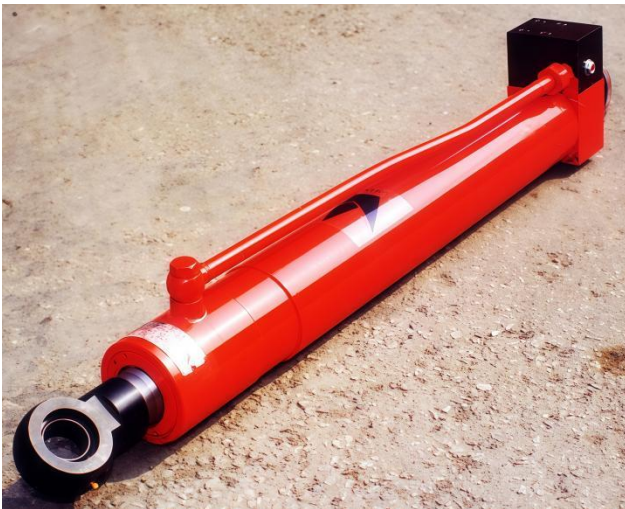
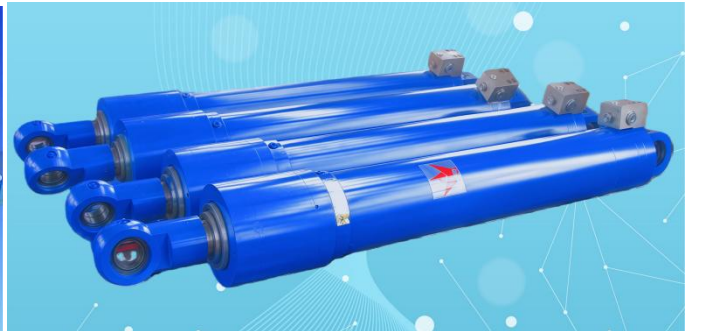
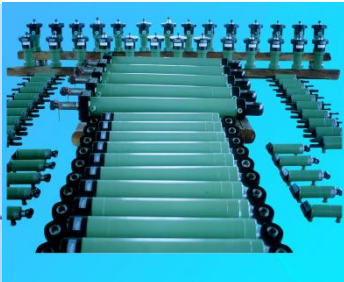
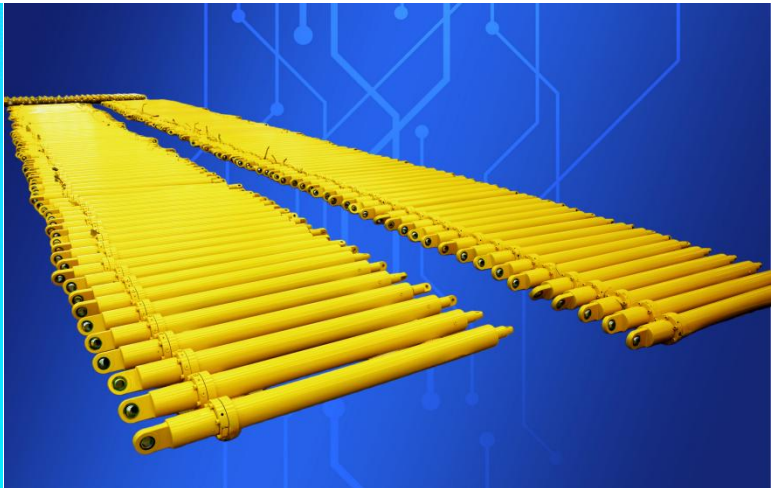


Photos of Construction Machinery Hydraulic Cylinder









UG 系列工程机械液压缸

Construction Machinery Hydraulic Cylinder



URANUS

UG Series Medium & High Pressure Hydraulic Cylinders

A Standardized Hydraulic Cylinder Platform Based on Decades of Custom Engineering Experience

Product Overview

The **UG Series medium and high-pressure hydraulic cylinders** are independently developed by **Uranus Hydraulic** based on decades of extensive experience in large-scale custom hydraulic cylinder manufacturing.

