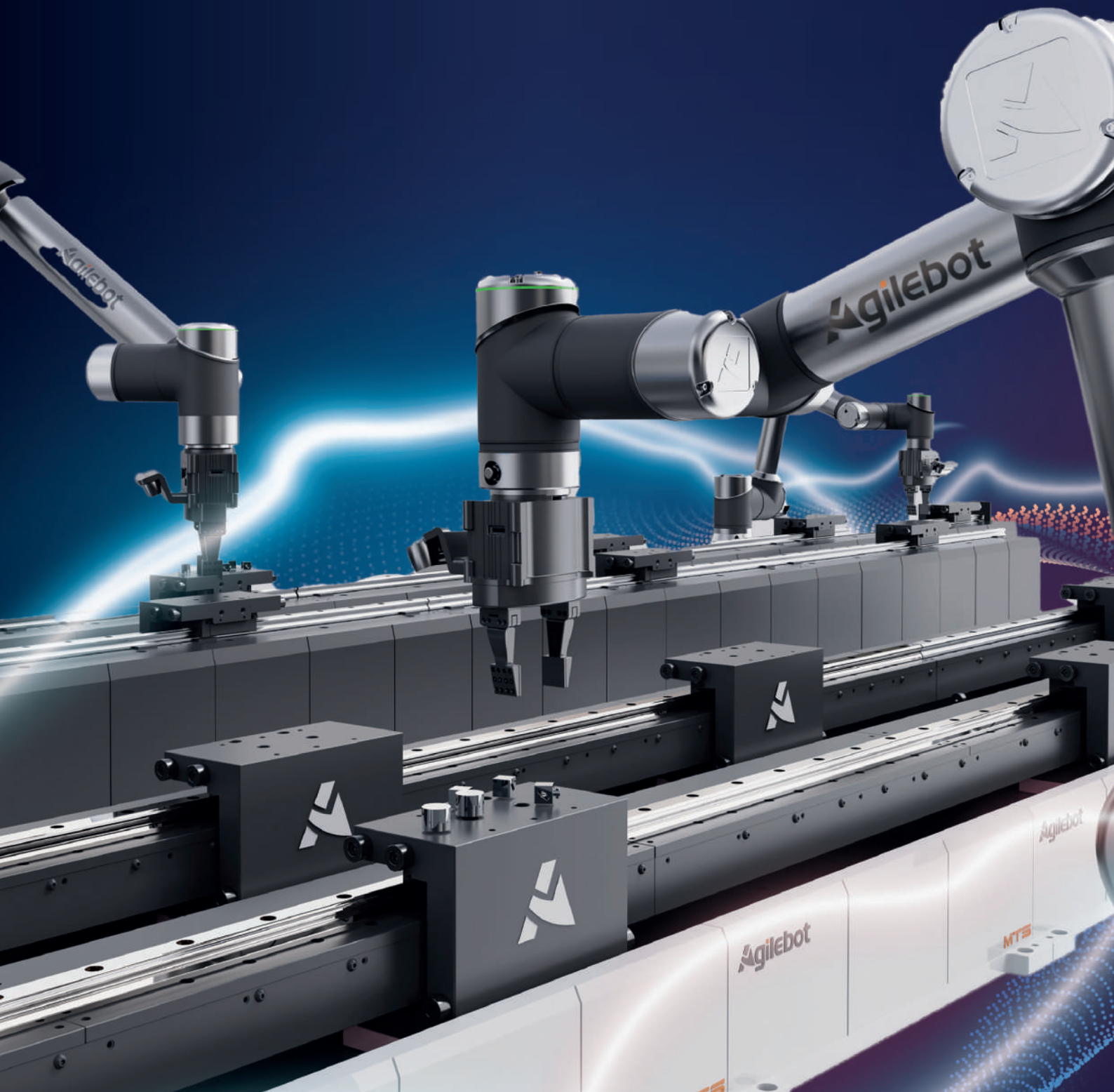


Agilebot | garnet

DRIVE THE FACTORIES OF THE FUTURE





Garnet è presente dal 1997 sul mercato italiano e internazionale rappresentando in esclusiva importanti aziende costruttrici di componenti per l'automazione, la robotica e l'automotive.

