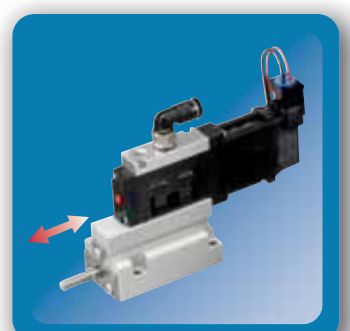
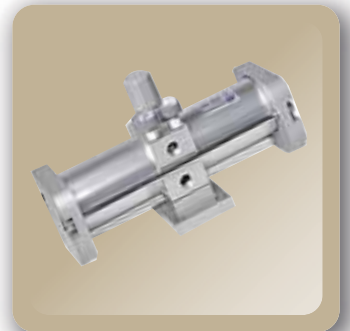
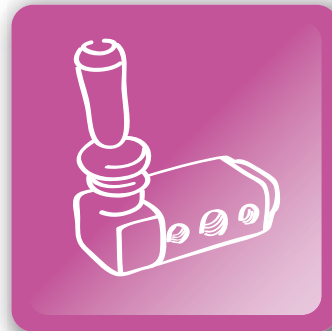


automax®

INNOVATIVE SOLUTIONS



INDUSTRIAL AUTOMATION

Program Overview

1	Air Treatment Modular air treatment GC (F-R-L), GFC (FR-L), Compacts air units FRZ • Precision regulator GRP • Handle regulator GRM • Shutoff valve GAC, Soft startup valve GDP • Water separator GSE & GTSE • Membrane compressed air dryer GSM • Digital flow controller GCD • Pneumatic Vortex jet out cooler MJC • Pneumatic pressure switch GPP • Pressure booster GVBA.	1
2	Static Electricity removal - Ionizers Ionizer blow type ESP, Fan type ESV, • Static ionizer & dust cleaner IPC • Electrostatic field meter IPC • ESD ground wrist straps ESB • ESD working material EPA • Antistatic clean walker CW, anti fatigue carpet AF.	2
3	Valves 25 pins Sub-D manifold MVB • Solenoid valves 3/2, 5/2 & 5/3 3ES - 4ES, Air-piloted valves 3A - 4A, NAMUR solenoid valve 4M • Manifold • Mechanical valves DM, Manually operated valves DML, Foot pedal valves PM • 2 ways solenoid valves 2/2, 3/2 EV.	3
4	ISO air cylinders Round cylinders ISO6432 CR • Profile round cylinders ISO15552 DNT, Rod-locking cylinders DNTK • Linear guide for ISO cylinders UG • Compact cylinders ISO CCD.	4
5	Standardized air cylinders Compact cylinders CQ2 • Multi-mount cylinders CDU • Dual-rod flat cylinders ZC • Dual-rod round cylinders CRZ • Compact cylinders with guides ZGP • Guide cylinders ZG-T • Oval cylinders BO/CO • Compact oval cylinders PO • Stopper cylinders RS • Pin compact cylinders CC • Short stroke clamping cylinders PDF • High-speed compact cylinders CHF.	5
6	Slide units Mini guide sliders VZM • Multi-mount slide cylinders MCG • Flat guide sliders ZV • Compact guide sliders VZT • Ultra-thin sliders MCSF.	6
7	Rodless cylinders Oval rodless cylinders WORV • Magnet oval rodless cylinders WRV • Magnet rodless cylinders with guide WHR/WOR • Magnet rodless cylinders with dual guide WHR/WOR • Magnet rodless cylinders slide bearing WRGH.	7
8	Combination motion cylinders Roto-linear cylinders SCDM • Compact clamp cylinders TB • Strng clamp cylinders TMA • Profile clamp cylinders TMC • Rotary grippers SHDM • Strong rotary grippers HY.	8
9	Rotary actuators Rotary actuators with rack 2, 3 & 4 positions YS • Rotary tables YCR • Compact rotary tables YCC • Miniature rotary tables YMC • Rotary actuators vane type YR • Rotary actuators rack & pinion type YRT • Rotary actuators rack & pinion type YT • Compact rotary actuators rack type YRC • Rotary actuators vane type YP • Rotary actuators vane type 3 & 4 positions YRS.	9
10	Grippers Parallel type mechanical grippers HNR • Angular & parallel grippers HNT • Precision parallel grippers HH • Parallel ball bearing grippers HFE • Compact long stroke parallel grippers HSCK • Compact high force parallel grippers HCTDP • Flat parallel grippers HE • Long stroke parallel grippers HMC • Reinforced parallele gripper HRTDP • Flat angular 180° grippers HNTDL • Strong angular 180° grippers HCTDL • Oval piston parallel grippers HO • 3-finger parallel grippers small size H3T • 3-finger parallel grippers large size H3T • 3-finger parallel grippers hollow body H3T-X • Long stroke 3-finger parallel grippers H3T-L • High force & long stroke 3-finger parallel grippers H3CHK & H3CHJ • 4-finger parallel grippers H4TDP • Non-Contact Transfer HPSC • Flexible rubber hands HT.	10
11	Modular pneumatic system Turning, reversing, shift, compliance, parallel Modules GPS.	11
12	Air scissors & nippers Compact pneumatic nippers CCP • Pneumatic scissors CCP • Automatic & manual pneumatic nippers CCP • Pneumatic scissors with heat blades CCP.	12
13	Rotating joints, Connection & in-line auxiliaries Rotating joints AJT • Miniature connection auxiliaries A • Miniature quick fittings for tube ø1,8 Amini • Connection auxiliaries with tapered and straight thread A • In-line auxiliaries DM, K2CV, A.	13
14	Dispensing pump Compact vacuum generator GVB • Compact compressor GCB • Multi-stage vacuum generators MEV • Miniature precision dosing pump MP • Constant volume dispensing pump F-P • Constant volume & flow dispensing pump F-P.	14
15	Shock absorbers & hydraulic regulators Hydraulic regulators serie K2 KHR • New generation shock absorbers serie K2 fixed version K2F or adjustable K2R, accessories.	15
16	Electric actuators Electric axis belt driven AELH • Electric cylinders ball screw AELV • Electric actuators EW • Electric linear stepping actuators IVM • Belt driven units ALCC • Linear electric cylinders with integrated motor VELVB • Electric rodless cylinders with integrated motor WELVB • Electric miniature cylinders with integrated motor AELM • Electric miniature grippers with integrated motor AELHE.	16



Legend

Autimax Express: We guaranty you a despatch within 2 days, as long as the production plan permits short-term production of the ordered quantities.



PROGRAM OVERVIEW

1

MODULAR AIR TREATMENT

- Three possible combinations: **GC** (F-R-L), **GFC** (FR-L) & separated modules ;
- Thread ports from G1/8" to G1" ;
- Filtering 5 μ .

Product family	Size	Connection	Pressure MPa Primary Secondary		Catalogue
Air treatment F-R-L independent: GC	200	1/8", 1/4"	1	0,05~0,85	FRL
	300	1/4", 3/8", 1/2"			
	400	3/8", 1/2", 3/4"			
	500	3/4", 1"			
Air treatment FR-L combined: GFC	200	1/8", 1/4"	1	0,05~0,85	
	300	1/4", 3/8", 1/2"			
	400	3/8", 1/2", 3/4"			
	500	3/4", 1"			
Air treatment FR single: GFR	200	1/8", 1/4"	1	0,05~0,85	
	300	1/4", 3/8", 1/2"			
	400	3/8", 1/2", 3/4"			
	500	3/4", 1"			
Air treatment F filter single: GF	200	1/8", 1/4"	1	Filtration 5μ	
	300	1/4", 3/8", 1/2"			
	400	3/8", 1/2", 3/4"			
	500	3/4", 1"			
Air treatment R régulator single: GR	200	1/8", 1/4"	1	0,05~0,85	
	300	1/4", 3/8", 1/2"			
	400	3/8", 1/2", 3/4"			
	500	3/4", 1"			
Air treatment L lubricator single: GL	200	1/8", 1/4"	1		
	300	1/4", 3/8", 1/2"			
	400	3/8", 1/2", 3/4"			
	500	3/4", 1"			



1

COMPACT AIR TREATMENT

- High flow with space saving requirement. Function: Filter regulator or regulator, lockable shut-off valve ;
- Residual pressure exhaust valve and pressure switch module can be associable. Filtration 5 μ ;
- 3 sizes : 30 [Not assembling] - 40 / 50 [assembling & compatible with filter Air-cyclone series] ;
- Low pressure version {0,05~0,40 MPa}.

Product family	Size	Connection	Pressure MPa Primary Secondary		Catalogue
Air treatment Filter Régulator separate: FRZ	30	M5, 1/8", 1/4"	1	0,05~0,85	FRZ
	40	1/8", 1/4", 3/8"			
	50	1/4", 3/8", 1/2"			
Air treatment Régulator indépendant: RZ	30	1/8", 1/4"	1	0,05~0,85	
	40	1/4", 3/8", 1/2"			
	50	3/8", 1/2", 3/4"			
Exhaust valve assembling: 50VZ	01	1/8"	1	0,05~0,85	
	02	1/4"			
	03	3/8"			
	04	1/2"			
Pressure switch assembling: 8Z	40	Electric	1		
	50	2 wires			



1

PRECISION REGULATOR

- 3 sizes with 3 pressure adjustment ranges per size ;
- Available port connections: 1/8" to 1/2" ;
- Setting accuracy: $\pm 0,2\%$;
- Repeatability: $\pm 0,5\%$.

Product family	Model	Pressure Mpa	Connection	Catalogue
Precision regulator: GRP	100	0,005~0,2	1/8"	GRP
	101	0,01~0,4	1/8"	
	102	0,01~0,8	1/8"	
	200	0,005~0,2	1/4"	
	201	0,01~0,4	1/4"	
	202	0,01~0,8	1/4"	
	300	0,005~0,2	3/8", 1/2"	
	301	0,01~0,4	3/8", 1/2"	
	302	0,01~0,8	3/8", 1/2"	



1

ONLINE REGULATOR

- Compact & lightweight (80g.), can be installed directly to pneumatic tools ;
- Outlet pressure indication on adjustment knob (No pressure-gauge).

Product family	Model	Connection	Inlet pressure MPa (bar)	Catalogue
Handle regulator : GRM	GRM310	1/4"	1,0 (10)	GRM
	GRM315	1/4"	1,5 (15)	



1

LOCKABLE SHUT-OFF VALVE

- Economical shut-off valve for FRL combination ;
- Lockable by padlock (not included) ;
- Versions: 2 & 3 ways.

Product family	Model	Connection	Pressure MPa (bar)	Catalogue
Lockable shut-off valve: GAC	GAC300	1/4", 3/8"	1,5 (15)	GAC
	GAC302	1/4", 3/8", 1/2"	1,5 (15)	
	GAC400	1/4", 3/8", 1/2"	1,5 (15)	



1

SOFT START-UP VALVE

- Soft start-up valve after shut-off of air supply, for low speed air supply to gradually raise initial pressure in air system.

Product family	Model	Connection	Pressure MPa (bar)	Catalogue
Soft start-up valve: GDP	GDP300	3/8"	0,25~1 (2,5~10)	GDP
	GDP400	1/2"	0,25~1 (2,5~10)	



1

WATER SEPARATION AIR CYCLONE

- 99% water separation ratio. Very small size ;
- High-speed cyclone effect uses the power of centrifugal separation ;
- Maintenance free, without element filter, with or without auto drain ;
- Preservation of the environment as standard, copper free.

Product family	Model	Connection	Collected vol. of water in ml (Flow l/min)	Catalogue
Water separator: GSE	GSE30	1/8", 1/4"	13 (850)	GSE
	GSE40	1/8", 1/4", 3/8"	16 (1500)	
	GSE50	1/4", 3/8"; 1/2"	27 (2800)	



1

TUBE DRYERS

- Independent running, without power supply ;
- Use of hollow fiber membranes, preserving the environment ;
- No condensation at the exhaust, but water vapor ;
- Dew point indicator to check separation level.

Product family	Model	Connection	Input / Output Flow (l/min)	Catalogue
Tube dryers: GTSE	GTSE15	Instant. ø6	18 / 15	GTSE
	GTSE30	Instant. ø6	36 / 30	



1

MEMBRANE AIR DRYERS

- Autonomous working, Freon-free air dryer, without energy. Working pressure from 0,2 to 0,83MPa ;
- Use of hollow fiber membranes, preserving the environment ;
- Generation of water vapor, without flow ;
- Dew point indicator to check separation level.

