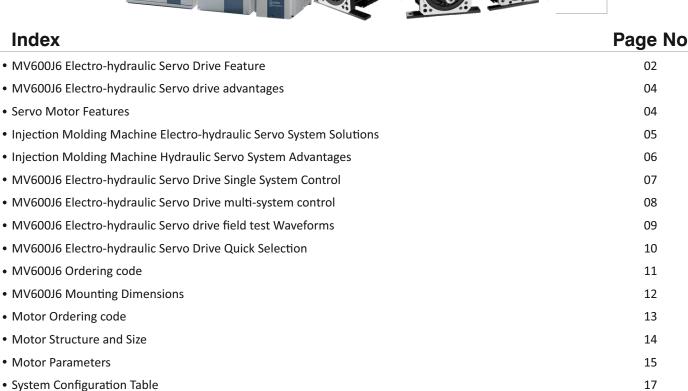
18

#### Industrial Mobile Hydraulic Hydraulic Services Hydraulics Hydraulics **Power Packs** Cylinders





• Confluence Configuration example





# MV600J6 Electro-hydraulic Servo Drive Feature

#### High reliability, high stability

- Wide voltage range design, adapt to a variety of grid environment
- EMC design, adapt to the complex environment on site
- Full range of servo design, fully adapt to highly dynamic, high-intensity load operation of the injection molding machine
- The drives of 90KW and below have built-in braking unit, easy to install and wiring, higher reliability
- PCB board three paint coating process, fully adapt to wet, oil mist, dust, particles and other poor working conditions of the injection molding machine Motor temperature detection (support PTC, KTY84) and protection, pressure sensor power failure protection, effectively ensuring the safe operation of the injection molding machine system

# Unique multi-pump parallel flow and multi-pump bypass/parallel flow control Multi-pump parallel flow

- For the same large-tonnage unit, achieve synchronous operation
- High-speed CAN bus interaction, just need to set the master, slave
- Convenient debugging, hydraulic response is fully controlled by the master PI, the slave follow the master action
- When holding pressure, the master can be automatically removed from the stave running, more energy-efficient
- Special treatment of unstable motor speed during the sol when breaking high hardness materials

#### Multi-pump bypass / parallel flow

In the multi-pump hydraulic injection molding machine system, it can use complex control scheme of multi-pump parallel flow and bypass flow, injection molding machine system switches mode according to the needs of actual process, comparing with a simple multi-pump parallel flow system, with more energy-efficient, more efficient, etc.

#### Unique dual displacement pump control

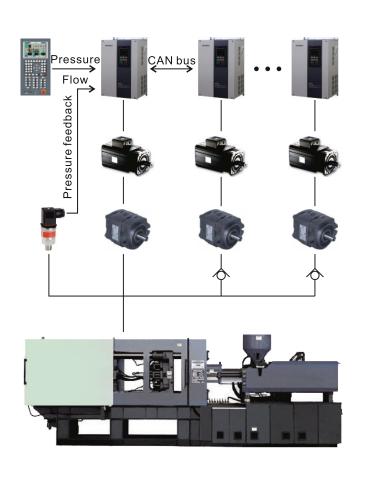
- The right amount of displacement switching, more energy efficient
- Fast response, fast cycling, more precise
- High sensitivity overflow, more reliable
- Saving power configuration, more environmentally friendly



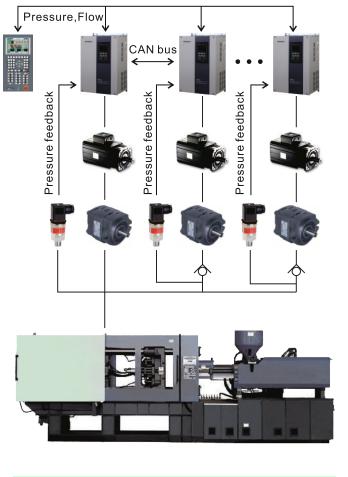




#### MV600J6 Electro-hydraulic Servo Drive Feature



Multi-pump parallel flow program



Multi-pump bypass / parallel flow program

## Easy parameter settings

- Factory empirical parameters, can satisfy the requirement of more than 90% of the field condition
- Many motor tuning mode selectable
- Operation panel rich parameters display
- Multiple sets of PI automatic switching, effective control the system response and overshoot
- Convenient PC TOOLING debugging software



#### MV600J6 Electro-hydraulic Servo drive advantages

- The pressure sensor AI channel is 16bit AD with higher precision.
- Motor resolver PG feedback soft decoding, stronger anti-interference ability.
- Standard equipped with dual-channel CAN, system control coordination is more flexible.
- Host computer USB debugging interface, oil pressure online monitoring.
- Optimized oil pressure loop and motor control algorithm.
- The voltage regulation accuracy can be controlled within ±0.5bar.
- Brand new core hardware platform and compact structure.

