



Technical Catalogue



**YCB Series**  
Gear Pump



## YCB SERIES GEAR PUMP

### 1. Application

It applies to delivering non-corrosive lubricating-oil or equivalent liquid without solid particles and fibres at temperature below 80°C and with the viscosity of  $5 \times 10^{-6} \sim 1.5 \times 10^{-3} \text{ m}^2/\text{s}$  (5-1500cSt). It applies to hydraulic system, too.

### 2. Application Scope

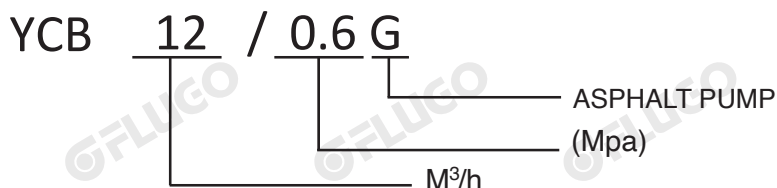
It can give performance as transfer pump or booster pump in oil delivery system, and a fuel pump for delivery, pressurization and injection in fuel supply system. It can be also applied as hydraulic pump supplying hydraulic power in hydraulic system and in all industry fields as lubricating pump.

### 3. Structure Features

- 2CY series gear pumps are mainly composed of gears, axles, pump body, pump cap, bearing sleeves and axle-end seals, etc. The gears are adopted double circular teeth shape, which makes the gears less wear on gear surface, stable revolution, low noise, long service life and high efficiency, due to no sliding on the teeth during gear falling-in. This kind of pump has got rid of traditional design and come into a new decade in designing and application.
- The pump is designed with safety valve for protection against overload. The full return flow pressure is 1.5 times higher than the rated exhaust pressure of the pump. It can be adjusted within the allowance of exhaust pressure range according to Circumstance. But please note the safety valve can't be applied as pressure-reducing valve for long time. You may install pressure-reducing valve separately on pipe-line if needed.
- There are two kinds of axle-end seals, mechanical seal and packing seal, which can be chosen according to the clients' requirements of application circumstance.

## YCB-G ASPHALT PUMP

### 1. MODEL EXPLANATIONS



### 2. PERFORMANCE DATA

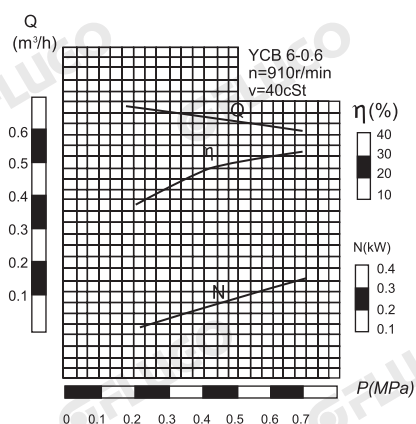
| Model       | mm | M³/h | Mpa | (NPSH) <sub>r</sub><br>m | r/min |
|-------------|----|------|-----|--------------------------|-------|
| YCB 6/0.6G  | 40 | 6    | 0.6 | 6                        | 960   |
| YCB 10/0.6G | 65 | 10   | 0.6 | 6                        | 320   |
| YCB 12/0.6G | 65 | 12   | 0.6 | 6                        | 383   |
| YCB 25/0.6G | 80 | 25   | 0.6 | 6                        | 252   |
| YCB 40/0.6G | 80 | 40   | 0.6 | 6                        | 417   |



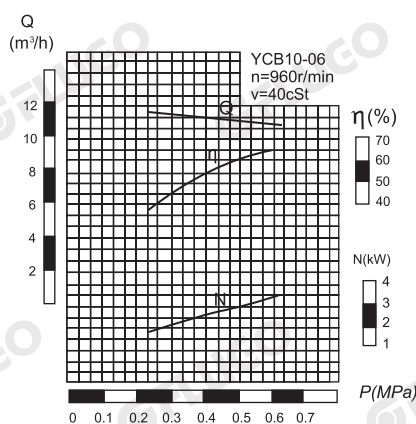
## DIAGRAM OF PERFORMANCE CURVE

Performance data of all gear pump have been defined on basis of the viscosity of  $4 \times 10^{-3} \text{ m}^2/\text{s}$  (40cSt). The data indicated in the performance diagram is suitable to medium viscosity of  $1 \times 10^{-5} \sim 8 \times 10^{-5} \text{ m}^2/\text{s}$  (10~80cSt). Of which exceeds the above viscosity, the data will be re-defined according to client's demands.