Product family	Model	Connection	Input / Output Flow (l/min)	Catalogue
Membrane air dryer: GSM	GSM05	Rc1/4"	33~133 / 20~120	GSM
	GSM1	Rc1/4"	65~205 / 40~180	
	GSM3	Rc1/2"	195~615 / 120~540	



1

DIGITAL FLOW CONTROLLER

- Corrections of cycle time variations with respect to flow rate, pressure or operating time ;
- Adjustment, setting can be made in real time ;
- Preventive maintenance of cessations by checking operating variations (Performances degradation) ;
- Synchronization of cycles of several actuators (16 per unit).

Product family	Model	Ø tube Connection	Free / Regulated flow (l/min)	Catalogue
Flow controller: GCD	GCD04(B)	ø4 (ø4)	180 / 75 (24)	GCD
	GCD06(B)	ø6 (ø6)	410 / 150 (24)	
	GCD08	ø8	410 / 150	
	GCD10	ø10	830 / 530	
	GCD12	ø12	830 / 530	
Time Controller: GCD-T	GCD-T	DC12~24v		
Setting device: GCD-BC	GCD-BC	AC100~240v	Cable Lg: 1m/3m	
Setting device battery: GCD-BR	GCD-BR			

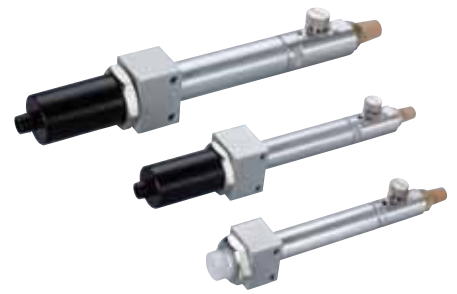


1

JET OUT COOLER

- Air maximum 60°C lower ;
- Uses a theory of vortex, no moving are used ;
- Possible combination with silencer for noise reduction ;
- Ideal in the search for acoust-effective and fast cooling.

Product family	Model	Connection	Working pressure MPa (bar)	Catalogue
Jet out cooler: MJC	MJC150K	1/8"	0,3~0,7 (3~7)	MJC
	MJC-300K	1/4"	0,3~0,7 (3~7)	
	MJC-450K	3/8"	0,3~0,7 (3~7)	
	MJC-600K	3/8"	0,3~0,7 (3~7)	



1

Pneumatic PRESSURE SWITCH

- Pressure level control ;
- Versions: économique, miniature form, digital display.

Product family	Model	Connection	Available for Vacuum, Pressure, Compound	Catalogue
Pneumatic Pressure Switch: GPP	GPP10	M5, 1/8", ø4, ø6	V, P, C, Low P.	GPP
	GPP30	1/8"	V, P, C	
	GPPS	1/8"	P	



1

PRESSURE BOOSTER

- Increased pressure locally ;
- Amplification ratio: 1/2 ;
- Available with buffer tank.

Product family	Model	Connection	Free/Regulated flow (l/min)	Catalogue
Booster: GVBA	GVBA21-03	3/8"	180 / 75 (24)	GVBA
Booster with tank: GVBA-R	GVBA21-03-R		410 / 150	



2

IONIZERS BLOW TYPE - FAN TYPE

- Wide choice of technological solutions for the elimination of static electricity in various fields: packaging, plastic injection, electronics, food, etc... ;
- Pulsed air (compressed air) series, ionized air fan type, air gun type, multi-nozzle bar.

Product family	Size	Air flow m³/min	Decay time*	Ion Balance	Catalogue
Fan type ionizers: ESV	120R	3,66	1,5 sec.	±10V	ES
	120S	2,21	2,5 sec.		
Multi nozzles bar type ionizers: ES	C series	-	0,8 sec.		
	H series	-	0,5 sec.		
Single nozzle type ionizers: ESP	N-1	0,190	1 sec.	±10V	
	N-3	0,210	0,7 sec.		
Gun type pulsed air ionizers: ESS	G2	0,153	0.4 sec.		

*: the decay time of electrostatic charge for ionizers **ESV/ESC(H)** varies depending of pressure & distance.



2

STATIC IONIZER & DUST CLEANER

- Integrated ionization system for dedusting, with particle recovery ;
- 2 compact A4 & A3 formats easy to integrate into a production line ;
- Fully automated function, with automatic start-up.

Product family	Size	Air Flow m³/min	Decay time	Ion Balance	Catalogue
ESD ionization cabin: IPC-	A4	3,66	1,5 sec.	±10%	IPC
	A3	2,21	2,5 sec.		



2

ELECTROSTATIC FIELD METER

- Measure the electrostatic charges ;
- Measure the ion balance ;
- Measurement values direct read on digital display ;
- Optical measurement distance used red cross by LED.

Product family	Size	Air Flow m³/min	Decay time	Ion Balance	Catalogue
Electrostatic field meter : EYE	EYE02	3,66	1,5 sec.	±10%	IPC



2

ESD WRIST STRAPS

- Static discharge of persons ;
- Visual display of operation ;
- 2 available materials stainless steel & plastic.

Product family	Size	Wristband	Resistance*	Catalogue
ESD grounding straps: ESB	01	Stretchable band	1 MΩ	ESB
	02	inox	1 MΩ	
	01D	Stretchable band	2 MΩ	
	02D	inox	2 MΩ	

*: Resistance value between band and grounding cord.



2

ESD WORKING MATERIAL

- Designed for workbenches require ESD measures ;
- Reduces static loads when assembling sensitive products.

Product family	Model	Conductivity Ω	Dimensions L. roll x l. x ép.	Catalogue
ESD working material: EPA	EPA-VC	$10^6 \leq R \leq 10^7$	10m x 1m x 2mm	EPA
	EPA-V	$10^6 \leq R \leq 10^7$	10m x 1m x 2mm	

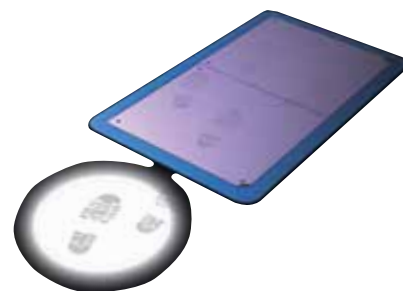


2

ESD - CARPET

- ESD-Carpet for placement in passageways ;
- Captures and retains dust and microparticles from shoe soles or trolley wheels ;
- Washable.

Product family	Model	Conductivity Ω	Dimensions (mm) W. x H. x Th.	Catalogue
ESD-Carpet: CWA	900B	$10^6 \leq R \leq 10^7$	900 x 500 x 5	CW
	900EZ	$10^6 \leq R \leq 10^7$	450 x 500 x 3	

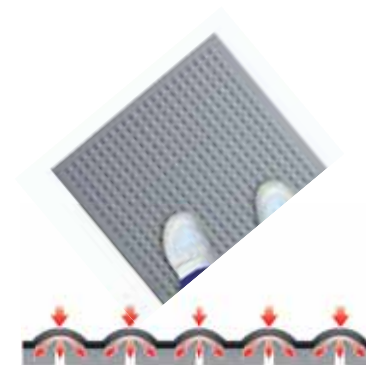


2

ESD - ANTI-FATIGUE CARPET

- Light-grey mat for easy detection of dirt, dust... ;
- Comfortable ;
- Conductive mat for fatigue alleviation from standing work.

Product family	Model	Dimensions (mm)		Catalogue
ESD - Anti-fatigue mat: AF	AF-45	600 x 447		AF
	AF-90	900 x 600		

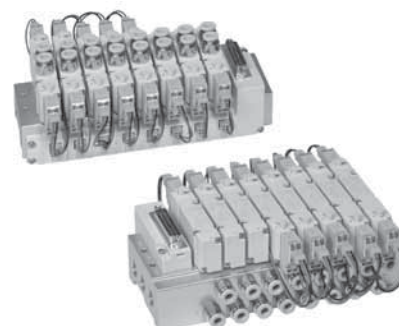


3

25 PINS SUB-D MANIFOLD

- Available in 5/2 & 5/3 versions, single or double solenoid ;
- Number of places: 12 in single solenoid, 11 in double solenoid ;
- 5 voltages: AC110 / 220V & DC6 / 12 / 24V.

Product family	Size	Fonction	Connection In - Out	Catalogue
Valve block exits valve body: MVB-156C	156	5/2-5/3	1/8" - $\varnothing$ 4, 6, 8	MVB
Valve block exits manifold: MVB-156M	156	5/2-5/3	1/8" - $\varnothing$ 4, 6, 8	



3

SOLENOID VALVES

- Large selection of solenoid valves **ES**. Functions: 3/2, 5/2 & 5/3 ;
- NAMUR version: **M** ;
- Connection ports from M5 to G1/2" ;
- Voltages: DC12, DC24V, AC24, AC110 & AC220V.

Product family	Size	Connection	Effective area mm ² (CV)	Catalogue
Solenoid valve 3/2 single solenoid: 3ES	3ES110	M5, 1/8"	12 (0,67)	ED
	3ES210	1/8", 1/4"	14 (0,78), 16 (0,89)	
	3ES310	1/4", 3/8"	25 (1,40), 30 (1,68)	
	3ES410	3/8", 1/2"	30 (1,68), 50 (2,79)	
Solenoid valve 5/2 single solenoid: 4ES	4ES110	M5, 1/8"	5,5 (0,31), 12 (0,67)	
	4ES210	1/8", 1/4"	14 (0,78), 16 (0,89)	
	4ES310	1/4", 3/8"	25 (1,40), 30 (1,68)	
	4ES410	1/2"	50 (2,79)	
Solenoid valve 5/2 double solenoid: 4ES	4ES120	M5, 1/8"	5,5 (0,31), 12 (0,67)	
	4ES220	1/8", 1/4"	14 (0,78), 16 (0,89)	
	4ES320	1/4", 3/8"	25 (1,40), 30 (1,68)	
	4ES420	1/2"	50 (2,79)	
Solenoid valve 5/3 Closed center: 4V...C Exhaust center: 4V...E Pressure center: 4V...P	4ES130*	M5, 1/8"	5 (0,28), 9 (0,50)	
	4ES230*	1/8", 1/4"	12 (0,67)	
	4ES330*	1/4", 3/8"	18 (1,00)	
	4ES430*	1/2"	50 (2,79)	
5/2 NAMUR single solenoid: 4M	4M310	1/8"	25 (1,40)	
5/2 NAMUR double solenoid: 4M	4M320	1/8"	25 (1,40)	



3

AIR-PILOTED VALVES

- Large selection of air-piloted valves: **A** ;
- Connection ports from G1/8" to G3/8" ;
- 3 fonctions: 3/2, 5/2 & 5/3.

Product family	Size	Connection	Effective area mm ² (CV)	Catalogue
Air piloted valve 3/2 single pilot: 3A	3A210	1/8", 1/4"	14 (0,78), 16 (0,89)	ED
	3A310	1/4", 3/8"	25 (1,40), 30 (1,68)	
Air piloted valve 5/2 single pilot: 4A	4A110	M5, 1/8"	5,5 (0,31), 12 (0,67)	
	4A210	1/8", 1/4"	14 (0,78), 16 (0,89)	
	4A310	1/4", 3/8"	25 (1,40), 30 (1,68)	
Air piloted valve 5/2 double pilot: 4A	4A120	M5, 1/8"	5,5 (0,31), 12 (0,67)	
	4A220	1/8", 1/4"	14 (0,78), 16 (0,89)	
	4A320	1/4", 3/8"	25 (1,40), 30 (1,68)	
Air piloted valve 5/3 Closed center: 4A...C Exhaust center: 4A...E Pressure center: 4A...P	4A130*	M5, 1/8"	5 (0,28), 9 (0,50)	
	4A230*	1/8", 1/4"	12 (0,67)	
	4A330*	1/4", 3/8"	18 (1,00)	



3

MECHANICAL VALVES

- Wide selection of control buttons: push-button, flush, projecting, rotating knob, punch button & roller lever ;
- 2 functions: 3/2 & 5/2.

Product family	Size	Connection	Effective area mm ² (CV)	Catalogue
Mechanical valves 3/2: DM	DM16U32	1/8"	12 (0,67)	DM
	DM26U32	1/4"	16 (0,89)	
Mechanical valves 5/2: DM	DM26U52		16 (0,89)	



3

MANUALLY OPERATED VALVES

- Wide selection of solutions with 3 types: valves with push-button **DML-P**, with lever **DML-L**, rotary valves **DML-R**. Indexable positions on all models ;
- 2 sizes in **-P** & **-L**, 1 size in **-R** ;
- Ports connection from G1/8" to G1/2" ;
- 3 functions 3/2, 5/2 & 5/3.