Designed on a standardized structural platform while retaining high modularity and configuration flexibility, the UG Series is suitable for construction machinery, industrial equipment, and heavy-duty applications. This series successfully integrates **custom engineering capability with standardized industrial production**, delivering stable performance, high reliability, and long service life.

Key Specifications & Configurations

Functional Types

- Standard temperature hydraulic cylinders
 - High temperature hydraulic cylinders
 - High-speed hydraulic cylinders
 - Servo hydraulic cylinders
 - Constant-speed hydraulic cylinders
-

Mounting Styles

- Front clevis mount
 - Mid clevis mount
 - Front flange mount
 - Rear flange mount
 - Foot mount
-

Rod End Connections

- Threaded rod end
 - Self-lubricating bushing eye
 - Spherical bearing eye
-

Pressure Ratings & Dimensions

- Pressure rating: 16 MPa / 21 MPa
 - Bore diameter: $\phi 40$ - $\phi 250$ mm (15 sizes)
 - Rod diameter: $\phi 20$ - $\phi 180$ mm (23 sizes)
 - Maximum stroke: up to 10 m (subject to rod stability conditions)
-

Manufacturing Capability

Key components of the UG Series hydraulic cylinders—including piston rods, cylinder tubes, pistons, cylinder heads, and end caps—are manufactured using

precision CNC machining centers and controlled under strict quality management procedures.

All cylinders are equipped with **low-friction, high wear-resistant premium sealing systems**, ensuring stable operation under high load, impact, and demanding working conditions.

Quality Control & Testing

Each UG Series hydraulic cylinder undergoes comprehensive performance testing prior to delivery, focusing on:

- Zero external leakage
- High mechanical efficiency
- Excellent resistance to shock and vibration
- Long service life

All product drawings, inspection records, and test reports are archived for **more than 10 years**, ensuring full traceability and quality verification.

Lifetime Quality Commitment

For any quality issues caused by design or manufacturing defects, **Uranus Hydraulic provides lifetime free repair or replacement**, offering long-term reliability and confidence to customers.

About Uranus Hydraulic

Founded in 1995, Uranus Hydraulic is a technology-driven manufacturer specializing in **high-end hydraulic transmission products and mechatronic intelligent equipment integrating mechanics, hydraulics, optics, and electronics**.

The company has archived over **50,000 sets of custom product drawings**, holds **100+ national invention and utility model patents**, and operates with 3D parametric design software, PDM product lifecycle management systems, and continuously optimized ERP systems.