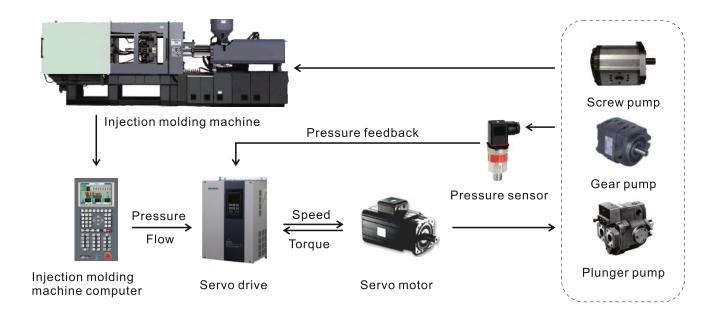
# Servo Motor Features

- The new permanent magnet embedded structure improves the weak magnetic overspeed and anti-demagnetization ability to meet the requirements of various working conditions in the electro-hydraulic industry.
- Industry-leading motor design technology platform, small motor size, light weight, low noise, strong overload capacity, ensure excellent electromagnetic performance.
- Mature manufacturing system, perfect process and quality standards, ensure stable and reliable product quality.
- Permanent magnets come from large domestic manufacturers, high performance, low loss, high energy efficiency, low temperature rise, small current and large torque.
- Built-in PTC and KTY temperature sensors, provide more protection for the motor.
- Support non-standard customization, suitable for a variety of occasions.
- A 9-core 6-meter encoder cable is included.



## Injection Molding Machine Electro-hydraulic Servo System Solutions

# Servo pump system components

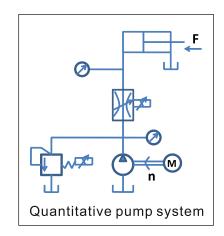


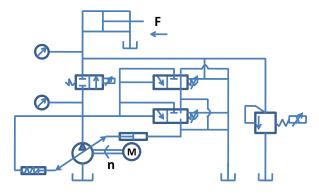
# Comparison of all kinds of pump system

Traditional quantitative pump injection molding machine has a very serious energy wastage. According to the statistics show that in the past, its maximum operating efficiency is not more than 40%, energy-saving reform for such injection molding machine is imperative.

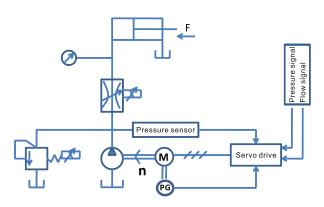
Variable pump injection molding machine mine energy-saving transformation space of oil circuit from the perspective of hydraulic components, , thereby improving the efficiency of the oil circuit system. But restricted by its control mode, the system cannot completely eliminate the throttling, overflow losses.

Servo drive injection molding machine transforms traditional oil circuit from the speed adjustment mode from the perspective of electrical control, using accurate, fast, and reliable characteristics of modern control systems, can eliminate the throttling losses from its source and reduce overflow losses.





Variable pump system



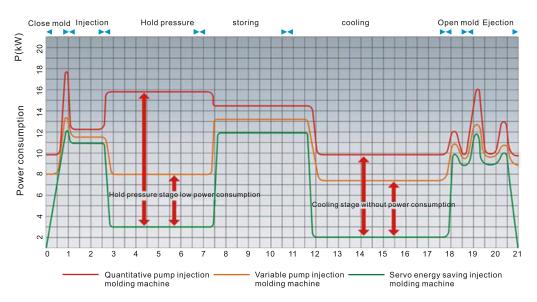
Servo pump system



## Injection Molding Machine Hydraulic Servo System Advantages

# Energy saving

Servo drives apply modern control technology, fully play the speed adjustment performance of servo motor, combine with a highspeed and high response PID algorithm, provide pressure as required, compared with the original quantitative pump or variable pump system, the highest energy saving rate can reach more than 80%.



# Precision

#### High position repeatability

Fast response servo drive to pressure, flow, ensure the open mold and close mold precision of injection molding machine, injection end position error can be controlled within 0.1mm.

#### High pressure control precision

Servo drive with high-speed DSP, combined with optimized high response and high precision PID algorithm to ensure the stability of the system pressure, pressure fluctuations can be controlled under  $\pm 0.5$  bar.

# High efficiency

#### High motor speed

Compared with the original asynchronous motors, higher speed of servo motor enhance the output of the pump to improve the overall efficiency of the injection molding machine.

#### High response speed

Fastest response speed can be up to 20ms, effectively improve the speed of the hydraulic system to build pressure.

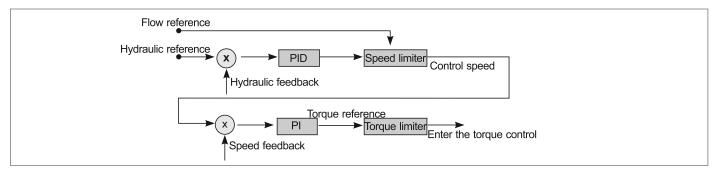
## Low noise

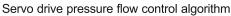
Rely on optimized PID control algorithm of servo drive, match high-performance permanent magnet servo motor, greatly reduce operating noise of the injection molding machine, achieve quiet operation, effectively improve the working environment.

