

# Servomotors for explosive atmospheres

EX series

1,75 to 35 Nm



## General technical characteristics

|                      |                                                                                                             |
|----------------------|-------------------------------------------------------------------------------------------------------------|
| Motor type           | Permanent magnets synchronous motors                                                                        |
| Number of poles      | 10                                                                                                          |
| Torque range         | 1,75 to 35 Nm                                                                                               |
| Speed range          | 2000 to 8000 rpm                                                                                            |
| Mounting             | - Flange with smooth holes                                                                                  |
| Mechanical interface | - Solid smooth shaft (standard)<br>- Solid shaft with key (option)                                          |
| Feedback sensors     | - 2 poles resolver (standard)<br>- Absolute EnDat encoder (option)<br>- Absolute Hiperface encoder (option) |
| Thermal protection   | - Thermoswitches and thermofuses integrated to the winding                                                  |
| Other options        | - Parking brake                                                                                             |

## Description

EX series is a range of permanent magnets servomotors designed for use in explosive atmospheres. Featuring robust explosion-proof housings, EX motors are capable of bearing internal explosions with no risks of propagation to the neighbouring environment. Two versions are available, conforming with north american or european safety standards. EX servomotors are characterized by excellent motion quality, great acceleration / deceleration capabilities, and high torque output over a wide speed range. Various winding variants and numerous options are available to offer maximum flexibility.

## Advantages

**Servomotors with explosion proof housings**

**CE or UL versions available**

**High dynamic performances**

**Compactness and robustness**

**No maintenance**

## Applications

- Printing machinery
- Paint spray equipments
- Plastics machinery
- Chemical, petro-chemical and pharmaceutical industries
- Waste processing plants...

|                          |                                                                                                  |                                                                                                           |
|--------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Voltage supply           | 230 / 400 VAC                                                                                    | 230/ 480 VAC                                                                                              |
| Conformance              | - ATEX 94/9/EC Directive<br>- EN60079-0, EN60079-1<br>- EN61241-0 and EN61241-1 standards        | - UL 674 standard : Electric Motors and Generators for use in Division 1 Hazardous (Classified) Locations |
| Classification           | - II 2G Ex d IIB T4 IP64 (Gaz)<br>- II 2GD Ex d IIB T4 IP65 Ex tD A21 IP65 T135°C (Gas and dust) | - Class 1, Division 1, Group C & D                                                                        |
| Ingress protection level | - IP64 (standard)<br>- IP65 (option)                                                             | - IP65                                                                                                    |
| Connections              | - cable glands                                                                                   | - Tapped holes                                                                                            |
| Marking                  |                                                                                                  |                                                                                                           |

