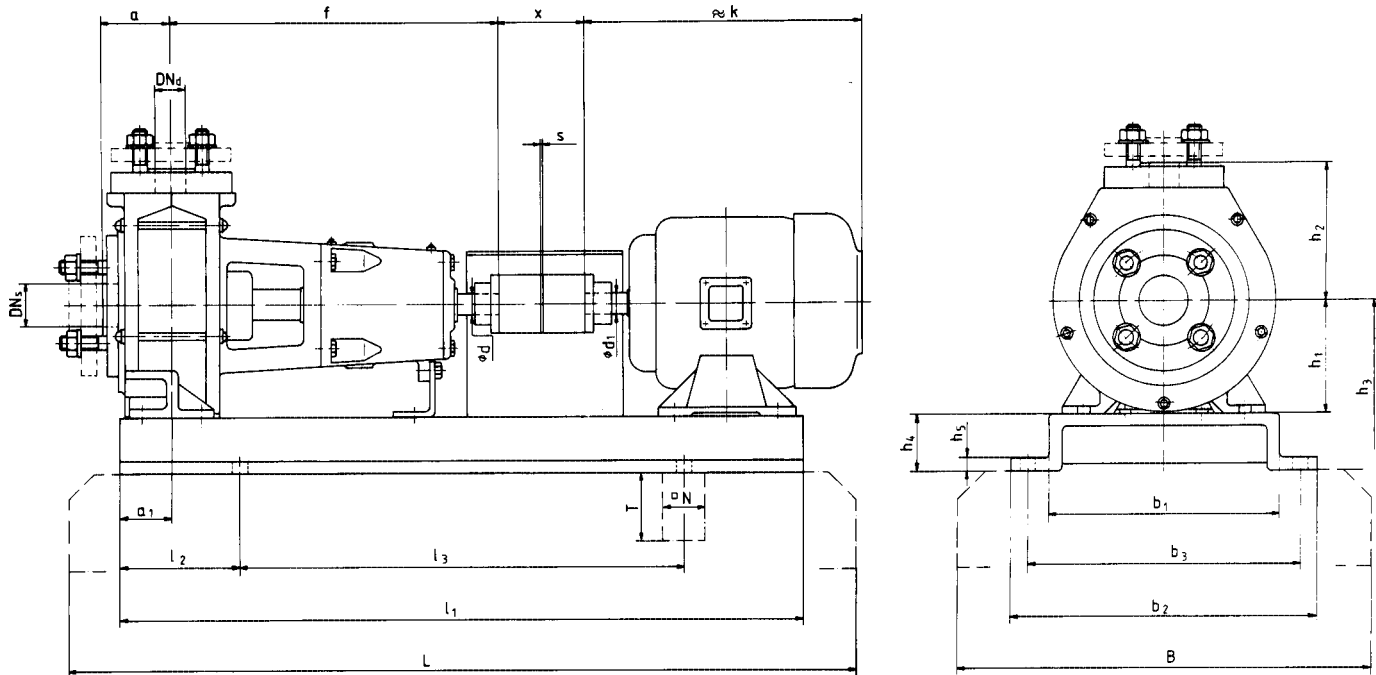
## Pump Dimensions



Measurements acc. to DIN 24256.  
Flange connection dimensions acc.  
DIN 2501 PN 16.  
Dimensions in mm.