# MV600J6 Electro-hydraulic Servo Drive Single System Control

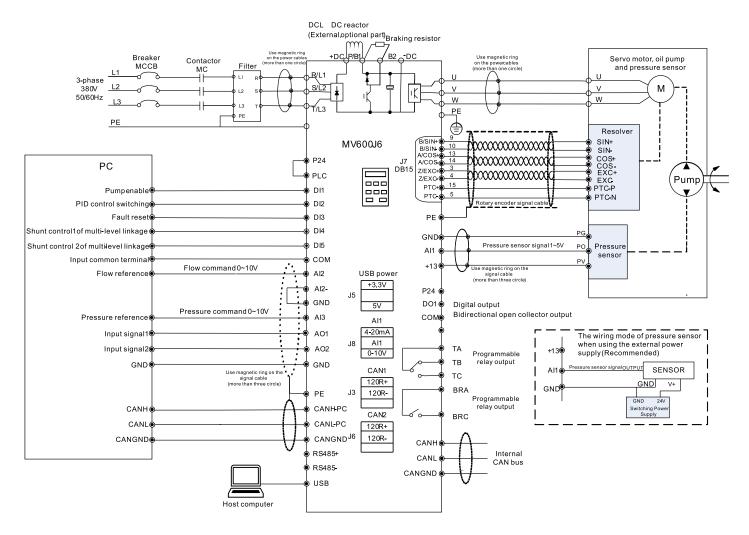


#### Pressure flow control algorithm





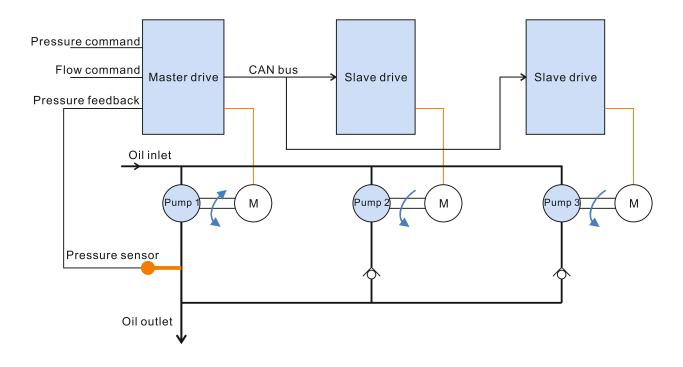
## Main circuit and control circuit terminal wiring diagram



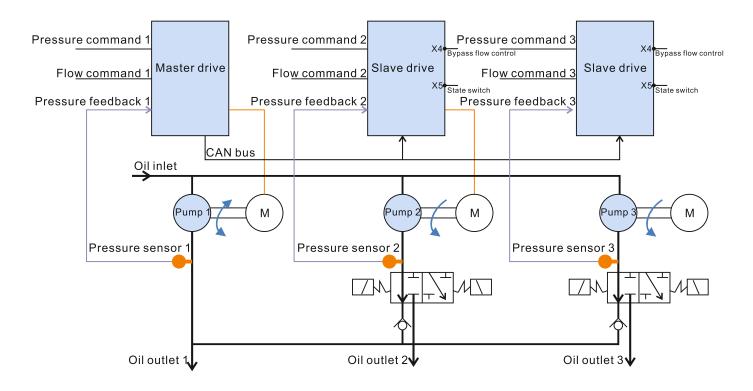


## MV600J6 Electro-hydraulic Servo Drive multi-system control

Multi-system control mode 1(parallel flow diagram)



# Multi-system control mode 2(parallel /bypass flow diagram)





## MV600J6 Electro-hydraulic Servo drive field test Waveforms

# **Building pressure**

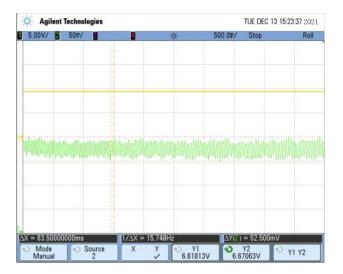


Building pressure time of 175bar is 64.5ms.



Unloading pressure time of 175 bar is less than 100ms.

# Steady pressure



Pressure sensor range 250bar, 0 ~ 10V output. Hold pressure 175bar, pressure fluctuations is  $\pm$  0.65kg / cm2.

# Full cycle



Fast response to cyclical building pressure, hold pressure, unloading pressure instructions.

# Unloading pressure



### MV600J6 Electro-hydraulic Servo Drive Quick Selection

#### Calculate the torque required by pump, determine motor selection

A rated displacement q (ml / rev) of the pump, produce a certain pressure p (bar), according to the hydraulic theory, the torque required to drive the pump is as follows:

T pump =0.0159\*p\*q(N·m)

Considering that the motor has a certain overload capability, and the injection molding machine is not been in a state of maximum torque, rated torque of pump motor is calculated as follows:

T motor=T pump /1.4~1.6

Related motor parameters table, firstly select the motor torque. According to the data provided by different motor manufacturers, usually a motor torque have three speed segments 1500rpm, 1700rpm, 2000rpm, according to different pump of system configuration, select the speed, determine the motor.

#### Calculate the drive rated current, determine the drive selection

After the motor is determined, according to the value of the motor kt, calculating the drive maximum current required to provide:

I drive max=T pump /kt

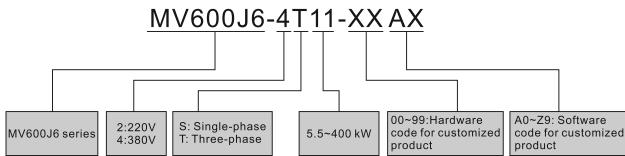
Computing according to drive overload 1.5 times in 1 min, the drive rated current is:

I rated =1.2 \* I drive max/1.5

Note: Due to the accuracy of the parameters provided by each motor and pump manufacturers is different, in order to improve the safety and stability of the system, multiplied by a safety factor of 1.2 should be considered in the drive selection. The drive model can be preliminary selected according to drive rated current.