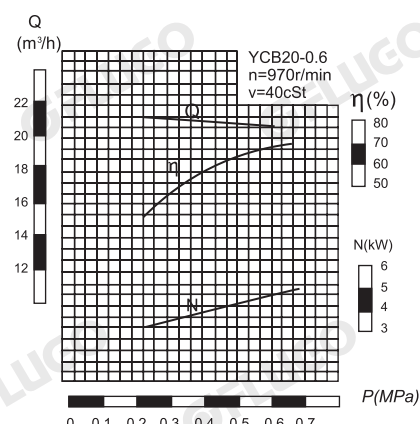
The given exhausting pressure of all gear pumps is the highest working pressure, and pumps can perform normally within range of the rated working pressure, which can be found in diagram No.1



YCB 0.6-0.6  
Diagram of performance Curve of  
Model YCB 0.6-0.6 Gear pump

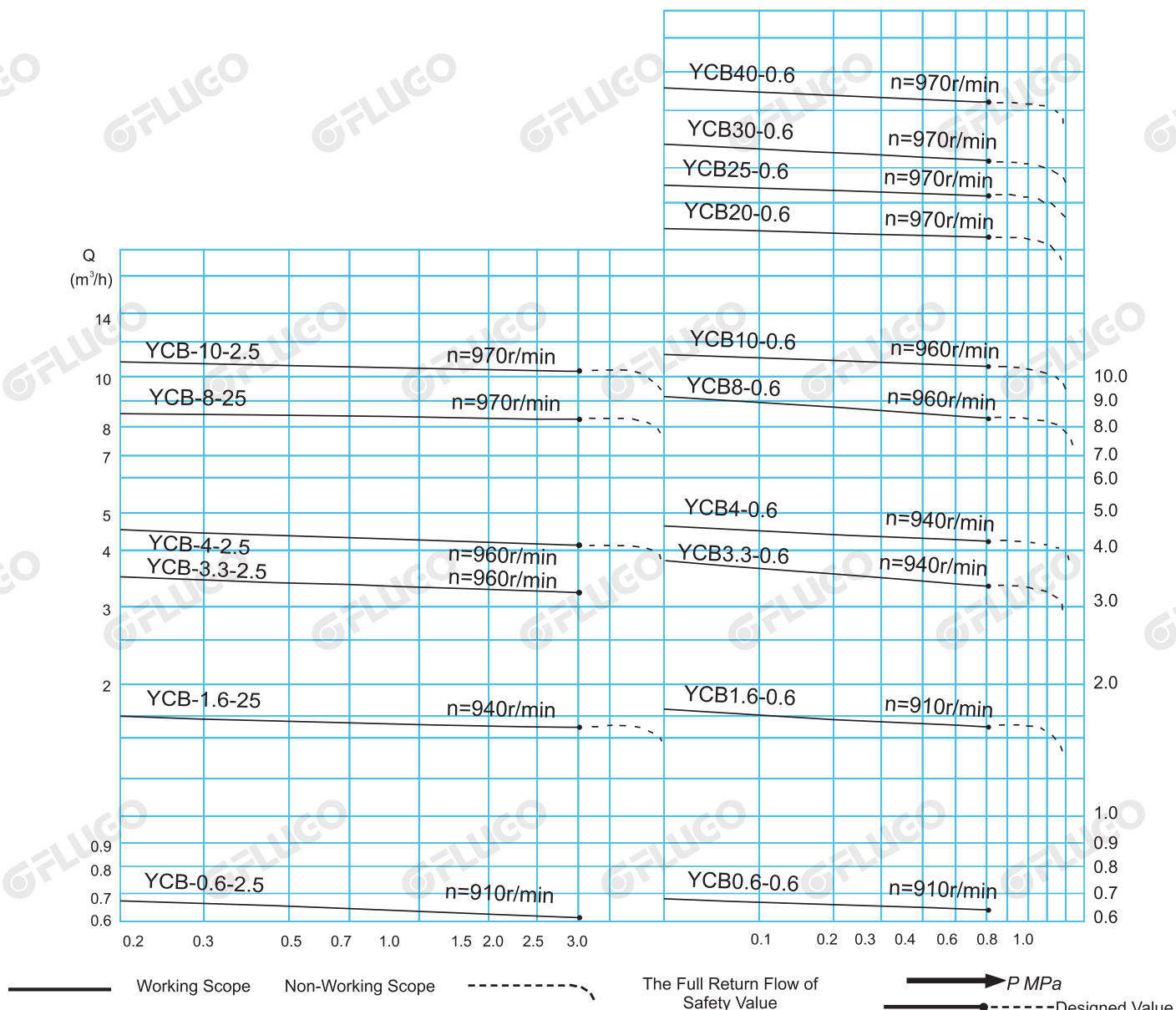


YCB 10-0.6  
Diagram of performance Curve of  
Model YCB 10-0.6 Gear pump



YCB 20-0.6  
Diagram of performance Curve of  
Model YCB 20-0.6 Gear pump

## WORKING SCOPE(DIAGRAM NO.1)

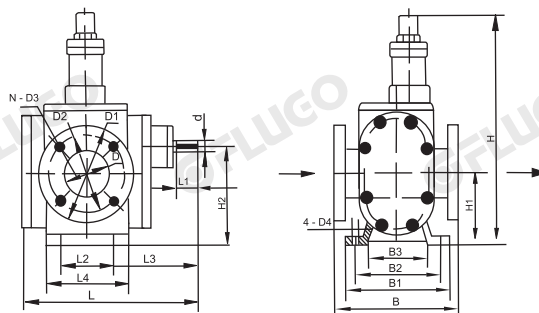


## YCB FUNCTIONAL DATA OF YCB SERIES CIRCULAR TEETH GEAR PUMPS

| Model      | Capacity Q<br>m <sup>3</sup> /h | Speed n<br>r/min | Exhaust<br>Pressure P<br>MPa | (NPSH) <sub>r</sub><br>m | Efficiency $\eta$<br>% | Motor |             |          |
|------------|---------------------------------|------------------|------------------------------|--------------------------|------------------------|-------|-------------|----------|
|            |                                 |                  |                              |                          |                        | Hz    | kW<br>Power | Model    |
| YCB0.6-0.6 | 0.6                             | 910              | 0.6                          | 5.5                      | 32                     | 50    | 0.75        | Y90S-6   |
|            | 1.0                             | 1390             |                              |                          |                        | 50    | 0.75        | Y80L2-4  |
|            | 0.7                             | 1130             |                              |                          |                        | 60    | 0.75        | Y90S-6   |
|            | 1.2                             | 1710             |                              |                          |                        | 60    | 0.75        | Y80L2-4  |
| YCB0.6-1.6 | 0.6                             | 910              | 1.6                          | 7.0                      | 70                     | 50    | 1.1         | Y90L-6   |
|            | 1.0                             | 1400             |                              |                          |                        | 50    | 1.5         | Y90L-4   |
|            | 0.7                             | 1130             |                              |                          |                        | 60    | 1.1         | Y90L-6   |
|            | 1.2                             | 1710             |                              |                          |                        | 60    | 1.1         | Y90S-4   |
| YCB1.6-0.6 | 1.6                             | 910              | 0.6                          | 5.5                      | 42                     | 50    | 0.75        | Y90S-6   |
|            | 2.5                             | 1400             |                              |                          |                        | 50    | 1.1         | Y90S-4   |
|            | 1.9                             | 1130             |                              |                          |                        | 60    | 1.1         | Y90L-6   |
|            | 3.0                             | 1710             |                              |                          |                        | 60    | 1.5         | Y90L-4   |
| YCB1.6-1.6 | 1.6                             | 940              | 1.6                          | 7.0                      | 71                     | 50    | 2.2         | Y112M-6  |
|            | 2.5                             | 1440             |                              |                          |                        | 50    | 4           | Y112M-4  |
|            | 1.9                             | 1150             |                              |                          |                        | 60    | 2.2         | Y112M-6  |