# CE servomotors

EX series

1,75 to 35 Nm



## Selection and ordering

| Rated Speed<br>N <sub>MAX</sub><br>(rpm) | Stall Torque<br>M <sub>0</sub><br>(Nm) | Stall Current<br>I <sub>0</sub><br>(A <sup>RMS</sup> ) | Rated Torque<br>M <sub>N</sub><br>(Nm) | Rated Current<br>I <sub>N</sub><br>(A <sup>RMS</sup> ) | Peak Torque<br>M <sub>MAX</sub><br>(Nm) | Peak Current<br>I <sub>MAX</sub><br>(A <sup>RMS</sup> ) | Max. Speed with Compax3<br>N <sub>MAX</sub><br>(rpm) | Moment of Inertia<br>J<br>(kgm²x10 <sup>-5</sup> ) | Reference   |   |      |   |   |   |
|------------------------------------------|----------------------------------------|--------------------------------------------------------|----------------------------------------|--------------------------------------------------------|-----------------------------------------|---------------------------------------------------------|------------------------------------------------------|----------------------------------------------------|-------------|---|------|---|---|---|
| 230 VAC power supply                     |                                        |                                                        |                                        |                                                        |                                         |                                                         |                                                      |                                                    |             |   |      |   |   |   |
| 2300                                     | 1.75                                   | 1.24                                                   | 1.66                                   | 1.19                                                   | 6.6                                     | 5.64                                                    | 1960                                                 | 7.9                                                | E X 3 1 0 E | ■ | PR 1 | ■ | ■ | ■ |
| 4000                                     | 1.75                                   | 2.16                                                   | 1.54                                   | 1.96                                                   | 6.6                                     | 9.85                                                    | 3630                                                 | 7.9                                                | E X 3 1 0 E | ■ | KR 1 | ■ | ■ | ■ |
| 2300                                     | 3.5                                    | 2.46                                                   | 3.18                                   | 2.26                                                   | 13.4                                    | 11.3                                                    | 2030                                                 | 29                                                 | E X 4 2 0 E | ■ | PR 1 | ■ | ■ | ■ |
| 4000                                     | 3.5                                    | 4.26                                                   | 2.67                                   | 3.33                                                   | 13.4                                    | 19.6                                                    | 3700                                                 | 29                                                 | E X 4 2 0 E | ■ | JR 1 | ■ | ■ | ■ |
| 3200                                     | 4.8                                    | 4.57                                                   | 3.74                                   | 3.63                                                   | 18.8                                    | 21                                                      | 2930                                                 | 42.6                                               | E X 4 3 0 E | ■ | JR 1 | ■ | ■ | ■ |
| 4000                                     | 4.8                                    | 5.8                                                    | 3.26                                   | 4.05                                                   | 18.8                                    | 26.6                                                    | 3790                                                 | 42.6                                               | E X 4 3 0 E | ■ | FR 1 | ■ | ■ | ■ |
| 2500                                     | 7                                      | 5.51                                                   | 5.49                                   | 4.47                                                   | 26.7                                    | 24.8                                                    | 2310                                                 | 98                                                 | E X 6 2 0 E | ■ | OR 1 | ■ | ■ | ■ |
| 3000                                     | 10.4                                   | 10                                                     | 7.24                                   | 7.32                                                   | 40                                      | 42.2                                                    | 2860                                                 | 147                                                | E X 6 3 0 E | ■ | IR 1 | ■ | ■ | ■ |
| 2200                                     | 14                                     | 9.28                                                   | 11.16                                  | 7.45                                                   | 50                                      | 41.8                                                    | 2050                                                 | 320                                                | E X 8 2 0 E | ■ | RR 1 | ■ | ■ | ■ |
| 3600                                     | 14                                     | 14.85                                                  | 7.53                                   | 8.3                                                    | 50                                      | 66.9                                                    | 3430                                                 | 320                                                | E X 8 2 0 E | ■ | LR 1 | ■ | ■ | ■ |
| 2200                                     | 24.5                                   | 16.04                                                  | 14.18                                  | 9.54                                                   | 92                                      | 72.7                                                    | 2120                                                 | 620                                                | E X 8 4 0 E | ■ | JR 1 | ■ | ■ | ■ |
| 2500                                     | 35                                     | 27.3                                                   | 8.5                                    | 7.28                                                   | 137                                     | 133                                                     | 2500                                                 | 920                                                | E X 8 6 0 E | ■ | DR 1 | ■ | ■ | ■ |
| 400VAC power supply                      |                                        |                                                        |                                        |                                                        |                                         |                                                         |                                                      |                                                    |             |   |      |   |   |   |
| 4000                                     | 1.75                                   | 1.24                                                   | 1.54                                   | 1.12                                                   | 6.6                                     | 5.64                                                    | 3600                                                 | 7.9                                                | E X 3 1 0 E | ■ | PR 1 | ■ | ■ | ■ |
| 2000                                     | 3.5                                    | 1.24                                                   | 3.22                                   | 1.15                                                   | 13.4                                    | 5.68                                                    | 1740                                                 | 29                                                 | E X 4 2 0 E | ■ | VR 1 | ■ | ■ | ■ |
| 4000                                     | 3.5                                    | 2.46                                                   | 2.68                                   | 1.93                                                   | 13.4                                    | 11.3                                                    | 3720                                                 | 29                                                 | E X 4 2 0 E | ■ | PR 1 | ■ | ■ | ■ |
| 3000                                     | 4.8                                    | 2.46                                                   | 3.85                                   | 2                                                      | 18.8                                    | 11.3                                                    | 2740                                                 | 42.6                                               | E X 4 3 0 E | ■ | PR 1 | ■ | ■ | ■ |
| 4000                                     | 4.8                                    | 3.3                                                    | 3.26                                   | 2.31                                                   | 18.8                                    | 15.1                                                    | 3740                                                 | 42.6                                               | E X 4 3 0 E | ■ | LR 1 | ■ | ■ | ■ |
| 4300                                     | 7                                      | 5.22                                                   | 3.13                                   | 2.75                                                   | 26.7                                    | 24.8                                                    | 4240                                                 | 98                                                 | E X 6 2 0 E | ■ | OR 1 | ■ | ■ | ■ |
| 2900                                     | 10.4                                   | 5.54                                                   | 7.42                                   | 4.12                                                   | 40                                      | 23.2                                                    | 2750                                                 | 147                                                | E X 6 3 0 E | ■ | YR 1 | ■ | ■ | ■ |
| 4000                                     | 10.4                                   | 7.5                                                    | 5.2                                    | 4.08                                                   | 40                                      | 31.4                                                    | 3820                                                 | 147                                                | E X 6 3 0 E | ■ | NR 1 | ■ | ■ | ■ |
| 2200                                     | 14                                     | 5.4                                                    | 11.16                                  | 4.36                                                   | 50                                      | 24.3                                                    | 2080                                                 | 320                                                | E X 8 2 0 E | ■ | WR 1 | ■ | ■ | ■ |
| 3600                                     | 14                                     | 9.3                                                    | 7.53                                   | 5.19                                                   | 50                                      | 41.8                                                    | 3600                                                 | 320                                                | E X 8 2 0 E | ■ | RR 1 | ■ | ■ | ■ |
| 2100                                     | 24.5                                   | 8.55                                                   | 15                                     | 5.37                                                   | 92                                      | 38.8                                                    | 1950                                                 | 620                                                | E X 8 4 0 E | ■ | QR 1 | ■ | ■ | ■ |
| 3300                                     | 24.5                                   | 14.3                                                   | 2.85                                   | 2.07                                                   | 92                                      | 64.7                                                    | 3300                                                 | 620                                                | E X 8 4 0 E | ■ | KR 1 | ■ | ■ | ■ |
| 2500                                     | 35                                     | 15.4                                                   | 8.5                                    | 4.1                                                    | 137                                     | 75                                                      | 2500                                                 | 920                                                | E X 8 6 0 E | ■ | JR 1 | ■ | ■ | ■ |