Grazie ad una solida esperienza maturata sul campo, Garnet offre soluzioni tecnologicamente avanzate per migliorare la produttività di macchine e impianti ottimizzando l'efficienza energetica.

L'attenzione alla rapida evoluzione del mercato e la costante interazione con i propri partner e clienti consentono a Garnet di lavorare sul continuo sviluppo di prodotti quali motori ed azionamenti, sistemi robotici scara, collaborativi e antropomorfi, sensori di velocità e posizione, semiconduttori di potenza, attuatori lineari, magneti permanenti e cablaggi custom.

La presenza di un qualificato supporto tecnico permette di identificare le soluzioni più adeguate a soddisfare le molteplici esigenze applicative.

Garnet opera in conformità al Sistema di Gestione Qualità certificato da TÜV Italia secondo la norma UNI EN ISO 9001:2015.

Garnet has been active since 1997 in the Italian and international markets, exclusively representing leading manufacturers of components for automation, robotics, and the automotive industry. Thanks to solid, hands-on experience, Garnet offers technologically advanced solutions to enhance the productivity of machines and systems while optimizing energy efficiency.

By closely monitoring the rapid evolution of the market and maintaining constant interaction with partners and customers, Garnet continues to develop and supply products such as motors and drives, scara, collaborative and anthropomorphic robotic systems, speed and position sensors, power semiconductors, linear actuators, permanent magnets, and custom wiring systems.

A highly qualified technical support team enables the company to identify the most suitable solutions to meet a wide range of application needs.

Garnet operates in accordance with a Quality Management System certified by TÜV Italia, compliant with the UNI EN ISO 9001:2015 standard.

Complete Portfolio



Model Naming Rules of Agilebot Industrial Robots & Controllers Series

SCARA Series

| Product Categories | Product Series | Payload | Version | Reach | Z-Axis Stroke | Branch Version |
|--------------------------------|----------------|--------------------------------------|------------------|--|-----------------------------------|---|
| GBT Agilebot Industrial Robots | S SCARA Robot | 3 3KG 6 6KG 10 10KG 20 20KG | A 1st Generation | 400 400mm 500 500mm 600 600mm 700 700mm 800 800mm 1000 1000mm | Blank Standard stroke .3 300mm | Blank Standard Version C Cleanroom Version |

Cobot Series

| Product Categories | Product Series | Payload | Version |
|--------------------------------|----------------|---------------------------|------------------|
| GBT Agilebot Industrial Robots | C Cobots | 5 5KG 7 7KG 12 12KG | A 1st Generation |

PUMA Series

| Product Categories | Product Series | Payload | Version | Reach | Branch Version |
|--------------------------------|----------------|------------------|--------------------------------------|---------------------------------------|---|
| GBT Agilebot Industrial Robots | P PUMA Robot | 7 7KG 20 20KG | A 1st Generation B 2nd Generation | 700 721mm 900 901mm 1800 1805mm | Blank Standard Version C Cleanroom Version |

Robot Controller Naming Rules

| Product Categories | Technical Features | Standard Axis | Version | Controller Type |
|---------------------------------|---|----------------------------------|--------------------------------------|--|
| IRC Industrial Robot Controller | I Integrated All-in-One Solution D Drive Distributed | 4 4 Axes 6 6 Axes 8 8 Axes | A 1st Generation B 2nd Generation | Blank Standard S Small Type C Compact Type |

