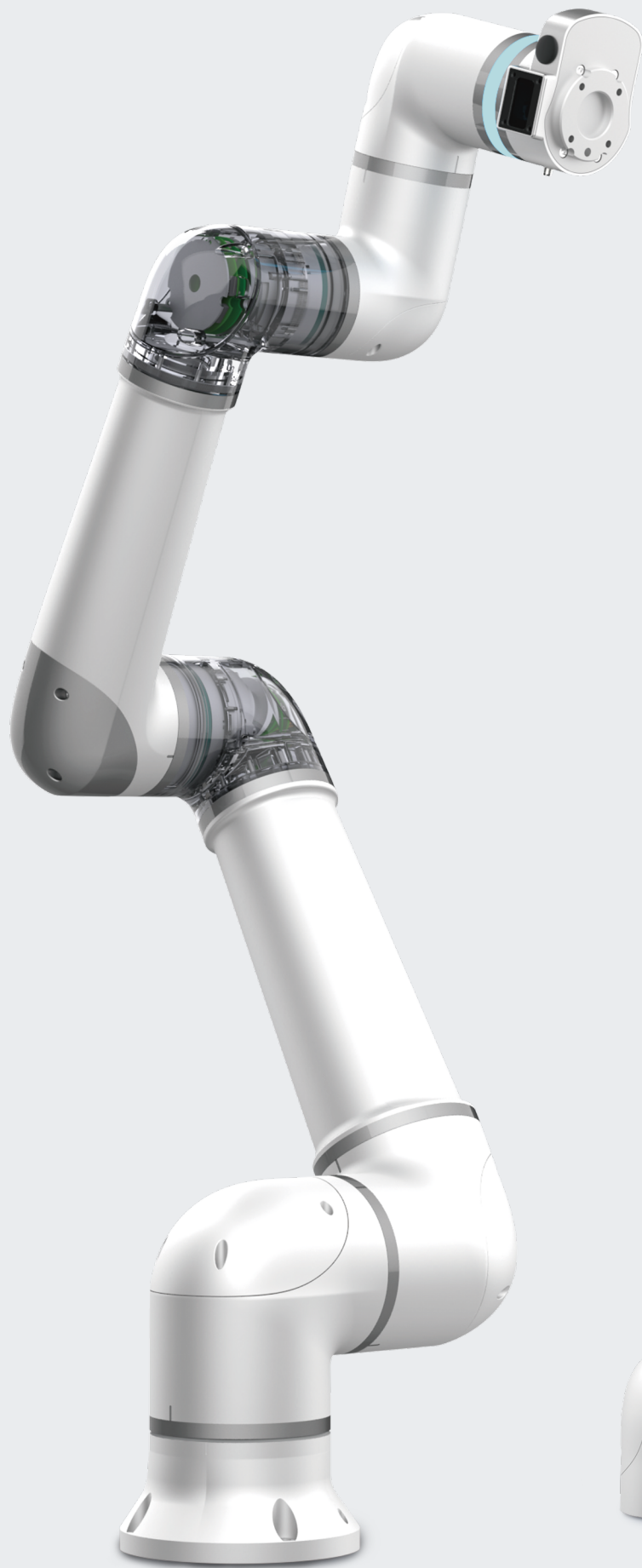
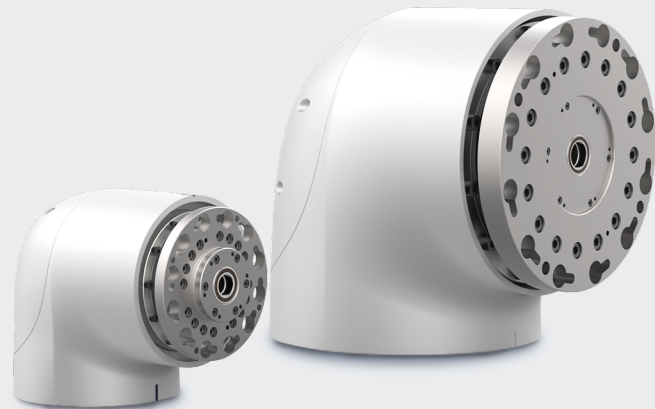
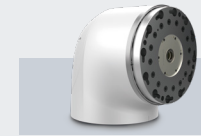
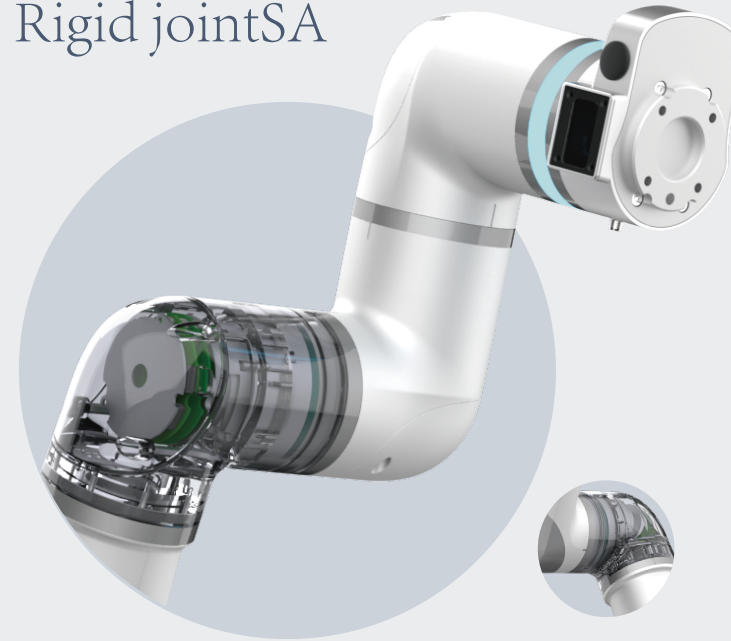




