

ABOUT US

四川天链机器人股份有限公司（川机器人835015）

成立于2012年，并于2015年在新三板挂牌上市。公司主要从事机器人、及机器人核心零部件的研发、生产、销售，并提供机器人技术服务和行业化解决方案。公司拥有专利近200余项。

SICHUAN TLIBOT Co., Ltd. (Stock Code 835015)

Founded in 2012, and listed on the New OTC Market in 2015. The company is mainly engaged in the research and development, production and sales of robots, and core components of robots, and provides robot technology services and industry solutions. The company has nearly 200 patents.

30000m²

自有厂房30000m²，自研自产

Own factory building of 30000m², self-developed and self-produced

200+

员工200+，研发人员占比超30%

200+ employees, over 30% of them are R&D personnel

150台

加工机床150台

150 machine tools

01



人形机器人
Humanoid robot

02



复合机器人
Composite robot

03



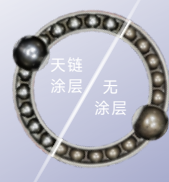
协作机器人码垛工作站
Collaborative Robot
Palletizing Station

04



超轻量协作机器人
Ultra lightweight
collaborative robot

05



超轻量一体化关节
Ultra lightweight
integrated joint

06



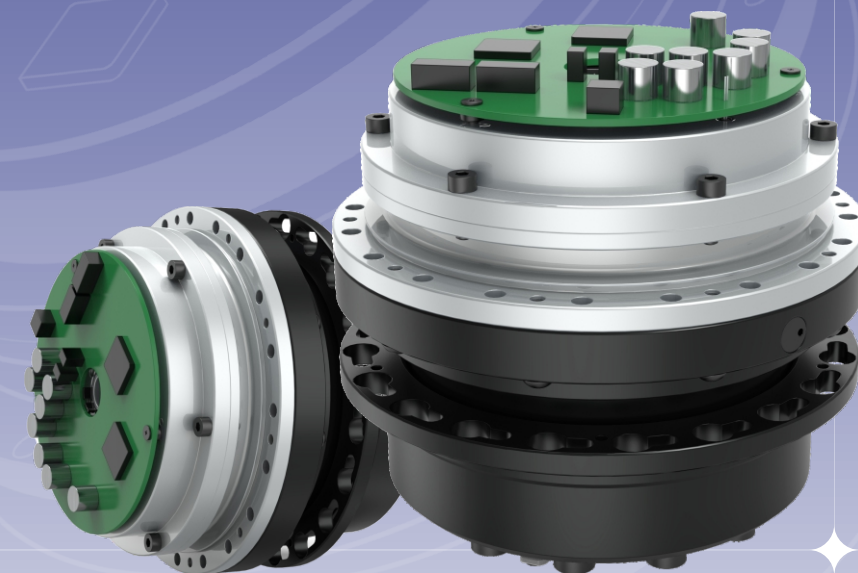
谐波减速机
Harmonic Reducer

超轻量

关节模组产品样册

ULTRA-LIGHTWEIGHT JOINT MODULE CATALOGUE

TLIBOT





超轻量关节模组

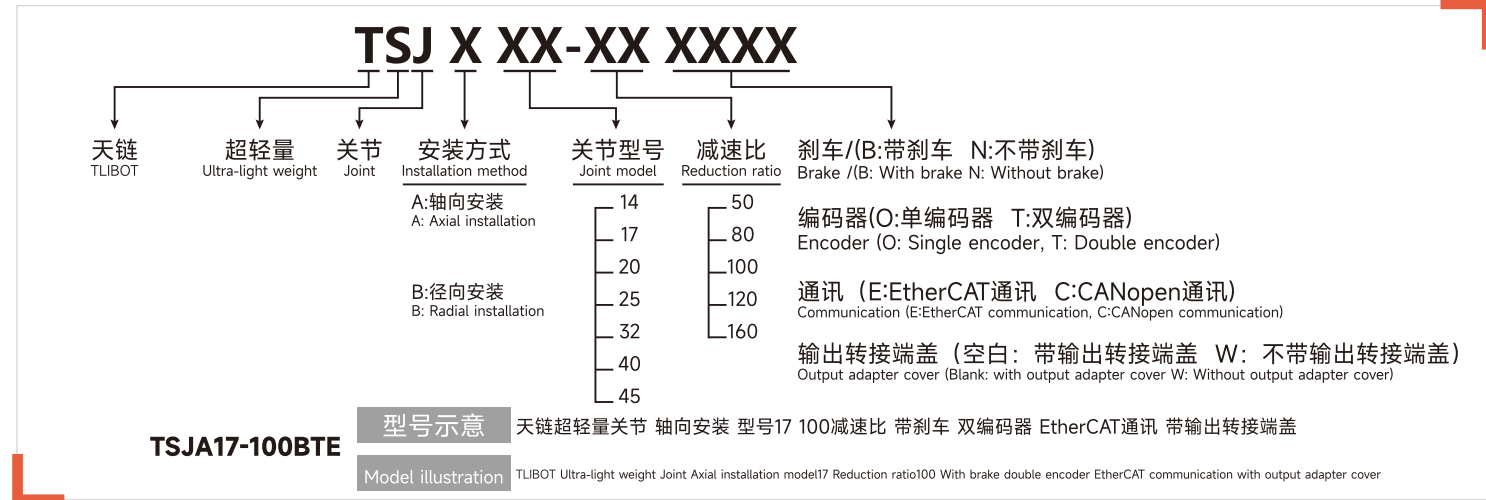
ULTRA-LIGHTWEIGHT JOINT MODULE

川机器人/STOCK CODE 835015，天链机器人股份有限公司一直以来致力于机器人核心零部件研发、生产与销售。公司经过多年潜心研发，隆重推出针对超轻量协作机器人等应用领域的一体化关节产品，创新性的将伺服电机与特制谐波减速机高度集成，拥有多项专利技术。它在极小的体积与重量下集成了高精度编码器、制动器、驱控、温度传感器等功能单元，极高的扭矩与体积重量比。

Chuan Robotics (STOCK CODE: 835015), Tianlian Robotics Co., Ltd. maintains core expertise in R&D, manufacturing, and distribution of mission-critical robotic components. After sustained R&D investment, the company now launches its integrated joint module for ultra-lightweight collaborative robots – featuring proprietary servo-harmonic drive integration with multiple patented technologies.