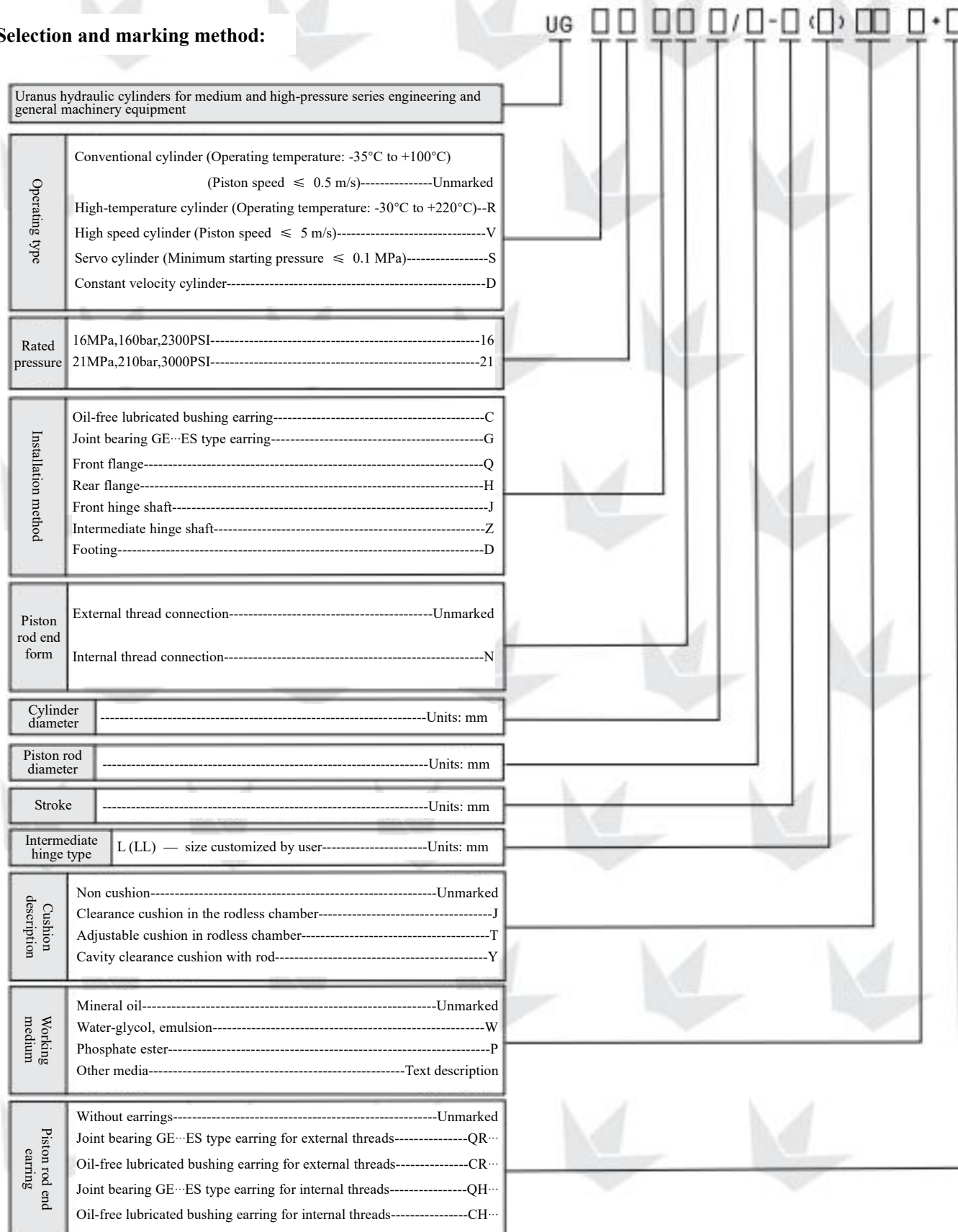
Uranus Hydraulic is certified to **ISO 9001, ISO 14001, and ISO 45001**, and its products are widely trusted by customers worldwide for their technical sophistication and consistent quality.

Related Product Series

- UY Series Heavy-Duty & Metallurgy Hydraulic Cylinders (25 MPa)
- US Series Servo Cylinders with Integrated Magnetostrictive Sensors
- UB Series Rack & Pinion Rotary Hydraulic Cylinders
- UX Series High-Pressure Multi-Passage Rotary Joints
- UP Series Hydraulic Power Units
- UF Series Synchronous Distributor Hydraulic Cylinder
- UE Electro-hydraulic cylinders

UG Medium and High-Pressure Series Engineering and General Machinery Equipment Hydraulic Cylinders

Selection and marking method:





C (tail earring equipped with oil-free lubricated bushing)
G (tail earring equipped with a joint bearing)

- Unmarked (without earrings)
- + CR... (with bushing earrings)
- + QR... (with joint bearing earrings)

Joint bearing structure

Oil-free lubricated bushing structure

C (tail earring equipped with oil-free lubricated bushing)
G (tail earring equipped with a joint bearing)