Product family	Size	Function	Connection	Effective area mm ² (CV)	Catalogue	
Manually valves with push-button: DML-P	22U32	3/2	1/8", 1/4"	12 (0,67)	DML	
	22U52	5/2	1/8", 1/4"	14 (0,78), 16 (0,89)		
Manually valves with lever: DML-L	22U32	3/2	1/8", 1/4"	14 (0,78), 16 (0,89)		
	26U32		1/4", 3/8"	25 (1,40), 30 (1,68)		
	22U52	5/2	1/8", 1/4"	14 (0,78), 16 (0,89)		
	26U52		1/4", 3/8"	25 (1,40), 30 (1,68)		
	22U53	5/3	1/4", 3/8"	16 (0,89), 30 (1,68)		
	26U53					
Manually rotary valves : DML-R	74U42	4/2	1/4",3/8",1/2"	30 (1,68)		
	74U43	4/3	1/4",3/8",1/2"	30 (1,68)		

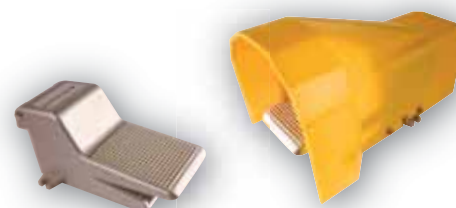


3

FOOT PEDAL VALVES

- different versions: single pedal, pedal with cover, with locking ;
- 2 functions: 3/2 & 5/2.

Product family	Size	Function	Connection	Catalogue
Foot pedal valve 3/2 : PM-32	1	3/2NC	R:1/8", P,A:1/4"	PM
Foot pedal valve 5/2 : PM-52	2	5/2	1/4"	



3

2 WAYS SOLENOID VALVES

- Versions 2/2, 3/2 & 2/2 explosion-proof (Exm I/II T4), stainless steel ;
- Medias: air pressure, water, vapor, oil, liquid gas, high temperature fluids ;
- Voltages: DC12, DC24V, AC24, AC110 & AC220V ;
- Connection ports: M5 to 2 1/2".

Product family	Model	Functions	Pressure Mpa	Nominal Dia. mm	Connection	Catalogue
Solenoid valve 2/2	2V-ZQ	Direct Action NC	0~0,8	2,5	1/8"	EV
	2V-ZQ025	Direct Action NC	0~0,8	2,5	1/8"	
	2V6213	Direct Action NC	0,03~1,0	10, 14 & 25	1/4" to 1"	
	2P025	Direct Action NC	0~0,7	2,5	1/8", 1/4"	
Air piloted valve 2/2	2V-CY	Air operated NC	0,2~1,0	13 to 59	1/4" to 2 1/2"	
	2VR	Air operated NC	0,3~1,0	15 to 65	3/8" to 2 1/2"	
Solenoid valve 3/2	3V-ZQ	Direct Action NC	0~0,8	2,5	1/8"	
	3V23	Direct Action NC	0~1,6	1,5, 2 & 2,5	1/8", 1/4"	
	3V106	Direct Action NC	0~0,8	1,2	M5 to 1/8"	



4

ROUND CYLINDERS - ISO6432

- Normalized range ISO 6432 from ø8 ~ ø25 ;
- Pen cylinders ø2,5, ø4, ø6 ;
- External dimensions for bores 8 to 25mm are conform with ISO6432 norms.



Product family	Size mm	Stroke mm	Connection	Catalogue
Single acting push type: CRBRM	2,5	5 ~ 10	Canule	CR
	4	5 ~ 15		
Double acting CRBDM Single acting push & pull type: CRBRM, CRBSM	6	5 ~ 60	M5	
Double acting, D. Act hollow piston rod: CRDM	8-10	5 ~ 100		
	12-16	5 ~ 200	1/8"	
Single acting push type: CRRM	20	5 ~ 300		
Single acting pull type: CRSM	25	5 ~ 500		



4

PROFILE CYLINDERS - ISO15552

- Compact, lightweight & design, available in version single piston rod and through piston rod, magnetic or not ;
- Rod locking cylinder version ;
- Profile integrated sensor switch .



Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting: DNT	32~125	25~1000*	1/8" à 1/2"	DNT
Double acting Through piston rod: DNTD	160~200	25~1000*	3/4"	
Product family	Size mm	Stroke mm	Maximum holding force (N)	
Double acting, rod locking: DNTK	20~125	25~700*	490~12040	

* : Maxi stroke depending on diameter.

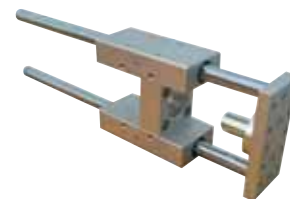


4

LINEAR GUIDE for ISO Cylinders

- Compatible with ISO 6432 cylinder (ø12 à 25) & ISO15552 profile cylinder (ø32 à 100) ;
- Guide rod bearings: Slide bearing or ball bearing ;
- Possibility to adjust stroke by optional plate.

Product family	Size	Stroke mm	Connection	Catalogue
Guide units H type, slide bearing: UG20-4	12, 16, 20, 25, 32, 40, 50, 63, 80, 100	50~500	Without	UG
Guide units H type, ball bearing: UG20-5				



4

COMPACT CYLINDERS ISO

- Compact, lightweight, Interchangeable standard ISO 21287, magnetic in standard ;
- Profile integrated sensor switch ;
- Versions male thread or female thread piston rod, stroke adjust 10mm bore 10 until 100mm bore 100.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting, single rod: CCDM-V	20~100	5~200	M5 à 1,8"	CCD
Double acting, through rod: CCDM-W		5~200		
Double acting, stroke adjust: CCDM-R		5~200		
Double acting, single non-rotating rod: CCDM-T		5~100	1,8"	



5

COMPACT CYLINDER

- Compact, lightweight, available in single or double acting, magnetic or not ;
- Profile integrated sensor switch ;
- male or female thread piston rod ;
- Mounting by through holes, or female threads both side.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting: C(D)Q2	12-16(20-25) 32-100	5~30(50) 5~100	12~25 : M5 32~40 : G1/8" 50~63 : G1/4" 80~100 : G3/8"	CQ2
Single acting push side: C(D)Q2-S	12-16(20-25) 32-100	5~20(30) 5~30		
Single acting pull side: C(D)Q2-T	12-16(20-25) 32-100	5~20(30) 5~30		
Double acting through piston rod: C(D)Q2-W	12-16(20-25) 32-100	5~30(50) 5~100		
Double acting, stroke adjust: C(D)Q2-R	12-16(20-25) 32-100	5~30(50) 5~100		



5

MULTI-MOUNT CYLINDERS

- Compact, lightweight, many possibilities to be fixed on all the faces ;
- Available in single rod version, through rod, simple effet tige rentrée ou tige sortie & tige anti-rotatio ;
- Magnetic or not, with profile integrated sensor switch.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting not magnetic: CU	6,10,16	5~30	M5	CDU
Double acting magnetic: CDU	20,25,32	5~50	T32: 1/8"	
Double acting non-rotating: CDUK				



5

DUAL-ROD FLAT CYLINDERS

- Integrated in compact profile, two associated piston for non-rotating function. Push out force is double ;
- Double acting, standard bearing, reinforced bearing, with ball bushing, Single acting.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting standard bearing: ZCBDM	10	10~70	M5	ZC
Double acting reinforced bearing: ZLBDM	16	10~100		
Double acting with ball bushing : ZHBDM	20			
	25			
	32		1/8"	
Single acting: ZCBRM	10	10~60	M5	
	16			
	20			
	25			
Double acting front lock: ZBBDMA	16	10~60	M5	
Double acting rear lock: ZBBDMR	20			
	25			



5

DUAL-ROD ROUND CYLINDERS

- Non-rotating cylinders compatible with ISO, with aluminium profile tube ;
- 2 aluminium profile tubes: standard, and without retention zone (Agro-food) ;
- High temperature version, Viton® seals.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting non-rotation piston-rods: CRZ	32	25~500	G1/8"	CRZ
	40		G1/4"	
	50			
	63		G3/8"	
	80		G1/2"	
	100			



5

COMPACT CYLINDERS WITH GUIDE

- New generation, lightweight and compact. slick bearing or ball bushing ;
- with robust design, suitable to support high load and torque ;
- Connection ports on 2 faces. with position holes ;
- Magnetic detection in standard.

Product family	Size mm	Stroke mm	Connection	Catalogue
Slick bearing compact cylinder: ZGPM	12 16	10~100	M5	ZGP
	20 25	20~200	1/8"	
Ball bushing compact cylinder: ZGPL	32 40	20~200		
	50 63			



5

GUIDE CYLINDERS

- Compact, slick bearing or ball bushing versions ;
- Robust design.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting, with slick bearing: ZGDL•T	12 16	10~100	M5	ZG.T
	20 25	20~200	1/8"	
	32	25~200		
	40	30~200	1/4"	
	50 63			
	80		3/8"	
Double acting, with ball bushing: ZGDQ.T	12 16	10~100	M5	ZG.T
	20	20~200	1/8"	
	25	25~200		
	32	1/8"		



5

OVAL CYLINDERS

- Compact, BO cylinders with their small size and flat profile allow a more harmonious and easy implantation with the mechanical elements ;
- The mounting is simplified by fixing holes integrated on the cylinder ;
- An innovante range of non-rotating cylinder with oval form of piston & tube to obtain the non-rotation of piston-rod ;
- The dimensions of the CO cylinders (for all sizes) are compatible with ISO 6432. The attachments are identical to the ISO 6432 round cylinders (CR range).



Product family	Size mm	Stroke mm	Connection	Catalogue
D.ble act. single rod, hollow through rod: BODM	10	5 ~100	M5	BO
Single acting push type: BORM	16			
Single acting pull type: BOSM	25			
D.ble act. single rod, hollow through rod: CODM	8-10	5 ~ 100	M5	CO
Single acting push type: CORM	16	5 ~ 200		
Single acting pull type: COSM	20	5 ~ 300	1/8	
	25	5 ~ 500		



5

COMPACT OVAL CYLINDERS

- Compact, their flat profile allows a more harmonious and easy implantation with the mechanical elements ;
- The mounting is simplified by fixing holes integrated on the cylinder ;
- An innovante range of non-rotating cylinder with oval form of piston & tube to obtain the non-rotation of piston-rod ;

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting single piston rod: PODM	25	5 ~250 (Max. 300)	M5	PO
	32		1/8	
	40			
	50			
	63			



5

STOPPER CYLINDERS

- Large selection of models: 7 versions in double and single acting. Direct shock or cushioning ;
- Large choice of stroke ;
- Vertical or horizontal mounting.

Product family	Size mm	Stroke mm	Connection	Catalogue
With cushioning and retractable roller, double acting: RSBD	32	20	1/8"	RS
	50	30		
	63	30	1/4"	
	80	40		
With straight roller & cubic body, single acting: RSBR	20	20	M5	
	32		1/8"	
	40	30		
	50			
With straight roller & threaded body: RSAR	32	30	1/8"	
	50		1/4"	
	80			
With direct acting on rod: RSBS	20	10	M5	
	32	20	1/8"	
	50	30		
Horizontal action with roller: RSLD, RSLL	25	30	1/8"	
	40	50		
	50		1/4"	
Horizontal direct action: RSLP	32	40	1/8"	



5

PIN COMPACT CYLINDERS

- Integration of pneumatic function in small tools ;
- Very small design with external thread. Option with seal for use in an integrable cartridge.

Product family	Size mm	Stroke mm	Connection	Catalogue
Single acting push out type: CCRP	06 10 16	5 ~ 15	M5	CC



5

SHORT STROKE CLAMPING CYLINDERS

- Short stroke with very weak design and high clamping force ;
- Many applications for holding, clamping pieces with a rough surface ;
- Single acting, with fast response time.

Product family	Size mm	Stroke mm	Connection	Catalogue
Single acting, short stroke with diaphragm: PDF	20x75	5	M5	PDF



5

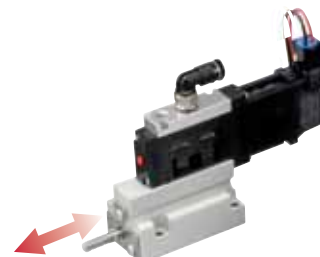
HIGH SPEED COMPACT CYLINDER

- Maximum allowable frequency 100cycles / sec (CHFS06x01), depending on the size, stroke & pressure ;
- Solenoid valve integrated on cylinder, to reduce cycle times ;
- Cycle time of 5ms (or less), depending of usages conditions.