# CE servomotors

EX series

1,75 to 35 Nm

Drives associations



| Motor                     | Rated Speed<br>N <sub>MAX</sub><br>(rpm) | Associated drives sizes |                                                         |                   |                  |             |
|---------------------------|------------------------------------------|-------------------------|---------------------------------------------------------|-------------------|------------------|-------------|
|                           |                                          | Compax3                 | Max. Speed<br>with Compax3<br>N <sub>MAX</sub><br>(rpm) | 890SD             | 650S             | DIGIVEX     |
| 230 VAC power supply      |                                          |                         |                                                         |                   |                  |             |
| E X 3 1 0 E ■ P R 1 ■ ■ ■ | 2300                                     | C3S025V2...             | 1960                                                    | 890SD-231300B0... | 650S-21140010... | DSD13004... |
| E X 3 1 0 E ■ K R 1 ■ ■ ■ | 4000                                     | C3S025V2...             | 3630                                                    | 890SD-231300B0... | 650S-21140010..  | DSD13004... |
| E X 4 2 0 E ■ P R 1 ■ ■ ■ | 2300                                     | C3S025V2...             | 2030                                                    | 890SD-231550B0... | 650S-21140010... | DSD13004... |
| E X 4 2 0 E ■ J R 1 ■ ■ ■ | 4000                                     | C3S063V2...             | 3700                                                    | 890SD-231700B0... | 650S-21170020... | DSD13007... |
| E X 4 3 0 E ■ J R 1 ■ ■ ■ | 3200                                     | C3S063V2...             | 2930                                                    | 890SD-231700B0... | 650S-21170020... | DSD13007... |
| E X 4 3 0 E ■ F R 1 ■ ■ ■ | 4000                                     | C3S063V2...             | 3790                                                    | 890SD-231700B0... | 650S-21170020... | DSD13015... |
| E X 6 2 0 E ■ O R 1 ■ ■ ■ | 2500                                     | C3S063V2...             | 2310                                                    | 890SD-231700B0... | 650S-21170020... | DSD13015... |
| E X 6 3 0 E ■ I R 1 ■ ■ ■ | 3000                                     | C3S100V2...             | 2860                                                    | 890SD-232165B0... | -                | DSD13015... |
| E X 8 2 0 E ■ R R 1 ■ ■ ■ | 2200                                     | C3S100V2...             | 2050                                                    | 890SD-232165B0... | -                | DSD13015... |
| E X 8 2 0 E ■ L R 1 ■ ■ ■ | 3600                                     | C3S150V2...             | 3430                                                    | 890SD-232240C0... | -                | DSD13030... |
| E X 8 4 0 E ■ J R 1 ■ ■ ■ | 2200                                     | -                       | 2120                                                    | 890SD-232240C0... | -                | DSD13030... |
| E X 8 6 0 E ■ D R 1 ■ ■ ■ | 2500                                     | -                       | 2500                                                    | 890SD-232300C0... | -                | DSD13060... |
| 480 VAC power supply      |                                          |                         |                                                         |                   |                  |             |
| E X 3 1 0 E ■ P R 1 ■ ■ ■ | 4000                                     | C3S015V4...             | 3600                                                    | 890SD-531200B0... | 650S-43125020... | DSD16002... |
| E X 4 2 0 E ■ V R 1 ■ ■ ■ | 2000                                     | C3S015V4...             | 1740                                                    | 890SD-531200B0... | 650S-43125020... | DSD16002... |
| E X 4 2 0 E ■ P R 1 ■ ■ ■ | 4000                                     | C3S038V4...             | 3720                                                    | 890SD-531350B0... | 650S-43125020... | DSD16004... |
| E X 4 3 0 E ■ P R 1 ■ ■ ■ | 3000                                     | C3S038V4...             | 2740                                                    | 890SD-531350B0... | 650S-43125020... | DSD16004... |
| E X 4 3 0 E ■ L R 1 ■ ■ ■ | 4000                                     | C3S038V4...             | 3740                                                    | 890SD-531450B0... | 650S-43155020... | DSD16008... |
| E X 6 2 0 E ■ O R 1 ■ ■ ■ | 4300                                     | C3S075V4...             | 4240                                                    | 890SD-532100B0... | 650S-43155020... | DSD16008... |
| E X 6 3 0 E ■ Y R 1 ■ ■ ■ | 2900                                     | C3S075V4...             | 2750                                                    | 890SD-532100B0... | 650S-43155020... | DSD16008... |
| E X 6 3 0 E ■ N R 1 ■ ■ ■ | 4000                                     | C3S075V4...             | 3820                                                    | 890SD-532120B0... | 650S-43190030... | DSD16016... |
| E X 8 2 0 E ■ W R 1 ■ ■ ■ | 2200                                     | C3S075V4...             | 2080                                                    | 890SD-532100B0... | 650S-43155020... | DSD16008... |
| E X 8 2 0 E ■ R R 1 ■ ■ ■ | 3600                                     | C3S150V4...             | 3600                                                    | 890SD-532160B0... | 650S-43216030... | DSD16016... |
| E X 8 4 0 E ■ Q R 1 ■ ■ ■ | 2100                                     | C3S150V4...             | 1950                                                    | 890SD-532120B0... | 650S-43190030... | DSD16016... |
| E X 8 4 0 E ■ K R 1 ■ ■ ■ | 3300                                     | C3S150V4...             | 3300                                                    | 890SD-53216SB0... | 650S-43216030... | DSD16032... |
| E X 8 6 0 E ■ J R 1 ■ ■ ■ | 2500                                     | C3S300V4...             | 2500                                                    | 890SD-53216SB0... | 650S-43216030... | DSD16032... |



# CE servomotors

EX series

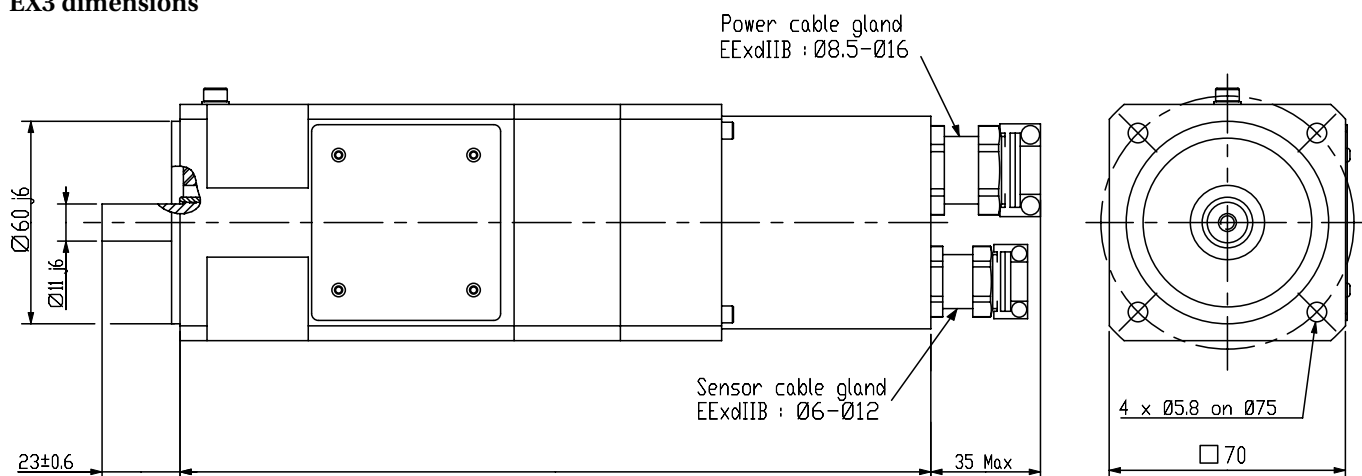
1,75 to 35 Nm

Dimensions (resolver version)



