

## VP 380 SCREW PUMP

### Applications:

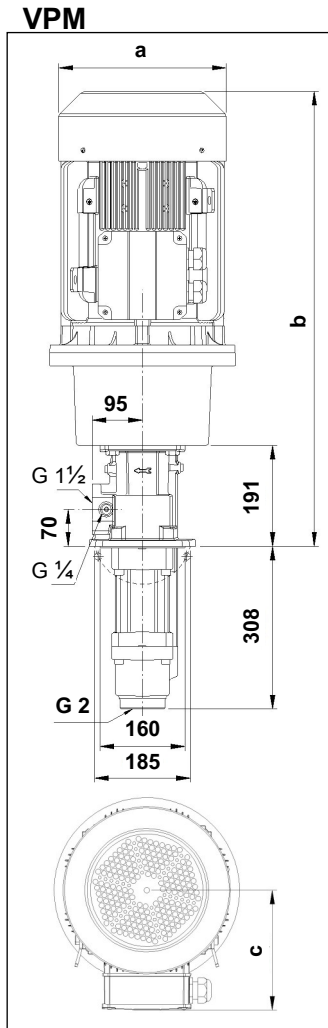
- High pressure pumps with low volumetric delivery,
- Cutting, turning milling, boring, grinding and similar applications of the machine tools,
- Especially used for deep hole boring operations due to the high pressure up to 100 bar,
- Pumping cutting/cooling fluids in circulation systems,

### Fluid Specifications:

- Coolants,
- Cutting oils,
- Grinding oils,
- Emulsions (minimum 5% oil),
- Thermal oils (contact for detailed information)
- Kinematic viscosity 1...400 mm<sup>2</sup>/s (contact for higher viscosities)

### Materials:

|                  |                                                 |
|------------------|-------------------------------------------------|
| Spindles         | : High performance steel, hardened steel        |
| Pump body        | : Cast iron - DIN GG 26, specially heat treated |
| Discharge casing | : Cast iron - DIN GG 26                         |
| Suction casing   | : Cast iron - DIN GG 26                         |
| Bell-Housing     | : Aluminium                                     |
| Mechanical seal  | : SiC-SiC-Viton                                 |
| O-ring           | : Viton                                         |
| Suction pipe     | : Steel                                         |



### VPM 380

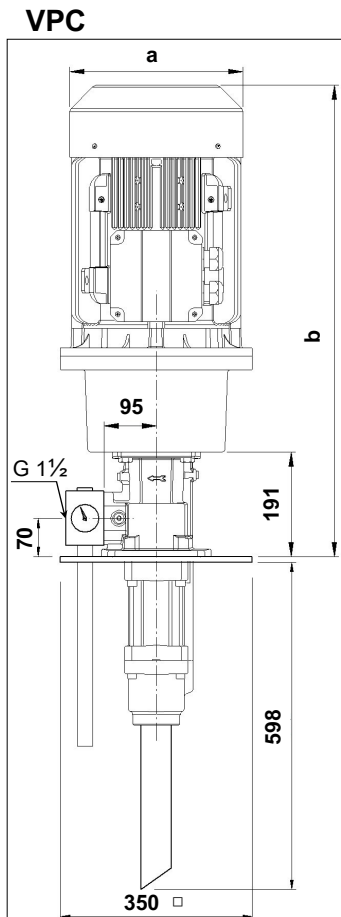
- VP 380 Screw pump,
- Electrical Motor, coupling and pump-housing.

### VPC 380

- VP 380 Screw pump,
- Electrical Motor, coupling and pump-housing.
- Pressure regulation valve,
- Pressure gauge,
- Tank lid
- Suction and drain pipes.

### Motor

: 3-phase IE3 induction motor  
 2-pole, 2900 RPM;  
 4-pole, 1450 RPM (Optional)  
 Protection degree, IP 55  
 Insulation class F



### NOMINAL SIZE

| Power              |                    | Dimensions |      |     | Cable Gland |
|--------------------|--------------------|------------|------|-----|-------------|
| 2-Pole             | 4-Pole             | a          | b    | c   |             |
| kW                 |                    | mm         |      |     |             |
| 4,0                | 2,2 / 3,0          | 193        | 637  | 149 | M20x1,5     |
| 5,5                | 4,0                | 215        | 658  | 161 | M20x1,5     |
| 7,5 / 11,0         | 5,5 / 7,5          | 257        | 766  | 182 | M25x1,5     |
| 15,0 / 18,5 / 22,0 | 11,0 / 15,0 / 18,5 | 316        | 861  | 224 | M32x1,5     |
| 30,0               | -                  | 396        | 1023 | 294 | M40x1,5     |

\* VPM and VPC series have the same hydraulic and electrical values.