Product Specifications Overview

| Models | GBT-S3A-400 | GBT-S3A-400-C | GBT-S6A-500 | GBT-S6A-500-C | GBT-S6A-600 | GBT-S6A-600-C | GBT-S6A-700 | GBT-S6A-700-C | GBT-S10A-600 | GBT-S10A-600.3 | GBT-S10A-700 | GBT-S10A-700.3 | GBT-S10A-800 | GBT-S10A-800.3 | GBT-S20A-800 | GBT-S20A-1000 | |
|-------------------------------------|------------------------------|------------------------------|-------------------------------|------------------------------|-------------------------------|------------------------------|-------------------------------|-------------------------------|------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--|--|
| Basic Specifications | | | | | | | | | | | | | | | | | |
| Axes | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| Reach (max) | 400mm | 400mm | 500mm | 500 mm | 600mm | 600 mm | 700mm | 700 mm | 600mm | 600 | 700mm | 700mm | 800mm | 800mm | 800mm | 1000mm | |
| Payload | Rated | 1kg | 1kg | 2kg | 2 kg | 2kg | 2 kg | 2kg | 2 kg | 5kg | 5 kg | 5kg | 5 kg | 5kg | 5kg | 10 kg | 10kg |
| | Maximum | 3kg | 3kg | 6kg | 6 kg | 6kg | 6 kg | 6kg | 6 kg | 10kg | 10 kg | 10kg | 10 kg | 10kg | 10kg | 20 kg | 20kg |
| Axis 4 Moment of Inertia | Rated | 0.005kg·m ² | 0.005kg·m ² | 0.01kg·m ² | 0.01 kg·m ² | 0.01kg·m ² | 0.01 kg·m ² | 0.01kg·m ² | 0.01 kg·m ² | 0.02kg·m ² | 0.02kg·m ² | 0.02kg·m ² | 0.02kg·m ² | 0.02kg·m ² | 0.02kg·m ² | 0.05kg·m ² | 0.05kg·m ² |
| | Maximum | 0.05kg·m ² | 0.05kg·m ² | 0.12kg·m ² | 0.12 kg·m ² | 0.12kg·m ² | 0.12 kg·m ² | 0.12kg·m ² | 0.12 kg·m ² | 0.3kg·m ² | 0.3kg·m ² | 0.3kg·m ² | 0.3kg·m ² | 0.3kg·m ² | 0.3kg·m ² | 1kg·m ² | 1kg·m ² |
| Axis 3 Down Force | 100N | 100N | 100N | 100 N | 100N | 100 N | 100N | 100 N | 200N | 200 N | 200N | 200 N | 200N | 200N | 200N | 250 N | 250N |
| Mounting | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor | Floor |
| Motion Parameters | | | | | | | | | | | | | | | | | |
| Axis Motion Range | J1 | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° | ±132° |
| | J2 | ±141° | ±141° | ±150° | ±150° | ±150° | ±150° | ±150° | ±150° | ±150° | ±150° | ±150° | ±150° | ±150° | ±150° | ±152° | ±152° |
| | J3 | 150mm | 120mm | 200mm | 170mm | 200mm | 170mm | 200mm | 170mm | 200mm | 300mm | 200mm | 300mm | 200mm | 300mm | 390mm | 390mm |
| | J4 | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° | ±360° |
| Axis Maximum Speed | J1+J2 | 6650mm/s | 6650 mm/s | 6180mm/s | 6180 mm/s | 6800mm/s | 6800 mm/s | 7100mm/s | 7100mm/s | 9100mm/s | 9100 mm/s | 9800mm/s | 9800 mm/s | 10600 mm/s | 10600 mm/s | 10250 mm/s | 11750mm/s |
| | J3 | 1100mm/s | 1100 mm/s | 1100mm/s | 1100 mm/s | 1100mm/s | 1100 mm/s | 1100mm/s | 1100 mm/s | 1100mm/s | 1100 mm/s | 1100mm/s | 1100 mm/s | 1100mm/s | 1100mm/s | 1800 mm/s | 1800mm/s |