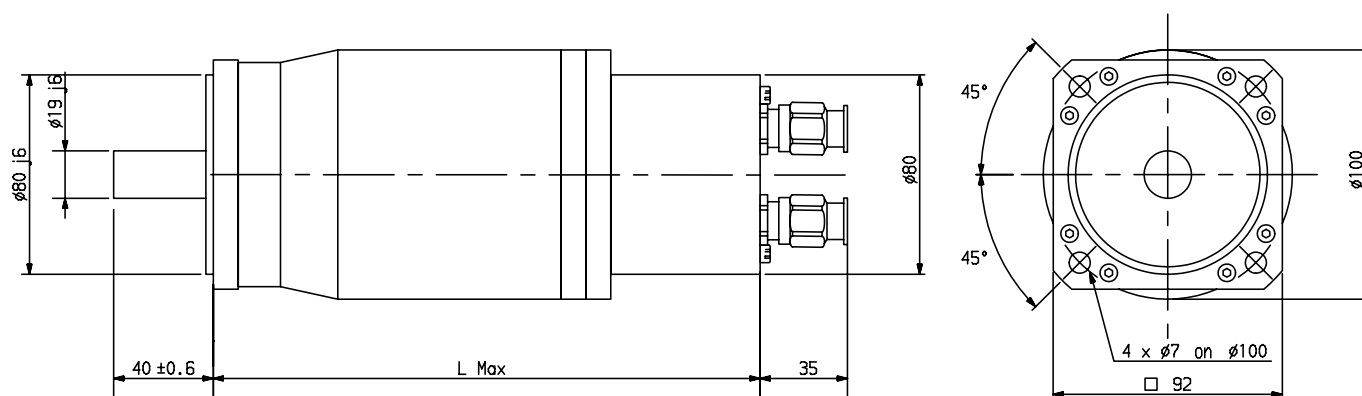
| EX3 dimensions (mm) |               |            |
|---------------------|---------------|------------|
| Motor               | L             |            |
|                     | Without brake | With brake |
| E X 3 1 0           | 225           | 255        |

## EX3 dimensions



| EX4 dimensions (mm) |               |            |
|---------------------|---------------|------------|
| Motor               | L             |            |
|                     | Without brake | With brake |
| E X 4 2 0           | 265           | 290        |
| E X 4 3 0           | 290           | 315        |

## EX4 dimensions



# CE servomotors

EX series

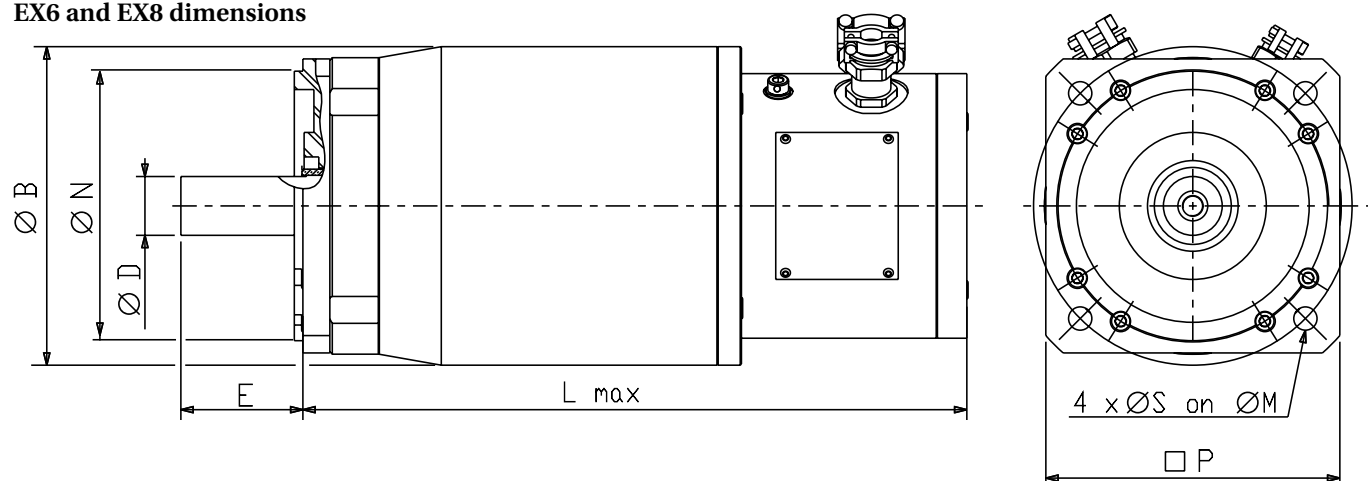
1,75 to 35 Nm

Dimensions (resolver version)



| EX6-EX8 dimensions (mm) |     |    |    |     |     |     |     |               |            |
|-------------------------|-----|----|----|-----|-----|-----|-----|---------------|------------|
| Motor                   | N   | D  | E  | B   | P   | S   | M   | L             |            |
|                         |     |    |    |     |     |     |     | Without brake | With brake |
| EX620                   | 110 | 24 | 50 | 130 | 120 | 8.4 | 130 | 275           | 290        |
| EX630                   | 110 | 24 | 50 | 130 | 120 | 8.4 | 130 | 300           | 325        |
| EX820                   | 130 | 32 | 58 | 165 | 155 | 12  | 165 | 290           | 325        |
| EX840                   | 130 | 32 | 58 | 165 | 155 | 12  | 165 | 350           | 385        |
| EX860                   | 130 | 32 | 58 | 165 | 155 | 12  | 165 | 410           | 445        |

