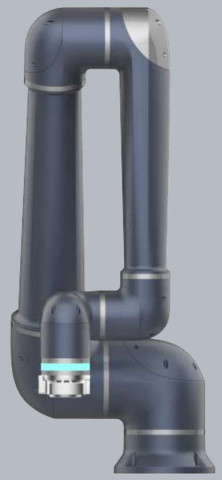

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COBOTARC

Collaborative Robot Product Manual

SCOBOTARC | Collaborative Robot
Series S-Eco

Multiple safety features, innovative UI and programming, and deep integration of AI – the S-series cobot builds flexible production processes, which are smarter and safer, more efficient and reliable, for human-robot collaboration in industries.

TRUSTED SAFETY

- Emergency stop, incl. STO, SBC, conforms to EN ISO 10218-1, EN ISO 13849-1 PId.Cat.3*.
- Sensitive to collisions.
- Brakes built into all axes.

EASY AND FLEXIBLE TO USE

- Built-in torque sensor, supporting by wizard force control kit.
- Teaching precise points and paths by agile manual guidance.
- Graphical UI for easy programming that can be mastered in 1 hour by novice Integrated vision system, capable of running in

PERFORMANCE

- Paired with the speed of a traditional industrial robot.
- Precision upgraded to industrial robot level through accurate calibration and compensation technology.
- Identification and compensation of high precision kinematic models ensure both accurate trajectory and smooth

QUALITY SYSTEM

- Comprehensive manufacturing quality management system.
- Rigorous and consistent quality control.
- Kinematic calibration before shipment to ensure absolute accuracy.
- 100+ design type tests, 20+ delivery inspections, 120 hours continuous no failure operating before shipment.

SCOBOTARC | Collaborative Robot
SSeries S-Pro

TORQUE SENSORS BUILT INTO ALL AXES, PERFORMANCE OF SAFETY AND MANUAL GUIDANCE IMPROVED COMPLETELY

More sensitive to collisions in all positions | Compliant hand guide | Supporting hand guide with fixed gestures

Easy programming by end display and customizable buttons, without teaching pendant.

Encoder upgraded from 19-Bit ↗20-Bit for more accurate position detection.

Drive performance improved again

· ↗Rigidity 50% · ↗Lifespan 20%

New software architecture brings the latest achievements

- Supporting extensions of force control kits
- New features added are accessible from updating

S-Pro

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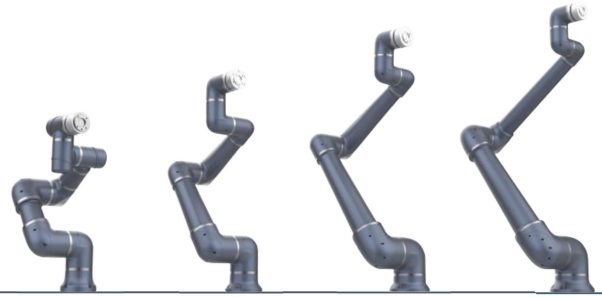
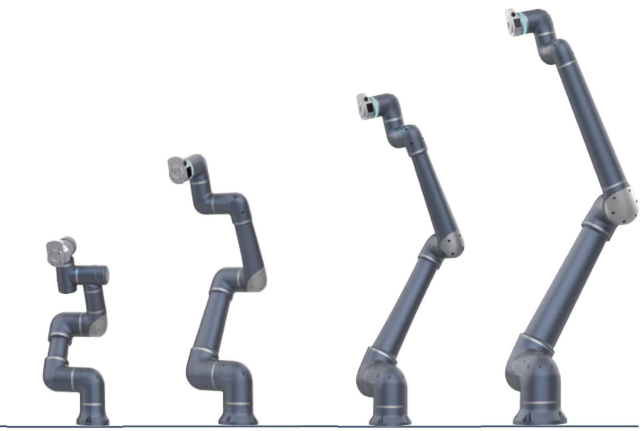
Specifications