| | J4 | 2350°/s | 2350°/s | 2000°/s | 2000°/s | 2000°/s | 2000°/s | 2000°/s | 2000°/s | 2700°/s | 2700°/s | 2700°/s | 2700°/s | 2700°/s | 2700°/s | 1400°/s | 1400°/s |
| Position Repeatability ¹ | J1+J2 | 0.01mm | 0.01 mm | 0.015mm | 0.015mm | 0.015mm | 0.015 mm | 0.015mm | 0.015 mm | 0.015mm | 0.015mm | 0.015mm | 0.015mm | 0.015mm | 0.015mm | 0.015mm | 0.015mm |
| | J3 | 0.01mm | 0.01 mm | 0.01mm | 0.01mm | 0.015mm | 0.015mm | 0.015mm | 0.015mm | 0.015mm | 0.015 mm | 0.015mm | 0.015 mm | 0.015mm | 0.015mm | 0.015 mm | 0.015mm |
| | J4 | 0.01° | 0.01 ° | 0.01° | 0.01 ° | 0.01° | 0.01 ° | 0.01° | 0.01 ° | 0.01° | 0.01 ° | 0.01° | 0.01 ° | 0.01° | 0.01 ° | 0.01 ° | 0.01° |
| Standard Cycle Time ² | 0.41s | 0.41s | 0.41s | 0.41s | 0.41s | 0.41s | 0.41s | 0.41s | 0.41s | 0.40s | 0.40s | 0.42s | 0.42s | 0.42s | 0.42s | 0.41s | 0.44s |
| Customer Interface | | | | | | | | | | | | | | | | | |
| Air | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ4x1, φ6x2 | φ8x2, φ6x2 | φ8x2, φ6x2 |
| Communication | D-sub15pin RJ45 (CAT5e) 8pin | D-sub15pin RJ45 (CAT5e) 8pin | D-sub15 pin RJ45(CAT 5e) 8pin | D-sub15pin RJ45(CAT 5e) 8pin | D-sub15 pin RJ45(CAT 5e) 8pin | D-sub15pin RJ45(CAT 5e) 8pin | D-sub15 pin RJ45(CAT 5e) 8pin | D-sub15 pin RJ45(CAT 5e) 8pin | D-sub15pin RJ45(CAT 5e) 8pin | D-sub15 pin RJ45 (CAT 5e) 8pin | D-sub15 pin RJ45 (CAT 5e) 8pin | D-sub15 pin RJ45 (CAT 5e) 8pin | D-sub15 pin RJ45 (CAT 5e) 8pin | D-sub15 pin RJ45 (CAT 5e) 8pin | D-sub15 pin RJ45 (CAT 5e) 8pin | D-sub15pin, D-sub9pin RJ45 (CAT 5e) 8pin | D-sub15pin, D-sub9pin RJ45 (CAT 5e) 8pin |
| Physical Characteristics | | | | | | | | | | | | | | | | | |
| Weight | 13kg | 13kg | 16.5kg | 16.5kg | 17.3kg | 17.3kg | 18kg | 18kg | 22.5kg | 22.5kg | 23kg | 23kg | 23.5kg | 23.5kg | 47kg | 50kg | |
| Base Mounting Area | 185mmx140mm | 185mmx140mm | 200mmx170mm | 200mmx170mm | 200mmx170mm | 200mmx170mm | 200mmx170mm | 200mmx170mm | 195mmx169mm | 195mmx169mm | 195mmx169mm | 195mmx169mm | 195mmx169mm | 195mmx169mm | 257mmx230mm | 257mmx230mm | |
| Other Information | | | | | | | | | | | | | | | | | |
| Applicable Controller | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C | IRC-I4A-C |
| Power Requirements | Voltage | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz | 220V~ / 50Hz |
| | Temperature | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C | 5° C~40° C |
| Operating Environment | Humidity | Up to 80%RH (non-condensing) | | | | | | | | | Up to 80%RH (non-condensing) | | | | | | |
| | Vibration | 0.5G (≥ 50Hz) | | | | | | | | | 0.5G (≥ 50Hz) | | | | | | |
| Adapter Options | | | | | | | | | | | | | | | | | |
| Cleanroom version (ISO 14644) | - | ISO Class 4 | - | ISO Class 4 | - | ISO Class 4 | - | ISO Class 4 | - | - | - | - | - | - | - | - | - |