Product family	Size mm	Stroke ⁽²⁾ mm	Allowable frequency	Catalogue
High frequency cylinder, single solenoid valve: CHFS	06	1 ⁽¹⁾ à 20	100 c/sec.	CHF
	10	5 à 20	20 ~ 50	
	16	5 à 30	20 ~ 50	
High frequency cylinder, double solenoid valve: CHFD	16	5 à 30	20 ~ 60	

(1) : No detection for stroke 1mm ;

(2) : The strokes 1, 5, 15 & 25mm are obtained with spacer collar on the next superior stroke.



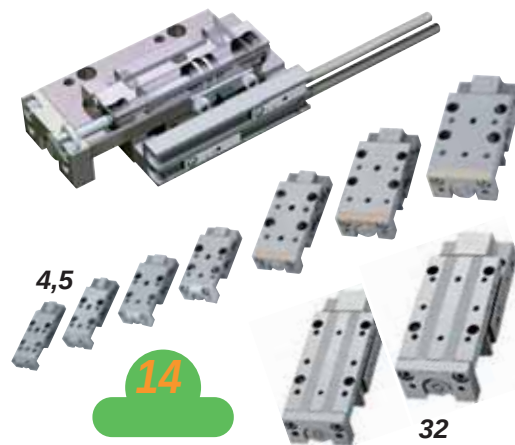
6

MINI GUIDE SLIDERS

- High rigidity through a guide bearing with four contact points for a parallelism precision of 0.005 ;
- Bores 10 to 32: Hydraulic shock absorber, or stopper (metal or rubber) to adjust stroke in end positions rear and/or front ;
- Various anchor points for precise assembly ;
- End-of-stroke detection with accuracy: 0.2mm and changeable detection side.

Product family	Size mm	Stroke mm	Connection	Catalogue
High-precision miniature sliders: VZMP	4,5	5~10	M3x0,5	VZM
	6	5~30		
High-precision miniature sliders, End-of-stroke detection: VZMM	8	5~30		
	10	5~50	M5x0,8	
	12	10~80		
High-precision adjusting sliders, shock absorbers: VZM.A	16	10~100		
	20	10~125		
High-precision adjusting sliders, stoppers: VZM.B	25	10~150		
	32	10~150	1/8"	

NOTE: Different versions such as buffer, cleanroom spec., lateral mounting, adjustable stroke are possible. Please contact us.



6

MULTI-MOUNT SLIDE CYLINDERS

- Compact dimensions, with non-rotation by ball bearing ;
- Allowable important lateral loads ;
- Several air connections, mounting from 3 or 4 directions.

Product family	Size mm	Stroke mm	Connection	Catalogue
Multi-mount sliders: MCGM	6	5~60	M5x0,8	MCG
	10			
	16			
	20			

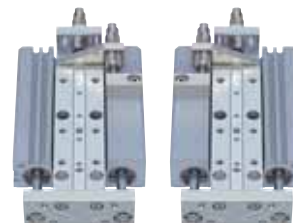


6

FLAT GUIDE SLIDERS

- Compact and lightweight, thin type actuator ;
- Adjusting stroke in the back side ;
- Adjusting stroke made by rubber stoppers or shock absorbers (except size 6) ;
- Options: buffer mechanism, Choice (symmetry) of model for sensor groove & air connection.

Product family	Size mm	Stroke mm	Connection	Catalogue	
Symmetrical high precision table: ZVG / ZVD	6	10~70	M5x0,8	ZV	
	10	10~100			
High precision table with buffer mechanism: ZVC	16	10~100			
High precision table end keep mechanism: ZVBB	20	10~100	1/8"		
	25				



6

COMPACT GUIDE SLIDERS

- Double pistons & ball bearing for precise work ;
- Shock absorbers, or adjusting stroke stoppers in extended & retracted ways ;
- Precise anchor points on all faces of the table / body cylinder.

Product family	Size mm	Stroke mm	Connection	Catalogue
Precise sliders: VZT	6	10~50	M3x0,5	VZT
	8	10~75	M5x0,8	
Precise sliders with shock absorbers: VZT.A	12	10~100		
	16	10~125		
Precise sliders with adtusting stoppers: VZT.B	20 25	10~150	1/8"	



6

ULTRA-THIN SLIDERS

- Parallel mounting of guide to cylinder gives slim compact unit ;
- Stroke adjustment of 5mm in standard, 15, 25mm in option (except Ø8 & Ø12) ;
- Integrated groove in profile for detection.

Product family	Size mm	Stroke mm	Connection	Catalogue
Table de précision à course réglable : MCSF	8	10~30	M3x0,5	MCSF
	12	20~50	M5x0,8	
	16	30~75		
	20	30~100		



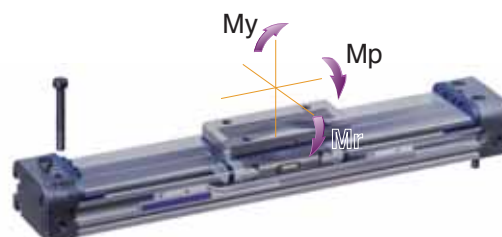
7

OVAL RODLESS CYLINDERS

- Very compact & lightweight.
- Stroke adjustment by shock absorber on separated holder.
- Rubber absorber integrated.
- Option: buffer mechanism.



Product family	Allow. torque			Size	Stroke	Connection	Catalogue
	Mp	Mr	My	mm	mm		
	N·m	N·m	N·m				
Flat oval rodless cylinder: WORV	3,2	0,5	0,5	16	25~800	M5x0,8	WORV
	6,3	1,2	1,2	20	50~1000	1/8"	
	12	1,6	1,6	25		100~1200	
	30	3,2	3,2	32	1/4"		
	60	6,3	6,3	40			
	100	10	10	50			



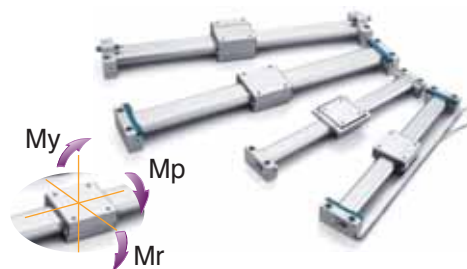
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MAGNET OVAL RODLESS CYLINDERS

- Compact, lightweight & ultra thin. Non-rotating with oval piston enables good low-speed performance : 8mm/s ;
- Mechanical stop by rubber stopper (in std) or hydraulic shock absorber (in option) ;
- Stroke adjustment by shock absorbers ;
- Option : Free mount compensator.

Product family	Allow. torque			Size mm	Stroke mm ⁽¹⁾	Connection	Catalogue
	Mp N·m	Mr N·m	My N·m				
Magnet oval rodless cylinder: WRV	0,8	1,8	0,8	14	100~500	M5x0,8	WRV
	0,6	1,2	0,6	22	200~1500		
	0,7	1,3	0,7	28			

⁽¹⁾ : La course maxi avec option Détection Magnétique est : 1000mm.

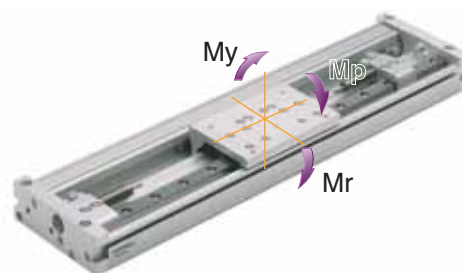


7

RODLESS CYLINDERS with GUIDE

- High precision and rigidity with single linear guide ;
- Slit type technologies with magnetic or belt coupling in identical dimensions ;
- Low height allowing a low center of gravity. Hydraulic shock absorbers and stroke adjustment in standard.

Product family	Allow. torque			Size mm	Stroke mm	Connection	Catalogue
	Mp N·m	Mr N·m	My N·m				
Magnetic coupling rodless cylinder: WHR	6	5	6	10	50~2000	1/8"	WHR WOR
				16	50~3000		
Belt coupling rodless cylinder: WORS				20			
	26	25	26	25			
				32			
	60	50	60	40			

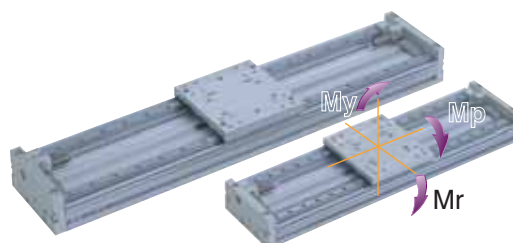


7

RODLESS CYLINDERS with DOUBLE GUIDE

- High precision and rigidity with two linear guides ;
- Slit type technologies with magnetic or oval rodless cylinder in identical dimensions ;
- Hydraulic shock absorber and stroke adjustment in standard.

Product family	Allow. torque			Size mm	Stroke mm	Connection	Catalogue
	Mp N·m	Mr N·m	My N·m				
Magnetic coupling rodless cylinder: WHRW	45	50	45	16	50~2000	1/8"	WHR WOR
	95	105	95	25			
	185	200	185	40			

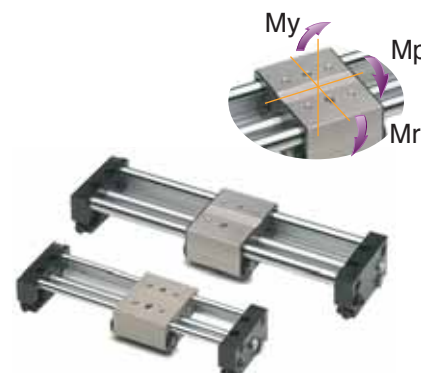


7

MAGNET RODLESS CYLINDER SLIDE BEARING

- Use a neodymium rare-earth magnet for a strong retaining force ;
- Double acting. Stroke adjustment. Hydraulic shock absorber double head.

Product family	Allow. torque			Size mm	Stroke mm	Connection	Catalogue
	Mp N·m	Mr N·m	My N·m				
Magnetic coupling rodless cylinder: WORV	0,3	0,06	0,3	06	50~300	M5x0,8	WRGH
	1,0	0,2	1,0	10	50~500		
	2,5	0,5	2,5	16	100~750		
	5,5	1,1	5,5	20	150~1000	1/8"	
	10	2,0	10	25	200~1500		
	16	3,2	16	32			
	25	5,0	25	40	1/4"		



8

ROTO-LINEAR CYLINDER

- Simple construction (combinaison) of rotary actuator and linear cylinder ;
- Angular adjustment by screw/nut, or hydraulic shock absorber (SK) ;
- Combination of the rotary movement with the linear movement simultaneously or sequentially in function of the pneumatic pilot of the actuators.

Product family	Size mm	Stroke mm	Rotation in °	Torque N•m	Catalogue
Rotary-linear unity: SCDM	25	15~150	45~270	0,56	SCDM
Rotary-linear unity with cushion: SKDM	40	15~300		1,32	



8

COMPACT CLAMP CYLINDERS

- Linear motion and 90° rotation of rod (twist movement) with a single action ;
- Slim body and piping concentrated in one location (rear) for space saving design.

Product family	Size mm	Stroke mm	Rotation in °	Connection	Catalogue
Reinforced guide clamping cylinder: TBDM	16	20, 30	90 Clockwise Counter-clockwise	M5x0,8	TB
	25	30,50		1/8"	
	40				
Single guide clamping cylinder: TBDL	16	20, 30		M5x0,8	
	25 40	30,50		1/8"	



8

ROBUST CLAMP CYLINDERS

- Robust, body with square or threaded base ;
- 5 sizes, 4 rotary angles clockwise or counter-clockwise ;
- Single or double rod flange.

Product family	Size mm	Stroke mm	Rotation ⁽¹⁾ in °	Connection	Catalogue
Single flange square base: TMAS	25	26	45, 60, 90, 180 Clockwise Counter-clockwise	M5x0,8	TMA
Double flange square base: TMASD	32			1/8"	
Single flange threaded body: TMATS	40	27			
Double flange threaded body: TMATSD	50	29			
	63				

(1): for angle 180° the stroke is only 21mm.



8

PROFILE CLAMP CYLINDERS

- Robust, with square profile, integrating sensor groove for detection ;
- 5 sizes, 1 rotary angle clockwise or counter-clockwise ;
- Single rod flange.