# Ordering code

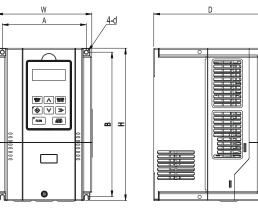


| Electro-hydraulic<br>servo drive | Input power            | Rated capacity<br>(kVA) |       | Rated output<br>current(A) | Braking resistor<br>value (Ω) | Braking<br>torque (%) | Braking<br>unit | Note                  |
|----------------------------------|------------------------|-------------------------|-------|----------------------------|-------------------------------|-----------------------|-----------------|-----------------------|
| MV600J6-4T5.5                    |                        | 8.5                     | 14.5  | 13.0                       | 1000W/45Ω                     | 120                   |                 |                       |
| MV600J6-4T7.5                    |                        | 11.0                    | 20.5  | 17.0                       | <b>1000W/45</b> Ω             | 200                   |                 | 0                     |
| MV600J6-4T11                     |                        | 17.0                    | 26.0  | 25.0                       | 1500W/32Ω                     | 200                   |                 | Plastic structure     |
| MV600J6-4T15                     |                        | 21.0                    | 35.0  | 32.0                       | 1500W/32Ω                     | 200                   |                 | c stru                |
| MV600J6-4T18.5                   |                        | 24.0                    | 38.5  | 37.0                       | <b>2500W/25</b> Ω             | 200                   |                 | lasti                 |
| MV600J6-4T22                     |                        | 30.0                    | 46.5  | 45.0                       | <b>2500W/20</b> Ω             | 200                   | Built-in        | <u>L</u>              |
| MV600J6-4T30                     |                        | 40.0                    | 62.0  | 60.0                       | <b>3000W/20</b> Ω             | 150                   | Buil            |                       |
| MV600J6-4T37                     |                        | 50.0                    | 76.0  | 75.0                       | <b>4000W/16</b> Ω             | 120                   |                 |                       |
| MV600J6-4T45                     |                        | 60.0                    | 92.0  | 90.0                       | <b>5000W/16</b> Ω             | 200                   |                 |                       |
| MV600J6-4T55                     | Three-phase:           | 72.0                    | 113.0 | 110.0                      | 6000W/9Ω                      | 160                   |                 |                       |
| MV600J6-4T75                     | 380V~480V<br>-15%~+10% | 100.0                   | 157.0 | 152.0                      | 8000W/9Ω                      | 120                   |                 |                       |
| MV600J6-4T90                     | -15%~+10%              | 116.0                   | 180.0 | 176.0                      | 10000W/7Ω                     | 200                   |                 | Ð                     |
| MV600J6-4T110                    |                        | 138.0                   | 214.0 | 210.0                      | <b>12000W/6</b> Ω             | 160                   |                 | uctur                 |
| MV600J6-4T132                    |                        | 167.0                   | 256.0 | 253.0                      | <b>14000W/6</b> Ω             | 130                   |                 | al stru               |
| MV600J6-4T160                    |                        | 200.0                   | 307.0 | 304.0                      | 15000W/4Ω                     | 200                   |                 | meta                  |
| MV600J6-4T200                    |                        | 250.0                   | 385.0 | 380.0                      | 9600W/13.6Ω*3                 | 130                   | <del>a</del>    | Sheet metal structure |
| MV600J6-4T220                    |                        | 280.0                   | 430.0 | 426.0                      | 40kW/3.2Ω*1                   | 140                   | External        | S                     |
| MV600J6-4T280                    |                        | 355.0                   | 525.0 | 495.0                      | 40kW/2Ω*1                     | 140                   | Ext             |                       |
| MV600J6-4T315                    |                        | 445.0                   | 590.0 | 585.0                      | 60kW/3.2Ω*1                   | 120                   |                 |                       |
| MV600J6-4T355                    |                        | 500.0                   | 665.0 | 650.0                      | 60kW/3.2Ω*1                   | 110                   |                 |                       |
| MV600J6-4T400                    |                        | 565.0                   | 785.0 | 725.0                      | 60kW/2Ω*1                     | 110                   |                 |                       |

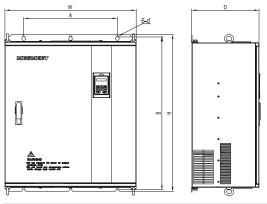
Note: \*2 means that two braking resistors are connected in parallel, and so on.



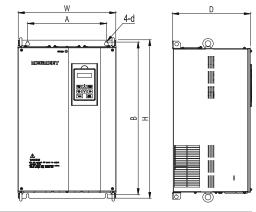
# **Mounting Dimensions**



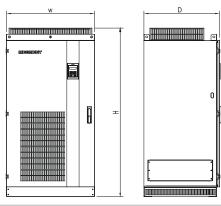
Mounting dimensions for products of R3,R4



Mounting dimensions for products of R9P,R10



Mounting dimensions for products of R5,R6,R7,R7P



Mounting dimensions for products of R11

| Enclosure<br>model | Drive model  | A(mm) | B(mm) | H(mm) | W(mm) | D(mm) | Diameter of mounting<br>aperture (mm) | Gross weight<br>±0.5(kg) |
|--------------------|--|-------|-------|-------|-------|-------|---------------------------------------|--------------------------|
| R3                 | MV600J6-4T5.5<br>MV600J6-4T7.5<br>MV600J6-4T11<br>MV600J6-4T15 | 137   | 236   | 249   | 155   | 198   | 5.5                                   | 4                        |
| R4                 | MV600J6-4T18.5<br>MV600J6-4T22<br>MV600J6-4T30                 | 186   | 314.5 | 330   | 209   | 206   | 6.5                                   | 9                        |
| R5                 | MV600J6-4T37<br>MV600J6-4T45                                   | 220   | 437.5 | 451.5 | 284.5 | 213   | 6.5                                   | 21                       |
| R6                 | MV600J6-4T55<br>MV600J6-4T75                                   | 270   | 549   | 570   | 335   | 262   | 7                                     | 41                       |
| R7                 | MV600J6-4T90   | 270   | 579   | 600   | 335   | 292   | 7                                     | 49                       |
| R7P                | MV600J6-4T110<br>MV600J6-4T132<br>MV600J6-4T160                | 290   | 641   | 672   | 374   | 296   | 12                                    | 55                       |
| R9P                | MV600J6-4T200  | 370   | 827.5 | 849.5 | 530   | 350   | 12                                    | 154                      |
| R10                | MV600J6-4T220<br>MV600J6-4T280<br>MV600J6-4T315                | 500   | 932   | 956   | 700   | 361.5 | 14                                    | 216                      |
| R11                | MV600J6-4T355<br>MV600J6-4T400                                 | -     | -     | 1624  | 710   | 610   | -                                     | 250                      |