| Pump<br>type<br>NM | Pump size |     |     |     | Foot measure |     |     |     |     |     |    |    |     |     |     |     |    |     |    |    | Shaft<br>DIN 748 |     |      |   | Flange measure<br>Discharge side |     |      |   | Suction side |     |      |   | Bearing<br>support<br>size |
|--------------------|-----------|-----|-----|-----|--------------|-----|-----|-----|-----|-----|----|----|-----|-----|-----|-----|----|-----|----|----|------------------|-----|------|---|----------------------------------|-----|------|---|--------------|-----|------|---|----------------------------|
|                    | a         | f   | h1  | h2  | b            | m1  | m2  | n1  | n2  | n3  | s3 | s4 | s1  | s2  | w   | x   | d  | l   | t  | u  | DNd              | k   | d2   | z | DNs                              | k   | d2   | z | DNs          | k   | d2   | z |                            |
| 32 - 125           | 80        | 385 | 112 | 140 | 50           | 100 | 70  | 190 | 140 | 110 | 10 | 5  | M12 | M12 | 285 | 100 | 24 | 50  | 27 | 8  | 32               | 100 | M 16 | 4 | 50                               | 125 | M 16 | 4 | 50           | 125 | M 16 | 4 | 1.1                        |
| 32 - 160           | 80        | 385 | 132 | 160 | 50           | 100 | 70  | 240 | 190 | 110 | 10 | 5  | M12 | M12 | 285 | 100 | 24 | 50  | 27 | 8  | 32               | 100 | M 16 | 4 | 50                               | 125 | M 16 | 4 | 50           | 125 | M 16 | 4 | 1.2                        |
| 32 - 200           | 80        | 385 | 160 | 180 | 50           | 100 | 70  | 240 | 190 | 110 | 10 | 5  | M12 | M12 | 285 | 100 | 24 | 50  | 27 | 8  | 32               | 100 | M 16 | 4 | 50                               | 125 | M 16 | 4 | 50           | 125 | M 16 | 4 | 1.2                        |
| 32 - 250           | 100       | 500 | 180 | 225 | 65           | 125 | 95  | 320 | 250 | 110 | 15 | 5  | M12 | M12 | 370 | 100 | 32 | 80  | 35 | 10 | 32               | 100 | M 16 | 4 | 50                               | 125 | M 16 | 4 | 50           | 125 | M 16 | 4 | 2.0                        |
| 40 - 125           | 80        | 385 | 112 | 140 | 50           | 100 | 70  | 210 | 160 | 110 | 10 | 5  | M12 | M12 | 285 | 100 | 24 | 50  | 27 | 8  | 40               | 110 | M 16 | 4 | 65                               | 145 | M 16 | 4 | 65           | 145 | M 16 | 4 | 1.1                        |
| 40 - 160           | 80        | 385 | 132 | 160 | 50           | 100 | 70  | 240 | 190 | 110 | 10 | 5  | M12 | M12 | 285 | 100 | 24 | 50  | 27 | 8  | 40               | 110 | M 16 | 4 | 65                               | 145 | M 16 | 4 | 65           | 145 | M 16 | 4 | 1.2                        |
| 40 - 200           | 100       | 385 | 160 | 180 | 50           | 100 | 70  | 265 | 212 | 110 | 10 | 5  | M12 | M12 | 285 | 100 | 24 | 50  | 27 | 8  | 40               | 110 | M 16 | 4 | 65                               | 145 | M 16 | 4 | 65           | 145 | M 16 | 4 | 1.2                        |
| 40 - 250           | 100       | 500 | 180 | 225 | 65           | 125 | 95  | 320 | 250 | 110 | 15 | 5  | M12 | M12 | 370 | 100 | 32 | 80  | 35 | 10 | 40               | 110 | M 16 | 4 | 65                               | 145 | M 16 | 4 | 65           | 145 | M 16 | 4 | 2.0                        |
| 40 - 315           | 125       | 500 | 200 | 250 | 65           | 125 | 95  | 345 | 280 | 110 | 15 | 5  | M12 | M12 | 370 | 100 | 32 | 80  | 35 | 10 | 40               | 110 | M 16 | 4 | 65                               | 145 | M 16 | 4 | 65           | 145 | M 16 | 4 | 2.0                        |
| 50 - 125           | 100       | 385 | 132 | 160 | 50           | 100 | 70  | 240 | 190 | 110 | 10 | 5  | M12 | M12 | 285 | 100 | 24 | 50  | 27 | 8  | 50               | 125 | M 16 | 4 | 80                               | 160 | M 16 | 8 | 80           | 160 | M 16 | 8 | 1.2                        |
| 50 - 160           | 100       | 385 | 160 | 180 | 50           | 100 | 70  | 265 | 212 | 110 | 10 | 5  | M12 | M12 | 285 | 100 | 24 | 50  | 27 | 8  | 50               | 125 | M 16 | 4 | 80                               | 160 | M 16 | 8 | 80           | 160 | M 16 | 8 | 1.2                        |
| 50 - 200           | 100       | 385 | 160 | 200 | 50           | 100 | 70  | 265 | 212 | 110 | 10 | 5  | M12 | M12 | 285 | 100 | 24 | 50  | 27 | 8  | 50               | 125 | M 16 | 4 | 80                               | 160 | M 16 | 8 | 80           | 160 | M 16 | 8 | 1.2                        |
| 50 - 250           | 125       | 500 | 180 | 225 | 65           | 125 | 95  | 320 | 250 | 110 | 15 | 5  | M12 | M12 | 370 | 100 | 32 | 80  | 35 | 10 | 50               | 125 | M 16 | 4 | 80                               | 160 | M 16 | 8 | 80           | 160 | M 16 | 8 | 2.0                        |
| 50 - 315           | 125       | 500 | 225 | 280 | 65           | 125 | 95  | 345 | 280 | 110 | 18 | 6  | M12 | M12 | 370 | 100 | 32 | 80  | 35 | 10 | 50               | 125 | M 16 | 4 | 80                               | 160 | M 16 | 8 | 80           | 160 | M 16 | 8 | 2.0                        |
| 65 - 160           | 100       | 500 | 160 | 200 | 65           | 125 | 95  | 280 | 212 | 110 | 10 | 8  | M12 | M12 | 370 | 100 | 32 | 80  | 35 | 10 | 65               | 145 | M 16 | 4 | 100                              | 180 | M 16 | 8 | 100          | 180 | M 16 | 8 | 1.3                        |
| 65 - 200           | 100       | 500 | 180 | 225 | 65           | 125 | 95  | 320 | 250 | 110 | 10 | 8  | M12 | M12 | 370 | 100 | 32 | 80  | 35 | 10 | 65               | 145 | M 16 | 4 | 100                              | 180 | M 16 | 8 | 100          | 180 | M 16 | 8 | 1.3                        |
| 65 - 250           | 125       | 500 | 200 | 250 | 80           | 160 | 120 | 360 | 280 | 110 | 15 | 6  | M16 | M12 | 370 | 140 | 32 | 80  | 35 | 10 | 65               | 145 | M 16 | 4 | 100                              | 180 | M 16 | 8 | 100          | 180 | M 16 | 8 | 2.0                        |
| 65 - 315           | 125       | 530 | 225 | 280 | 80           | 160 | 120 | 400 | 315 | 110 | 18 | 6  | M16 | M12 | 370 | 140 | 42 | 110 | 45 | 12 | 65               | 145 | M 16 | 4 | 100                              | 180 | M 16 | 8 | 100          | 180 | M 16 | 8 | 3.0                        |
| 80 - 160           | 125       | 500 | 180 | 225 | 65           | 125 | 95  | 320 | 250 | 110 | 15 | 6  | M12 | M12 | 370 | 140 | 32 | 80  | 35 | 10 | 80               | 160 | M 16 | 8 | 125                              | 210 | M 16 | 8 | 125          | 210 | M 16 | 8 | 2.0                        |
| 80 - 200           | 125       | 500 | 180 | 250 | 65           | 125 | 95  | 345 | 280 | 110 | 18 | 6  | M12 | M12 | 370 | 140 | 32 | 80  | 35 | 10 | 80               | 160 | M 16 | 8 | 125                              | 210 | M 16 | 8 | 125          | 210 | M 16 | 8 | 2.0                        |
| 80 - 250           | 125       | 500 | 225 | 280 | 80           | 160 | 120 | 400 | 315 | 110 | 18 | 6  | M16 | M12 | 370 | 140 | 32 | 80  | 35 | 10 | 80               | 160 | M 16 | 8 | 125                              | 210 | M 16 | 8 | 125          | 210 | M 16 | 8 | 2.0                        |
| 80 - 315           | 125       | 530 | 250 | 315 | 80           | 160 | 120 | 400 | 315 | 110 | 18 | 6  | M16 | M12 | 370 | 140 | 42 | 110 | 45 | 12 | 80               | 160 | M 16 | 8 | 125                              | 210 | M 16 | 8 | 125          | 210 | M 16 | 8 | 3.0                        |
| 125 - 315          | 140       | 530 | 280 | 355 | 100          | 200 | 150 | 500 | 400 | 110 | 18 | 6  | M20 | M12 | 370 | 140 | 42 | 110 | 45 | 12 | 125              | 210 | M 16 | 8 | 150                              | 240 | M 20 | 8 | 150          | 240 | M 20 | 8 | 3.0                        |
| 150 - 400          | 160       | 670 | 315 | 450 | 100          | 200 | 150 | 550 | 450 | 140 | 20 | 8  | M20 | M16 | 500 | 180 | 48 | 110 | 51 | 14 | 150              | 240 | M 20 | 8 | 200                              | 295 | M 20 | 8 | 200          | 295 | M 20 | 8 | 4.0                        |