命名规则

NAMING RULES



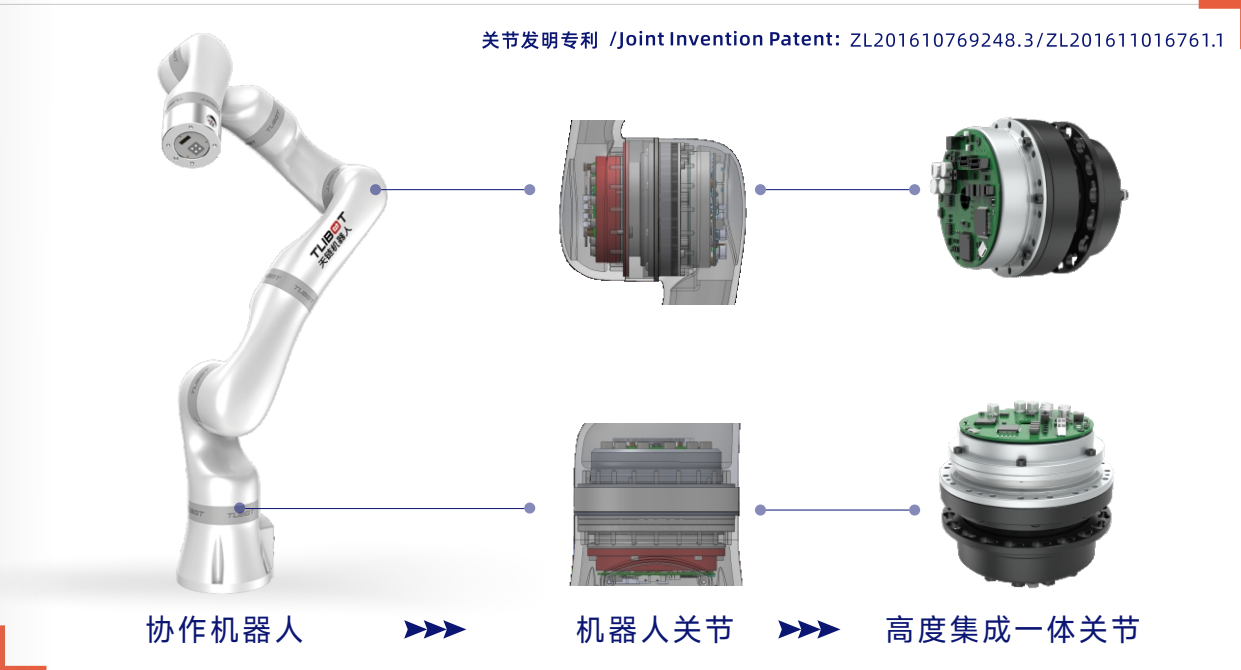
产品参数

PRODUCT PARAMETERS

型号/Model	TSJ14			TSJ17				TSJ20				TSJ25					TSJ32					TSJ40					TSJ45				
谐波减速比 Harmonic reduction ratio	50	80	100	50	80	100	120	50	80	100	120	50	80	100	120	160	50	80	100	120	160	50	80	100	120	160	50	80	100	120	160
额定扭矩(Nm) Rated torque(Nm)	6.8	9.8	9.8	20	28	31	31	33	43	52	52	51	82	86	86	86	99	153	176	176	176	176	268	343	381	381	229	407	457	524	524
允许启停峰值扭矩(Nm) Peak torque for start and stop is allowed(Nm)	24	30	35	44	56	70	70	73	96	107	113	127	178	204	217	229	281	395	433	456	484	523	675	738	798	841	650	918	982	1070	1147
平均负载转矩容许最大值(Nm) The maximum allowable average load torque(Nm)	9	14	14	34	35	51	51	44	61	63	63	72	113	137	137	137	140	217	278	278	278	255	369	484	584	584	584	507	650	806	819
瞬间容许最大转矩(Nm) Instantaneous Allowable Maximum Torque(Nm)	46	61	70	91	113	143	112	127	165	189	189	242	232	369	395	408	497	738	841	887	887	887	1270	1400	1528	1528	1235	1651	2041	2288	2483
输出端最大转速(RPM) Maximum rotational speed at the output end(RPM)	60	37.5	30	60	37.5	30	25	60	37.5	30	25	60	37.5	30	25	18.75	60	37.5	30	25	18.75	40	25	20	16.6	12.5	40	25	20	16.6	12.5
重复定位精度' Repeat positioning accuracy	1'			1'				1'						1'		1'					1'					1'					
电机额定转速(RPM) Rated speed of the motor(RPM)	3000			3000				3000						3000		3000					2000					2000					
电机瞬时最高转速(RPM) Peak instantaneous motor speed(RPM)	4500			4500				3500						3500		3500					2500					2500					
电机额定功率(W) Motor rated power	60			80				160						290		800					1300					1385					
额定电压(V) Rated voltage(V)	48			48				48						48		48					48					48					
重量(Kg) Weight(kg)	0.38			0.68				0.98						1.57		5.07					6.879					9.83					
输出端编码器分辨率 Output encoder resolution	19bit单圈绝对值，无备份电池/19bit single-turn abs. (battery-less)																														
输入端编码器分辨率 Input encoder resolution	19bit单圈绝对值，可由输出编码器求得多圈值，无备份电池/19bit ST abs. (multi-turn via output, battery-less)																														
通讯总线 Fieldbus	Ethercat/CAN/CAN FD																														
内置制动器 Integrated brake	齿啮合式电磁制动/Gear-meshed electromagnetic brake																														