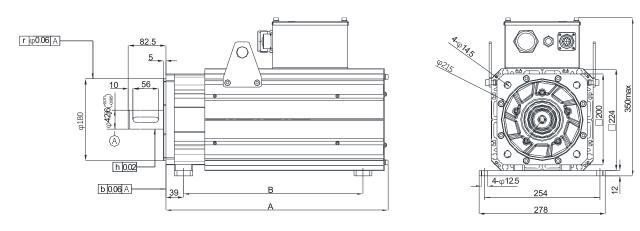
# Motor Ordering code



| <u>NYS</u> 2<br>①  | $-\frac{20}{3}$ $\frac{F/Y}{4}$ $-\frac{043}{5}$             | $-\frac{17}{6}$ $\frac{R}{7}$ $\frac{H}{8}$ $\frac{42}{9}$  |
|--|--|---|
| ①<br>Manufacturer code   | 5<br>Motor rated torque<br>043 means 43N.M                   | ⑧<br>Voltage level<br>H: 380V   |
| ②<br>1: SPM motor<br>2: IPM motor  | 6  | M: 220V   |
| ③<br>Motor base number<br>20 means base 200 motor                            | 6<br>Motor rated speed<br>17 means 1700 rpm<br>17x100 = 1700 | <ul> <li>⑨</li> <li>Shaft mode</li> <li>42: extended shaft with key, key width 12MM, shaft diameter φ42MM</li> </ul>  |
| ④<br>Motor cooling method  | $\overline{\mathbb{Q}}$                                      | <ul> <li>42A: shaft diameter φ42MM bare axis</li> <li>48: extended shaft with key, key width 14MM, shaft diameter φ48MM</li> <li>48A: shaft diameter φ48MM bare axis</li> </ul> |
| F: air-cooled<br>Y: oil cooling/water cooling<br>Not marked: natural cooling | Encoder type<br>R: resolver<br>M: photoelectric encoder      | 60: extended shaft with key, key width 18MM,<br>shaft diameter φ60MM<br>60A: shaft diameter φ60MM bare axis   |

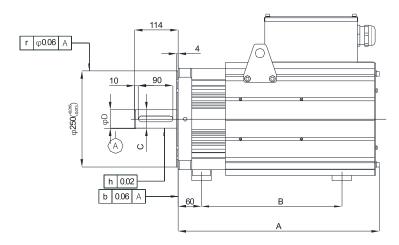
#### **Motor Structure and Size**

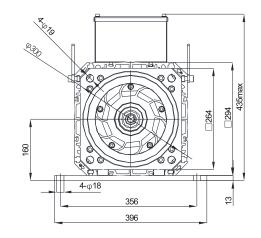
## NYS2-20F



| Motor model | NYS2-20F-055 | NYS2-20F-065 | NYS2-20F-080 | NYS2-20F-105 | NYS2-20F-130 | NYS2-20F-155 | NYS2-20F-180 | NYS2-20F-200 |
|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| A (mm)      | 345          | 361          | 381          | 417          | 453          | 489          | 525          | 575          |
| B (mm)      | 265          | 265          | 285          | 310          | 350          | 395          | 395          | 470          |

## NYS2-26F





| Motor model | NYS2-26F-225                      | NYS2-26F-250                      | NYS2-26F-300                      | NYS2-26F-340                      | NYS2-26F-370                      | NYS2-26F-440                      | NYS2-26F-500                          | NYS2-26F-560                      |
|-------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|---------------------------------------|-----------------------------------|
| A (mm)      | 523.5                             | 577                               | 577                               | 630.5                             | 630.5                             | 684                               | 757.5                                 | 811                               |
| B (mm)      | 365.5                             | 419                               | 419                               | 472.5                             | 472.5                             | 526                               | 599.5                                 | 653                               |
| C (mm)      | 14 <sup>0</sup> <sub>-0.027</sub> | 18 <sup>0</sup> <sub>-0.027</sub>     | 18 <sup>0</sup> <sub>-0.027</sub> |
| D (mm)      | 48 +0.011 -0.005                  | 48 +0.011 -0.005                  | 48 +0.011 -0.005                  | 48 +0.011 -0.005                  | 48 +0.011 -0.005                  | 48 +0.011 -0.005                  | 60 <sup>+0.03</sup> <sub>+0.011</sub> | 60 <sup>+0.03</sup><br>+0.011     |