## Installation drawing



## Baseplate and basement dimensions / Stone bolts

| Baseplate<br>Size | Baseplate dimensions mm |     |      |     |     |     |     |    |    |     | Weight<br>kg | Basement dimensions mm |     |     |     | Stonebolts |
|-------------------|-------------------------|-----|------|-----|-----|-----|-----|----|----|-----|--------------|------------------------|-----|-----|-----|------------|
|                   | l1                      | l2  | l3   | b1  | b2  | b3  | h3* | h4 | h5 | a1* |              | L                      | B   | T   | N   |            |
| 2                 | 800                     | 130 | 540  | 270 | 360 | 320 |     | 55 | 5  |     | 16           | 920                    | 470 | 140 | 70  | M 16 x 160 |
| 3                 | 900                     | 150 | 600  | 300 | 390 | 350 |     | 55 | 5  |     | 19           | 1020                   | 500 | 140 | 70  | M 16 x 160 |
| 4                 | 1000                    | 170 | 660  | 340 | 450 | 400 |     | 75 | 9  |     | 48           | 1130                   | 580 | 180 | 85  | M 20 x 200 |
| 5                 | 1120                    | 190 | 740  | 380 | 490 | 440 |     | 75 | 9  |     | 58           | 1250                   | 620 | 180 | 85  | M 20 x 200 |
| 6                 | 1250                    | 205 | 840  | 430 | 540 | 490 |     | 75 | 9  |     | 73           | 1380                   | 670 | 180 | 85  | M 20 x 200 |
| 7                 | 1400                    | 230 | 940  | 480 | 610 | 550 |     | 85 | 10 |     | 96           | 1540                   | 750 | 230 | 100 | M 24 x 250 |
| 8                 | 1600                    | 270 | 1060 | 530 | 660 | 600 |     | 92 | 14 |     | 148          | 1740                   | 800 | 230 | 100 | M 24 x 250 |
| 9                 | 1800                    | 300 | 1200 | 600 | 730 | 670 |     | 92 | 14 |     | 183          | 1940                   | 870 | 230 | 100 | M 24 x 250 |

\*a1 see table "Pump dimensions"

\*h3 see table "Mounting height h3 / Motor dimensions / Baseplate and coupling allocation"

Baseplate execution according to DIN 24259, for motors IP 55 and (EX)e.

## Pump dimensions / Dismounting dimensions X

| Pump type<br>NM | Pump dimensions mm |                 |     |     |    |     |     |     |    |
|-----------------|--------------------|-----------------|-----|-----|----|-----|-----|-----|----|
|                 | DN <sub>s</sub>    | DN <sub>d</sub> | a   | f   | Ød | x   | h1  | h2  | a1 |
| 32 - 125        | 50                 | 32              | 80  | 385 | 24 | 100 | 112 | 140 | 60 |
| 32 - 160        | 50                 | 32              | 80  | 385 | 24 | 100 | 132 | 160 | 60 |
| 32 - 200        | 50                 | 32              | 80  | 385 | 24 | 100 | 160 | 180 | 60 |
| 32 - 250        | 50                 | 32              | 100 | 500 | 32 | 100 | 180 | 225 | 75 |
| 40 - 125        | 65                 | 40              | 80  | 385 | 24 | 100 | 112 | 140 | 60 |
| 40 - 160        | 65                 | 40              | 80  | 385 | 24 | 100 | 132 | 160 | 60 |
| 40 - 200        | 65                 | 40              | 100 | 385 | 24 | 100 | 160 | 180 | 60 |
| 40 - 250        | 65                 | 40              | 100 | 500 | 32 | 100 | 180 | 225 | 75 |
| 40 - 315        | 65                 | 40              | 125 | 500 | 32 | 100 | 200 | 250 | 75 |
| 50 - 125        | 80                 | 50              | 100 | 385 | 24 | 100 | 132 | 160 | 60 |
| 50 - 160        | 80                 | 50              | 100 | 385 | 24 | 100 | 160 | 180 | 60 |
| 50 - 200        | 80                 | 50              | 100 | 385 | 24 | 100 | 160 | 200 | 60 |

| Pump type<br>NM | Pump dimensions mm |                 |     |     |    |     |     |     |     |
|-----------------|--------------------|-----------------|-----|-----|----|-----|-----|-----|-----|
|                 | DN <sub>s</sub>    | DN <sub>d</sub> | a   | f   | Ød | x   | h1  | h2  | a1  |
| 50 - 250        | 80                 | 50              | 125 | 500 | 32 | 100 | 180 | 225 | 75  |
| 50 - 315        | 80                 | 50              | 125 | 500 | 32 | 100 | 225 | 280 | 75  |
| 65 - 160        | 100                | 65              | 100 | 500 | 32 | 100 | 160 | 200 | 75  |
| 65 - 200        | 100                | 65              | 100 | 500 | 32 | 100 | 180 | 225 | 75  |
| 65 - 250        | 100                | 65              | 125 | 500 | 32 | 140 | 200 | 250 | 90  |
| 65 - 315        | 100                | 65              | 125 | 530 | 42 | 140 | 225 | 280 | 90  |
| 80 - 160        | 125                | 80              | 125 | 500 | 32 | 140 | 180 | 225 | 75  |
| 80 - 200        | 125                | 80              | 125 | 500 | 32 | 140 | 180 | 250 | 75  |
| 80 - 250        | 125                | 80              | 125 | 500 | 32 | 140 | 225 | 280 | 90  |
| 80 - 315        | 125                | 80              | 125 | 530 | 42 | 140 | 250 | 315 | 90  |
| 125 - 315       | 150                | 125             | 140 | 530 | 42 | 140 | 280 | 355 | 110 |
| 150 - 400       | 200                | 150             | 160 | 670 | 48 | 180 | 315 | 450 | 110 |

Technical alterations excepted.