N $\begin{cases} - & \text{Unmarked (without earrings)} \\ + & \text{CH}\cdots\text{(with bushing earrings)} \\ & \text{QH}\cdots\text{(with joint bearing earrings)} \end{cases}$

For internal threads

bearing)

A

R

A

L3

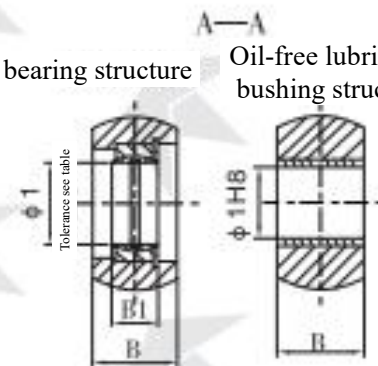
L2

L8

L7

L9+S (stroke)

L9+S (stroke)



UG···C···oil-free lubricated bushing earring type, UG···G···joint bearing (GE..ES type) earring type

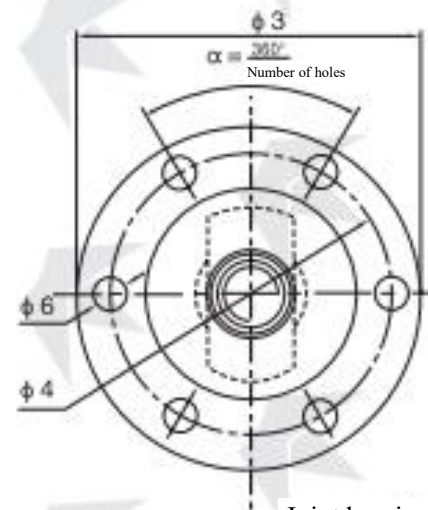
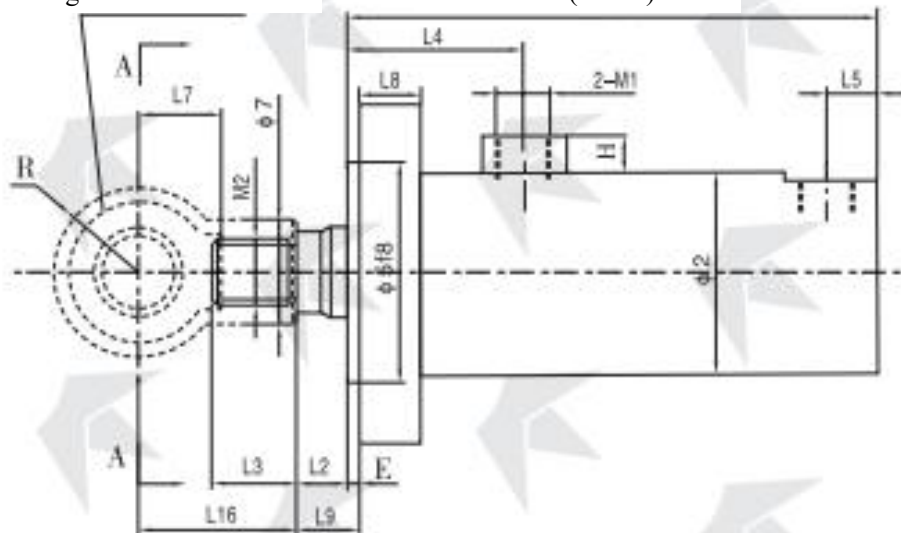
Cylinder diameter	Rod diameter	ø1		ø2	ø7	L1	L2	L3	L4		L5	L6	L7	L9	L16	R	B	B1	H	M	M2	Rod end earring					
		Dimensions	Bearing hole tolerance						Non-cushion	Cushion Y												CR	QR	CH	QH		
40	20	20	0-0.010	58	25	200	16	25	70	59	30	10	30	190	50	25	16	12	M18×1.5	M14×1.5	40-1						
	22				28															M16×1.5	-2						
	28				35															M22×1.5	-3						
50	25	30		70	28	205	18	30		58	35		40	195	60	35	22			15	M22×1.5	M20×1.5	50-1				
	28				35																	M22×1.5	-2				
	36				42																	M27×2	-3				
63	32			40	83	35	245	35	73		76	40		15	235	65	45	28	20			M27×2	M24×1.5	63-1			
	36					42																	M27×2	-2			
	45					45																	M33×2	-3			
80	40	50			108	42	260	45		78	75	45	55	255	105	45	28	25		M33×2	M30×2		80-1				
	45					48															M33×2		-2				
	56					60															M42×2		-3				
90	45			60	114	48	300	50	89		85	55		295	130	60	35		20		M36×2	M36×2	100-1				
	50					52																M42×2	-2				
	63					68																M48×2	-3				
100	50	70	127		52	305	55	90		90	55		300	135	60	35	20	M42×2		M36×2		100-1					