Product family	Size mm	Stroke (mm) CombinéeRectiligne		Rotation in °	Connect.	Catalogue
Single flange square base: TMC	16	7,5	10, 20, 30	90 Clockwise Counter-clockwise	M5x0,8	TMC
	20	9,5				
	25					
	32	15				
	40					



8

ROTARY GRIPPERS

- Simple construction (combinaison) of rotary actuator and parallel gripper ;
- Adjustable rotation by screw/nut or hydraulic shock absorber of $\pm 10^\circ$;
- 3 types of gripper: 3 fingers, 2 parallel fingers, 2 fingers 180° angular ;
- Magnetic detection on the 2 actuators.

Product family	Size mm	Stroke mm	Rotation in °	Connection	Catalogue
Rotary gripper 3 fingers: SH3M	16	5/finger	90	M5	SHDM
Rotary gripper 2 fingers: SH2M		14	180		
Rotary gripper 2 fingers 180° : SH2L		90°			



8

STRONG ROTARY GRIPPERS

- Compact construction (combinaison) of rotary actuator and parallel gripper ;
- Both functions are integrated and can be simultaneous or sequential.

Product family	Size mm	Stroke/finger mm	Rotation in °	Connection	Catalogue
Rotary gripper 2 fingers: HYDP	05	20	90	M3	HY
	20	24	180	1/8"	



9

ROTARY ACTUATORS with RACK 2, 3 & 4 positions

- Dual rack-and-pinion technology minimizes mechanical game ;
- Pneumatic cushion available for 2 positions actuator (YS2P) in option ;
- 3 mounting sides.

Product family	Size mm	Torque N·m	Rotation in °	Connection	Catalogue
Double acting 2 positions: YS2P	24	2,6	0~90	M5	YS
	26	4,3	0~180		
	30	7,0			
Double acting 3 positions: YS3P	24	0,8	0~180 (90+90)		
	26	1,4			
Double acting 4 positions: YS4P	30	2,1	0~180 ($\alpha+\beta$)*		

(*) : All values α & β configurable, within the limit of the value $(2\alpha + \beta) = 180^\circ$



9

ROTARY TABLES

- Angular adjustment over the whole angle $0 \sim 190^\circ$, by screw/nut or hydraulic shock absorber ;
- Hollow pinion shaft for cable / tube passageway.

Product family	Size mm	Couple N•m ⁽¹⁾	Rotation in °	Connection	Catalogue
Double acting 2 positions: YCRM	12	0,52	0 ~190	M5	YCR
	16	1,31			
	20	2,51			
	25	4,55			
	32	9,44			
	40	18,87			

(1): The indicated values are available for pressure of 0,5MPa.



9

COMPACT ROTARY TABLES

- Allowable kinetic energy 4 to 10 times higher than standard ;
- Angular adjustment on $\pm 3^\circ$ at end of rotation ;
- Hydraulic shock absorber at end of rotation ;
- Hollow pinion shaft for cable / tube passageway.

Product family	Size mm	Allowable kinetic energy (J)	Rotation in °	Connection	Catalogue
Double acting 2 positions: YCCR	15	0,231	0 ~90	M5	YCC
	20	1,21	0~180	1/8"	
	25	1,82			



9

MINIATURE ROTARY TABLES

- Mounting on 3 sides ;
- Angular adjusting of $\pm 5^\circ$ at end of rotation by screw/nut ;
- Male pinion shaft.
- Sensor groove for magnetic detection.

Product family	Size mm	Torque N·m ⁽¹⁾	Rotation in °	Connection	Catalogue
Double acting 2 positions: YMCM	06	0,059	0 ~90	M3x0,5	YMC
	08	0,13	0~180		

⁽¹⁾ : Available values under 0,7MPa (7bar).



9

ROTARY ACTUATORS VANE TYPE

- Compact and lightweight, easy axial or radial mounting ;
- Magnetic or non-magnetic version .

Product family	Size mm	Torque N•m	Rotation in °	Connection	Catalogue
Double acting vane type: YRDP	1	0,12	90, 100 180, 270	M5	YR
	3	0,3			
Double acting vane type, magnetic: YRDM	8	0,8			
	20	2			
	50	5,3	90,100,180, 190, 275	1/8"	



9

ROTARY ACTUATORS RACK-AND-PINION TYPE

- Anodized aluminum tube with non-retaining clean profile ;
- Angular adjustment of $\pm 5^\circ$ at end of rotation ;
- Magnetic version in standard.

Product family	Size mm	Allowable kinetic energy (J)	Rotation in °	Connection	Catalogue
Double acting rack type, male shaft: YRTM	40	0,58	90, 180	1/4"	YRT
Double acting rack type, double male shaft: YRTM-W	63	1,54		3/8"	
Double acting rack type, hollow shaft: YRTF	80	3,03			



9

ROTARY ACTUATORS RACK-AND-PINION TYPE

- Tube with tie rods, or anodized aluminium tube "Mickey Mouse" profile and clean profile ;
- Angular adjustment 0,+2° at end of rotation & pneumatic cushion ;
- High torque version (61,58Nm/Bar) for size 100 (x2) ;
- Magnetic version in standard.

Product family	Size mm	Allowable kinetic energy (J)	Rotation in °	Connection	Catalogue
Double acting rack type, male shaft: YRTM Double acting rack type, double male shaft: YRTM-W Double acting rack type, hollow shaft: YRTF	25	0,2751	90	1/8"	YT
	32	0,5176		1/8"	
	40	0,9183	180	1/4"	
	50	1,5897		1/4"	
	63	2,7513	360	3/8"	
	80	6,1025		3/8"	
	100	10,2467		1/2"	
	100x2	19,2231			



9

COMPACT ROTARY ACTUATORS RACK-AND-PINION TYPE

- Compact version with aluminium profil ;
- Functional & rational design ;
- Magnetic version in standard.

Product family	Size mm	Allowable kinetic energy (J)	Rotation in °	Connection	Catalogue
Double acting rack type, male shaft: YRCM	63	1,5	90 180	1/8"	YRC



9

ROTARY ACTUATORS VANE TYPE

- Low friction and good lifetime ;
- Hydraulic shock absorber and/or sensor kit integrable at the rear ;

Product family	Size mm	Torque in N.m	Rotation in °	Connection	Catalogue
Double acting single vane: YPRS	50	4,7	90	1/8"	YP
	150	14,7	180	1/4"	
	300	28		3/8"	
	800	100	270	1/2"	
Double acting double vane: YPRD	50	10	90	1/8"	
	150	34		1/4"	
	300	67		3/8"	
	800	201		1/2"	



9

ROTARY ACTUATORS VANE TYPE 3 or 4 Positions

- 3 or 4 positions adjustable with high precision ;
- Fast rotation time (high speed).

Product family	Size mm	Torque in N.m	Rotation in °	Connection	Catalogue
Double acting, double vane male shaft: YRS	05	$\alpha: 0,47 \cdot \beta: 1,16$	$\alpha: 30 \sim 180 \cdot \beta: 30 \sim 120$	M5	YRS
	20	$\alpha: 1,91 \cdot \beta: 5,63$	$\alpha: 30 \sim 180 \cdot \beta: 30 \sim 180$	1/8"	



PARALLEL TYPE MECHANICAL GRIPPERS

- Operating by external force type when open or closed ;
- Use in environment without air supply, or indexed table ;
- Small design for space saving.

Product family	Size mm	Stroke mm	Operation type	Catalogue
Parallel gripper single acting normally open: HNRO	10	4	Single act. N.O	HNR
Parallel gripper single acting normally closed: HNRF	16	9	Single act. N.C	
	20	13		
Parallel linear guide gripper single acting normally closed: HFRF	8	4,8	Single act. N.C	
	10	6,8		
	16	11,2		
	20	14,9		



ANGULAR & PARALLEL GRIPPERS

- Usable for current works when pick and deposit ;
- Compact and homogeneous, these grippers have a flat profile in each size ;
- Same design and uniform body for angular grippers and parallel grippers ;
- Sensor groove integrated in the aluminium body.

Product family	Size mm	Rotation° /Stroke mm	Connection	Catalogue
Double acting angular gripper: HNTDA Single acting angular gripper: HNTRA	12	-10 ~ +30	M3	HNT
	16		M5	
	20			
	25			
	32			
Double acting parallel gripper: HNTDP Single acting parallel gripper: HNTRP	12	6	M3	
	16	8	M5	
	20	12		
	25	14		
	32	16		



PRECISION PARALLEL GRIPPERS

- Parallel type cross roller bearing ensures high accuracy ;
- Suitable for strong working conditions ;
- Dust protection cover (bellows) available in: N.B.R., viton ®, silicon ;
- Sensor grooves integrated in profile.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting parallel cross roller gripper: HHBDP	06	4	M3	HH
	10	4		
	16	8	M5	
	20	12		
	25	14		
Single acting parallel cross roller gripper NO: HHBRP	06	4	M3	
	10	4		
	16	8	M5	
	20	12		
	25	14		



PARALLEL BALL BEARING GRIPPERS

- One-piece linear guide ensures high rigidity and accuracy;
- Versions double acting, single acting Normally Open & Normally closed ;
- Sensor groove integrated in profile body.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting parallel ball bearing gripper: HFEDP Single acting parallel ball bearing gripper NF: HFERP Single acting parallel ball bearing gripper NO: HFESP	10	4	M5	HFE
	16	6		
	20	10		
	25	14		
	32	22		
	40	30		



COMPACT LONG STROKE PARALLEL GRIPPERS

- Robust jaw guides for long fingers.
- Compact, these grippers have a good compromise between stroke and dimensions, low height.
- Sensor groove integrated in profile body.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting parallel gripper: HSCK	12	15	M5	HSCK
	16	20		
	20	25		



COMPACT HIGH FORCE PARALLEL GRIPPERS

- Compact, low height ;
- Flat profile for all sizes ;
- Increased gripping force by spring reinforcement, and safety function in case of air pressure drop ;
- Sensor groove integrated in profile body.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting parallel gripper: HCTDP	25	12	M5	HCTDP
	32	16		
	40	20	1/8"	
	50	26		
	63	32		



FLAT PARALLEL GRIPPERS

- Extra thin profile, robust guide. Dual-piston technology allows a large tightening torque in a small space ;
- Adjustment of fingers when closing and / or opening, practical for handling or tightening fragile parts ;
- Movement of the fingers version synchronized or not.

Product family	Size mm	Stroke mm	Connection	Catalogue
Synchronized parallel grippers: HEBDP	6	12	M3	HE
	8	16		
	12	22	M5	
	14	30		
	18	40		
Synchronized parallel grippers long stroke: HEBDPL	14	60		
	18	80		
Not synchronized parallel grippers: HEBDPH	8	16	M3	
	12	22	M5	



LONG STROKE PARALLEL GRIPPERS

- Dual-piston and racks technology ensure self-centering of the jaws. Can be used as a "re-centering" of product ;
- Reinforced guide with 2 columns ;
- Sensor grooves integrated in profile.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting parallel gripper: HMCH	10	20,40,60	M5	HMC
	16	30,60,80		
	20	40,80,100		
	25	50,100,120		
	32	70,120,160	1/8"	



REINFORCED PARALLEL GRIPPERS

- Compact, this range of grippers are designed to develop an important gripping force ;
- Mechanism with special surface treatment without maintenance ;
- Sensor grooves integrated in profile.

Product family	Size mm	Stroke mm	Connection	Catalogue
Double acting parallel gripper: HRTDP	20	16	M5	HRT
	25	26		
	40	41	1/8"	



Pinces EXTRA-PLATES A 180°

- Compact, these grippers are designed for applications with few place ;
- Perfectly synchronized movements & high gripping force by rod-piston / cam mechanism ;
- Sensor grooves integrated in profile ;
- Dustproof.

Product family	Size mm	Opening Angle in°	Connection	Catalogue
Double acting angular 180° grippers : HNTDL	10	-3~+180	M5	HNTDL
	16			
	20			
	25			



Pinces ROBUSTES A 180°

- Very compact, are therefore easily integrable ;
- Heavy-duty ball-bearing jaws ;
- Perfectly synchronized movements by pinion / rack mechanism ;
- Dustproof ;
- Sensor grooves integrated in profile.

Product family	Size mm	Effective force Nm*	Angle in°	Connection	Catalogue
Serrage angulaire double effet: HCTDL	20	0,30	180	M5	HCTDL
	25	0,73			
	32	1,61		1/8"	
	40	3,70			
	50	8,27			

*: Effective force at 0,5 MPa (5 bar).