## Mounting height h3 / Motor dimensions / Baseplate and coupling allocation

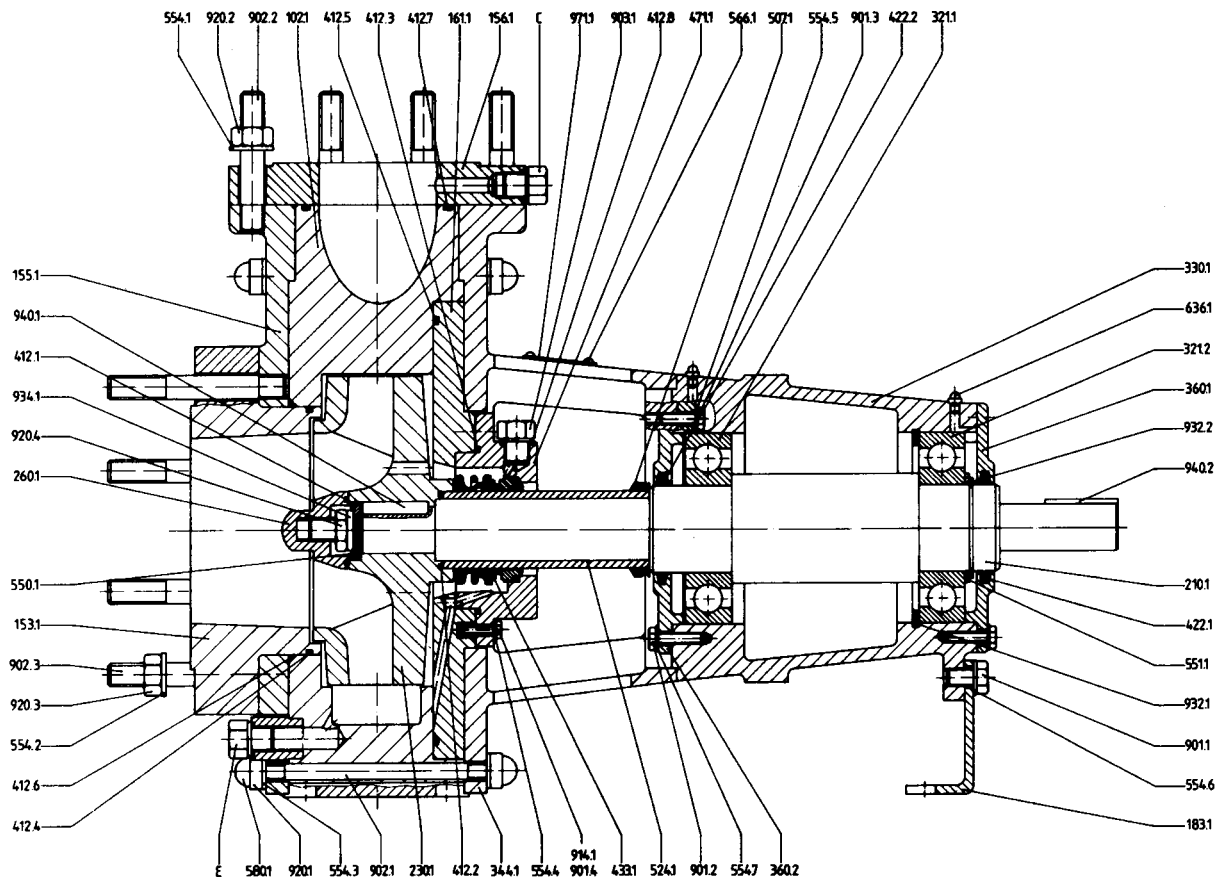
| Motor size IEC         | 80                                               | 90 S             | 90 L         | 100 L        | 112 M        | 132 S          | 132 M        | 160 M         | 160 L        | 180 M        | 180 L     | 200 L         | 225 S     | 225 M        | 250 M        | 280 S        | 280 M        | 315 S          | 315 M              |
|------------------------|--------------------------------------------------|------------------|--------------|--------------|--------------|----------------|--------------|---------------|--------------|--------------|-----------|---------------|-----------|--------------|--------------|--------------|--------------|----------------|--------------------|
| kW                     | 1450 min <sup>-1</sup><br>2900 min <sup>-1</sup> | 0,55+0,75<br>1,1 | 1,1<br>1,5   | 1,5<br>2,2   | 2,2+3<br>3,0 | 4,0<br>5,5+7,5 | 5,5<br>7,5   | 11,0<br>11+15 | 15,0<br>18,5 | 18,5<br>22,0 | 22,0<br>- | 30,0<br>30+37 | 37,0<br>- | 45,0<br>-    | 55,0<br>55,0 | 75,0<br>75,0 | 90,0<br>90,0 | 110,0<br>110,0 | 132-200<br>132-200 |
| Ø d1                   | 1450 min <sup>-1</sup><br>2900 min <sup>-1</sup> | 19,0<br>19,0     | 24,0<br>24,0 | 24,0<br>24,0 | 28,0<br>28,0 | 28,0<br>28,0   | 38,0<br>38,0 | 42,0<br>42,0  | 42,0<br>42,0 | 48,0<br>48,0 | 48,0<br>- | 55,0<br>55,0  | 60,0<br>- | 60,0<br>55,0 | 65,0<br>60,0 | 75,0<br>65,0 | 75,0<br>65,0 | 80,0<br>65,0   | 80,0<br>65,0       |
| k ca.                  |                                                  | 267              | 294          | 319          | 363          | 380            | 447          | 485           | 583          | 627          | 650       | 688           | 738       | 770          | 825          | 863          | 985          | 1046           | 1095               |
| Cupling size           |                                                  |                  |              |              |              |                |              |               |              |              |           |               |           |              |              |              |              |                |                    |
| 1450 min <sup>-1</sup> | H-67                                             | H-67             | H-67         | H-67         | H-67         | H-67           | H-67         | H-67          | H-67         | H-67         | H-67      | H-67          | H-67      | H-67         | H-67         | H-67         | H-67         | H-67           | H-67               |
| 2900 min <sup>-1</sup> | H-67                                             | H-67             | H-67         | H-67         | H-67         | H-67           | H-67         | H-67          | H-67         | H-67         | H-67      | H-67          | H-67      | H-67         | H-67         | H-67         | H-67         | H-67           | H-67               |
| Pumptype               |                                                  |                  |              |              |              |                |              |               |              |              |           |               |           |              |              |              |              |                |                    |
| 32 - 125 h3            | 167                                              | 167              | 167          | 167          | 167          | 207            | 207          |               |              |              |           |               |           |              |              |              |              |                |                    |
| Baseplate size         | 2                                                | 2                | 3            | 3            | 3            | 4              | 4            |               |              |              |           |               |           |              |              |              |              |                |                    |
| 32 - 160 h3            |                                                  | 187              | 187          | 187          | 187          | 207            | 207          | 235           |              |              |           |               |           |              |              |              |              |                |                    |
| Baseplate size         |                                                  | 2                | 3            | 3            | 3            | 4              | 4            | 5             |              |              |           |               |           |              |              |              |              |                |                    |
| 32 - 200 h3            |                                                  | 215              | 215          | 215          | 215          | 235            | 235          | 235           |              |              |           |               |           |              |              |              |              |                |                    |
| Baseplate size         |                                                  | 2                | 3            | 3            | 3            | 4              | 4            | 5             |              |              |           |               |           |              |              |              |              |                |                    |
| 32 - 250 h3            |                                                  | 255              | 255          | 255          | 255          | 255            | 255          | 255           | 255          | 255          | 255       | 285           | 310       | 310          |              |              |              |                |                    |
| Baseplate size         |                                                  | 4                | 4            | 4            | 4            | 5              | 5            | 6             | 6            | 6            | 6         | 7             | 7         | 7            |              |              |              |                |                    |
| 40 - 125 h3            |                                                  | 167              | 167          | 167          | 167          | 207            | 207          |               |              |              |           |               |           |              |              |              |              |                |                    |
| Baseplate size         |                                                  | 2                | 3            | 3            | 3            | 4              | 4            |               |              |              |           |               |           |              |              |              |              |                |                    |
| 40 - 160 h3            |                                                  | 187              | 187          | 187          | 187          | 207            | 207          | 235           | 235          |              |           |               |           |              |              |              |              |                |                    |
| Baseplate size         |                                                  | 2                | 3            | 3            | 3            | 4              | 4            | 5             | 5            |              |           |               |           |              |              |              |              |                |                    |
| 40 - 200 h3            |                                                  | 215              | 215          | 215          | 215          | 235            | 235          | 235           | 235          | 255          |           |               |           |              |              |              |              |                |                    |
| Baseplate size         |                                                  | 3                | 3            | 3            | 3            | 4              | 4            | 5             | 5            | 5            |           |               |           |              |              |              |              |                |                    |
| 40 - 250 h3            |                                                  | 255              | 255          | 255          | 255          | 255            | 255          | 255           | 255          | 255          | 255       | 285           | 310       | 310          |              |              |              |                |                    |
| Baseplate size         |                                                  | 4                | 4            | 4            | 4            | 5              | 5            | 6             | 6            | 6            | 6         | 7             | 7         | 7            |              |              |              |                |                    |
| 40 - 315 h3            |                                                  | 275              | 275          | 275          | 275          | 275            | 275          | 275           | 275          | 275          | 275       | 275           | 310       | 310          | 342          | 372          | 372          |                |                    |
| Baseplate size         |                                                  | 5                | 5            | 5            | 5            | 5              | 5            | 6             | 6            | 6            | 6         | 7             | 7         | 7            | 8            | 9            | 9            |                |                    |
| 50 - 125 h3            |                                                  | 187              | 187          | 187          | 187          | 207            | 207          | 235           |              |              |           |               |           |              |              |              |              |                |                    |