产品应用

PRODUCT APPLICATION



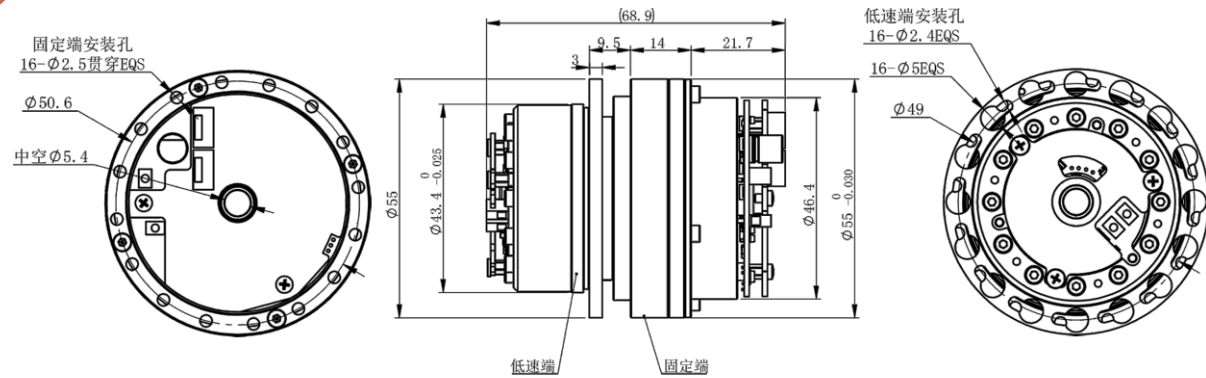
- 关节主体结构具备IP54防护等级，可实现360度连续旋转，拓展应用范围
 - 适用于抓重在5-10kg，臂展500-1000mm的轻量机械臂
 - 可实现全臂展抓重比超过1:1的超轻量协作机器人
- IP54-rated joint structure with continuous 360° rotation for extended applications
For lightweight arms: 5-10kg payload | 500-1000mm reach
Ultralight cobot achieving >1:1 payload-to-weight ratio at full extension