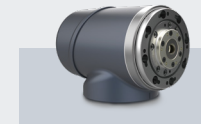
刚性关节SA系列 Rigid joint SA series



刚性关节SA Rigid jointSA



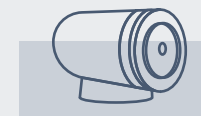
转角 L 型系列
Corner L-type series



转角 T 型系列
Corner T-type series



直筒 I 型系列
Straight I Series



按客户需求定制
Customized according to
customer needs

机器人一体化关节
Robot integrated joint

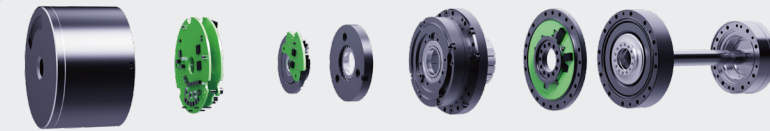
支持高度个性化定制 用户可根据实际使用需求定制，支持多种构型、外观、色彩等，适配工业、医疗、服务等多应用场景
Supports highly personalized customization Users can customize according to actual usage needs, support a variety of configurations, appearances, colors, etc., and adapt to multiple application scenarios such as industry, medical care, and services

产品特点

Features

一体化设计 Integrated design

驱动器、电机、抱闸、减速机、扭矩传感器、编码器高度集成，结构紧凑。
The driver, motor, brake, reducer, torque sensor and encoder are highly integrated and compact.



扭矩传感器集成

Torque sensor integrated

内部物理冗余结构设计，高速、高精度、高稳定性数据采样性能，满足全力控制应用场景；机器人末端无需增加六维力矩传感器，对拖动示教外力检测更准确，关节力矩检测范围更大；其检测的输入力矩可以直接用于关节的过载检测，检测精度更高，有效保护工作人员及周边设备安全。The internal physical redundant structure design and high-speed, high-precision, and high-stability data sampling performance meet the full force control application scenarios. There is no need to add a six-dimensional torque sensor at the end of the robot, which can more accurately detect the external force of dragging teaching and has a larger joint torque detection range. The input torque it detects can be directly used for joint overload detection with higher detection accuracy, effectively protecting the safety of workers and surrounding equipment.

高扭矩密度

High torque density

转动惯量低，转矩输出稳定，峰值扭矩高，动态响应好；体积小、重量轻、扭矩大，性能极致优化。
Low moment of inertia, stable torque output, high peak torque, good dynamic response; small size, light weight, high torque, and extremely optimized performance

高定位精度

High positioning accuracy

采用双反馈系统，电机端、减速机输出端均采用19位绝对值编码器，定位精度高。
It adopts a dual feedback system, and both the motor end and the reducer output end use 19-bit absolute encoders with high positioning accuracy.

多重安全保护

Multiple security protections

采用过流保护、过压保护、低压保护、过温保护、PWM dead time保护、PWM shoot through保护等多重安全保护措施，有效降低关节电气元件及机械结构的损坏。Multiple safety protection measures such as over-current protection, over-voltage protection, low-voltage protection, over-temperature protection, PWM dead time protection, and PWM shoot through protection are adopted to effectively reduce the damage to the joint electrical components and mechanical structure.

精简电气接口

Simplified electrical interface

采用DC48V供电，EtherCat通讯接口，电气线缆少，连接便捷，伺服通讯频率高达4kHz。
It adopts DC48V power supply, EtherCat communication interface, fewer electrical cables, convenient connection, and the servo communication frequency is up to 4kHz.