Pinces PARALLELES À PISTON OVALE

- compact, and easily integrable ;
- Strong jaws in T-profile for precise gripping ;
- Possibility to obtain high torques with long fingers; Quick Finger Changer System (option) ;
- Oval piston to increase gripping force with respect to size ;
- Dustproof (in option); Sensor grooves integrated in profile.

Product family	Size	Gripping force C/O(N)	Stroke mm	Connection	Catalogue
Double acting oval piston parallel grippers: HOBT	50	170/185	4	M5	HO
	66	300/325	6		
	80	550/590	8		
	100	740/795	10	1/8"	
	125	1290/1370	12		
	160	1860/1960	16		
	200	3175/3330	20	1/4"	
	300	6675/6830	30		



3-FINGER PARALLEL GRIPPERS

- Repeatability: Small size (± 0.01), Large size (± 0.05) ;
- Concentric gripping ; Slick guide ;
- Size minimum for maximum gripping force ;
- Indexing hole on fingers for repositioning ;
- Maxi handling weight : 25 Kg (Size: 160).

Product family	Size mm	Stroke mm	Connection	Catalogue
Concentric 3-finger parallel gripping: H3TDP Small Sizes	16	4	M3	H3T
	25	6	M5	
	32	8		
	40	8		
Product family	Size mm	Stroke mm	Connection	Catalogue
Concentric 3-finger parallel gripping: H3TDP Large Sizes	50	8	M5	H3T
	64	12		
	80	16		
	100	20	1/8"	
	125	26		
	160	32		

SMALL SIZES



LARGE SIZES



3-FINGER PARALLEL GRIPPERS HOLLOW BODY

- Supply of parts / air by the central through hole ;
- Compact and robust design for high gripping force ;
- Highly corrosion resistant aluminum body ;
- Indexing holes on the body for repositioning ;
- Sensor groove integrated in body.

Product family	Size mm	Stroke by ø	Connection	Catalogue
Concentric parallel tightening 3 fingers: H3TDP-X	64	8	M5	H3T-X
	80	12		
	100	16	1/8"	
	125	20		
	160	26		



LONG STROKE 3-FINGER PARALLEL GRIPPERS

- Compact, therefore are easily integrable ;
- Rugged jaws in T-profile for precise grip ;
- 2 times longer stroke with standard grippers H3TDP ;
- Interchangeable with standard grippers H3TDP in mounting.

Product family	Size	Force de Serr. F/O(N)*	Stroke by ø	Connection	Catalogue
Concentric parallel tightening 3 fingers: H3TDP-L	16	1,4/1,6	10	M3	H3T-L
	25	4,2/4,7	12	M5	
	32	7,4/8,2	16		
	40	11,8/13	20		
	50	18,7/20,4	28		
	63	33,5/35,9	32		
	80	50/52,5	40	1/8"	



*: Gripping force at 0.5MPa, with gripping point at L = 20mm for ø16 to 25, L = 30mm for ø32 to 63 and L = 50mm for ø80.

HIGH FORCE & LONG STROKE 3-FINGER PARALLEL GRIPPERS

- Model **H3CHK** with 3-piston design, increasing force & stroke while reducing overall dimensions ;
- Direct drive synchronized via a cam disk for self-centering and high repeatability;
- Supply parts / air by central through hole ; Aluminum body with high strength coating;
- Indexing holes on the body for repositioning ;
- Sensor groove integrated in body.

Product family	øPiston Cl. / Op.	Stroke by ø	Connection	Catalogue
Concentric parallel tightening 3 fingers: H3CHK	20 / 16	20	M5	H3CHK
	32 / 25	32		
	50 / 40	50	1/8"	



- Model **H3CHJ** with compact and robust design, ensuring precise grip ;
- High torque capacity, combined with long fingers ; Aluminum body with high strength coating ;
- Hose-free direct connection : Air supply channel can connect directly without piping or through thread to assure the flexibility ;
- Indexing holes on the body for repositioning ; Options on demand : Dust protection, heat-resistance.

Product family	Size	Stroke by finger	Connection	Catalogue
Concentric parallel tightening 3 fingers: H3CHJ	50	4	M5	H3CHJ
	66	6		
	80	8	1/8"	
	100	10		
	125	12		
	160	16		
	200	20	1/4"	
	300	30		



4-FINGER PARALLEL GRIPPERS

- Gripping and positioning of square pieces ;
- Compact, lightweight and robust, with large gripping stroke ;
- Highly corrosion resistant aluminum body ;
- Sensor groove integrated in body.

Product family	Size mm	Stroke mm	Connection	Catalogue
Concentric parallel tightening 4 fingers: H4TDP	50	8	M5	H4TDP
	64	12		
	80	16		
	100	20	1/8"	
	125	26		



NON-CONTACT TRANSFER

- No contact between the product and the gripper. Use only positive pressure ;
- No maintenance ;
- Handling fragile or porous objects, irregular surfaces, CDs, DVDs ...

Product family	Size mm	Gripping force (N)	Connection	Catalogue
Non-contact transfer: HPSC	20	0,90	M3	HPSC
	30	1,30	M5	
	40	2,00		
	60	6,00		

Note: Other sizes on request. Specific version possible.



FLEXIBLE RUBBER HANDS

- A new way to handle parts, mainly complex and fragile shapes ;
- 2 types exist: male and female gripper ;
- Silicone version for food applications, high temperature ;
- Existing protection overskirt for male grippers from size HTM27 to HTM105.

Product family	Size mm	Clamping range (mm)	Manipulable mass (g.)	Connection	Catalogue
Flexible male grippers: HTM	10	ø8,5~ø10	300	M3	HT
	12	ø10~ø12	300	M5	
	17	ø12~ø17	1300		
	21	ø16~ø21	2000		
	27*	ø21~ø27	2500		
	32*	ø24~ø32	3000		
	36*	ø28~ø36	3500		
	44*	ø30~ø44	6000		
	52*	ø32~ø52	9000		
	65*	ø45~ø65	12000	M6•1/8"	
	85	ø58~ø85	22000	M6	
105	ø70~ø105	28000			
Flexible female grippers: HTF	15	ø5~ø15	1400	M5	
	25	ø10~ø25	3800	M6	
	35	ø15~ø35	9000		
	45	ø20~ø45	9000	1/8"	

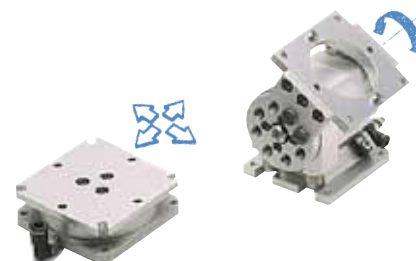
(*): Possible model with elastic silicone skirt. As standard the elastic skirt is made of chloroprene.



MODULAR PNEUMATIC SYSTEM

- Standardization of function modules, useful in automation of assembly lines ;
- The handling operation is classified, standardized and modularized into 7 functions ;
As a result, designers can immediately complete the handling unit by combining modules organized by functions

Product family	Size mm	Stroke mm	Amplitude in °	Connection	Catalogue	
Mounting Module: GPS**F	50	-		Hole ø10	GPS	
	65	-		ø13		
	85	-		ø20		
Turning Module: GPS**YV 	50		90 / 180	Tube ø4		
	65		90 / 180			
	85		90 / 180			
Reversing Module: GPS**YH180 	50		180			
	65		180			
	85		180			
Shift Module: GPS**E 	50	10, 20				
	65	15, 30				
	85	20, 40				
Cushion Module: GPS**K 	50	5, 10		-		
	65	8, 15				
	85	10, 20				
Compliance Module: GPS**XY 	32			Tube ø4		
Compliance Module: GPS**XYZ 	50	X-Y : ±1	θ : ± 2,5°			
	65	Z : -0,5	α : ±0,6°			
	85					
Parallel clamping Module: GPS**HHR Single acting 	50	26 ~ 42		Tube ø4		
	65	33 ~ 57				
	85	43 ~ 73				
Parallel clamping Module: GPS**HHD Double acting 	24	6		M5		
	32	6, 8				
	50	40				
		65	52			Tube ø4
		85	60			



Global Pneumatic Solution



COMPACT PNEUMATIC NIPPERS

- Large technologic selection. Cutting of plastic injection gate, Steel or copper wire ;
- Automatic series. Important choice of cutting blades. Blade approach stroke adjustment.

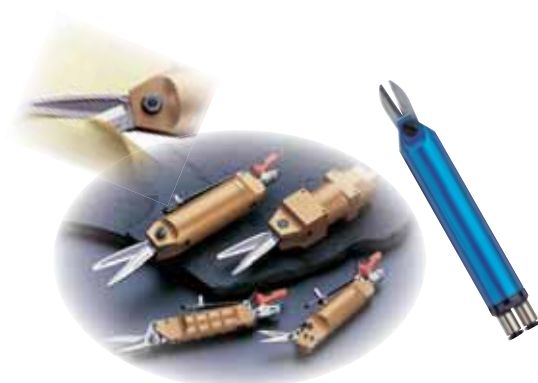
Product family	Size mm	Cutting capacity (ø in mm)			Catalogue
		Copper	Steel	Plastic (ABS)	
Single acting Compact: GT-NF	5	1,6	1	3	CCP
	10	1,7	1,1	3,5	
	15	1,8	1,2	4	
Single acting with slides Compact: GT-NY	5	1,6	1	-	
	10	3,5	-	-	
	15	4	-	-	
	25	5	-	-	
Double acting Compact: GT-NY	10	-	-	3,5	
	3	-	-	1,5	
Simple acting with slides Compact, vertical: GT-NT	5	-	-	2,5	
	10	-	-	3,5	
	20	-	-	5	



PNEUMATIC SCISSORS

- Easy installation on machine ;
- Manual version for carbon fiber cut, textile, fiberglass, etc ...
- Specific cut on request (Kevlar) with ceramic blade.

Product family	Size mm	Cutting capacity (ø en mm)			Catalogue
		Copper	Steel	Kevlar (Thickness)	
Double acting Round: GT-HWR	1	1	0,5	-	CCP
	10	1,8	1,2	-	
Double acting Square: GT-HWS	1	1	0,5	-	
	10	1,8	1,2	-	
Double acting Square: GT-HS	30	-	-	1	
Hand held Round: GT-H	12	-	-	0,3	
	120K	-	-	Steel band 15x th. 0,5	
	30	-	-	1	



AUTOMATIC & MANUAL PNEUMATIC NIPPERS

- Wide technologic selection. Cutting of plastic injection gates, steel or copper wire ;
- 9 different constructions. Important choice of cutting blades ;
- Specific custom blades on request.

Product family	Size mm	Cutting capacity (ø en mm)					Catalogue
		Copper	Steel	Piano wire	Soft plastic	Hard plastic (ABS)	
Single acting Square: GT-NS	3	1	0,5	0,2	2	-	CCP
	5	1	0,5	0,3	2	-	
	7	1,6	1	0,5	3	2	
	10	1,8 (2,6)	1,2 (1,6)	0,8 (1,2)	4 (5)	2,6 (4)	
	20	2,6 (3)	2 (2,2)	1 (1,2)	7 (8)	5 (6)	
	30	3,3 (4,8)	2,8 (4)	1,2 (2)	10 (13)	6,5 (7)	
Single acting Round: GT-NR	3	1	0,5	0,2	2	-	
	5	1	0,5	0,3	2	-	
	7	1,6	1	0,5	3	2	
	10	1,8 (2,6)	1,2 (1,6)	0,8 (1,2)	4 (5)	2,6 (4)	
	20	1,6 (3)	2 (2,2)	1 (1,2)	7 (8)	5 (6)	
	30	3,3 (4,8)	2,8 (4)	1,2 (1,2)	10 (13)	6,5 (7)	
	50	5,5 (6,5)	4,5 (5,5)	1,6 (2)	12	6,5	
Double acting Square: GT-NWS	1	1	0,5			2	
	10	1,8	1,2			4	
	20	2,6	2			6,5	
	30	3,3	2,8			6,5	
Double acting Round: GT-NWR	10	1,8	1,2			4	
	20	2,6	2			6,5	
	30	3,3	2,8			9,5	

GT-NS



GT-NR



GT-NW*



Product family	Size mm	Cutting capacity (ø en mm)					Catalogue
		Copper	Steel	Piano wire	Soft plastic	Hard plastic (ABS)	
Single acting Round Manual: GT-N	3	1	0,5	0,2	2	-	CCP
	5	1	0,5	0,3	2	-	
	7	1,6	1	0,5	3	2	
	10	1,8 (2,6)	1,2 (1,6)	0,8 (1,2)	4 (5)	2,6 (4)	
	12	2,6 (3)	2 (2,2)	1 (1,2)	7 (8)	5 (6)	
	20	3,3 (4,8)	2,8 (4)	1,2 (2)	10 (13)	6,5 (7)	
	30	1	0,5	0,2	2	-	
	50	1	0,5	0,3	2	-	

GT-N



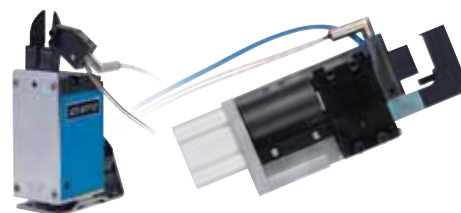
(): Specified value with pressure booster.