EX6 and EX8 dimensions



# UL servomotors

EX series

1,75 to 35 Nm



## Selection and ordering

| Rated Speed<br>$N_{MAX}$<br>(rpm) | Stall Torque<br>$M_0$<br>(Nm) | Stall Current<br>$I_0$<br>(A <sub>RMS</sub> ) | Rated Torque<br>$M_N$<br>(Nm) | Rated Current<br>$I_N$<br>(A <sub>RMS</sub> ) | Peak Torque<br>$M_{MAX}$<br>(Nm) | Peak Current<br>$I_{MAX}$<br>(A <sub>RMS</sub> ) | Moment of Inertia<br>$J$<br>kgm <sup>2</sup> x10 <sup>-5</sup> | Product Code |   |   |   |   |   |   |      |   |   |   |  |
|-----------------------------------|-------------------------------|-----------------------------------------------|-------------------------------|-----------------------------------------------|----------------------------------|--------------------------------------------------|----------------------------------------------------------------|--------------|---|---|---|---|---|---|------|---|---|---|--|
| 230 VAC power supply              |                               |                                               |                               |                                               |                                  |                                                  |                                                                |              |   |   |   |   |   |   |      |   |   |   |  |
| 4200                              | 1.6                           | 2.46                                          | 1.41                          | 2.24                                          | 3.98                             | 6.29                                             | 7.9                                                            | E            | X | 3 | 1 | 0 | U | ■ | UR 1 | ■ | 1 | ■ |  |
| 4000                              | 3.2                           | 4.15                                          | 2.45                          | 3.25                                          | 8                                | 10.8                                             | 29                                                             | E            | X | 4 | 2 | 0 | U | ■ | IR 1 | ■ | 1 | ■ |  |
| 3200                              | 4.4                           | 4.88                                          | 3.48                          | 3.94                                          | 11                               | 12.6                                             | 42.6                                                           | E            | X | 4 | 3 | 0 | U | ■ | GR 1 | ■ | 1 | ■ |  |
| 2750                              | 6.4                           | 6.02                                          | 4.76                          | 4.67                                          | 17.4                             | 16.2                                             | 98                                                             | E            | X | 6 | 2 | 0 | U | ■ | MR 1 | ■ | 1 | ■ |  |
| 2700                              | 9.5                           | 7.91                                          | 7.12                          | 6.16                                          | 23.8                             | 19.4                                             | 147                                                            | E            | X | 6 | 3 | 0 | U | ■ | KR 1 | ■ | 1 | ■ |  |
| 2300                              | 12.9                          | 9.1                                           | 10.1                          | 7.21                                          | 30                               | 22.8                                             | 320                                                            | E            | X | 8 | 2 | 0 | U | ■ | QR 1 | ■ | 1 | ■ |  |
| 1650                              | 22.6                          | 12                                            | 16.8                          | 9                                             | 60                               | 34.6                                             | 620                                                            | E            | X | 8 | 4 | 0 | U | ■ | LR 1 | ■ | 1 | ■ |  |
| 1500                              | 31.4                          | 13.9                                          | 22.3                          | 10.01                                         | 90                               | 43.5                                             | 920                                                            | E            | X | 8 | 6 | 0 | U | ■ | JR 1 | ■ | 1 | ■ |  |
| 480 VAC power supply              |                               |                                               |                               |                                               |                                  |                                                  |                                                                |              |   |   |   |   |   |   |      |   |   |   |  |
| 7600                              | 1.6                           | 2.46                                          | 1.03                          | 1.74                                          | 3.98                             | 6.29                                             | 7.9                                                            | E            | X | 3 | 1 | 0 | U | ■ | UR 1 | ■ | 1 | ■ |  |
| 7000                              | 3.2                           | 4.15                                          | 1.1                           | 1.58                                          | 8                                | 10.8                                             | 29                                                             | E            | X | 4 | 2 | 0 | U | ■ | IR 1 | ■ | 1 | ■ |  |
| 5700                              | 4.4                           | 4.88                                          | 1.72                          | 2.07                                          | 11                               | 12.6                                             | 42.6                                                           | E            | X | 4 | 3 | 0 | U | ■ | GR 1 | ■ | 1 | ■ |  |
| 5000                              | 6.4                           | 6.02                                          | 1.71                          | 1.95                                          | 17.4                             | 16.2                                             | 98                                                             | E            | X | 6 | 2 | 0 | U | ■ | MR 1 | ■ | 1 | ■ |  |
| 4200                              | 9.5                           | 7.91                                          | 4.38                          | 4.02                                          | 23.8                             | 19.4                                             | 147                                                            | E            | X | 6 | 3 | 0 | U | ■ | KR 1 | ■ | 1 | ■ |  |
| 4000                              | 12.9                          | 9.1                                           | 5.77                          | 4.27                                          | 30                               | 22.8                                             | 320                                                            | E            | X | 8 | 2 | 0 | U | ■ | QR 1 | ■ | 1 | ■ |  |
| 3000                              | 22.6                          | 12                                            | 5.84                          | 3.39                                          | 60                               | 34.6                                             | 620                                                            | E            | X | 8 | 4 | 0 | U | ■ | LR 1 | ■ | 1 | ■ |  |
| 2500                              | 31.4                          | 13.9                                          | 8.31                          | 4.01                                          | 90                               | 43.5                                             | 920                                                            | E            | X | 8 | 6 | 0 | U | ■ | JR 1 | ■ | 1 | ■ |  |

## Associated drives

| Motor                     | Rated Speed<br>N <sub>MAX</sub><br>(rpm) | Associated Drives Sizes |                   |                  | DIGIVEX     |
|---------------------------|------------------------------------------|-------------------------|-------------------|------------------|-------------|
|                           |                                          | Compax3                 | 890SD             | 650S             |             |
| 230 VAC power supply      |                                          |                         |                   |                  |             |
| E X 3 1 0 U ■ U R 1 ■ 1 ■ | 4200                                     | C3S063V2...             | 890SD-231550B0... | 650S-21140010... | DSD13004... |
| E X 4 2 0 U ■ I R 1 ■ 1 ■ | 4000                                     | C3S063V2...             | 890SD-231700B0... | 650S-21170020... | DSD13007... |
| E X 4 3 0 U ■ G R 1 ■ 1 ■ | 3200                                     | C3S063V2...             | 890SD-231700B0... | 650S-21170020... | DSD13015... |
| E X 6 2 0 U ■ M R 1 ■ 1 ■ | 2750                                     | C3S063V2...             | 890SD-231700B0... | 650S-21170020... | DSD13015... |
| E X 6 3 0 U ■ K R 1 ■ 1 ■ | 2700                                     | C3S100V2...             | 890SD-232165B0... | -                | DSD13015... |
| E X 8 2 0 U ■ Q R 1 ■ 1 ■ | 2300                                     | C3S100V2...             | 890SD-232165B0... | -                | DSD13015... |
| E X 8 4 0 U ■ L R 1 ■ 1 ■ | 1650                                     | C3S150V2...             | 890SD-232165B0... | -                | DSD13030... |
| E X 8 6 0 U ■ J R 1 ■ 1 ■ | 1500                                     | C3S150V2...             | 890SD-232240C0... | -                | -           |
| 480 VAC power supply      |                                          |                         |                   |                  |             |
| E X 3 1 0 U ■ U R 1 ■ 1 ■ | 7600                                     | C3S038V4...             | 890SD-531450B0... | 650S-43125020... | DSD16004... |
| E X 4 2 0 U ■ I R 1 ■ 1 ■ | 7000                                     | C3S075V4...             | 890SD-532100B0... | 650S-43155020... | DSD16008... |
| E X 4 3 0 U ■ G R 1 ■ 1 ■ | 5700                                     | C3S075V4...             | 890SD-532100B0... | 650S-43155020... | DSD16008... |
| E X 6 2 0 U ■ M R 1 ■ 1 ■ | 5000                                     | C3S075V4...             | 890SD-532100B0... | 650S-43190030... | DSD16016... |
| E X 6 3 0 U ■ K R 1 ■ 1 ■ | 4200                                     | C3S150V4...             | 890SD-532120B0... | 650S-43190030... | DSD16016... |
| E X 8 2 0 U ■ Q R 1 ■ 1 ■ | 4000                                     | C3S150V4...             | 890SD-532160B0... | 650S-43216030... | DSD16016... |
| E X 8 4 0 U ■ L R 1 ■ 1 ■ | 3000                                     | C3S150V4...             | 890SD-53216SB0... | 650S-43216030... | DSD16032... |
| E X 8 6 0 U ■ J R 1 ■ 1 ■ | 2500                                     | C3S150V4...             | 890SD-53216SB0... | 650S-43216030... | DSD16032... |