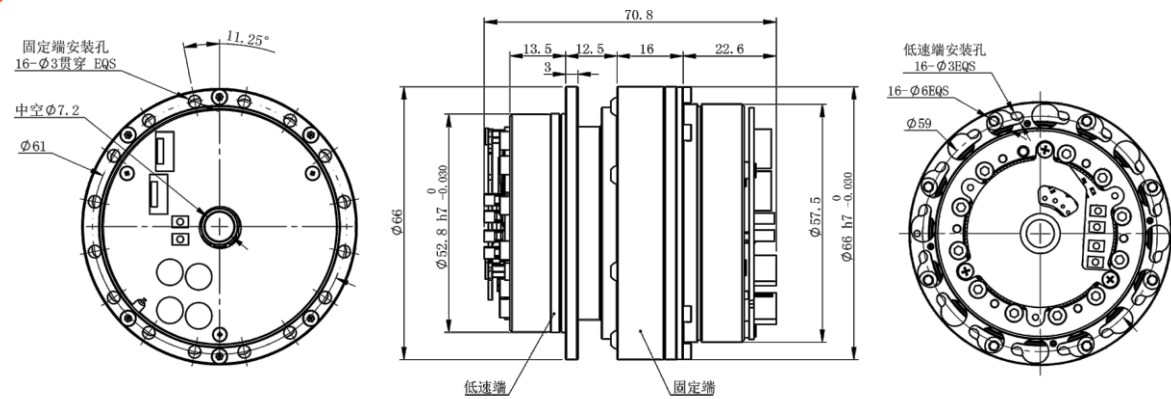
参数对比
PARAMETER COMPARISON

项目 Project	与市面上的同类型关节对比 (谐波减速比100) Benchmarking Against Comparable Joints (Harmonic Drive 100:1 Ratio)									
	TSJ14 TLIBOT	友商 Peer Manufacturer	TSJ17 TLIBOT	友商 Peer Manufacturer	TSJ20 TLIBOT	友商 Peer Manufacturer	TSJ25 TLIBOT	友商 Peer Manufacturer	TSJ32 TLIBOT	友商 Peer Manufacturer
外径 (mm) Outer Diameter (mm)	55	70	66	80	78	90	92	110	128	142
重量 (kg) Weight (kg)	0.38	0.82	0.68	1.03	0.98	1.51	1.57	2.57	5.07	6.49
额定扭矩 (Nm) Rated Torque (Nm/kg)	9.8	10	31	31	52	52	86	87	176	178
额定扭矩密度 (Nm/kg) Rated Torque Density (Nm/kg)	25.79	12.19	45.59	30.10	53.06	34.43	54.78	33.85	34.71	27.43
最大扭矩密度 (Nm/kg) Peak Torque Density (Nm/kg)	92.11	43.90	102.94	67.96	109.18	70.86	129.94	79.38	85.40	66.72
额定功率密度 (W/kg) Rated Power Density (W/kg)	157.89	121.95	117.65	122.33	163.27	207.95	184.71	281.32	157.79	154.08