S-Eco

Model	S3-60 Eco	S5-90 Eco	S10-140 Eco	S20-180 Eco
DOF	6			
Payload (kg)	3	5	10	20
Reach of Arms (mm)	575.8	919	1400	1777.5
Repeatability (mm)	±0.03	±0.03	±0.03	±0.1
Dead Load (kg)	14	21	37	58
Safety	Adjustable collaborative drag mode and collision detection levels			
Certification	EN ISO 13849-1 PLd Cat.3 & EN ISO 10218-1			
IP Grade	IP54			
Max. Speed at Tool End (m/s)	2	2.5	2.5	3.2
Working Range	Axis1/2/4/5/6: ±360° Axis3: ±160°			
Max. Speed	[3、5、10kg] Axis 1/2/3: 150 ° /s [20kg] Axis1/2: 110 ° /sAxis3: 150 ° /s Axis 4/5/6: 180 ° /s			
Mounting	Mount at any angle			
Operating Temp.	0 – 50 ° C			
Operating Humidity	70% RH			
Flange Connector	ISO 9409-1-50-4-M6			
Flange Communication	2 DI, 2DO, 24VDC, MODBUS RTU, RS485			



S-Pro

Model	S3-60 Pro	S5-90 Pro	S10-140 Pro	S20-180 Pro
DOF	6			
Payload (kg)	3	5	10	20
Reach of Arms (mm)	575.8	919	1400	1777.5
Repeatability (mm)	±0.03	±0.03	±0.03	±0.1
Dead Load (kg)	14	21	37	58
Torque Transducer Accuracy - Composition Error (F.S)	<2%			
Torque Sensor Accuracy - Repeatability Error (F.S)	<0.1%			
Safety	Adjustable collaborative drag mode and collision detection levels			
Certification	EN ISO 13849-1 PLd Cat.3 & EN ISO 10218-1			
IP Grade	IP54			
Max. Speed at Tool End (m/s)	2	2.5	2.5	3.2
Working Range	Axis1/2/4/5/6: ±360° Axis3: ±160°			
Max. Speed	[3、5、10kg] Axis1/2/3: 150 ° /s [20kg] Axis1/2: 110 ° /sAxis3: 150 ° /s Axis4/5/6: 180 ° /s			
Mounting	Mount at any angle			
Operating Temp.	0 – 50 ° C			
Operating Humidity	70% RH			
Flange Connector	ISO 9409-1-50-4-M6			
Flange Communication	2 DI, 2DO, 24VDC, MODBUS RTU, RS485			

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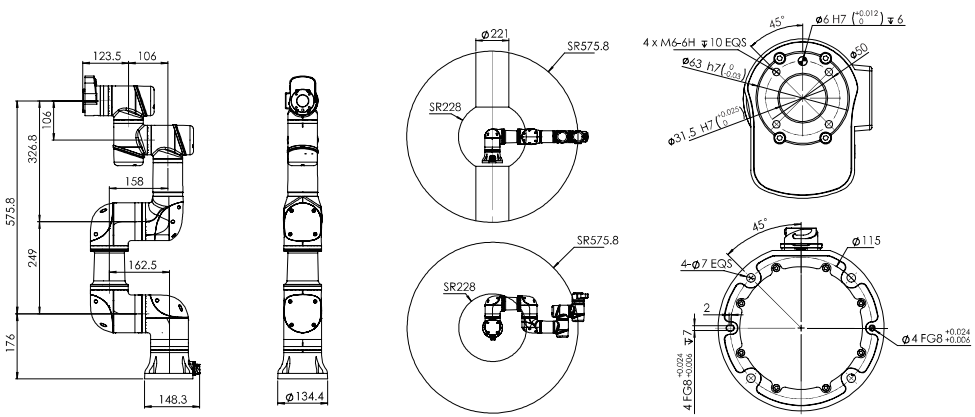
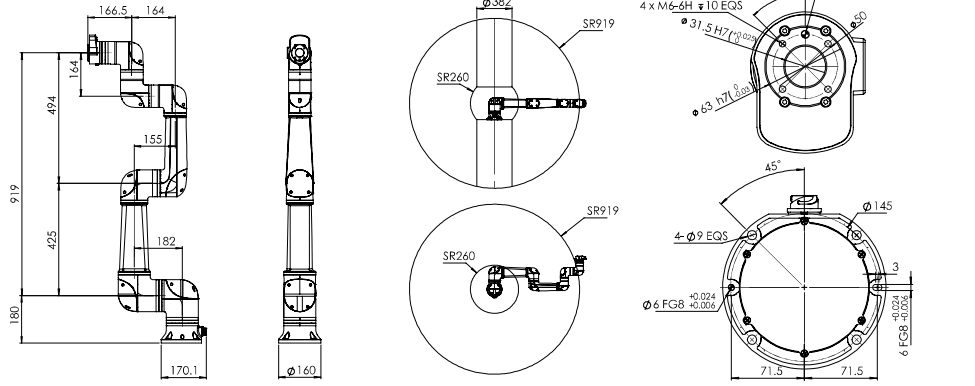
Series-Technical Drawings