# UL servomotors

EX series

1,75 to 35 Nm



## EX codification

| EX motors - UL marked                                                        | Product code example |   |   |   |          |
|------------------------------------------------------------------------------|----------------------|---|---|---|----------|
|                                                                              | E                    | X | 8 | 6 | 0        |
|                                                                              | U                    | ▪ | J | R | 1        |
|                                                                              |                      | ▪ |   |   | 1        |
|                                                                              |                      | ▪ |   |   | ▪        |
| <b>FEEDBACK SENSOR</b>                                                       |                      |   |   |   |          |
| <b>2 poles resolver (Standard)</b>                                           |                      |   |   |   | <b>A</b> |
| Absolute singleturn HIPERFACE SKS36 Encoder (128 periods/rev)                |                      |   |   |   | R        |
| Absolute multiturn HIPERFACE SKM36 Encoder (128 periods/rev)                 |                      |   |   |   | S        |
| Absolute singleturn HIPERFACE SRS50 encoder 1024 ppr (not available for EX3) |                      |   |   |   | T        |
| Absolute multiturn HIPERFACE SRM50 encoder 1024 ppr (not available for EX3)  |                      |   |   |   | U        |
| Absolute singleturn ENDAT ECN 1113 encoder                                   |                      |   |   |   | V        |
| Absolute multiturn ENDAT EQN 1125 encoder                                    |                      |   |   |   | W        |
| Low cost encoder with 10 commutation tracks 2048 ppr                         |                      |   |   |   | X        |
| Without feedback sensor                                                      |                      |   |   |   | Y        |
| Other sensor                                                                 |                      |   |   |   | Z        |
| <b>BRAKE</b>                                                                 |                      |   |   |   |          |
| <b>Motor without brake + thermal switch sensor (standard)</b>                |                      |   |   |   | <b>2</b> |
| Motor with Brake + thermal switch sensor                                     |                      |   |   |   | 5        |
| <b>INGRESS PROTECTION LEVEL</b>                                              |                      |   |   |   |          |
| <b>IP64</b>                                                                  |                      |   |   |   | <b>0</b> |
| IP65                                                                         |                      |   |   |   | 1        |
| <b>SHAFT END</b>                                                             |                      |   |   |   |          |
| <b>Smooth shaft</b>                                                          |                      |   |   |   | <b>0</b> |
| Keyed shaft                                                                  |                      |   |   |   | 1        |

# UL servomotors

EX series

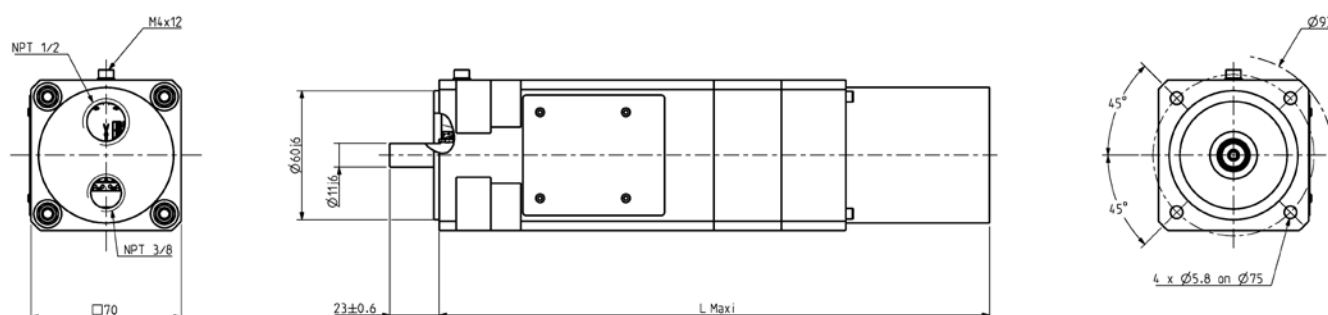
1,75 to 35 Nm



## Dimensions (resolver version)

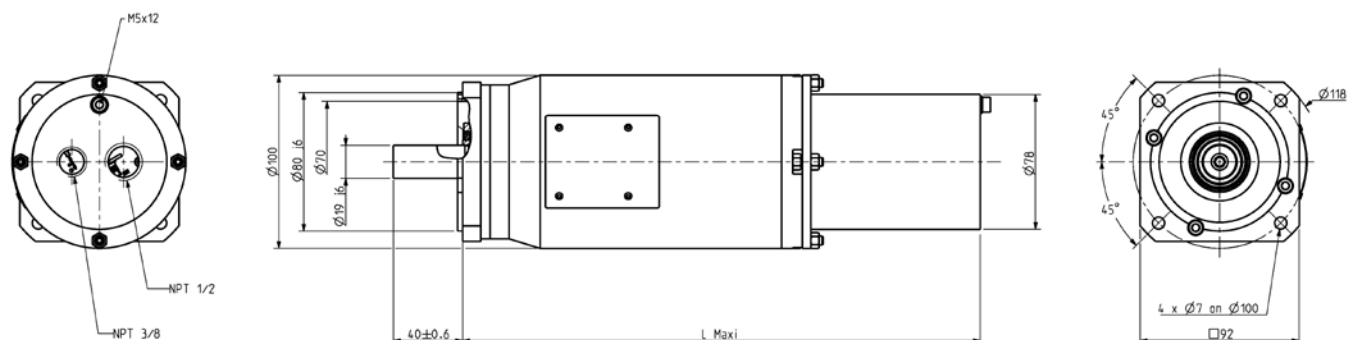
| EX3 dimensions UL (mm) |               |            |
|------------------------|---------------|------------|
| Motor                  | L Maxi        |            |
|                        | Without brake | With brake |
| E X 3 1 0              | 230           | 260        |

## UL EX3 dimensions



| EX4 dimensions UL (mm) |               |            |
|------------------------|---------------|------------|
| Motor                  | L Maxi        |            |
|                        | Without brake | With brake |
| E X 4 2 0              | 260           | 305        |
| E X 4 3 0              | 305           | 330        |