	56				60															M42×2		-2					
	70				72															M52×2		-3					
110	56		80	140	60	315	60		104	87		65	340	155	70	44			25	M48×2	M42×2	110-1					
	63				68																M48×2	-2					
	80				80																M60×2	-3					
125	63	90		152	68	345	65	114		105	75		345	157	70	44	25	M52×2			M48×2	125-1					
	70				72																M52×2	-2					
	90				90																M68×2	-3					
140	70		100	168	72	350	70		119	110		85	350	160	80	49			25	M56×2	M52×2	145-1					
	80				80																M60×2	-2					
	100				100																M76×3	-3					
150	75	110		180	76	355	75	124		115	95		420	200	90	55	25	M56×2			M64×2	150-1					
	85				85																M64×2	-2					
	105				105																M80×3	-3					
160	80		120	194	80	410	85		129	122		75	400	180	80	49			25	M60×2	M60×2	160-1					
	90				90																M68×2	-2					
	110				110																M85×3	-3					
180	90	130		219	90	430	95	141		127	85		420	200	90	55	25	M68×2			M68×2	180-1					
	100				100																M76×3	-2					
	125				120																M95×3	-3					
200	100		140	245	100	465	105		146	143		90	420	200	90	55			25	M76×3	M76×3	200-1					
	110				110																M85×3	-2					
	140				125																M100×3	-3					
220	110	150		272	110	485	115	155		143	100		475	245	110	70	25	M85×3			M85×3	220-1					
	125				120																M95×3	-2					
	160				140																M125×3	-3					
250	125		180	299	120	485	115		155	143		100	475	245	110	70			25	M95×3	M95×3	250-1					
	140				125																M100×3	-2					
	180				160																M145×3	-3					