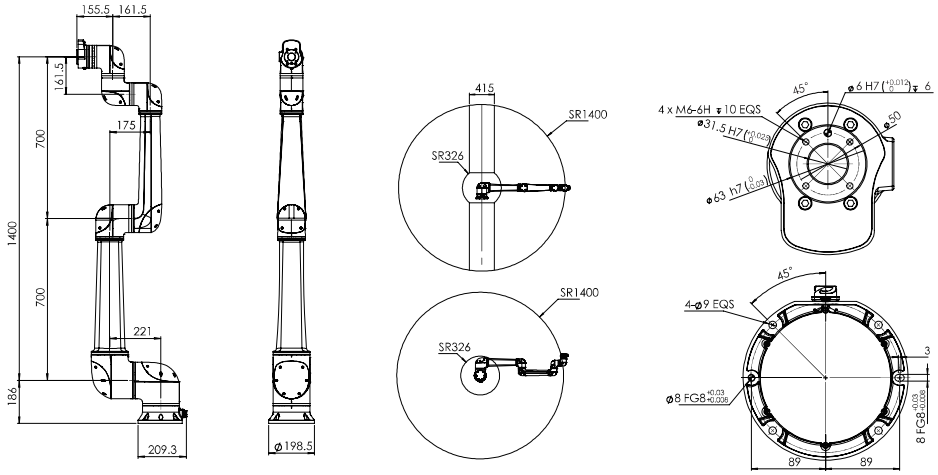
3kg Arm



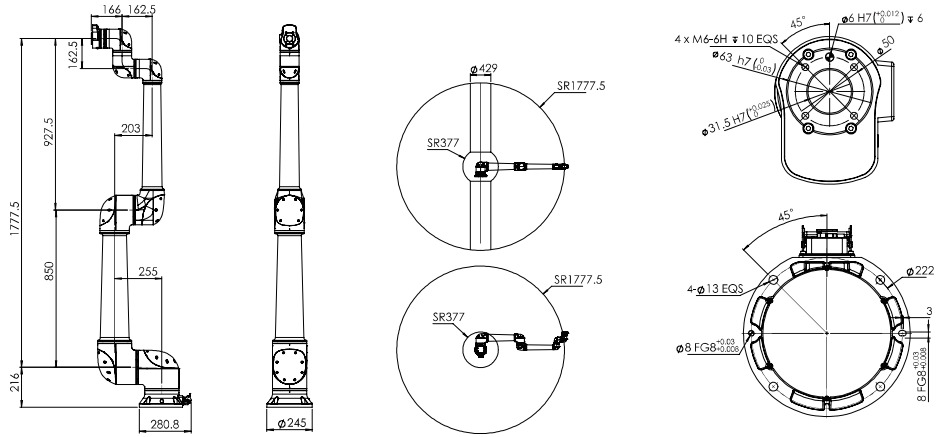
5kg Arm



10kg Arm



20kg Arm



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Series-Control Cabinet

COCB-E03/05/10/20

Human-Machine interaction	PC/laptop/tablet/smartphone/teach pendant
Safety device	Hand-held enable 1 channel/hand-held E-stop 1 channel
Drag teaching	Drag mode: Cartesian space/axis space; Teaching method: point/continuous path
High dynamic force control	Cartesian space/axis space impedance control
IP grade	IP20
Cabinet I/O ports	16DI(PNP), 16D0(PNP), 4AI, 4AO, five E-stop inputs
Cabinet I/O power supply	24VDC, 2A
Communication	MODBUS RTU, MODBUS TCP, CAN, RS485 EtherNET, EtherCAT, Profinet slave (optional), EthernetIP slave (optional)
Power supply	AC: 100- 240 V 47 - 63 Hz/DC: 48 V
Control cabinet dimensions	402,,270,,149mm (10kg and below) 29(T420*200mm (20kg)
Weight	13kg
Material	SPCC
External control interface	Underlying force/position control interface; Robot model library and API
Cable length	Robot-Controller 3m Controller power cable 3m Manipulator handle 6m

PAD Teach Pendar optional

Teach Pendant	Pad
Weight	550g
Display Size	12.7 inch

End Effectors

Various end effectors can be quickly switched to match multiple industry applications


Handling


Screw fastening


Polishing


Welding


Spraying

Application Scenarios