## UL EX4 dimensions



# 1 UL servomotors

EX series

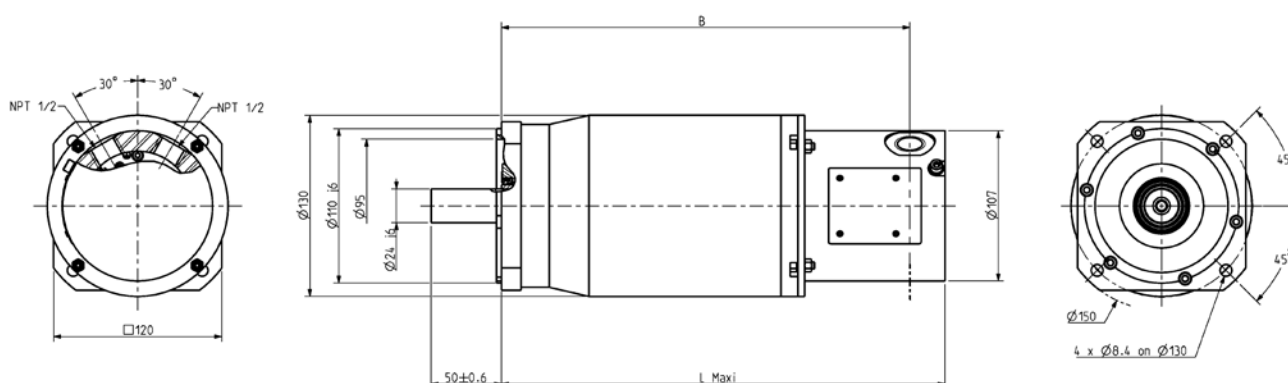
1,75 to 35 Nm



## Dimensions (resolver version)

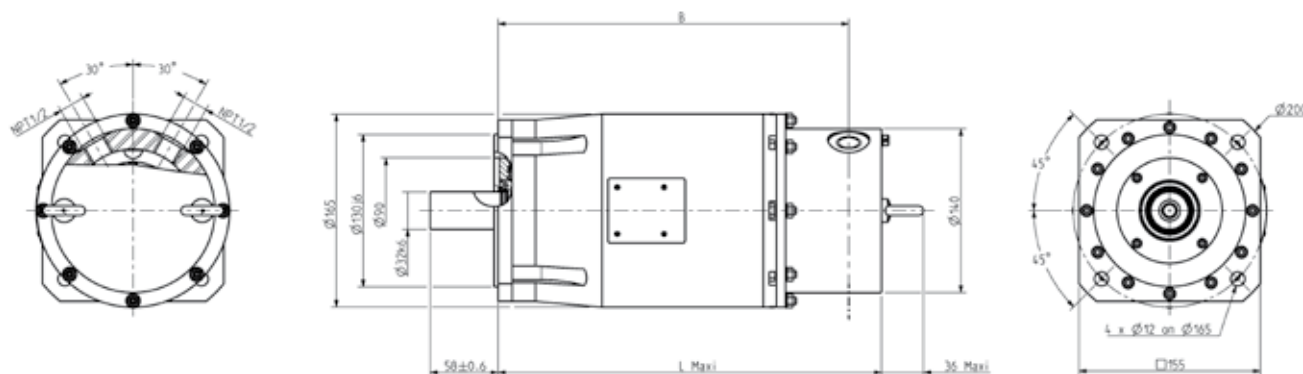
| EX6 dimensions UL (mm) |               |            |               |            |
|------------------------|---------------|------------|---------------|------------|
| Motor                  | L Maxi        |            | B             |            |
|                        | Without brake | With brake | Without brake | With brake |
| E X 6 2 0              | 290           | 320        | 262.5         | 291.5      |
| E X 6 3 0              | 320           | 435        | 291.5         | 316.5      |

## UL EX6 dimensions



| EX8 dimensions UL (mm) |               |            |               |            |
|------------------------|---------------|------------|---------------|------------|
| Motor                  | L Maxi        |            | B             |            |
|                        | Without brake | With brake | Without brake | With brake |
| E X 8 2 0              | 295           | 330        | 265           | 300        |
| E X 8 4 0              | 355           | 390        | 325           | 360        |
| E X 8 6 0              | 415           | 450        | 385           | 420        |

## UL EX8 dimensions



# Cables and accessories

EX series - brushless motors for explosive atmospheres



## Modules and accessories

### Cables for EX ↔ DIGIVEX

| Feedback cable    | Description                                                                                        |
|-------------------|----------------------------------------------------------------------------------------------------|
| CD1UA1D1R0005 (*) | Resolver or Posivex cable with connectors, length = 5m                                             |
| Power cable       | Description                                                                                        |
| CD1UQ1D1R0005 (*) | Cable with connectors standard for Digivex $\leq 16\text{A}$ , length = 5m                         |
| CD1UQ2D1R0005 (*) | Cable with connectors for Digivex $\leq 32\text{A}$ , length = 5m                                  |
| 6537P0051         | Cable per meter ( $4 \times 6 \text{ mm}^2 + 4 \times 1,5 \text{ mm}^2$ ) for Digivex $50\text{A}$ |

### Cables for EX ↔ 890

| Feedback cable    | Description                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------------------|
| CS4UA1D1R0005 (*) | Resolver cable with connectors, length = 5m                                                           |
| CS4UV1D1R0005 (*) | Endat encoder cable with connectors - 12pts, length = 5m                                              |
| Power cable       | Description                                                                                           |
| CS4UQ1D1R0005 (*) | Cable with connectors standard for 890 $\leq 12 \text{ Arms}$ , length = 5m                           |
| CS4UQ2D1R0005 (*) | Cable with connectors for 890 $\leq 30 \text{ Arms}$ , length = 5m                                    |
| 6537P0051         | Cable per meter ( $4 \times 6 \text{ mm}^2 + 4 \times 1,5 \text{ mm}^2$ ) for 890 $< 42 \text{ Arms}$ |

### Cables for EX ↔ COMPAX 3

| Feedback cable    | Description                                                                                                   |
|-------------------|---------------------------------------------------------------------------------------------------------------|
| CC3UA1D1R0005 (*) | Resolver cable with connectors, length = 5m                                                                   |
| CC3UV1D1R0005 (*) | Endat encoder cable with connectors - 12pts, length = 5m                                                      |
| CC3UR1D1R0005 (*) | Hiperface encoder cable with connectors - length = 5m                                                         |
| Power cable       | Description                                                                                                   |
| CC3UQ1D1R0005 (*) | Cable with connectors standard for COMPAX3 $\leq 10 \text{ Arms}$ , length = 5m                               |
| CC3UQ2D1R0005 (*) | Cable with connectors for COMPAX3 $\leq 15 \text{ Arms}$ , length = 5m                                        |
| 6537P0051         | Cable per meter ( $4 \times 6 \text{ mm}^2 + 4 \times 1,5 \text{ mm}^2$ ) for COMPAX 3 $\leq 30 \text{ Arms}$ |

\*) the 3 last digits indicate cable length in meters  $\pm 5\%$ max

For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.