## Pump Performance and Electrical Values

| 50 Hz                                                 |                         | 2900 RPM           |        |                            |        |             |              | 1450 RPM           |        |                            |        |             |              |
|-------------------------------------------------------|-------------------------|--------------------|--------|----------------------------|--------|-------------|--------------|--------------------|--------|----------------------------|--------|-------------|--------------|
| Type                                                  | Max.<br>Pressure<br>bar | Flow rate<br>l/min |        | Power<br>Consumption<br>kW |        | Motor<br>kW | Weight<br>kg | Flow rate<br>l/min |        | Power<br>Consumption<br>kW |        | Motor<br>kW | Weight<br>kg |
|                                                       |                         | 1 cSt              | 20 cSt | 1 cSt                      | 20 cSt |             |              | 1 cSt              | 20 cSt | 1 cSt                      | 20 cSt |             |              |
| <b>VPM 380</b><br><br>Q <sub>TH</sub> =167,3<br>l/min | <b>10</b>               | 158,1              | 161,3  | 3,5                        | 3,7    | 5,5         | 72,0         | 73,2               | 79,1   | 1,6                        | 1,7    | 2,2         | 63,0         |
|                                                       | <b>20</b>               | 151,4              | 158,2  | 6,2                        | 6,6    | 7,5         | 92,0         | 69,1               | 76,6   | 3,0                        | 3,1    | 4,0         | 73,0         |
|                                                       | <b>30</b>               | 145,9              | 155,5  | 9,2                        | 9,5    | 11,0        | 96,0         | 65,7               | 74,7   | 4,4                        | 4,6    | 5,5         | 92,0         |
|                                                       | <b>40</b>               | 141,3              | 153,7  | 11,7                       | 12,1   | 15,0        | 128,0        | 61,2               | 73,2   | 5,8                        | 6,0    | 7,5         | 100,0        |
|                                                       | <b>50</b>               | 135,7              | 152,0  | 14,5                       | 15,0   | 18,5        | 137,0        | 58,3               | 71,8   | 7,2                        | 7,5    | 11,0        | 113,0        |
|                                                       | <b>60</b>               | 132,1              | 150,5  | 17,3                       | 17,8   | 22,0        | 156,0        | 55,5               | 70,5   | 8,6                        | 9,1    | 11,0        | 113,0        |
|                                                       | <b>70</b>               | 129,3              | 149,1  | 20,1                       | 20,7   | 22,0        | 156,0        | 51,1               | 69,1   | 10,0                       | 10,5   | 11,0        | 113,0        |
|                                                       | <b>80</b>               | 125,2              | 147,8  | 22,6                       | 23,2   | 30,0        | 223,0        | 46,8               | 67,8   | 11,4                       | 12,0   | 15,0        | 140,0        |
|                                                       | <b>90</b>               | 119,9              | 146,1  | 25,7                       | 26,3   | 30,0        | 223,0        | 42,9               | 66,4   | 12,8                       | 13,5   | 15,0        | 140,0        |
|                                                       | <b>100</b>              | 113,5              | 144,6  | 28,6                       | 29,3   | 30,0        | 223,0        | 37,4               | 64,9   | 14,3                       | 15,0   | 18,5        | 157,0        |

| 60 Hz                                                 |                         | 3500 RPM           |        |                            |        |             |              | 1750 RPM           |        |                            |        |             |              |
|-------------------------------------------------------|-------------------------|--------------------|--------|----------------------------|--------|-------------|--------------|--------------------|--------|----------------------------|--------|-------------|--------------|
| Type                                                  | Max.<br>Pressure<br>bar | Flow rate<br>l/min |        | Power<br>Consumption<br>kW |        | Motor<br>kW | Weight<br>kg | Flow rate<br>l/min |        | Power<br>Consumption<br>kW |        | Motor<br>kW | Weight<br>kg |
|                                                       |                         | 1 cSt              | 20 cSt | 1 cSt                      | 20 cSt |             |              | 1 cSt              | 20 cSt | 1 cSt                      | 20 cSt |             |              |
| <b>VPM 380</b><br><br>Q <sub>TH</sub> =201,9<br>l/min | <b>10</b>               | 188,1              | 195,6  | 4,3                        | 4,9    | 6,6         | 72,0         | 90,1               | 95,8   | 2,0                        | 2,2    | 2,5         | 63,0         |
|                                                       | <b>20</b>               | 182,3              | 192,3  | 7,7                        | 8,4    | 8,7         | 92,0         | 85,6               | 93,9   | 3,6                        | 3,9    | 4,5         | 73,0         |
|                                                       | <b>30</b>               | 176,6              | 189,9  | 11,2                       | 12,0   | 12,8        | 96,0         | 80,3               | 91,9   | 5,4                        | 5,8    | 6,4         | 92,0         |
|                                                       | <b>40</b>               | 172,8              | 187,8  | 14,7                       | 15,7   | 17,4        | 128,0        | 77,0               | 90,2   | 7,0                        | 7,5    | 8,7         | 100,0        |
|                                                       | <b>50</b>               | 169,3              | 186,0  | 18,1                       | 19,3   | 21,5        | 137,0        | 73,9               | 88,8   | 8,8                        | 9,3    | 12,7        | 113,0        |
|                                                       | <b>60</b>               | 164,4              | 184,3  | 21,4                       | 22,7   | 25,5        | 156,0        | 69,2               | 87,4   | 10,4                       | 11,0   | 12,7        | 113,0        |
|                                                       | <b>70</b>               | 161,2              | 182,9  | 24,8                       | 26,2   | 25,5        | 156,0        | 66,3               | 86,1   | 12,1                       | 12,7   | 12,7        | 113,0        |
|                                                       | <b>80</b>               | 158,0              | 181,4  | 28,2                       | 29,7   | 34,8        | 223,0        | 63,3               | 84,8   | 13,8                       | 14,6   | 17,4        | 140,0        |
|                                                       | <b>90</b>               | 153,1              | 179,7  | 31,6                       | 33,2   | 34,8        | 223,0        | 58,1               | 83,4   | 15,5                       | 16,4   | 17,4        | 140,0        |
|                                                       | <b>100</b>              | 149,7              | 178,1  | 34,9                       | 36,6   | 34,8        | 223,0        | 52,2               | 81,9   | 17,2                       | 18,0   | 21,4        | 157,0        |