

Specialty Cylinders

Low Friction Cylinder/Metal Seal **MQQ/MQM/MQP**



- Covers a range of driving speeds and output controls not possible with standard cylinders thanks to its metal seal structure with minimal sliding resistance

Type	Series	Bore size [mm]	Operating pressure range [MPa]	Driving speed [mm/s]
Standard	MQQT	10, 16, 20, 25, 30, 40	0.005 to 0.5	0.3 to 300
Anti-lateral load	MQQL	10, 16, 20, 25, 30, 40	0.005 to 0.7	0.5 to 500
Anti-lateral load	MQML	6	0.02 to 0.7	0.5 to 1000
Anti-lateral load	MQML	10, 16, 20, 25	0.005 to 0.7	0.5 to 1000
High speed/High frequency	MQML□□H	10, 16, 20, 25	0.01 to 0.7	5 to 3000
Single acting	MQP	4, 6, 10, 16, 20	0.001 to 0.7	—

High Power Cylinder **RHC**



- Provides 10 to 20 times the energy absorption capacity of general purpose cylinders (CG1 series)
- Smooth cushioning from high-speed operation (3000 mm/s) with light loads to low/medium-speed operation with heavy loads
- XC93: With greater water resistance + a stable lubrication function 5 times stronger against water (liquids) than the standard model (RHC series)

Type	Series	Action	Bore size [mm]
Standard	RHC	Double acting	20, 25, 32, 40, 50, 63, 80, 100
Standard	RHC-XC93	Double acting	32, 40

3 Position Cylinder **RZQ**



- Equipped with an intermediate stop mechanism
- Two-stage strokes are possible with just a minute extension.

Type	Series	Action	Bore size [mm]
Standard	RZQ	Double acting	32, 40, 50, 63

Clamp Cylinders

Rotary Clamp Cylinder **MK**



- The allowable moment of inertia is 3 times higher. (The same as the heavy-duty MK2 series)
- It is possible to mount small auto switches on 4 surfaces.
- Mounting dimensions are interchangeable with the MK series.
- Consolidated to the new MK series and renewed

Type	Series	Action	Bore size [mm]
Standard	MK	Double acting	12, 16, 20, 25, 32, 40, 50, 63

Rotary Clamp Cylinder **MK2T**



- The double guide type features improved non-rotating accuracy by using a guide roller in the rotating mechanism.
- Can be used as a spatter resistant cylinder for arc welding (-XC89/-XC91)

Type	Series	Action	Bore size [mm]
Double guide type	MK2T	Double acting	20, 25, 32, 40, 50, 63

Clamp Cylinders

Clamp Cylinder CK□1



- Total tube length reduced by 7 mm (for CKP1□40)
- Easy fine speed adjustment with screw adjustment construction
- Speed controller valve has no projection from the tube's external surface
- It is possible to mount magnetic field resistant auto switches from 3 directions.
D-P3DW type, D-P4DW type (CKG1), D-P79WSE type, D-P74L/Z type
- Can be used as a spatter resistant cylinder for arc welding (-XC88/-XC89/-XC91) (CKG1 only)

Type	Series	Action	Clevis width [mm]	Bore size [mm]
Standard	CK1	Double acting	16.5, 19.5	40, 50, 63
Built-in standard magnet type (With magnetic field resistant auto switch)	CKG1	Double acting	16.5, 19.5	40, 50, 63
Built-in strong magnet type (With magnetic field resistant auto switch)	CKP1	Double acting	16.5, 19.5	40, 50, 63

Clamp Cylinder with Lock CLK2



- The clamp cylinder makes it possible to maintain a clamped or unclamped state even when the air supply pressure drops or residual pressure is released. (Single-directional lock)
- Increases operation efficiency by eliminating the overhang from the tube cover with built-in cushion valve and plug

Type	Series	Action	Clevis width [mm]	Bore size [mm]
Built-in standard magnet	CLK2G	Double acting	12, 16.5, 19.5	32, 40, 50, 63
Built-in strong magnet	CLK2P	Double acting	16.5, 19.5	40, 50, 63

Clamp Cylinder/Slim Type C (L) KG/C (L) KP-X2095



- The smallest class of clamp cylinder in the world.
- ø25 is available.
Weight: 380 g, Length: 186.7 mm
(ø25-50 stroke without speed controller or auto switch)
- Weight reduced by up to 48%, total length reduced by 18%