|            | 3.0                             | 1750             |                              |                          |                        | 60    | 4           | Y112M-4  |
| YCB3.3-0.6 | 3.3                             | 940              | 0.6                          | 5.0                      | 60                     | 50    | 1.5         | Y100L-6  |
|            | 5.0                             | 1420             |                              |                          |                        | 50    | 22          | Y100L1-4 |
|            | 4.0                             | 1150             |                              |                          |                        | 60    | 1.5         | Y100L-6  |
|            | 6.0                             | 1730             |                              |                          |                        | 60    | 2.2         | Y100L1-4 |
| YCB3.3-1.6 | 3.3                             | 960              | 1.6                          | 7.0                      | 72                     | 50    | 5.5         | Y132M2-6 |
|            | 5.0                             | 1440             |                              |                          |                        | 50    | 7.5         | Y132M-4  |
|            | 4.0                             | 1170             |                              |                          |                        | 60    | 4           | Y132M1-6 |
|            | 6.0                             | 1750             |                              |                          |                        | 60    | 7.5         | Y132M-4  |
| YCB4-0.6   | 4.0                             | 940              | 0.6                          | 5.0                      | 60                     | 50    | 1.5         | Y100L-6  |
|            | 6.0                             | 1420             |                              |                          |                        | 50    | 2.2         | Y100L1-4 |
|            | 4.8                             | 1150             |                              |                          |                        | 60    | 2.2         | Y112M-6  |
|            | 7.2                             | 1730             |                              |                          |                        | 60    | 3           | Y100L2-4 |
| YCB4-1.6   | 4.0                             | 960              | 1.6                          | 7.0                      | 72                     | 50    | 5.5         | Y132M2-6 |
|            | 6.0                             | 1440             |                              |                          |                        | 50    | 7.5         | Y132M-4  |
|            | 4.8                             | 1170             |                              |                          |                        | 60    | 5.5         | Y132M-6  |
|            | 7.2                             | 1750             |                              |                          |                        | 60    | 7.5         | Y132M-4  |
| YCB8-0.6   | 8.0                             | 960              | 0.6                          | 5.0                      | 61                     | 50    | 3           | Y132S-6  |
|            | 12.0                            | 1440             |                              |                          |                        | 50    | 5.5         | Y132S-4  |
|            | 9.6                             | 1170             |                              |                          |                        | 60    | 4           | Y132M1-6 |
|            | 14.4                            | 1750             |                              |                          |                        | 60    | 5.5         | Y132S-4  |