*1. Numerical values obtained under constant environmental temperature of 20° C.

*2. The cycle time of the robot, performing an oscillatory arched motion with a horizontal displacement of 300mm and a vertical displacement of 25mm under 2kg load conditions (maximum speed, optimal trajectory, coarse positioning).

The specifications are subject to change without prior notice.

Product Specifications Overview

| Models | GBT-P7B-700 | GBT-P7B-700-C | GBT-P7B-900 | GBT-P7B-900-C | GBT-P20A-1800 | GBT-C5A | GBT-C7A | GBT-C12A | |
|---------------------------------|---|--|--|--|----------------------------|---------------------------------|---------------------------------|---|--------------------|
| Basic Specifications | | | | | | | | | |
| Axes | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| Reach (max) | 721mm | 721mm | 901mm | 901mm | 1805mm | 933mm | 785mm | 1303mm | |
| Payload | Rated | 3.5kg | 3.5kg | 3.5kg | 20kg | 5kg | 7kg | 12kg | |
| | Maximum | 7kg | 7.0kg | 7kg | 7.0kg | 20kg | 5kg | 7kg | |
| Degree of Protection | IP67 | IP67 | IP67 | IP67 | Overall IP65, Wrist IP67 | IP67 | IP67 | IP67 | |
| Mounting | Ground Ceiling mounted Wall mounted | Ground Ceiling mounted Wall mounted | Ground Ceiling mounted Wall mounted | Ground Ceiling mounted Wall mounted | Ground | Mounting at Any Angle | Mounting at Any Angle | Mounting at Any Angle | |
| Motion Parameters | | | | | | | | | |
| Axis Motion Range | J1 | 340° (-170°/+170°) | 340° (-170°/+170°) | 340° (-170°/+170°) | 340° (-170°/+170°) | 370° (-185°/+185°) | 720° (-360°/+360°) | 720° (-360°/+360°) | 720° (-360°/+360°) |
| | J2 | 235° (-135°/+100°) | 235° (-135°/+100°) | 235° (-135°/+100°) | 235° (-135°/+100°) | 260° (-160°/+100°) | 720° (-360°/+360°) | 720° (-360°/+360°) | 720° (-360°/+360°) |
| | J3 | 270° (-70°/+200°) | 270° (-70°/+200°) | 270° (-70°/+200°) | 270° (-70°/+200°) | 243.5° (-83.5°/+160°) | 720° (-360°/+360°) | 720° (-360°/+360°) | 720° (-360°/+360°) |
| | J4 | 380° (-190°/+190°) | 380° (-190°/+190°) | 380° (-190°/+190°) | 380° (-190°/+190°) | 400° (-200°/+200°) | 720° (-360°/+360°) | 720° (-360°/+360°) | 720° (-360°/+360°) |
| | J5 | 230° (-115°/+115°) | 230° (-115°/+115°) | 230° (-115°/+115°) | 230° (-115°/+115°) | 274° (-137°/+137°) | 720° (-360°/+360°) | 720° (-360°/+360°) | 720° (-360°/+360°) |
| | J6 | 720° (-360°/+360°) | 720° (-360°/+360°) | 720° (-360°/+360°) | 720° (-360°/+360°) | 900° (-450°/+450°) | 720° (-360°/+360°) | 720° (-360°/+360°) | 720° (-360°/+360°) |
| Axis Maximum Speed | J1 | 333°/s | 333°/s | 333°/s | 333°/s | 195°/s | 180°/s | 180°/s | 120°/s |
| | J2 | 267°/s | 267°/s | 267°/s | 267°/s | 168°/s | 180°/s | 180°/s | 120°/s |
| | J3 | 333°/s | 333°/s | 333°/s | 333°/s | 180°/s | 180°/s | 180°/s | 150°/s |
| | J4 | 450°/s | 450°/s | 450°/s | 450°/s | 400°/s | 180°/s | 180°/s | 180°/s |
| | J5 | 405°/s | 405°/s | 405°/s | 405°/s | 400°/s | 180°/s | 180°/s | 180°/s |
| | J6 | 605°/s | 605°/s | 605°/s | 605°/s | 600°/s | 180°/s | 180°/s | 180°/s |
| Position Repeatability | 0.02mm | 0.02mm | 0.02mm | 0.02mm | 0.04mm | 0.02mm | 0.02mm | 0.02mm | |
| Customer Interface | | | | | | | | | |
| Standard configuration | φ4×2, 6RI/6RO, 24V×2, 0V×2 | | | | φ8×1, 8RI/8RO, 24V×4, 0V×4 | 2RI/2RO/2AI, 0/24VDC, 1A, RS485 | 2RI/2RO/2AI, 0/24VDC, 1A, RS485 | 4RIO (NPN/PNP)/2AI, 0/12/24VDC, 2A, RS485 | |
| Optional configuration | 6RI/6RO, 24V×1, 0V×1 4 Port Solenoid Valve × 2 | | | | - | - | - | - | |
| Physical Characteristics | | | | | | | | | |
| Weight | 51kg | 51kg | 54.5kg | 54.5kg | 245kg | 23.5kg | 22.5kg | 37kg | |
| Base Mounting Area | 230mm×230mm | 230mm×230mm | 230mm×230mm | 230mm×230mm | 446mm×343mm | φ150mm | φ150mm | φ190mm | |
| Other Information | | | | | | | | | |
| Applicable Controller | IRC-I6A-C | IRC-I6A-C | IRC-I6A-C | IRC-I6A-C | IRC-I6A | IRC-D6A | IRC-D6A | IRC-D6B, IRC-D6B-S | |
| Power Requirements | Voltage | 220V~/50Hz | 220V~/50Hz | 220V~/50Hz | 220V~/50Hz | 380V3~/50Hz | 100-240 VAC / 50-60 Hz | 100-240 VAC / 50-60 Hz or 30-56V DC | |
| | Temperature | 0° C~45° C | 0° C~45° C | 0° C~45° C | 0° C~45° C | 0° C~45° C | 0° C~50° C | 0° C~50° C | |
| Operating Environment | Humidity | Up to 90%RH (non-condensing) | | | | | | | |
| | Vibration | 0.5G(≥100Hz) | 0.5G(≥100Hz) | 0.5G(≥100Hz) | 0.5G(≥100Hz) | 0.5G(≥100Hz) | - | - | |
| Adapter Options | | | | | | | | | |
| Cleanroom version (ISO14644) | - | ISO Class 4 | - | ISO Class 4 | - | ISO Class 4 | ISO Class 4 | ISO Class 4 | |