| Baseplate size         |                                                  | 2                | 3            | 3            | 3            | 4              | 4            | 5             |              |              |           |               |           |              |              |              |              |                |                    |
| 50 - 160 h3            |                                                  | 215              | 215          | 215          | 215          | 235            | 235          | 235           | 235          | 255          |           |               |           |              |              |              |              |                |                    |
| Baseplate size         |                                                  | 3                | 3            | 3            | 3            | 4              | 4            | 5             | 5            | 5            |           |               |           |              |              |              |              |                |                    |
| 50 - 200 h3            |                                                  | 215              | 215          | 215          | 215          | 235            | 235          | 235           | 235          | 255          | 255       | 275           |           |              |              |              |              |                |                    |
| Baseplate size         |                                                  | 3                | 3            | 3            | 3            | 4              | 4            | 5             | 5            | 5            | 6         | 6             |           |              |              |              |              |                |                    |
| 50 - 250 h3            |                                                  | 255              | 255          | 255          | 255          | 255            | 255          | 255           | 255          | 255          | 255       | 285           | 310       | 310          | 342          |              |              |                |                    |
| Baseplate size         |                                                  | 4                | 4            | 4            | 4            | 5              | 5            | 6             | 6            | 6            | 6         | 7             | 7         | 7            | 8            |              |              |                |                    |
| 50 - 315 h3            |                                                  | 300              | 300          | 300          | 300          | 300            | 300          | 300           | 300          | 300          | 300       | 310           | 310       | 310          | 342          | 372          | 372          | 407            | 407                |
| Baseplate size         |                                                  | 5                | 5            | 5            | 5            | 5              | 5            | 6             | 6            | 6            | 6         | 7             | 7         | 7            | 8            | 9            | 9            | 9              | 9                  |
| 65 - 160 h3            |                                                  | 235              | 235          | 235          | 235          | 235            | 235          | 235           | 235          | 255          | 255       | 285           | 310       | 310          |              |              |              |                |                    |
| Baseplate size         |                                                  | 4                | 4            | 4            | 4            | 5              | 5            | 6             | 6            | 6            | 6         | 7             | 7         | 7            |              |              |              |                |                    |
| 65 - 200 h3            |                                                  | 255              | 255          | 255          | 255          | 255            | 255          | 255           | 255          | 255          | 265       | 285           | 310       | 310          | 342          | 372          | 372          |                |                    |
| Baseplate size         |                                                  | 4                | 4            | 5            | 5            | 5              | 5            | 6             | 6            | 6            | 7         | 7             | 7         | 7            | 8            | 9            | 9            |                |                    |
| 65 - 250 h3            |                                                  | 275              | 275          | 275          | 275          | 275            | 275          | 275           | 275          | 275          | 285       | 285           | 310       | 310          | 342          | 372          | 372          | 407            | 407                |
| Baseplate size         |                                                  | 5                | 5            | 5            | 5            | 5              | 5            | 6             | 6            | 6            | 7         | 7             | 7         | 7            | 8            | 9            | 9            | 9              | 9                  |
| 65 - 315 h3            |                                                  |                  |              | 300          | 300          | 300            | 300          | 300           | 310          | 310          | 310       | 310           | 310       | 317          | 342          | 372          | 372          | 407            | 407                |
| Baseplate size         |                                                  |                  |              | 6            | 6            | 6              | 6            | 6             | 7            | 7            | 7         | 7             | 7         | 8            | 8            | 9            | 9            | 9              | 9                  |
| 80 - 160 h3            |                                                  | 255              | 255          | 255          | 255          | 255            | 255          | 255           | 255          | 255          | 265       | 285           | 310       | 310          | 342          | 372          | 372          |                |                    |
| Baseplate size         |                                                  | 4                | 4            | 5            | 5            | 5              | 5            | 6             | 6            | 6            | 7         | 7             | 7         | 7            | 8            | 9            | 9            |                |                    |
| 80 - 200 h3            |                                                  | 255              | 255          | 255          | 255          | 255            | 255          | 255           | 255          | 255          | 265       | 285           | 310       | 310          | 342          | 372          | 372          |                |                    |
| Baseplate size         |                                                  | 5                | 5            | 5            | 5            | 5              | 5            | 6             | 6            | 6            | 7         | 7             | 7         | 7            | 8            | 9            | 9            |                |                    |
| 80 - 250 h3            |                                                  | 300              | 300          | 300          | 300          | 300            | 300          | 300           | 300          | 300          | 310       | 310           | 310       | 310          | 342          | 372          | 372          | 407            | 407                |
| Baseplate size         |                                                  | 6                | 6            | 6            | 6            | 6              | 6            | 6             | 6            | 6            | 7         | 7             | 7         | 7            | 8            | 9            | 9            | 9              | 9                  |
| 80 - 315 h3            |                                                  |                  |              | 325          | 325          | 325            | 325          | 325           | 335          | 335          | 335       | 335           | 335       | 342          | 342          | 372          | 372          | 407            | 407                |
| Baseplate size         |                                                  |                  |              | 6            | 6            | 6              | 6            | 6             | 7            | 7            | 7         | 7             | 7         | 8            | 8            | 9            | 9            | 9              | 9                  |
| 125 - 315 h3           |                                                  |                  |              |              |              |                |              | 372           | 372          | 372          | 372       | 372           | 372       | 372          | 372          | 372          | 372          |                |                    |
| Baseplate size         |                                                  |                  |              |              |              |                |              | 8             | 8            | 8            | 8         | 8             | 8         | 8            | 8            | 9            | 9            |                |                    |
| 150 - 400 h3           |                                                  |                  |              |              |              |                |              |               |              |              |           | 407           | 407       | 407          | 407          | 407          | 407          |                |                    |
| Baseplate size         |                                                  |                  |              |              |              |                |              |               |              |              |           | 9             | 9         | 9            | 9            | 9            | 9            |                |                    |