Example CD1UP1F1R0015 : power cable, length = 15 m.

# Cables and accessories

EX series - brushless motors for explosive atmospheres



## Modules and accessories

### Cables for EX ↔ 631

| Feedback cable    | Description                                 |
|-------------------|---------------------------------------------|
| CS1UA1D1R0005 (*) | Resolver cable with connectors, length = 5m |

| Power cable       | Description                                                   |
|-------------------|---------------------------------------------------------------|
| CS1UQ1D1R0005 (*) | Cable with connectors standard for 631 ≤ 12 Arms, length = 5m |

### Cables for EX ↔ 637 / 638

| Feedback cable    | Description                                           |
|-------------------|-------------------------------------------------------|
| CS1UA1D1R0005 (*) | Resolver cable with connectors, length = 5m           |
| CS2UR1D1R0005 (*) | Hiperface encoder cable with connectors - length = 5m |

| Power cable       | Description                                                                          |
|-------------------|--------------------------------------------------------------------------------------|
| CS2UQ1D1R0005 (*) | Cable with connectors standard for 637 / 638 Stand Alone ≤ 12 Arms, length = 5m      |
| CS2UQ2D1R0005 (*) | Cable with connectors for 637 / 638 Stand Alone ≤ 20 Arms, length = 5m               |
| CS3UQ1D1R0005 (*) | Cable with connectors standard for 637 Rack ≤ 12 Arms, length = 5m                   |
| CS3UQ2D1R0005 (*) | Cable with connectors for 637 Rack ≤ 20 Arms, length = 5m                            |
| 6537P0051         | Cable per meter (4 x 6 mm <sup>2</sup> + 4 x 1,5 mm <sup>2</sup> ) for 637 ≤ 30 Arms |

\*) the 3 last digits indicate cable length in meters ± 5%max

For non-standard length cable with length different from : 1 / 2 / 3 / 4 / 5 / 10 / 15 / 20 / 25 / 30 / 40 / 50m please contact us.

Example CD1UP1F1R0015 : power cable, length = 15 m.



# 北京高控科技有限公司

## 全系列产品的一站式解决方案

| 类别           | 名 称                                            | 品 牌                                                                                |
|--------------|------------------------------------------------|------------------------------------------------------------------------------------|
| 人机界面         | 工控机和触摸屏                                        | 德国倍福BECKHOFF                                                                       |
| 控制器          | 多轴运动控制器                                        | 美国Delta Tau(PMAC控制卡)、Kollmorgen (美国科尔摩根)、MEI、G&L、Aerotech、美国Parker (派克)、德国Beckhoff |
| 电机和驱动器       | DDR直接驱动旋转伺服(力矩伺服电机)                            | Alliedmotion、Kollmorgen、Aerotech、Akribis                                           |
|              | 无框DDR直接驱动旋转伺服 (力矩伺服电机)                         | Alliedmotion、Kollmorgen、Aerotech、Akribis                                           |
|              | DDL直接驱动直线伺服                                    | Alliedmotion、Kollmorgen、Aerotech、Akribis                                           |
|              | 通用旋转伺服电机和驱动器                                   | Alliedmotion、Kollmorgen、Infranor、AMC、松下、安川、三菱、山洋、日立                                |
|              | 低温伺服、防爆伺服、防水伺服                                 | Parker、Kollmorgen、Mavilor、Infranor                                                 |
|              | 伺服驱动器、伺服放大器、线性伺服放大器                            | Kollmorgen、AMC、ELMO、TRUST                                                          |
|              | 步进电机和驱动器                                       | PacificScientific(美国太平洋)、Kollmorgen                                                |
|              | 无刷/有刷直流电机、无槽 / 有槽直流电机                          | Alliedmotion、Portescap                                                             |
|              | 直驱直流力矩电机                                       | Alliedmotion、Kollmorgen Inland                                                     |
|              | 音圈电机                                           | SMAC、Akribis                                                                       |
| 减速机          | 精密行星齿轮减速机、精密轴承减速机                              | Thomson Micron、美国Parker (派克) Bayside、Apex                                          |
| 直线平台<br>回转平台 | 精密定位直线平台和转台<br>直驱直线电机平台、直驱转台<br>空气轴承高精度定位平台和转台 | 美国Aerotech、ABTech、美国Parker (派克)、Akribis                                            |
| 执行器          | 工业直线执行器-电动推杆(可替代液压、气动产品)                       | Thomson Neff、TOLLO                                                                 |
|              | 精密直线执行器-电动缸(可替代液压、气动产品)                        | Thomson、Parker                                                                     |
| 主轴           | 精密空气轴承电主轴、精密机械轴承电主轴                            | Loadpoint Bearings、Aerotech                                                        |
| 直线单元         | 直线运动单元                                         | Thomson Tollo、NEFF、Parker、韩国TPC                                                    |
| 升降机构         | 螺旋升降机(专门替代液压、气动产品)                             | Thomson NEFF                                                                       |
| 丝杠           | 滚珠丝杠和普通丝杠                                      | THOMSON、NEFF                                                                       |
| 导轨           | 方导轨和圆导轨                                        | Thomson                                                                            |
| 轴承           | 线性轴承                                           | Thomson                                                                            |
| 编码器          | 增量、绝对、总线、低温、防爆旋转编码器                            | Renishaw、Heidehain、Hengstler                                                       |
| 光栅尺          | 精密定位用直线光栅编码器、圆光栅编码器                            | MicroE、Renishaw、Heidehain、RSF                                                      |
| 机器人          | 直角坐标机器人 (搬运、装配、焊接、喷涂等)                         | Thomson、Parker                                                                     |

汇聚全球科技，成就客户价值，北京高控将与您共同成长