Type	Series	Action	Clevis width [mm]	Bore size [mm]
Standard (Built-in standard magnet)	CKG-X2095	Double acting	9, 12	25, 32, 40
Standard (Built-in strong magnet)	CKP-X2095	Double acting	9, 12	25, 32, 40
With lock (Built-in standard magnet)	CLKG-X2095	Double acting	9, 12	25, 32, 40
With lock (Built-in strong magnet)	CLKP-X2095	Double acting	9, 12	25, 32, 40

Pin Clamp Cylinder C (L) KQG/C (L) KQP



- Simultaneous positioning and clamping
- Compatible with a broad range of workpiece configurations (55 types of guide pins)
- 4 body types for a broad range of installation conditions
- The height of the clamping position can be selected according to the workpiece.

Type	Series	Guide pin shape	Bore size [mm]
Standard (Built-in standard magnet)	CKQG	Round/Diamond	50
Standard (Built-in strong magnet)	CKQP	Round/Diamond	50
With lock (Built-in standard magnet)	CLKQG	Round/Diamond	50
With lock (Built-in strong magnet)	CLKQP	Round/Diamond	50

Clamp Cylinders

Pin Clamp Cylinder **C (L) KQG32/C (L) KU32**



- 2 types of clamping heights can be selected: 30 mm, 100 mm
- Plate cylinder type: Width 29 mm
- All types come equipped with a lock.
- Plate cylinder type with small auto switch
- Newly added guide pins and a diamond shape option (Available for $\phi 10$ or more) for workpieces with $\phi 9$, $\phi 11$, and $\phi 13$ hole diameters

Type	Series	Guide pin shape	Bore size [mm]
Compact cylinder: Magnetic field resistant auto switch mounting type	CKQG32-X2081/X2082	Round/Diamond	32
Compact cylinder with lock: Magnetic field resistant auto switch mounting type	CLKQG32-X2081/X2082	Round/Diamond	32
Plate cylinder: Magnetic field resistant auto switch, Small auto switch mounting type	CKU32-X2321/X2322	Round/Diamond	32
Plate cylinder with lock: Magnetic field resistant auto switch, Small auto switch mounting type	CLKU32-X2321/X2322	Round/Diamond	32
Plate cylinder: Magnetic field resistant auto switch mounting type	CKU32-X2091/X2092	Round/Diamond	32
Plate cylinder with lock: Magnetic field resistant auto switch mounting type	CLKU32-X2091/X2092	Round/Diamond	32

Pin Plate Cylinder **C (L) KU32-X2359**



- Reduction of spare parts, short lead times, and a drastic reduction of the need for special orders
- Guide pin is separated from the reference support block.
- The reference support block can be machined by the customer.
(The block can be changed to any desired shape.)

Type	Series	Guide pin shape	Bore size [mm]
Pin plate cylinder: Magnetic field resistant auto switch mounting type	CKU32-X2359	Round/Diamond	32
Pin plate cylinder with lock: Magnetic field resistant auto switch mounting type	CLKU32-X2359	Round/Diamond	32

Micro Clamp Cylinder **CKZM16**



- Compact: Width 20 mm, Lightweight: 250 g
- Maximum clamping force: 200 N, Maximum holding force: 300 N
- Flat clamping characteristics
Outputs constant clamping force for workpiece thicknesses up to 3.5 mm
- Reduction of design/assembly labor by unitization
Arm assembly and mounting assembly have been added to the clamp cylinder.

Type	Series	Action	Bore size [mm]
Base type	CKZM16-X2800	Double acting	16
Tandem type	CKZM16-X2900	Double acting	16

For North America/Europe: Power Clamp Cylinder **CKZ3**



- Weight reduced by up to 39% with aluminum body
- Standardized unclamp opening to 15°
- Complies with NAAMS Standards (CKZ3N)
- 75 types of arm variations (CKZ3N), 12 types for each size (CKZ3T)

Type	Series	Arm opening angle	Switch	Bore size [mm]
For North America	CKZ3N	15°, 30°, 45°, 60°, 75° 90°, 105°, 120°, 135°	TURCK/P&F	50, 63
For Europe	CKZ3T	15°, 30°, 45°, 60°, 75° 90°, 105°, 120°, 135°	TURCK/P&F	50, 63