The specifications are subject to change without prior notice.

| Models | IRC-I4A-C | IRC-I6A-C | IRC-I6A | IRC-D6A | IRC-D6B | IRC-D6B-S |
|-----------------------|----------------------------|--|---|----------------------------------|---|---|
| Size | 380mmx350mmx182mm | 400mmx380mmx182mm | 650mmx483mmx810mm | 410mmx260mmx235mm | 500mmx330mmx210mm | 410mmx161mmx150mm |
| Weight | 8kg | 12 kg | 85.5kg | 14.5kg | 12kg | 7kg |
| Degree of Protection | IP20 | IP20 | IP54 | IP54 | IP54 | IP20 |
| Power Requirements | Voltage | 220V~/50Hz | 220V~/50Hz | 380V3~/50Hz | 100-240 VAC / 50-60 Hz | 100-240V AC / 50-60 Hz or 30-56V DC |
| | Standard Configuration I/O | Input: 24 Output: 16 (NPN or PNP) | Input: 48 Output: 48 (NPN or PNP) | Input: 25 Output: 25 (NPN) | Digital input (NPN or PNP):16 Digital output (NPN or PNP):16 Analog input (Voltage or Current):2 Analog output (Voltage or Current):2 ABZ encoder | Digital input (NPN or PNP):16 Digital output (NPN or PNP):16 Analog input (Voltage or Current):2 Analog output (Voltage or Current):2 ABZ encoder |
| Communication | Standard Communication | TCP/IP, Modbus TCP | TCP/IP, Modbus TCP | TCP/IP, Modbus TCP | TCP/IP, Modbus TCP, RS485 | TCP/IP, Modbus TCP, RS485 |
| | Temperature | 5° C~40° C | 0° C~45° C | 0° C~45° C | 0° C~50° C | 0° C~50° C |
| Operating Environment | Humidity | Up To 80%RH (non-condensing) | Up To 90%RH (non-condensing) | Up To 90%RH (non-condensing) | Up To 90%RH (non-condensing) | Up To 90%RH (non-condensing) |
| | Applicable Robot Models | GBT-S3A Series GBT-S6A Series GBT-S10A Series GBT-S20A Series | GBT-P7B Series | GBT-P20A Series | GBT-C5A GBT-C7A | GBT-C12A |



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