## Coupling dimensions

| Coupling size | H - 67            | H - 82         | H - 97         | H - 97         | H - 112        | H - 112        | H - 128        | H - 148        | H - 168           | H - 194           | H - 214           |
|---------------|-------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------------------|-------------------|-------------------|
| Lengths mm    | 100               | 100            | 100            | 140            | 100            | 140            | 140            | 140            | 140               | 140               | 180               |
| s             | 5 <sup>+0,5</sup> | 5 <sup>+</sup> | 5 <sup>+</sup> | 5 <sup>+</sup> | 7 <sup>+</sup> | 7 <sup>+</sup> | 7 <sup>+</sup> | 7 <sup>+</sup> | 7 <sup>+1,5</sup> | 7 <sup>+1,5</sup> | 7 <sup>+1,5</sup> |
| Weight kg     | 2,1               | 3,3            | 4,9            | 6,3            | 7,2            | 9,5            | 12,9           | 17,8           | 26,7              | 37,0              | 52,0              |

Other coupling types on request.

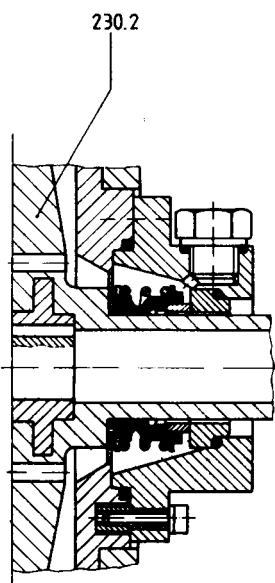
## Sectional drawing and component part register



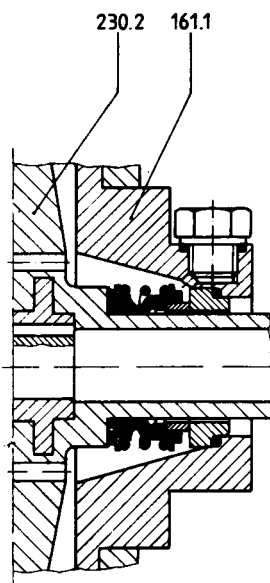
Mechanical seal: single acting, internal