PNEUMATIC SCISSORS WITH HEAT BLADES

- Easy installation on machine ;
- Blade temperature T.20: 180°C, T.10: 200°C ;
- Removal of risk of cracks in cutting [especially on transparent material (Acrylic)].

Product family	Size mm	Stroke mm	Cutting capacity (mm) Acrylic / ABS Section W.xTh.*		Catalogue
Double acting: GT-NKH	10	10	1,5 x 10	15 x 5	CCP
	20	10			
Double acting vertical: GT-NTH	05	12	1,5 x 7	8 x 7	
	10	12			

*: The cutting section is indicative and varies according to the materials to be cut.



ROTATING JOINTS

- Standard version up to 6 independent ways, up to 16 ways in special development (may include electrical connections) ;
- Rotation speed up to 550 rpm, up to 2000 rpm for ball bearing version ;
- Possible fluids: Air, vacuum, steam and high temperature, water ;
- Specific custom rotating joint on request.

Product family	Number of outlets	Flow NI/min	Total torque N·m	Rotation speed tr·min	Connection	Catalogue
Rotating joint 1 inlet: AJT1	1	425~9800	0,1~0,29	140~550	1/8" à 1"	AJT
	3	1600~6200		160~300		
	6					
Rotating joint 1 inlet High speed: AJT1	1	440~3350	0,01~0,03	900~1200	1/8" à 1/2"	
Rotating joint 2 inlets: AJT2	2	440~870	0,25~0,6	140~300	1/8" à 1/4"	
	4					
Rotating joint 3 inlets: AJT3	3	865	0,7~0,78	140~200	1/4"	
	6					
Compact rotating joint 2 inlets: AJTC2	2	1370~3000	6,5	120	1/4" & 1/2"	
Compact rotating joint 3 inlets: AJTC3	3	1370~3000	8,2	100~120	1/4" & 1/2"	
Compact rotating joint 4 inlets: AJTC4	4	120~3000	3,5~12	100~120	M5, 1/4" & 1/2"	
Compact rotating joint 6 inlets: AJTC6	6	1370~3000	13~15	100~120	1/4" & 1/2"	



MINIATURE CONNECTION AUXILIARIES

- Large range of miniaturized fitting ;
- Use where standard fittings do not fit.

Product family	Type	Connection	Section mm ²	Inside ø x Outside ø	Tube material	Catalogue
Speed controller	ARC • ARB	M3	1	-	-	A
Straight cannula fitting	AN	M3	1	2,4 x 3,2 2,5 x 4	Nylon	
Elbow cannula fitting						
Tee cannula fitting						
Union cannula fitting						
Straight cannula fitting	AP	M3 M5	1 2	2,5 x 4	Polyurethane	
Elbow cannula fitting						
Tee cannula fitting						
Union cannula fitting						
Elbow threaded fitting	AF	M3 M5	1 2	-	-	
Tee threaded fitting						
Union fitting male/female						
Union fitting female/female						



MINIATURE QUICK FITTINGS FOR TUBE $\varnothing 1,8\text{mm}$

- 20% reduction of volume compared to current quick fittings. Urethane tube suitable ;
- 11 types - 16 models. Suitable for piping to miniature cylinders and solenoid valves.

Product family	Type	Connection	Section in mm^2	Weight (g.)	Catalogue
Straight fitting	ATD	M3	0,7	1	A MINI
		M5	0,8	2,3	
Hexagon head straight fitting	ATDH	M3	0,7	0,9	
Union straight	ATUS	2- $\varnothing 1,8$	0,6	1,1	
Different diameter union		$\varnothing 3/\varnothing 1,8$	0,6	1,1	
		$\varnothing 4/\varnothing 1,8$	0,6	1,8	
Reducer	ATUR	$\varnothing 4/\varnothing 1,8$	0,6	0,7	
Elbow 90° fitting	ATL	M3	0,5	1,4	
		M5	0,7	2,8	
Union elbow	ATUL	2- $\varnothing 1,8$	0,6	1,2	
Tee fitting	ATT	M3	0,6	1,9	
		M5	0,7	3,2	
Branch tee fitting	ATB	M3	0,6	1,9	
		M5	0,8	3,2	
Union tee fitting	ATUY	3- $\varnothing 1,8$	0,6	1,7	
Plug	ATUOM	-	-	0,1	



AUXILIARIES OF CONNECTION

- PTFE-coated tapered thread (R), with cylindrical thread (G) sealing by O-ring for PA12 or PU tube ;
- PA12 polyamide (nylon) tube, PU urethane tube. Spiral and straight (roll) tube.

Conical quick fittings	Type	Tube dia.	Connection	Catalogue
Straight	APC	$\varnothing 4$ to $\varnothing 16$	M5 to R1/2"	A
Female straight	APCF	$\varnothing 4$ to $\varnothing 12$	R1/8" to R1/2"	
Cylindrical straight	APOC	$\varnothing 4$ to $\varnothing 12$	M5 to R1/2"	
Elbow 90°	AGPL	$\varnothing 4$ to $\varnothing 16$	M5 to R1/2"	
Branch tee	AGPD	$\varnothing 4$ to $\varnothing 16$	M5 to R1/2"	
Union for bulkhead	APM/APMF	$\varnothing 4$ to $\varnothing 16$	M12 to M24	
Female elbow 90°	AGPLF	$\varnothing 4$ to $\varnothing 16$	M5 to R1/2"	
Long elbow 90°	AGPLL	$\varnothing 4$ to $\varnothing 16$	M5 to R1/2"	
Elbow 45°	AGPLH	$\varnothing 4$ to $\varnothing 12$	M5 to R1/2"	
Tee	AG PB	$\varnothing 4$ to $\varnothing 16$	M5 to R1/2"	
Branch Y	APX	$\varnothing 4$ to $\varnothing 16$	M5 to R1/2"	
Swing elbow	APH/APHF	$\varnothing 4$ to $\varnothing 12$	M5 to R1/2"	
Branch triple tee	APKB/APKD	$\varnothing 4$ to $\varnothing 8/10$	R1/8" to R3/8"	
Socket elbow 90°/45°	APLJ/APLHJ	$\varnothing 4$ to $\varnothing 16/12$	R1/8" to R3/8"	
Socket union Y	APYJ/APWJ	$\varnothing 4$ to $\varnothing 12$	-	
Plug	APP	$\varnothing 4$ to $\varnothing 12$	-	
Socket nipple	APIJ/APIG	$\varnothing 4$ to $\varnothing 16$	-	
Socket reducer	APGJ	$\varnothing 4$ to $\varnothing 12$	-	
union	APU/APG	$\varnothing 4$ à $\varnothing 16/12$	-	
Cross fitting	APZA	$\varnothing 4$ to $\varnothing 12$	-	
Union elbow	APV	$\varnothing 4$ to $\varnothing 16$	-	
Union tee	APEG/APEW	$\varnothing 4$ to $\varnothing 16$	-	
Union Y	APY/APW	$\varnothing 4$ to $\varnothing 16$	-	
Union triple	APK/APKG	$\varnothing 4$ to $\varnothing 8/10$	-	



AUXILIARIES OF CONNECTION

- PTFE-coated tapered thread (R), with cylindrical thread (G) sealing by O-ring for PA12 or PU tube ;
- PA12 polyamide (nylon) tube, PU urethane tube. Spiral and straight (roll) tube.

Cylindrical quick fittings	Type	Tube dia.	Connection	Catalogue
Straight	APC-G	ø4 to ø16	G1/8" to G1/2"	A
Female straight	APCF-G	ø4 to ø12	G1/8" to G1/2"	
Cylindrical straight	APOC-G	ø4 to ø12	G1/8" to G1/2"	
Elbow 90°	AGPL-G	ø4 to ø16	G1/8" to G1/2"	
Branch tee	AGPD-G	ø4 to ø16	G1/8" to G1/2"	
Female elbow 90°	AGPLF-G	ø4 to ø16	G1/8" to G1/2"	
Long elbow 90°	AGPLL-G	ø4 to ø16	G1/8" to G1/2"	
Elbow 45°	AGPLH-G	ø4 to ø12	G1/8" to G1/2"	
Tee	AGPB-G	ø4 to ø16	G1/8" to G1/2"	
Branch Y	APX-G	ø4 to ø16	G1/8" to G1/2"	
Swing elbow	APH-G/APHF-G	ø4 to ø12	G1/8" to G1/2"	
Branch triple	APKB-G/APKD-G	ø4 to ø8/10	G1/8" to G3/8"	



Speed controllers - Throttle valves - Mufflers - PU tube

Swing elbow throttle valves	ASL / ASL-G	ø4 to ø12	M5toR1/2" / G1/8"toG1/2"	A
Union straight throttle valves	ASA	ø4 to ø12	-	
Straight hand valves 2/3 ways	AHVFF	ø4 to ø12	-	
Exhaust mufflers	BSL / BSLM	ø4 to ø16	M5toR2" / G1/8"toG1"	
Plastic exhaust mufflers	PSL	ø4 to ø16	R1/8" to R1/2"	
Adjustable exhaust mufflers	BESL / BESLD	ø4 to ø16	R1/8" to R1"	
PU tube	AETP	ø4 to ø12	-	



AUXILIARIES IN LINE

- Straight flow controller, straight or elbow quick exhaust valves, shuttle valves ;
- Pilot-controlled check valve enabling the holding in pressure, the stops in position ;
- Compact regulator with gauge.

Product family	Size	Pressure MPa	Connection	Catalogue
Straight flow controller: ARCD	01,02,03,04	0~0,95	1/8", 1/4", 3/8", 1/2"	DM
Quick exhaust valve: ERD	01,02,03,04,06	0~1,0	1/8", 1/4", 3/8", 1/2", 3/4"	
Quick exhaust valve: ERL	M5,01,02,03,04	0~1,0	M5, 1/8", 1/4", 3/8", 1/2"	
Shuttle valve: SCD	01,02,03,04,06,08	0~1,0	1/8", 1/4", 3/8", 1/2", 3/4", 1"	
Product family	Size	Pressure MPa	Connection	Catalogue
Pilot-controlled check valve: K2CV	02,03,04	0,05~0,95	1/4", 3/8", 1/2"	K2CV
Product family	Size	Ø Tube exter.	Raccordement	Catalogue
Miniature regulator: ATRP	M5	4, 6	M5	A
	1/8	4, 6, 8	1/8	
	1/4	6, 8	1/4	



COMPACT VACUUM GENERATOR

- Easy installation with A4 format, especially in vertical version ;
- Silent design: 55dB, lightweight: 4.5Kg ;
- Possibility of tank with same dimensions.

Product family	Model	Voltage V	Features		Catalogue
			Vacuum Maxi	Vacuum Flow	
Vacuum generator Horiz.: GVB	01	DC24	-75 kPa	5,7 l/min.	GVB
Vacuum generator Vertical: GVB	02				



COMPACT COMPRESSOR

- Easy installation with A4 format, especially in vertical version ;
- Silent design: 55dB, lightweight: 4.6Kg ;
- Possibility of tank 1800ml with same dimensions.

Product family	Model	Voltage V	Features		Catalogue
			Pressure Maxi	Flow	
Compressor Horiz.: GCB	01	DC24	0,55 MPa	2,0 l/min.	GCB
Compressor Vertical: GCB	02				



MULTI-STAGE VACUUM GENERATORS

- 3-stage diffuser for energy saving (20%), compact & large flow ;
- Diffuser stacked and integrated compact size and large flow rate ;
- Universal mounting by top, bottom and side mounting.

Product family	Size	Features		Catalogue
		Vacuum Maxi	Max. Vacuum flow	
Mono stage vacuum generator: MEVZL	112	-84 kPa	100 l/min.	MEV
Multi-stage vacuum generator: MEVZL	212		200 l/min.	