| YCB8-1.6   | 8.0                             | 970              | 1.6                          | 7.0                      | 75                     | 50    | 11          | Y160L-6  |
|            | 12.0                            | 1460             |                              |                          |                        | 50    | 15          | Y160L-4  |
|            | 9.6                             | 1170             |                              |                          |                        | 60    | 11          | Y160L-6  |
|            | 14.4                            | 1760             |                              |                          |                        | 60    | 15          | Y160L-4  |
| YCB10-0.6  | 10.0                            | 960              | 0.6                          | 5.0                      | 62                     | 50    | 4           | Y132M1-6 |
|            | 15.0                            | 1440             |                              |                          |                        | 50    | 5.5         | Y132S-4  |
|            | 12.0                            | 1170             |                              |                          |                        | 60    | 5.5         | Y132M2-6 |
|            | 18.0                            | 1750             |                              |                          |                        | 60    | 7.5         | Y132M-4  |
| YCB10-1.6  | 10.0                            | 970              | 1.6                          | 7.0                      | 76                     | 50    | 11          | Y160L-6  |
|            | 15.0                            | 1470             |                              |                          |                        | 50    | 15          | Y160L-4  |
|            | 12.0                            | 1170             |                              |                          |                        | 60    | 11          | Y160L-6  |
|            | 18.0                            | 1770             |                              |                          |                        | 60    | 18.5        | Y180M-4  |
| YCB20-0.6  | 20.0                            | 970              | 0.6                          | 5.0                      | 68                     | 50    | 7.5         | Y160M-6  |
|            | 24.0                            | 1170             |                              |                          |                        | 60    | 7.5         | Y160M-6  |
| YCB25-0.6  | 25.0                            | 970              | 0.6                          | 5.5                      | 69                     | 50    | 11          | Y160L-6  |
|            | 30.0                            | 1170             |                              |                          |                        | 60    | 11          | Y160L-6  |
| YCB30-0.6  | 30.0                            | 970              | 0.6                          | 5.5                      | 70                     | 50    | 11          | Y160L-6  |
|            | 36.0                            | 1170             |                              |                          |                        | 60    | 11          | Y160L-6  |
| YCB40-0.6  | 40.0                            | 970              | 0.6                          | 5.5                      | 72                     | 50    | 15          | Y180L-6  |
|            | 48.0                            | 1180             |                              |                          |                        | 60    | 15          | Y180L-6  |
| YCB50-0.6  | 50.0                            | 970              | 0.6                          | 5.5                      | 72                     | 50    | 22          | Y200L2-6 |
|            | 60.0                            | 1180             |                              |                          |                        | 60    | 22          | Y200L2-6 |