Front flange and rod end external thread type: UG...Q...

- Unmarked (without earrings)
- + CR... (with bushing earrings)
- + QR... (with joint bearing earrings)

Earring for external threads

L1+S (stroke)



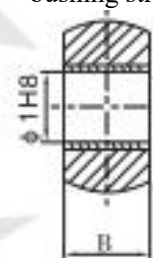
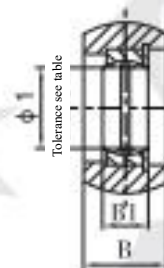
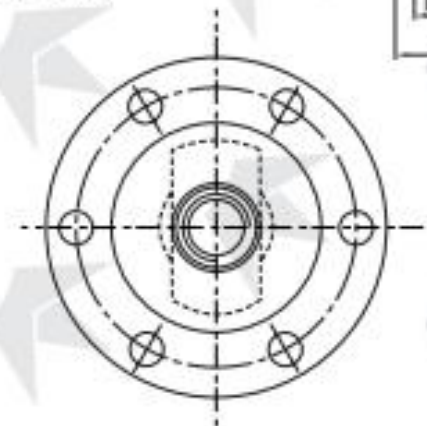
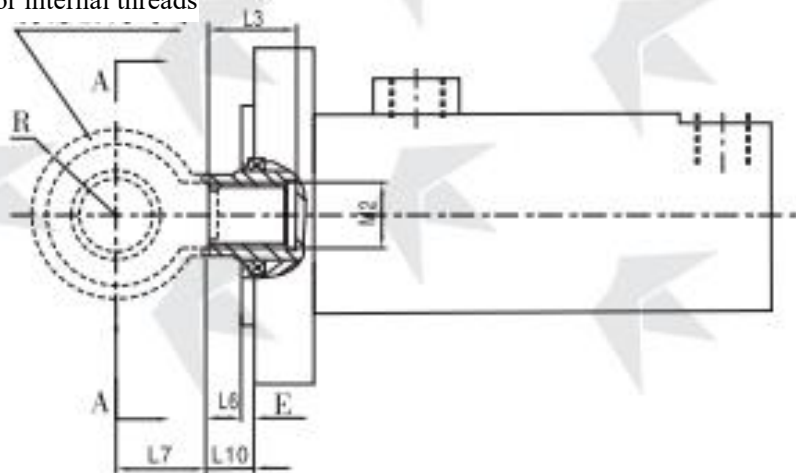
Joint bearing structure

Oil-free lubricated bushing structure

Front flange and rod end internal thread type: UG...QN...

- Unmarked (without earrings)
- + CH... (with bushing earrings)
- + QH... (with joint bearing earrings)

Earring for internal threads

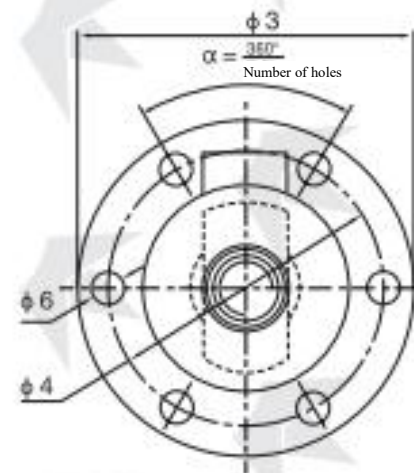
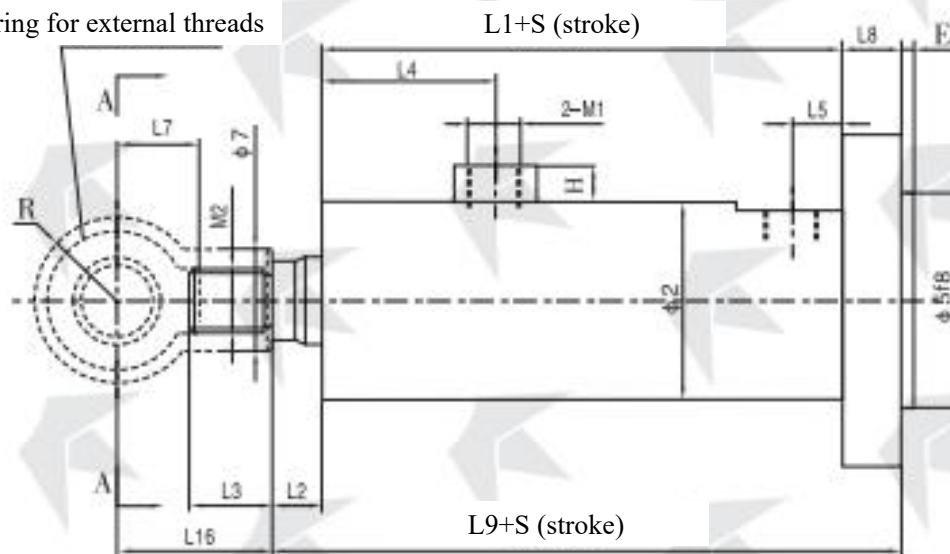