# Motor Ordering code

# 1500rpm

| Motor model         | Rated power<br>(kW) | Rated current<br>(A) | Rated torque<br>(N.m) | Rated speed<br>(rpm) | Rated<br>frequency<br>(Hz) | Back-EMF<br>(V) | Kt<br>Thermal state | Number of motor poles (2P) | Peak speed<br>(rpm) | Peak torque<br>(N.m) | Peak current<br>(A) | Inertia<br>(kg.cm²) |
|---------------------|---------------------|----------------------|-----------------------|----------------------|----------------------------|-----------------|---------------------|----------------------------|---------------------|----------------------|---------------------|---------------------|
| NYS2-20F-055-15RH42 | 8.6                 | 16.3                 | 55                    | 1500                 | 100                        | 320             | 3.37                | 8                          | 2200                | 88                   | 27.5                | 62                  |
| NYS2-20F-065-15RH42 | 10.2                | 19.1                 | 65                    | 1500                 | 100                        | 321             | 3.4                 | 8                          | 2200                | 104                  | 32.5                | 73                  |
| NYS2-20F-080-15RH42 | 13.2                | 24.6                 | 84                    | 1500                 | 100                        | 327             | 3.41                | 8                          | 2200                | 145                  | 45                  | 87                  |
| NYS2-20F-105-15RH42 | 17                  | 31.8                 | 108                   | 1500                 | 100                        | 327             | 3.4                 | 8                          | 2200                | 195                  | 63                  | 112                 |
| NYS2-20F-130-15RH42 | 20.4                | 39.2                 | 130                   | 1500                 | 100                        | 312             | 3.32                | 8                          | 2200                | 248                  | 83                  | 137                 |
| NYS2-20F-155-15RH42 | 24.5                | 44.7                 | 156                   | 1500                 | 100                        | 327             | 3.49                | 8                          | 2200                | 300                  | 104                 | 160                 |
| NYS2-20F-180-15RH42 | 28.3                | 52                   | 180                   | 1500                 | 100                        | 327             | 3.46                | 8                          | 2200                | 360                  | 130                 | 187                 |
| NYS2-20F-200-15RH42 | 32.2                | 61.8                 | 205                   | 1500                 | 100                        | 312             | 3.32                | 8                          | 2200                | 400                  | 140                 | 213                 |
| NYS2-26F-225-15RH48 | 33.8                | 63                   | 215                   | 1500                 | 100                        | 328             | 3.41                | 8                          | 2200                | 355                  | 118                 | 380                 |
| NYS2-26F-250-15RH48 | 39.2                | 73.3                 | 250                   | 1500                 | 100                        | 328             | 3.41                | 8                          | 2200                | 400                  | 130                 | 440                 |
| NYS2-26F-300-15RH48 | 45.9                | 87                   | 292                   | 1500                 | 100                        | 312             | 3.36                | 8                          | 2200                | 500                  | 160                 | 500                 |
| NYS2-26F-340-15RH48 | 53.4                | 100                  | 340                   | 1500                 | 100                        | 318             | 3.38                | 8                          | 2200                | 520                  | 170                 | 560                 |
| NYS2-26F-370-15RH48 | 58.1                | 110                  | 370                   | 1500                 | 100                        | 312             | 3.36                | 8                          | 2200                | 600                  | 228                 | 630                 |
| NYS2-26F-440-15RH48 | 76                  | 126                  | 429                   | 1500                 | 100                        | 328             | 3.41                | 8                          | 2200                | 675                  | 230                 | 720                 |
| NYS2-26F-500-15RH60 | 77.3                | 146                  | 492                   | 1500                 | 100                        | 328             | 3.37                | 8                          | 2200                | 750                  | 260                 | 815                 |
| NYS2-26F-560-15RH60 | 85.6                | 166                  | 545                   | 1500                 | 100                        | 312             | 3.28                | 8                          | 2200                | 830                  | 292                 | 905                 |

# 1700rpm

| Motor model         | Rated power<br>(kW) | Rated current<br>(A) | Rated torque<br>(N.m) | Rated speed<br>(rpm) | Rated<br>frequency<br>(Hz) | Back-EMF<br>(V) | Kt<br>Thermal state | Number of motor poles (2P) | Peak speed<br>(rpm) | Peak torque<br>(N.m) | Peak current<br>(A) | Inertia<br>(kg.cm²) |
|---------------------|---------------------|----------------------|-----------------------|----------------------|----------------------------|-----------------|---------------------|----------------------------|---------------------|----------------------|---------------------|---------------------|
| NYS2-20F-055-17RH42 | 9.8                 | 18.5                 | 55                    | 1700                 | 113.3                      | 318             | 2.97                | 8                          | 2500                | 89                   | 32.5                | 62                  |
| NYS2-20F-065-17RH42 | 11.5                | 21.3                 | 65                    | 1700                 | 113.3                      | 321             | 3.05                | 8                          | 2500                | 104                  | 37.5                | 73                  |
| NYS2-20F-080-17RH42 | 15                  | 28.3                 | 84                    | 1700                 | 113.3                      | 318             | 2.97                | 8                          | 2500                | 147                  | 54                  | 87                  |
| NYS2-20F-105-17RH42 | 18.7                | 35.3                 | 105                   | 1700                 | 113.3                      | 318             | 2.97                | 8                          | 2500                | 202                  | 74                  | 112                 |
| NYS2-20F-130-17RH42 | 23                  | 44.8                 | 129                   | 1700                 | 113.3                      | 309             | 2.88                | 8                          | 2500                | 247                  | 89                  | 137                 |
| NYS2-20F-155-17RH42 | 27.8                | 53.3                 | 156                   | 1700                 | 113.3                      | 318             | 2.93                | 8                          | 2500                | 302                  | 110                 | 160                 |
| NYS2-20F-180-17RH42 | 31.3                | 61.5                 | 176                   | 1700                 | 113.3                      | 309             | 2.86                | 8                          | 2500                | 370                  | 138                 | 187                 |
| NYS2-20F-200-17RH42 | 36.5                | 70                   | 205                   | 1700                 | 113.3                      | 318             | 2.93                | 8                          | 2500                | 425                  | 157                 | 213                 |
| NYS2-26F-225-17RH48 | 38.8                | 74                   | 218                   | 1700                 | 113.3                      | 318             | 2.95                | 8                          | 2500                | 440                  | 162                 | 380                 |
| NYS2-26F-250-17RH48 | 44                  | 83.5                 | 247                   | 1700                 | 113.3                      | 310             | 2.96                | 8                          | 2500                | 490                  | 173                 | 440                 |
| NYS2-26F-300-17RH48 | 50.2                | 95                   | 282                   | 1700                 | 113.3                      | 318             | 2.97                | 8                          | 2500                | 510                  | 180                 | 500                 |
| NYS2-26F-340-17RH48 | 59.8                | 110                  | 336                   | 1700                 | 113.3                      | 317             | 3.05                | 8                          | 2500                | 580                  | 215                 | 560                 |
| NYS2-26F-370-17RH48 | 64.6                | 126                  | 363                   | 1700                 | 113.3                      | 310             | 2.88                | 8                          | 2500                | 600                  | 225                 | 630                 |
| NYS2-26F-440-17RH48 | 76                  | 146                  | 427                   | 1700                 | 113.3                      | 318             | 2.92                | 8                          | 2500                | 670                  | 255                 | 720                 |
| NYS2-26F-500-17RH60 | 86.3                | 168                  | 485                   | 1700                 | 113.3                      | 310             | 2.89                | 8                          | 2500                | 755                  | 298                 | 815                 |
| NYS2-26F-560-17RH60 | 96.1                | 183                  | 540                   | 1700                 | 113.3                      | 318             | 2.95                | 8                          | 2500                | 830                  | 326                 | 905                 |