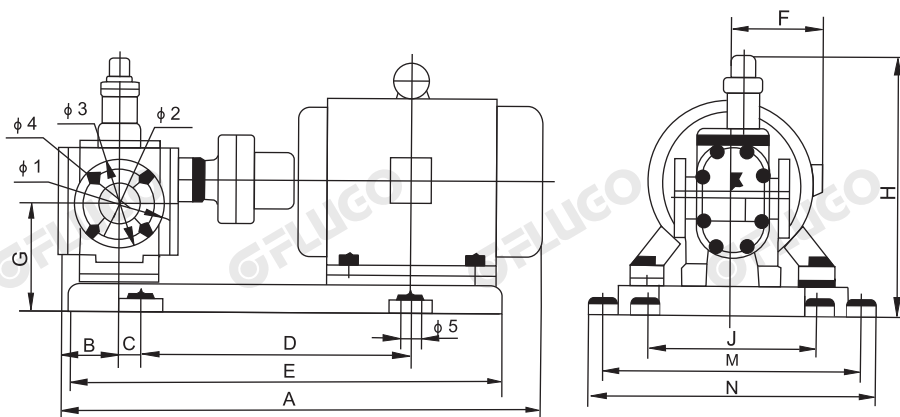


## YCB TYPE GEAR PUMP APPERANCE & INSTALLATION DIMENSION



| Model  | L     | L1 | L2  | L3     | L4  | B   | B1  | B2  | B3  | H     | H1    | H2  | D    | D1   | D2   | N-D3  | 4-D4  | d   |
|--------|-------|----|-----|--------|-----|-----|-----|-----|-----|-------|-------|-----|------|------|------|-------|-------|-----|
| YCB0.6 | 180   | 30 | 45  | 107.5  | 66  | 125 | 91  | 70  | 35  | 187   | 80    | 92  | Ø25  | Ø100 | Ø75  | 4-M10 | 4-Ø9  | Ø12 |
| YCB1.6 | 208   | 32 | 55  | 118.5  | 80  | 150 | 115 | 90  | 50  | 208   | 79.7  | 95  | Ø32  | Ø120 | Ø90  | 4-Ø14 | 4-Ø11 | Ø14 |
| YCB3.3 | 247.6 | 35 | 70  | 132.85 | 98  | 180 | 148 | 120 | 75  | 258   | 87.6  | 110 | Ø40  | Ø130 | Ø100 | 4-Ø14 | 4-Ø13 | Ø18 |
| YCB4   | 260.6 | 35 | 80  | 134.8  | 108 | 180 | 148 | 120 | 75  | 263   | 92.6  | 115 | Ø50  | Ø140 | Ø110 | 4-Ø14 | 4-Ø13 | Ø18 |
| YCB8   | 313   | 45 | 100 | 158.5  | 138 | 220 | 178 | 140 | 90  | 361   | 105   | 135 | Ø65  | Ø160 | Ø130 | 4-Ø14 | 4-Ø13 | Ø24 |
| YCB10  | 330   | 45 | 100 | 168.5  | 138 | 220 | 178 | 140 | 90  | 360   | 105   | 135 | Ø65  | Ø160 | Ø130 | 4-Ø14 | 4-Ø13 | Ø24 |
| YCB20  | 400   | 55 | 135 | 201    | 182 | 260 | 226 | 180 | 118 | 436.5 | 130.8 | 170 | Ø80  | Ø190 | Ø150 | 4-Ø18 | 4-Ø18 | Ø32 |
| YCB25  | 430   | 55 | 135 | 216    | 182 | 260 | 226 | 180 | 118 | 436.5 | 130.8 | 170 | Ø100 | Ø210 | Ø170 | 4-Ø18 | 4-Ø18 | Ø32 |
| YCB30  | 459   | 60 | 150 | 236    | 200 | 275 | 231 | 190 | 126 | 461   | 141   | 185 | Ø100 | Ø210 | Ø170 | 4-Ø18 | 4-Ø18 | Ø35 |
| YCB40  | 500   | 70 | 175 | 251.5  | 225 | 300 | 260 | 210 | 140 | 509   | 157   | 205 | Ø125 | Ø240 | Ø200 | 8-Ø18 | 4-Ø18 | Ø40 |
| YCB50  | 493   | 70 | 175 | 246.5  | 225 | 300 | 260 | 210 | 140 | 509   | 157   | 205 | Ø125 | Ø240 | Ø200 | 8-Ø18 | 4-Ø18 | Ø40 |