UG...Q front flange type

Cylinder diameter	Rod diameter	ø1		ø2	ø3	ø4	ø5 f8	ø6	ø7	L1	L2	L3	L4			L5	L6	L7	L8	L9	L10	L16	E	R	B	B1	H	M1	M2	Rod end earring			
		Dimensions	Bearing hole tolerance										Non-cushion	Cushion Y	CR															QR	CH	QH	
40	20	20	0-0.010	58	104	84	64	6 holes ø 11	25	167	16	25	70	59	17	10	30	21	15	50	25	16	12	M18×1.5	M14×1.5	40-1							
	28								35					20	60		M16×1.5			-2													
	25								28					35	23	60	M22×1.5			-3													
50	25	30		0-0.010	70	120	98	76	6 holes ø 11	28	170	18	30	70	58	20	40	20	15	60	35	22	15	M22×1.5	M20×1.5	50-1							
	36									42					23					60					M22×1.5	-2							
	32									42					23	60	M27×2			-3													
63	36	40			0-0.012	83	140	115	90	6 holes ø 13	35	200	35	73	76	25	15	25	105	20	65	45	28	15	M22×1.5	M24×1.5	63-1						
	45										42				20						65					M27×2	-2						
	40										42				20	65	M33×2				-3												
80	45	40	0-0.012			108	175	145	115	8 holes ø 13.5	48	217	78	75	25	55	25	110	45	28	15	M22×1.5	M30×2	80-1									
	56										60			25	110								M33×2	-2									
	45										60			25	110								M42×2	-3									
90	50	50		0-0.012		114	190	160	130	8 holes ø 15.5	52	252	50	89	85	30	18	130	60	35	20	M27×2	M36×2	100-1									
	63										68				30								135	M42×2	-2								
	50										68				30	135	M48×2						-3										
100	50	50			0-0.012	127	210	180	145	8 holes ø 18	52	252	50	89	85	30	18	130	60	35	20	M27×2	M36×2	100-1									
	56										60				30								135	M42×2	-2								
	70										60				30	135	M52×2						-3										
110	56	50	0-0.012			140	225	195	160	8 holes ø 18	60	257	20	55	90	90	30	18	135	60	35	20	M27×2	M42×2	110-1								
	63										68					30								135	M48×2	-2							
	80										68					30	135	M60×2						-3									
125	63	50		0-0.015		152	240	210	175	10 holes ø 18	68	267	60	104	87	40	50	140	70	44	20	M33×2	M48×2	125-1									
	70										72				40								50	M52×2	-2								
	90										72				40	50	M68×2						-3										
140	70	60			0-0.015	168	260	225	190	10 holes ø20	80	292	65	114	105	35	80	155	70	44	20	M33×2	M52×2	140-1									
	80										80				35								80	M60×2	-2								
	100										80				35	80	M76×3						-3										
150	75	60	0-0.015			180	285	245	205	10 holes ø 22	76	297	70	119	110	35	80	157	70	44	20	M33×2	M56×2	150-1									
	85										85				35								80	M64×2	-2								
	105										85				35	80	M80×3						-3										
160	80	70		0-0.015		194	300	260	220	10 holes ø 22	80	302	75	124	115	40	90	160	80	49	25	M42×2	M60×2	160-1									
	90										90				40								90	M68×2	-2								
	110										90				40	90	M85×3						-3										
180	90	80			0-0.020	219	325	285	245	10 holes ø 24	90	343	85	129	122	50	100	180	90	55	25	M48×2	M68×2	180-1									
	100										100				50								100	M76×3	-2								
	125										100				50	100	M95×3						-3										
200	100	90	0-0.020			245	365	320	275	10 holes ø 26	100	353	95	141	127	50	110	200	100	60	35	M48×2	M76×3	200-1									
	110										110				50								110	M85×3	-2								
	140										110				50	110	M100×3						-3										
220	110	90		0-0.020		272	405	355	305	10 holes ø 29	110	393	105	146	143	50	110	70	225	100	60	25	M48×2	M85×3	220-1								
	125										120													143	50	110	70	M95×3	-2				
	160										140				143	50								110	70	M125×3	-3						
250	125	100			0-0.020	299	450	390	330	12 holes ø 32	120	403	115	155	143	50	120	245	110	70	25	M48×2	M95×3	250-1									
	140										125												143	50	120	245	M100×3	-2					
	180										160				143	50							120	245	M145×3	-3							