MINIATURE PRECISION DOSING PUMP

- Allows manual dosing ;
- Allows precise dosing of grease ;
- Allows a dosage of a very small volume.

Product family	Size	Stroke mm	Features in ml		Catalogue
			Volume Maxi	Accuracy	
Micro-Lubricating Pump: MP	010	0~16	0,014	0,002	MP
	250		0,307	0,003	



CONSTANT VOLUME DISPENSING PUMP

- High precision pump for use requiring repeatability of the dispensed volume ;
- The liquid is in contact only with PTFE (fluorine resin), without moving part therefore no generating of particles ;
- Daily maintenance unnecessary, therefore no adjustment variation.

Product family	Size	Technology	Features en ml		Catalogue
			Maxi. Volume	Accuracy	
Pneumatic bellows pump: F-APB	08,15, 40,60,80	Bellow PTFE	8, 15, 40, 60	±1% F.S.	F-P
Pneumatic pump with parallel bellows: F-APP	10 50	PTFE Bellow & diaphragm tube	10, 50	±1% F.S.	
Electric Pump (Stepper Motor) with bellows: F-EPB	08,15, 40	Bellow PTFE	8, 15, 40	±1% F.S.	
Electric Pump (Stepper Motor) with coaxial bellows: F-EPT	06 10	PTFE Bellow & diaphragm tube	0,5 ~ 6 0,5 ~ 10	±1% F.S.	
Electric Pump (Stepper Motor) with parallel bellows: F-EPP	05, 10, 50	PTFE Bellow & diaphragm tube	0,1 ~ 5 0,1 ~ 10 2 ~ 50	±1% F.S. ±0,5 F.S.	



CONSTANT VOLUME AND FLOW DISPENSING PUMP

- High precision pump for use requiring repeatability of volume dispensed at constant flow ;
- The liquid is in contact only with PTFE (fluorine resin), without moving part therefore without generation of polluting particles ;
- Daily maintenance unnecessary, therefore no adjustment variation.

Product family	Size	Technology	Features		Catalogue
			Maxi Volume ml	Output Flow ml/s.	
Electrical Pump (Servo Motor AC) coaxial bellows: F-EPT	30, 60, 100, 200, 300	PTFE Bellow & diaphragm tube	3~30, 6~60, 10~100, 20~200, 30~300	0,05~10, 0,05~15, 0,05~25, 0,1~25, 0,1~60	F-P
Electric Pump (Servo Motor AC) with parallel bellows: F-EPP	200, 300	PTFE Bellow & diaphragm tube	20~200, 30~300,	0,5~20, 0,5~30	
Electric Pump (Servo Motor AC) with parallel bellows: F-EPH	200, 300	Plunger & diaphragm tube	20~200, 30~300	0,5~20, 0,5~30	
Pneumatic Pump (Servo Motor AC) coaxial bellows: F-EPT	05	PFA Bellow & diaphragm tube	0,1 ~ 5	4	



HYDRAULIC REGULATORS K2 series

- Used to stabilize (regulate) the speed of a cylinder or moving organ.

Product family	Stroke mm	Controllable load DaN	Allowable impact N·m	Catalogue
Hydraulic speed controllers: KHR	15 30 60 80 100	15 ~ 350	2,3(*)	KHR

(*): The energy of 2.3 N · m corresponds to an energy generated by a load of 180 N at a speed of 0.5 m / s.

SÉRIE
K2



HYDRAULIC SHOCK ABSORBERS

- Adjustable or fixed shock absorbers with or without rod end ;
- Shock absorbers single or double head with cap ;
- Complete range adaptable on many translation units.

SÉRIE
K2

Product family	Allow. energy N·m	Impact Speed m/s	Size mm	Stroke mm	External thread	Catalogue
Fixed absorption capacity dampers: K2F {K2FC}	2 {3}	0,3~2,5	8	6	M8x1	K2
	3 {6}	0,3~3,5	10	5~8	M10x1	
	5 {12}	0,3~4	12	10	M12x1	
	15 {20}	0,3~5	14	12~16	M14x1,5	
	60 {20}	0,8~3,5	20	15~50	M20x1,5	
Fixed absorption capacity dampers double head: K2FD	150 {80}	0,3~5	25	25~80	M25x1,5	
	147	0,3~5	27	25	M27x1,5	
	250	1~4	36	60	M36x1,5	
Adjustable absorption capacity dampers: K2R	1,5	1,5	10	8	M10x1	
	3	1,5	12	10	M12x1	
	20	3	14	10	M14x1,5	
	25~39	3,5	20	16, 25	M20x1,5	
	85~150	3,5~4	25	25~80	M25x1,5	
	150~300	3	36	25, 50	M36x1,5	
	260~750	3,5~4,5	42	25~75	M42x1,5	
	12000 à 36000	1~4 0,3~5 1~4	64	50 100 150	UNF21/2-12	



ELECTRIC AXIS BELT DRIVEN

- Reduction of the installation dimensions to the useful surface thus saving space ;
- Use of a step-by-step servomotor with precise transmission, at minimum pitch, by toothed belt ;
- Ball bearing guide for heavy loads, stable and gentle method ;
- Stepping motor with 10,000 pts increment / rot ; 3 inputs, 2 outputs and all-inclusive program.

Product family	Size	Stroke	Features		Catalogue
			Max. Horizontal load	Repeat accuracy	
Electric axis: AELH	50	100~750	5 kg.	±0,1mm	AELH



ELECTRIC CYLINDERS BALL SCREW

- Reduction of the installation dimensions to the useful surface thus saving space ;
- Use of stepping motor or servomotor, with precise screw transmission ;
- Depending on the motor choice, type and size of the screws, the allowable characteristics vary ;
- 2 coupling configurations Motor: in-line or lateral mounted.

Product family	Size	Stroke	Allow. load DaN	Allow. speed m/min	Catalogue
Electric linear cylinder screw-nut: AELVE	32	50~500	50	6/30	AELV
	40		76	3/15	
	63		100	6/36	
Electric linear cylinder balls screw: AELVB	32	50~500	50	6/30	
	40		76	3/15-6/30	
	63		100	5/30-10/60	



ELECTRIC ACTUATORS

- The three basic movements: linear, rotary and clamping can be combined to achieve a very precise manipulation set ;
- Easy implementation. Free programming software.

Product family	Stroke mm	Allowable load in N		Speed in mm/s.	Force in N	Catalogue
		Vertical	Horizontal			
Linear actuator, short table, high speed: EWM5HS	20	0,4	1	120	18~27	EW
	40					
Linear actuator, long table, high speed: EWM5HL	20					
	40					
Linear actuator, short table, High thrust: EWM5SS	20	0,8	2	50	42~65	
	40					
Linear actuator, long table, high thrust: EWM5SL	20					
	40					
Electric hands: EWHA	12			1 (70)	12~17	
	24			1 (35)	22~37	
	36			1 (24)	33~47	
Product family	Taille	Axial	Radial	Speed ¹ in s./90°	Torque in N·m	
Rotary actuators: EWHRT	1	100	100	0,2 (0,35)	0,1	
	3			0,1 (0,25)	0,25	
	5			0,2 (0,4)	0,5	
	10	200	200	0,12 (0,25)	1,0	
	20			0,2 (0,5)	2,0	
	40	400	400	0,3 (0,5)	4,0	
	60			0,3 (0,65)	6,0	

Rotary: Speed¹: Value without load, (in parenthesis) value with maximum allowable load.

Hand: Speed: Minimum speed value, (in parenthesis) max speed value in mm / s.

Force: Effective gripping force in N.



ELECTRIC LINEAR STEPPING ACTUATOR

- Stepping motor ;
- High speed electric cylinder, silent ;
- Multiple settings: Acceleration, deceleration, forces ;
- Simple and easy programming.

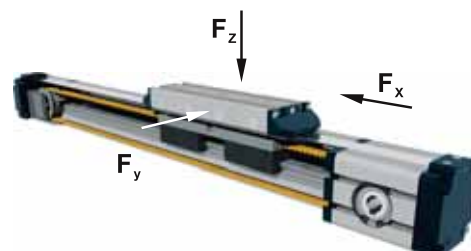
Product family	Size	Stroke mm	Features		Catalogue
			Max. Speed mm/s.	Vert. (Horiz.) maxi loads	
Electric linear cylinder: IVM	5	10, 20	300, 400	0,55 (0,7)N	IVM
	10	20, 30	500, 600	2 (2,5)N	
	16	32, 48	600, 700	6 (8)N	



BELT DRIVEN UNITS

- Repeatability $\pm 0,05$ mm ;
- Polyurethane teeth belt with steel reinforced ;
- 2 motor mount versions ;
- Ball rail guide and dust protection seal ;
- Position detection & integrated sensor groove.

Product family	Size	Stroke mm	Features		Catalogue
			Maxi Speed mm/s.	Maxi Loads Fx (Fy) [Fz]	
Belt driven units: ALCC	42	100	3000	460 (1560) [1560]N	ALCC
	55	à		820 (1850) [1850]N	
	80	6000		1650 (4500) [4500]N	



LINEAR ELECTRIC CYLINDERS WITH INTEGRATED MOTOR

- 2 sizes 50 & 65mm ; strokes from 50 to 300mm per interval of 50mm ; Screw lead pitch: 5 or 10mm ; repeatability: $\pm 0,01$;
- 3 versions: Threaded rod, rod with guide on columns & plate on balls guide ;
- Multiple settings: Acceleration, deceleration, forces ;
- Simple & easy programming.

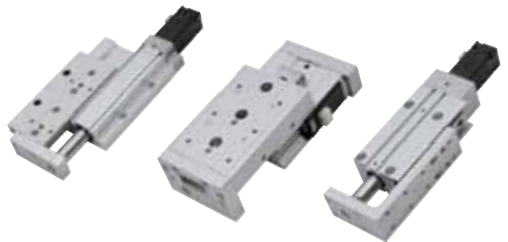
Product family	Size	Stroke mm	Features			Catalogue
			Screw lead	Horiz/Vert. Max. loads (N)	Max. speed (mm/s.)	
Linear electric cylinder, threaded rod: VELVB-V Linear electric cylinder, guided plate: VELVB-L Linear electric cylinder, ball guide: VELVB-H	50	50~ 300	5	300 / 150	250	VELVB
			10	150 / 120	500	
	65	50~ 300	5	1100 / 300	250	
			10	880 / 200	500	
			20	400 / 100	1000	
Electric rodless cylinder: WELVB	5	50~800	5	100 / 30	250	WELVB
			10	50 / 30	500	
	6	50~800	5	300 / 100	250	
			10	150 / 60	500	
	10	50~1050	5	500 / 120	250	
			10	300 / 80	500	
			20	150 / 40	1000	
	12	50~1050	5	500 / 120	250	
			10	300 / 80	500	
			20	180 / 40	1000	
	13	50~1050	5	700 / 120	250	
			10	470 / 80	500	
20			240 / 00	1000		



ELECTRIC MINIATURE CYLINDERS WITH INTEGRATED MOTOR

- 1 size 20mm ; 2 strokes 30 & 50mm per interval of 50mm ; Screw lead pitch: 1 ou 6mm ; repeatability: $\pm 0,02$;
- 3 versions: Multi-mounted cylinder with guide, ultra-thin slider, slider with guide ;
- Multiple settings: Acceleration, deceleration, forces ;
- Simple & easy programming.

Product family	Size	Stroke mm	Features			Catalogue
			Screw lead	Horiz/Vert. Max. loads (N)	Max. speed (mm/s.)	
Mini vérin multi-fixation électrique : AELCG	20	30, 50	1	60 / 20	50	AELM
			6	20 / 5	250	
Mini table ultra-plate électrique : AELSF	20	30, 50	1	60 / 20	50	
			6	20 / 5	250	
Mini table guidée électrique : AELVZ	20	30, 50	1	60 / 20	50	
			6	20 / 5	250	



ELECTRIC MINIATURE GRIPPER WITH INTEGRATED MOTOR

- 2 sizes 20 & 25mm ; strokes from 10 & 14mm ; repeatability: $\pm 0,02$;
- Parallel grippers with balls linear guide, with close-finger version ;
- Multiple settings: Acceleration, deceleration, forces ;
- Simple & easy programming.

Product family	Size	Stroke mm	Features			Catalogue
			Axial load (N)	Gripping force (N)	Max. speed (mm/s.)	
Electric parallel gripper : AELHE	20	10	147	22 ~ 98	5 ~ 50	AELHE
	25	14	255	22 ~ 98	5 ~ 50	



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