## YCB TYPE GEAR PUMP APPERANCE & INSTALLATION DIMENSION & WEIGHT



| Model      | M³/h | A     | B     | C    | D     | E     | F   | G     | H   | J   | K   | M     | N     | Ø1   | Ø2   | Ø3   | nxØ4  | nxØ5  | weight |      |      |      |       |       |       |
|------------|------|-------|-------|------|-------|-------|-----|-------|-----|-----|-----|-------|-------|------|------|------|-------|-------|--------|------|------|------|-------|-------|-------|
| YCB0.6-0.6 | 0.6  | 506   | 50    | 22.5 | 280   | 421   | 155 | 115   | 232 | 136 | 125 | 222   | 252   | Ø25  | Ø75  | Ø100 | 4xM10 | 4xØ14 | 38.5   |      |      |      |       |       |       |
| YCB1.0-0.6 | 1.0  | 486.5 |       |      | 264   | 405   | 150 |       | 217 | 207 | 237 |       |       |      |      |      |       |       |        |      |      |      |       |       |       |
| YCB1.6-0.6 | 1.6  | 547   | 63    | 27.5 | 303   | 455   | 155 |       | 243 | 156 | 150 | 222   | 252   | Ø32  | Ø90  | Ø120 | 4xØ14 |       | 43     |      |      |      |       |       |       |
| YCB2.5-0.6 | 2.5  |       |       |      |       |       |     |       |     |     |     |       |       |      |      |      |       |       |        |      |      |      |       |       |       |
| YCB3.3-0.6 | 3.3  | 644   | 76    | 35   | 344.5 | 544.5 | 180 | 127.6 | 298 | 198 | 180 | 266   | 298   | Ø40  | Ø100 | Ø130 | 4xØ14 | 4xØ16 | 65     |      |      |      |       |       |       |
| YCB5.0-0.6 | 5    |       |       |      |       |       |     |       |     |     |     | 256   | 288   |      |      |      |       |       |        | Ø50  | Ø110 | Ø140 |       |       |       |
| YCB4.0-0.6 | 4    | 667.5 | 82    | 40   | 346   | 557   |     |       |     |     |     | 256   | 288   | Ø50  | Ø110 | Ø140 |       |       | 66     |      |      |      |       |       |       |
| YCB6.0-0.6 | 6    |       |       |      |       |       |     |       |     |     |     |       |       |      |      |      |       |       |        |      |      |      |       |       |       |
| YCB8.0-0.6 | 8    | 795   | 101   | 50   | 382   | 644   | 210 | 140   | 396 | 218 | 220 | 332   | 364   | Ø65  | Ø130 | Ø160 |       |       | 117    |      |      |      |       |       |       |
| YCB12-0.6  | 12   |       |       |      |       |       |     |       |     |     |     |       |       |      |      |      |       |       |        | 430  | 690  |      |       |       |       |
| YCB10-0.6  | 10   | 849   | 111   |      | 392   | 652   |     |       |     |     |     | 165.8 | 471.5 | 270  | 260  | 380  |       |       | 416    | Ø80  | Ø150 | Ø190 | 4xØ18 | 4xØ18 | 216   |
| YCB15-0.6  | 15   | 808   |       |      |       |       |     |       |     |     |     |       |       |      |      |      |       |       |        |      |      |      |       |       |       |
| YCB20-0.6  | 20   | 1009  | 131.5 | 29.5 | 566   | 845   | 255 | 196   | 517 | 295 | 275 | 400   | 436   | Ø100 | Ø170 | Ø210 | 4xØ18 | 4xØ18 | 223    |      |      |      |       |       |       |
| YCB25-0.6  | 25   | 1100  | 146.5 |      | 603   | 904   |     |       |     |     |     |       |       |      |      |      |       |       |        | 385  | 421  | Ø125 | Ø200  | Ø240  | 8xØ18 |
| YCB30-0.6  | 30   | 1125  | 147   | 35   | 646   | 954   | 285 |       |     |     |     | 212   | 562   | 315  | 300  | 425  |       |       | 461    | Ø125 | Ø200 | Ø240 | 8xØ18 | 4xØ18 | 288   |
| YCB40-0.6  | 40   | 1214  | 161   | 42.5 | 673   | 1023  | 310 |       |     |     |     | 237   | 590   | 340  | 300  | 476  |       |       | 536    | Ø125 | Ø200 | Ø240 | 8xØ18 | 4xØ22 |       |
| YCB50-0.6  | 50   | 1300  | 159   | 52.5 | 680   | 1080  | 310 | 237   | 590 | 340 | 300 | 476   | 536   | Ø125 | Ø200 | Ø240 | 8xØ18 | 4xØ22 |        |      |      |      |       |       |       |



YCB Series - Gear Pump

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