E = Outflow on request

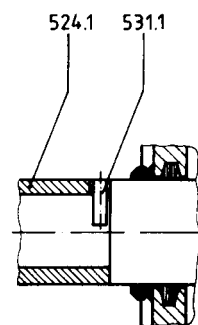
C = Circulation on request



Execution: with welded shaft protection sleeve

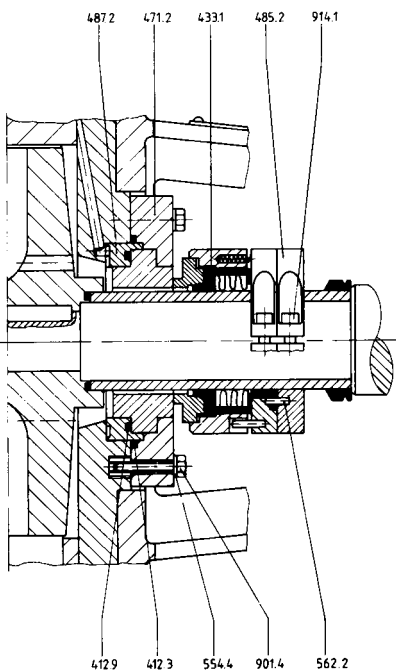


Execution: 32 - 125 , 40 - 125

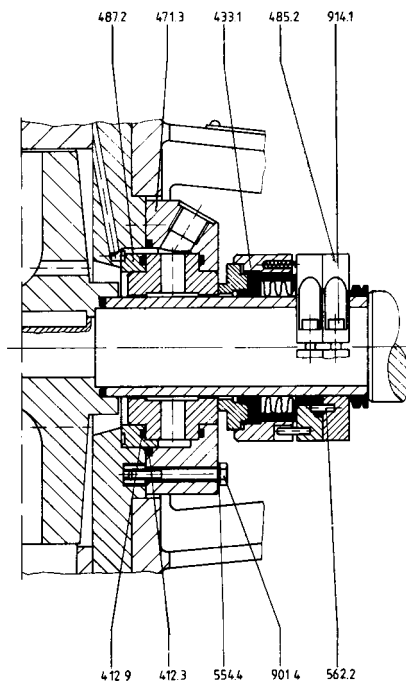


Execution: shaft protection sleeve with tension safety device by clamping sleeve

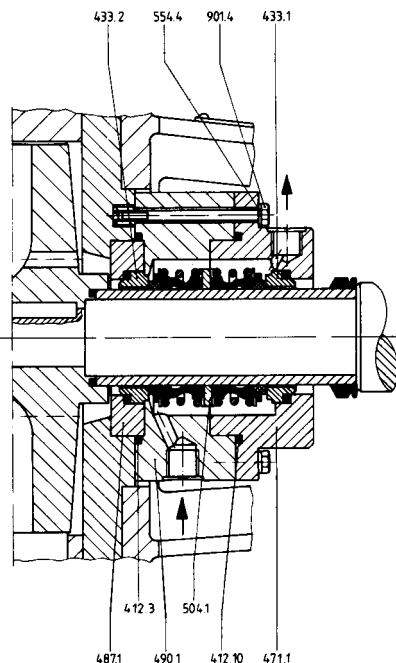
The illustrations generally correspond to the executions.  
Construction alterations excepted.



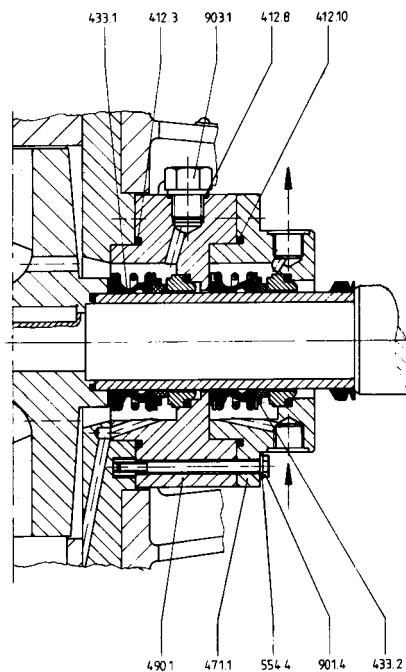
Mechanical seal:  
single acting external



Mechanical seal:  
single acting, external with internal or  
external circulating or rising



Mechanical seal:  
double acting flushing chamber



Mechanical seal:  
single acting in tandem-arrangement

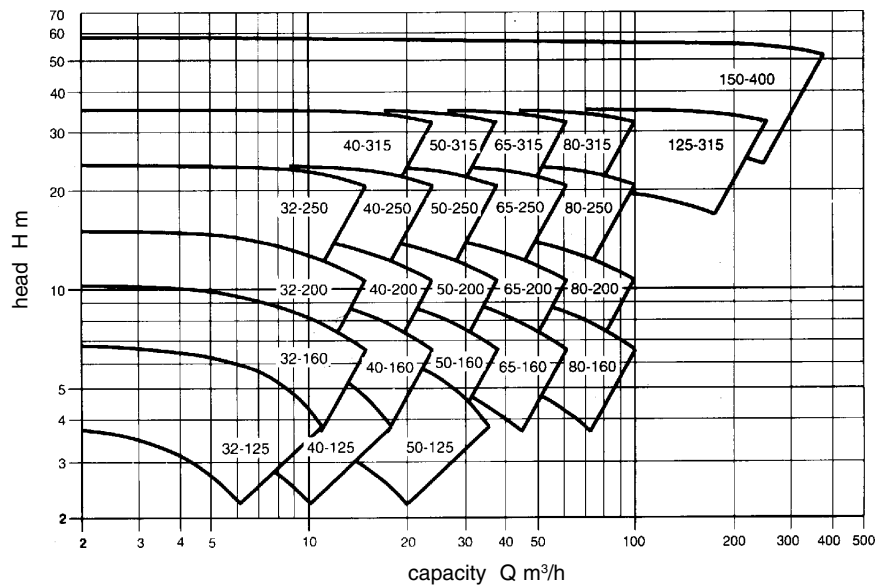
| Item   | Description                  |
|--------|------------------------------|
| 102.1  | Spiral casing                |
| 153.1  | Suction connection           |
| 155.1  | Housing flanges              |
| 156.1  | Pressure connection          |
| 161.1  | Casing cover                 |
| 183.1  | Support foot                 |
| 210.1  | Shaft                        |
| 230.1  | Impeller                     |
| 230.2  | Impeller                     |
| 260.1  | Impeller cap                 |
| 321.1  | Radial ball bearing          |
| 321.2  | Radial ball bearing          |
| 330.1  | Bearing carrier              |
| 344.1  | Bearing carrier lantern      |
| 360.1  | Bearing cover                |
| 360.2  | Bearing cover                |
| 412.1  | O-ring sealing               |
| 412.2  | O-ring sealing               |
| 412.3  | O-ring sealing               |
| 412.4  | O-ring sealing               |
| 412.5  | O-ring sealing               |
| 412.6  | O-ring sealing               |
| 412.7  | O-ring sealing               |
| 412.8  | O-ring sealing               |
| 412.9  | O-ring sealing               |
| 412.10 | O-ring sealing               |
| 422.1  | Felt Ring                    |
| 422.2  | Felt Ring                    |
| 433.1  | Mechanical seal              |
| 433.2  | Mechanical seal              |
| 471.1  | Seal cover                   |
| 471.2  | Seal cover                   |
| 485.2  | Driver                       |
| 487.1  | Counterring feeder           |
| 487.2  | Counterring feeder           |
| 490.1  | Seal Flange                  |
| 504.1  | Distance ring                |
| 507.1  | V-ring                       |
| 524.1  | Shaft protection sleeve      |
| 531.1  | Clamping sleeve              |
| 550.1  | Washer                       |
| 554.1  | U-washer                     |
| 554.2  | U-washer                     |
| 554.3  | U-washer                     |
| 554.4  | U-washer                     |
| 554.5  | U-washer                     |
| 554.6  | U-washer                     |
| 554.7  | U-washer                     |
| 562.2  | Straight pin                 |
| 566.1  | Round-head notched nail      |
| 580.1  | Hexagonal protection cap     |
| 636.1  | Ball type lubrication nipple |
| 901.1  | Hexagonal screw              |
| 901.2  | Hexagonal screw              |
| 901.3  | Hexagonal screw              |
| 901.4  | Hexagonal screw              |
| 902.1  | Stud bolt                    |
| 902.2  | Stud bolt                    |
| 902.3  | Stud bolt                    |
| 903.1  | Plug screw                   |
| 914.1  | Socket head cap screw        |
| 920.1  | Hexagonal nut                |
| 920.2  | Hexagonal nut                |
| 920.3  | Hexagonal nut                |
| 920.4  | Hexagonal nut                |
| 932.1  | Circlip for a bore           |
| 932.2  | Circlip for a bore           |
| 934.1  | Spring ring                  |
| 940.1  | Feather key                  |
| 940.2  | Feather key                  |
| 971.1  | Identification plate         |