# Motor Ordering code

# 2000rpm

| Motor model         | Rated power<br>(kW) | Rated current<br>(A) | Rated torque<br>(N.m) | Rated speed<br>(rpm) | Rated<br>frequency<br>(Hz) | Back-EMF<br>(V) | Kt<br>Thermal state |   | Peak speed<br>(rpm) | Peak torque<br>(N.m) | Peak current<br>(A) | Inertia<br>(kg.cm²) |
|---------------------|---------------------|----------------------|-----------------------|----------------------|----------------------------|-----------------|---------------------|---|---------------------|----------------------|---------------------|---------------------|
| NYS2-20F-055-20RH42 | 11.3                | 21                   | 54                    | 2000                 | 133.3                      | 322             | 2.57                | 8 | 2600                | 88                   | 36                  | 62                  |
| NYS2-20F-065-20RH42 | 13.6                | 24.8                 | 65                    | 2000                 | 133.3                      | 327             | 2.62                | 8 | 2600                | 104                  | 44.5                | 73                  |
| NYS2-20F-080-20RH42 | 17.4                | 31.6                 | 82                    | 2000                 | 133.3                      | 327             | 2.59                | 8 | 2600                | 145                  | 62                  | 87                  |
| NYS2-20F-105-20RH42 | 21.8                | 38.3                 | 104                   | 2000                 | 133.3                      | 332             | 2.72                | 8 | 2600                | 194                  | 80                  | 112                 |
| NYS2-20F-130-20RH42 | 26.8                | 51.3                 | 128                   | 2000                 | 133.3                      | 312             | 2.5                 | 8 | 2600                | 248                  | 110                 | 137                 |
| NYS2-20F-155-20RH42 | 32.5                | 60.9                 | 155                   | 2000                 | 133.3                      | 312             | 2.55                | 8 | 2600                | 310                  | 140                 | 160                 |
| NYS2-20F-180-20RH42 | 36.4                | 66.8                 | 174                   | 2000                 | 133.3                      | 327             | 2.6                 | 8 | 2600                | 360                  | 154                 | 187                 |
| NYS2-20F-200-20RH42 | 40.8                | 74                   | 195                   | 2000                 | 133.3                      | 332             | 2.64                | 8 | 2600                | 400                  | 185                 | 213                 |
| NYS2-26F-225-20RH48 | 43.4                | 81.5                 | 207                   | 2000                 | 133.3                      | 312             | 2.54                | 8 | 2600                | 365                  | 160                 | 380                 |
| NYS2-26F-250-20RH48 | 50.8                | 91.6                 | 243                   | 2000                 | 133.3                      | 328             | 2.65                | 8 | 2600                | 400                  | 170                 | 440                 |
| NYS2-26F-300-20RH48 | 58.6                | 104                  | 280                   | 2000                 | 133.3                      | 333             | 2.69                | 8 | 2600                | 490                  | 205                 | 500                 |
| NYS2-26F-340-20RH48 | 69.1                | 125                  | 330                   | 2000                 | 133.3                      | 328             | 2.65                | 8 | 2600                | 520                  | 210                 | 560                 |
| NYS2-26F-370-20RH48 | 75.4                | 143                  | 360                   | 2000                 | 133.3                      | 312             | 2.52                | 8 | 2600                | 595                  | 273                 | 630                 |
| NYS2-26F-440-20RH48 | 88.6                | 167                  | 423                   | 2000                 | 133.3                      | 312             | 2.53                | 8 | 2600                | 670                  | 308                 | 720                 |
| NYS2-26F-500-20RH60 | 101                 | 181                  | 482                   | 2000                 | 133.3                      | 328             | 2.66                | 8 | 2600                | 755                  | 330                 | 815                 |
| NYS2-26F-560-20RH60 | 111                 | 203                  | 530                   | 2000                 | 133.3                      | 333             | 2.62                | 8 | 2600                | 820                  | 345                 | 905                 |

Test conditions:

1)The motor is placed horizontally in free still air and the ambient temperature is 25  $^\circ\!\mathbb{C}$  .