多控制支持

Multiple control support

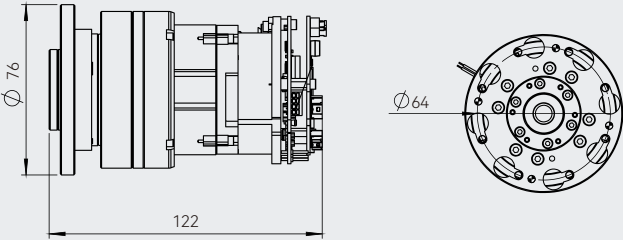
支持位置模式、速度模式、力矩模式等多种控制模式的任意切换。
Supports arbitrary switching of multiple control modes such as position mode, speed mode, torque mode, etc.

产品参数Product parameters

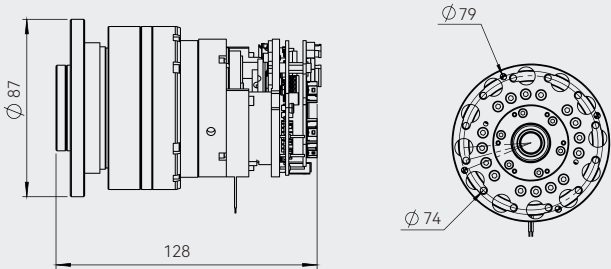
Model	SA14	SA17	SA20	SA25	SA32	SA40
Basic performance						
Rated torque (Nm)	10	31	52	87	178	382
Max allowable torque for start stop (Nm)	36	70	107	217	459	841
Maxi instantaneous permissible torque (Nm)	70	143	191	395	892	1530
Average load torque maximum value (Nm)	14	51	64	140	281	586
Rated speed (rpm)	49.5	34.6	34.6	28.9	24.7	18.6
Maximum speed (rpm)	56	44	39.8	30	28.5	18.6
Positioning accuracy(deg)	+/-0.01					
Electrical performance						
Rated power(W)	159	183	366	732	1000	1257
Rated voltage(VDC)	48	48	48	48	48	48
Rated current(A)	4.4	5	9.7	16	27	27
Peak current(A)	13.6	15	29.1	48	89	72
Communication protocol	EtherCAT, CiA402					
Mechanical properties						
Diameter of middle hole (mm)	8	11	8	12	16	16
Reduction ratio	101	101	101	121	121	161
encoder	Dual absolute value magnetic encoder, output resolution 19Bits9Bits					
brake	Electromagnetic friction type					
IP class	IP54					
Weight(Kg)						
I type	1.24	1.60	2.06	3.37	6.16	9.72
L type	1.77	2.35	2.79	4.48	8.67	13.55
T type	1.62	2.22	2.97	4.36	/	/
diameter(mm)						
I type	76	87	96	117	148	176
L type	85	98	102	121	159	185
T type	80	92	102	118	/	/
Length(mm)						
I type	122	128	139	145.6	160	192
L type	154.6	152.6	165	176	203	236
T type	136	141	152.4	164.5	/	/

技术图纸（直筒I型系列）
Technical Drawings (Straight I Series)

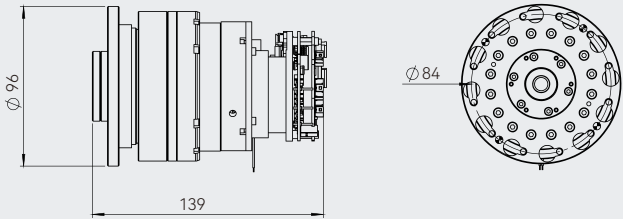
I 14



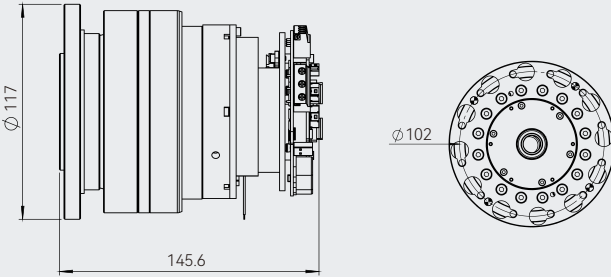
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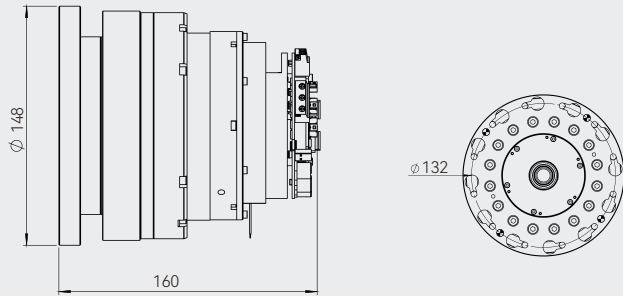
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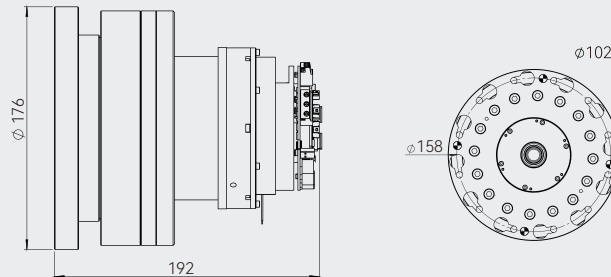
I 25