Clamp Cylinders

Power Clamp Cylinder **CKZ3T-X2734**



- Simple switch adjustment greatly reduces work-hours
Switch can be adjusted easily when changing the arm opening angle.
- With metal switch cassette cover
- Weight reduced by up to 39%
- High clamping force: 4000 N
- Spatter proof construction
- Select from 2 types of top cover

Series	Arm opening angle	Switch	Bore size [mm]
CKZ3T-X2734	15°, 30°, 45°, 60°, 75°, 90°, 105°, 120°, 135°	TURCK/P&F	50, 63

For North America: Power Clamp Cylinder **CKZ2N**



- Complies with the new NAAMS Standards (North America Automotive Metric Standard)
- 138 types of arm variations
- Spatter resistant and water resistant structure

Series	Arm opening angle	Switch	Bore size [mm]
CKZ2N	30°, 45°, 60°, 75°, 90°, 105°, 120°, 135°	TURCK/P&F	50, 63, 80

For Europe: Power Clamp Cylinder **CKZT**



- 3 types of arm variations for each size
- Spatter resistant and water resistant structure

Series	Arm opening angle	Switch	Bore size [mm]
CKZT	30°, 45°, 60°, 75°, 90°, 105°, 120°, 135°	TURCK/P&F	40, 50, 63, 80

For France: Power Clamp Cylinder **CLKZ1R**



- Complies with CNOMO Standards
- Constant clamping force irrespective of workpiece thickness
- End lock on unclamp side
- Rubber cushion on unclamp side

Series	Arm opening angle	Bore size [mm]
CLKZ1R	15°, 30°, 45°, 60°, 75°, 90°, 105°	40, 50, 57

Slim-line Power Clamp Cylinder **CKZ2N-X2346**



- The distance accuracy from the reference hole to the lower surface of the clamp arm is ± 0.1 mm.
- Easy setup with a scale
The guide of the appropriate position can be checked visually when adjusting the shim.
- Reduced width
Easy torch entry for spot welding, arc welding, etc.

Series	Arm opening angle	Bore size [mm]
CKZ2N-X2346	30°, 45°, 60°, 75°, 90°, 105°, 120°, 135°	50, 63, 80

Clamp Cylinders

Frame Clamp Cylinder **WRF100**



- High output: 20,000 N (at 0.5 MPa)

Series	Bore size [mm]	Stroke [mm]
WRF100	100	48

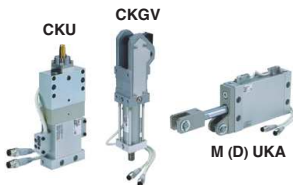
Pallet Lock Cylinder **W-R1/W-R3**



- Centering applied to correct positional deviation of up to ± 50 mm
- Through the toggle mechanism, max. clamping force of 4430 N
- Arm opening angle: Approx. 70°
- The integration of the clamping unit and cylinder unit reduces design and assembly labor.

Series	Mass of transferred object	Clamping force [N]	Bore size [mm]
W-R1	1000 kg or less	4430	100
W-R3	3000 kg or less	4070	100

Other Clamp Cylinders



Description	Series
Plate Clamp Cylinder	M (D) UKA
Clamp Cylinder	CKGV
Pin Clamp Cylinder (Compact body type)	CKU

Pin Shift Cylinders

For High Precision Positioning: Pin Shift Cylinder **CKQG-X2370/CKQP-X2371**



- High Precision: Rod end deflection of ± 0.1 mm or less
- Position reproducibility
- Pins for positioning the workpiece provided by the customer can be directly mounted.
- Built-in coil scraper
- Reduces labor time by integrating the cylinder and guide
- Magnetic field resistant auto switches are mountable.

Type	Series	Bore size [mm]	Stroke [mm]
Built-in standard magnet	CKQG-X2370	32, 40, 50	25, 30, 40, 50
Built-in strong magnet	CKQP-X2371	50	30, 50

Locating Pin Cylinder **MGPL50-X2616**



- Ideal for pin positioning and locating workpieces
- Highly accurate mounting positions
Highly accurate positioning is possible even after the cylinder is replaced.
- D-P3DWA magnetic field resistant auto switch is available.
- Coil scraper is equipped as standard.

Type	Bearing	Series	Action	Bore size [mm]
Locating pin cylinder	Ball bushing	MGPL50-X2616	Double acting	25, 40, 65