2)The rated data of the motor is based on the temperature rise of 100K (typical tolerance value ±5%), and the alarm temperature of the temperature sensor is 130°C.



# System Configuration Table

# Single machine configuration recommendations

| Maximum system<br>pressure (bar) | Maximum system<br>flow (L / min) | Recommended pump<br>displacement (CC) | Recommended<br>motor model | Recommend servo<br>drive model |
|----------------------------------|----------------------------------|---------------------------------------|----------------------------|--------------------------------|
| 140                              | 66                               | 32                                    | NYS2-20F-055-17RH42        | MV600J6-4T11                   |
| 140                              | 82                               | 40                                    | NYS2-20F-065-17RH42        | MV600J6-4T11                   |
| 140                              | 103                              | 50                                    | NYS2-20F-080-17RH42        | MV600J6-4T15                   |
| 140                              | 147                              | 63                                    | NYS2-20F-105-20RH42        | MV600J6-4T22                   |
| 140                              | 180                              | 80                                    | NYS2-20F-130-20RH42        | MV600J6-4T30                   |
| 140                              | 213                              | 100                                   | NYS2-20F-155-20RH42        | MV600J6-4T37                   |
| 140                              | 265                              | 125                                   | NYS2-20F-200-20RH42        | MV600J6-4T45                   |

| Maximum system<br>pressure (bar) | Maximum system<br>flow (L / min) | Recommended pump displacement (CC) | Recommended<br>motor model | Recommend servo<br>drive model |
|----------------------------------|----------------------------------|------------------------------------|----------------------------|--------------------------------|
| 160                              | 66                               | 32                                 | NYS2-20F-055-17RH42        | MV600J6-4T11                   |
| 160                              | 82                               | 40                                 | NYS2-20F-065-17RH42        | MV600J6-4T15                   |
| 160                              | 103                              | 50                                 | NYS2-20F-080-17RH42        | MV600J6-4T18.5                 |
| 160                              | 147                              | 63                                 | NYS2-20F-105-20RH42        | MV600J6-4T30                   |
| 160                              | 180                              | 80                                 | NYS2-20F-130-20RH42        | MV600J6-4T37                   |
| 160                              | 213                              | 100                                | NYS2-20F-180-20RH42        | MV600J6-4T45                   |
| 160                              | 265                              | 125                                | NYS2-26F-225-20RH48        | MV600J6-4T55                   |

| Maximum system<br>pressure (bar) | Maximum system<br>flow (L / min) | Recommended pump displacement (CC) | Recommended<br>motor model | Recommend servo<br>drive model |
|----------------------------------|----------------------------------|------------------------------------|----------------------------|--------------------------------|
| 175                              | 66                               | 32                                 | NYS2-20F-065-17RH42        | MV600J6-4T11                   |
| 175                              | 82                               | 40                                 | NYS2-20F-080-17RH42        | MV600J6-4T15                   |
| 175                              | 103                              | 50                                 | NYS2-20F-105-17RH42        | MV600J6-4T22                   |
| 175                              | 147                              | 63                                 | NYS2-20F-130-20RH42        | MV600J6-4T30                   |
| 175                              | 180                              | 80                                 | NYS2-20F-155-20RH42        | MV600J6-4T37                   |
| 175                              | 213                              | 100                                | NYS2-20F-200-20RH42        | MV600J6-4T45                   |
| 175                              | 265                              | 125                                | NYS2-26F-250-20RH48        | MV600J6-4T55                   |



# Confluence Configuration example

| Maximum system<br>pressure (bar) | Maximum system<br>flow (L / min) | Recommended pump displacement (CC) | Recommended<br>motor model   | Recommended servo<br>drive model                     |
|----------------------------------|----------------------------------|------------------------------------|--|--|
|                                  |                                  | 80x1+63x1                          | NYS2-20F-155-17RH42 x1+<br>NYS2-20F-130-17RH42 x1                            | MV600J6-4T37x1+<br>MV600J6-4T30x1                    |
| 175                              | 290                              | 100x1+50x1                         | NYS2-20F-180-17RH42 x1+<br>NYS2-20F-105-17RH42 x1                            | MV600J6-4T45x1+<br>MV600J6-4T22x1                    |
|                                  |                                  | 50x3                               | NYS2-20F-105-17RH42 x3   | MV600J6-4T22x3                                       |
|                                  |                                  | 63x2+50x1                          | NYS2-20F-130-17RH42 x2+<br>NYS2-20F-105-17RH42 x1                            | MV600J6-4T30x2+<br>MV600J6-4T22x1                    |
| 175                              | 342                              | 80x1+50x1+40x1                     | NYS2-20F-155-17RH42 x1+<br>NYS2-20F-105-17RH42 x1+<br>NYS2-20F-080-17RH42 x1 | MV600J6-4T37x1+<br>MV600J6-4T22x1+<br>MV600J6-4T15x1 |
| 175                              | 427                              | 63x1+50x3                          | NYS2-20F-155-17RH42 x 1 +<br>NYS2-20F-105-17RH42 x 3                         | MV600J6-4T30x1+<br>MV600J6-4T22x3                    |

Note: x1 means that the number of motors or drives is 1, x2 means 2, and so on.



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The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.



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