ROBOTICS
OVERVIEW OF SERIES

TOOL CHANGERS	Connecting flange according EN ISO 9409-1	Locking stroke	Pneumatic energy transfer
MANUAL			
Series HWR2000	31.5 / 40 / 50	4 mm	4 / 8
Series HWR	63 / 80	1 mm	6 / 6
PNEUMATIC			
Series WPR5000	31.5 / 40 / 50 / 63 / 80 / 100 / 125 / 160 / 200	1.2 mm - 2.5 mm	4 / 12
Series WWR1000	160 / 200	1 mm	
AUTOMATIC			
Series FWR	40 / 50 / 63 / 80	0.6 mm - 1 mm	4 / 4
MAGNETIC			
Series WMR2000	63		4 / 4
ROTARY DISTRIBUTORS	**Connecting flange according EN ISO 9409-1**	**Flow per connector**	**Electrical energy transfer**
Series DVR	40 / 50 / 63 / 80 / 100 / 125 / 160	70 l/min - 270 l/min	12-pole | 4 - 12-pole | 4-pole | 6-pole | 8-pole
Series DVR1000	125	290 l/min	4-pole + PE
AXIS COMPENSATION MODULES			
X-, Y-AXIS AND ROTARY			
Axis Compensation Modules	**Connecting flange according EN ISO 9409-1**	**Horizontal deviation +/-**	**Rotation angle max.**
Series FGR	40 / 50	2 mm - 4 mm	9 ° - 12 °
X- AND Y-AXIS			
Axis Compensation Modules	**Connecting flange according EN ISO 9409-1**	**Stroke X/Y level +/-**	**Retention force centred**
Series XYR1000	40 / 50 / 63 / 80 / 100 / 125 / 160 / 200	3.0 mm - 12.5 mm	150 N - 3000 N
Series XYR9000		15.0 mm - 20.0 mm	10000 N - 20000 N
Z-AXIS			
Axis Compensation Modules	**Connecting flange according EN ISO 9409-1**	**Stroke in Z-axis**	**Holding force**
Series ZR1000	40 / 50 / 63 / 80 / 100 / 125 / 160 / 200	8 mm - 20 mm	250 N - 11500 N
Axis Compensation Modules	**Connecting flange according EN ISO 9409-1**	**Installation Height**	**Deflection hoirontal +/-**
Series ARP	40 / 50 / 63 / 80 / 100 / 125 / 160	21.5 mm - 28 mm	2 / 1 mm/°
CRASH PROTECTION	**Connecting flange according EN ISO 9409-1**	**Z-axis deviation**	**Horizontal deviation +/-**
PNEUMATIC			
Series CSR	50 / 63 / 80 / 100 / 125 / 160	10.5 mm - 28 mm	9 ° - 12.5 °
Series CRR	40 / 50 / 63 / 80 / 100 / 125 / 160 / 200	8 mm - 30 mm	12.5 ° - 15.0 °
MATCH - END-OF-ARM-ECOSYSTEM			
MATCH - Robot module	**Connecting flange according EN ISO 9409-1**	**Tightening force**	**Handling weight max.**
Series LWR	TK 31.5 / TK 40 / TK 50	50 N	25 kg
MATCH - Grippers	**Stroke per jaw**	**Gripping force**	**Gripper finger length**
Series LWR	3 mm - 60 mm	145 N - 2370 N	60 mm - 120 mm
MATCH - Storage station		**Compatible with installation size**	**Locking force**
Series ALWR		LWR50L	40 N
MATCH - Angle flange	**Suitable for series**	**Locking stroke**	**Pneumatic energy transfer**
Series LWR	LWR50F-xx-06	1 mm	integrated

Electrical energy transfer	Weight	IP class	Clean room class	UL	CE	UKCA	LABS	REACH	RoHS
optional	0.04 kg - 0.23 kg						●	●	●
optional	0.31 kg - 0.67 kg						●	●	●
optional	0.094 kg - 11 kg						●	●	●
optional	5.3 kg - 15 kg						●	●	●
optional	0.14 kg - 0.68 kg	IP44					●	●	●
integrated	0.21 kg - 0.49 kg	IP68	2				●	●	●

Pneumatic energy transfer	Weight	IP class	Clean room class	UL	CE	UKCA	LABS	REACH	RoHS
4 / 8	0.38 kg - 11 kg	IP40 / IP64					●	●	●
8 / 8	8.5 kg	IP64					●	●	●

				UL	CE	UKCA	LABS	REACH	RoHS
Retention force decentred	**Weight**	**IP class**	**Clean room class**						
50 N - 140 N	0.84 kg - 1.8 kg						●	●	●
Retention force decentred	**Weight**	**IP class**	**Clean room class**						
30 N - 1250 N	0.5 kg - 18 kg						●	●	●
3500 N	38 kg - 140 kg	IP40 / IP54					●	●	●
Spring force	**Weight**	**IP class**	**Clean room class**						
22 N - 320 N	0.52 kg - 13 kg	IP40					●	●	●
Defletion vertical +/-	**Weight**	**IP class**	**Clean room class**						
2 / 1 mm/°	0.14 kg - 5.8 kg						●	●	●

Repetition accuracy axial +/-	Weight	IP class	Clean room class	UL	CE	UKCA	LABS	REACH	RoHS
0.05 mm	0.66 kg - 15 kg						●	●	●
0.01 mm - 0.02 mm	0.61 kg - 30 kg						●	●	●

				UL	CE	UKCA	LABS	REACH	RoHS
Service life in cycles	**Weight**	**IP class**	**Clean room class**						
100000	0.27 kg - 0.72 kg	IP40			●	●	●	●	●
Dead weight of gripper jaw	**Weight**	**IP class**	**Clean room class**						
0.05 kg - 2.1 kg	0.44 kg - 1.8 kg	IP30 / IP40			●	●	●	●	●
Release force	**Weight**	**IP class**	**Clean room class**						
20 N	0.2 kg						●	●	●
Electrical energy transfer	**Weight**	**IP class**	**Clean room class**						
integrated	1.2 kg	IP40					●	●	●