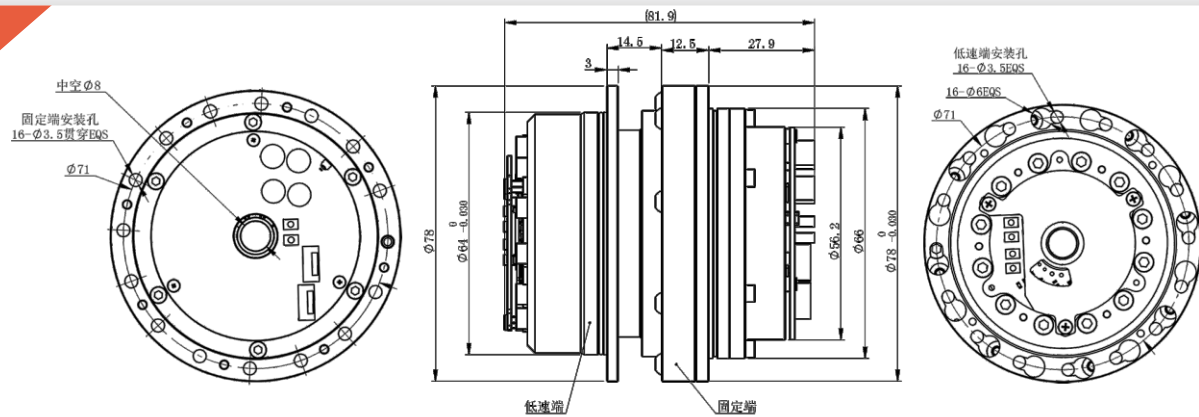
TSJ14



TSJ17

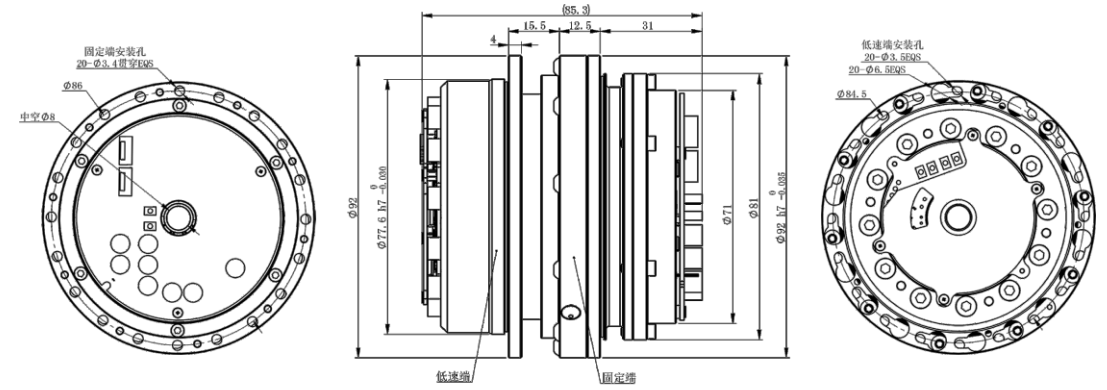


TSJ20

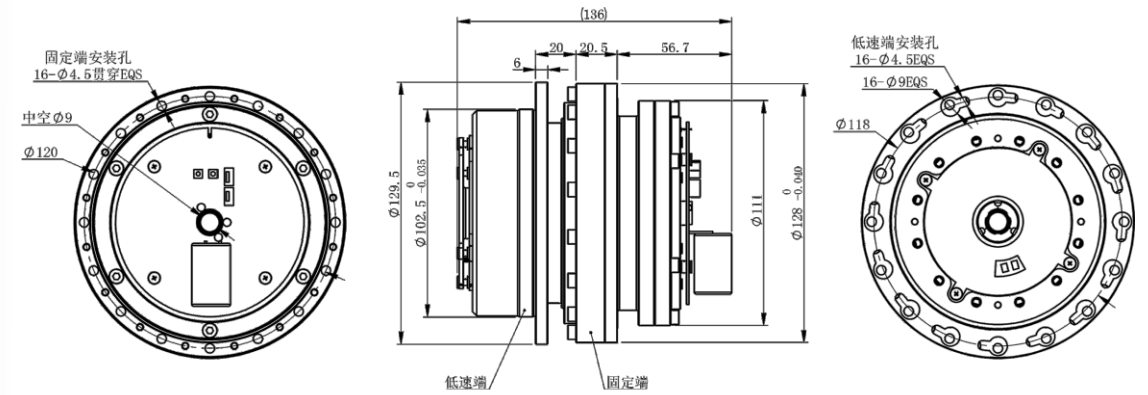


结构尺寸
STRUCTURAL DIMENSIONS

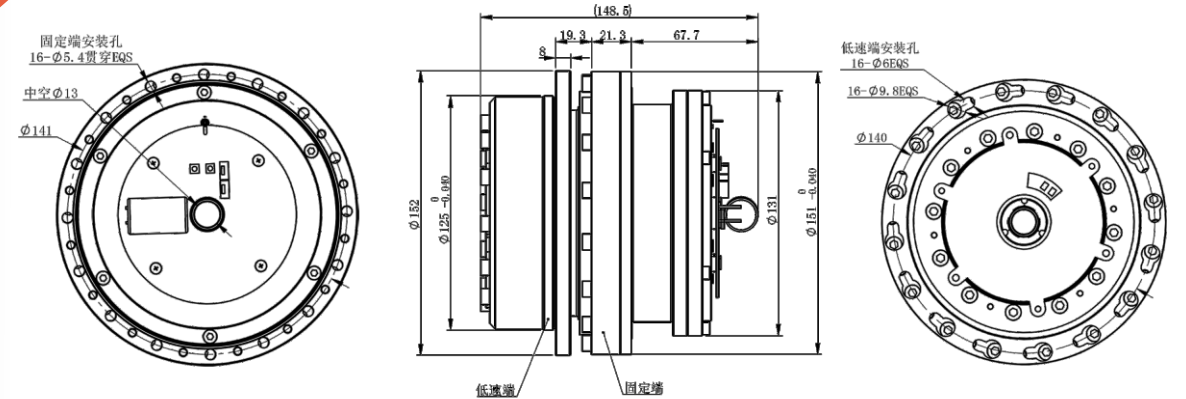
TSJ25



TSJ32



TSJ40



TSJ45