## Weight<sup>1)</sup> of pumps without motor

| pump type | weight kg |              |
|-----------|-----------|--------------|
|           | NM        | PE / PP PVDF |
| 32 - 125  | 32        | 37           |
| 32 - 160  | 35        | 40           |
| 32 - 200  | 41        | 47           |
| 32 - 250  | 51        | 59           |
| 40 - 125  | 32        | 37           |
| 40 - 160  | 46        | 53           |
| 40 - 200  | 47        | 54           |
| 40 - 250  | 56        | 65           |
| 40 - 315  | 88        | 102          |
| 50 - 125  | 36        | 42           |
| 50 - 160  | 47        | 54           |
| 50 - 200  | 48        | 55           |
| 50 - 250  | 68        | 79           |
| 50 - 315  | 95        | 110          |
| 65 - 160  | 48        | 55           |
| 65 - 200  | 48        | 55           |
| 65 - 250  | 94        | 108          |
| 65 - 315  | 123       | 141          |
| 80 - 160  | 56        | 65           |
| 80 - 200  | 95        | 110          |
| 80 - 250  | 100       | 115          |
| 80 - 315  | 141       | 162          |
| 125 - 315 | 152       | 175          |
| 150 - 400 | 217       | 252          |

## Characteristic fields acc. DIN 24256

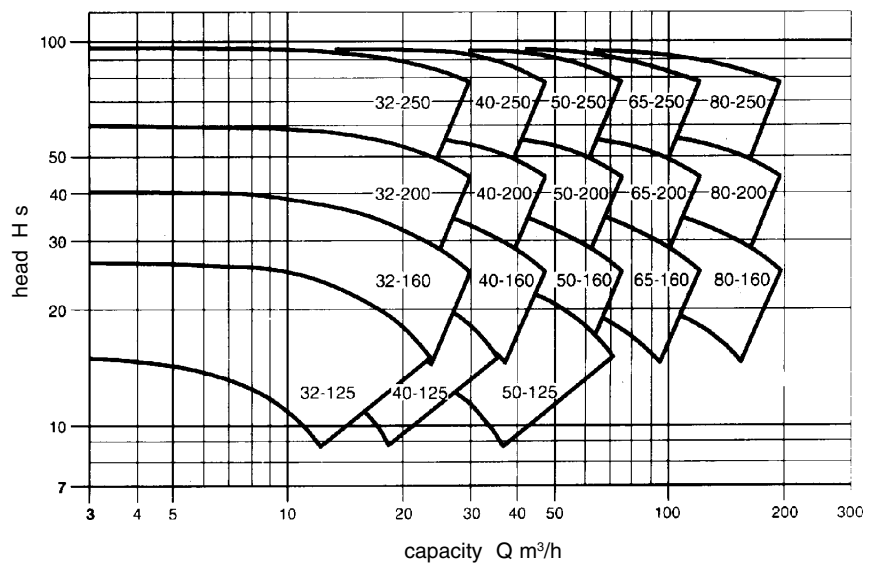
speed n = 1450 rpm



## Weight<sup>1)</sup> of motors (kg)

| motor | power kW | weight (kg) |          |
|-------|----------|-------------|----------|
|       |          | 2900 rpm    | 1450 rpm |
| 80    | 0.55     | -           | 8        |
| 80    | 0.75     | 8           | 10       |
| 80    | 1.1      | 9           | -        |
| 90 S  | 1.1      | -           | 12       |
| 90 S  | 1.5      | 12          | -        |
| 90 L  | 1.5      | -           | 14       |
| 90 L  | 2.2      | 15          | -        |
| 100 L | 2.2      | -           | 18       |
| 100 L | 3.0      | 20          | 20       |
| 112 M | 4.0      | 25          | 28       |
| 132 S | 5.5      | 45          | 45       |
| 132 S | 7.5      | 48          | -        |
| 132 M | 7.5      | -           | 50       |
| 160 M | 11       | 75          | 77       |
| 160 M | 15       | 91          | -        |
| 160 L | 15       | -           | 96       |
| 160 L | 18.5     | 107         | -        |
| 180 M | 18.5     | -           | 154      |
| 180 M | 22       | 129         | -        |
| 180 L | 22       | 170         | 170      |
| 200 L | 30       | 208         | 215      |
| 200 L | 37       | 227         | -        |
| 225 S | 37       | 309         | 309      |
| 225 M | 45       | 330         | 340      |
| 250 M | 55       | 445         | 445      |
| 280 S | 75       | 560         | 580      |
| 280 M | 90       | 620         | 650      |
| 315 S | 110      | 850         | 900      |
| 315 M | 132      | 910         | 940      |

Speed n = 2900 rpm



<sup>1)</sup>standard values

Technical alterations excepted