I 32

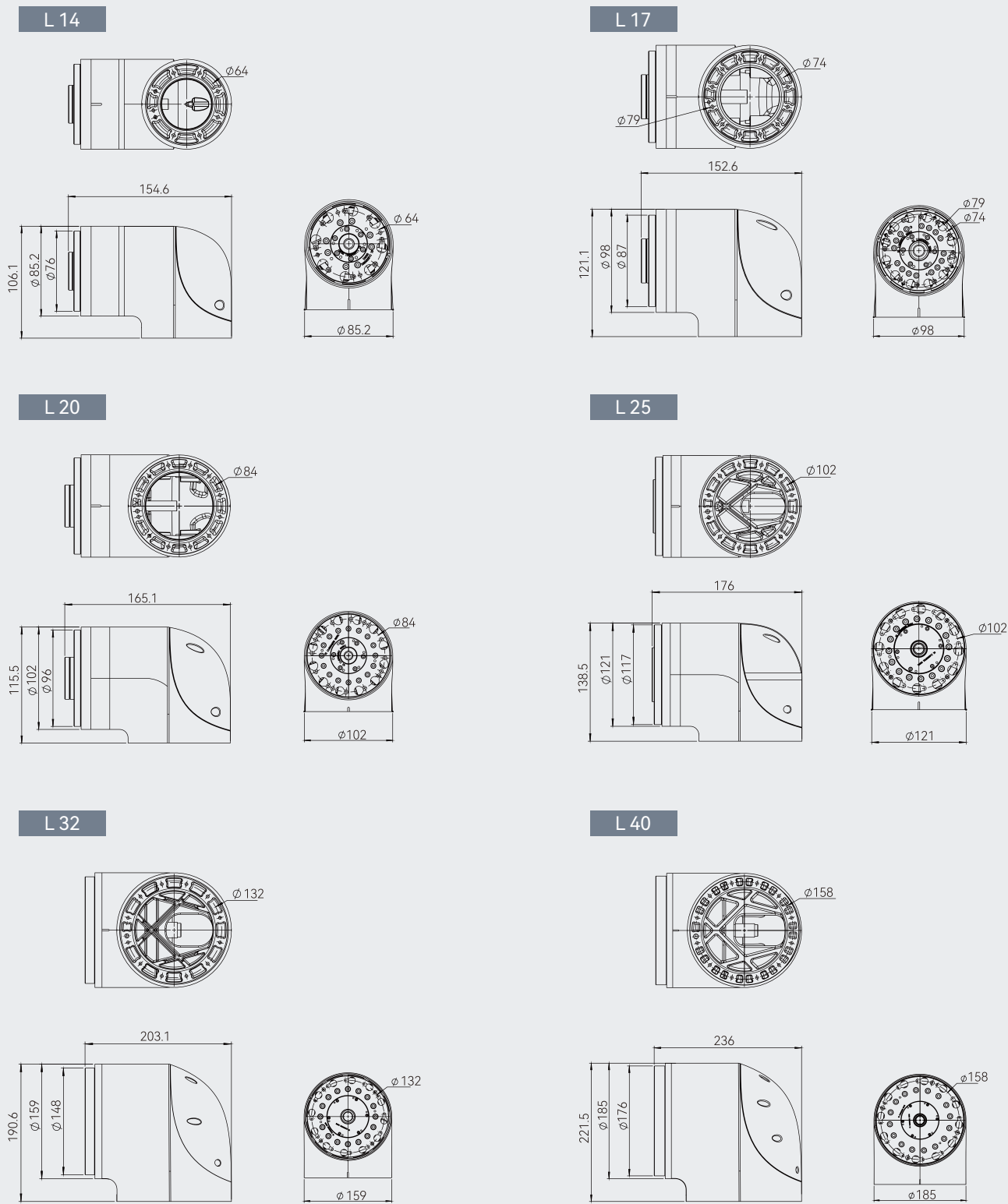


I 40



技术图纸（转角L型系列）

Technical Drawing (Corner L-Type Series)



技术图纸（转角T型系列）

Technical Drawing (Corner T Series)