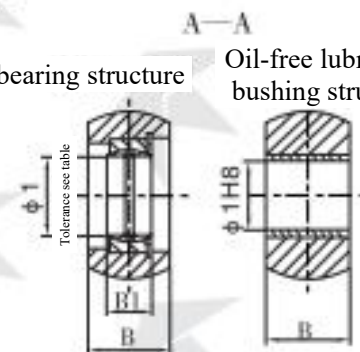
Rear flange and rod end external thread type: UG...H...
 - Unmarked (without earrings)
 + CR... (with bushing earrings)
 + QR... (with joint bearing earrings)

Earring for external threads



Joint bearing structure

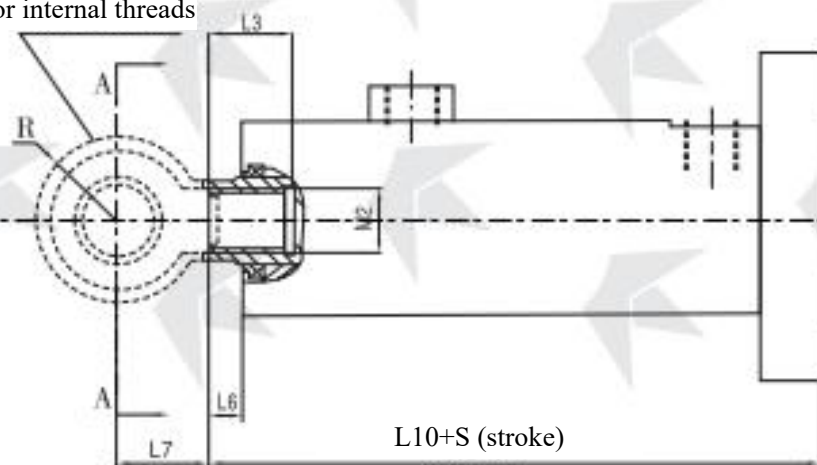
Oil-free lubricated bushing structure



Rear flange and rod end internal thread type: UG...HN...

- Unmarked (without earrings)
 + CH... (with bushing earrings)
 + QH... (with joint bearing earrings)

Earring for internal threads



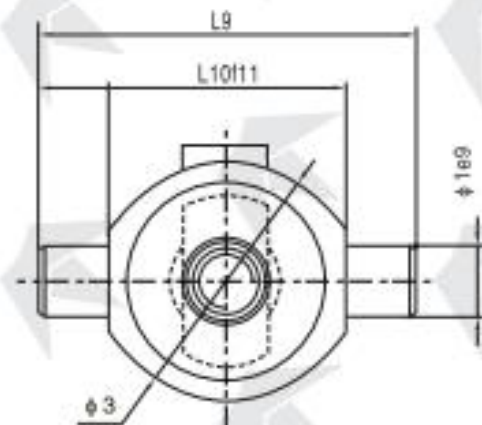
UG···H rear flange type

Cylinder diameter	Rod diameter	ø1		ø2	ø3	ø4	ø5 f8	ø6	ø7	L1	L2	L3	L4		L5	L6	L7	L8	L9	L10	L16	E	R	B	B1	H	M1	M2	Rod end earring							
		Dimensions	Bearing hole tolerance										Non-cushion	Cushion Y															CR	QR	CH	QH				
40	20	20	0-0.010	58	104	84	64	6 holes ø 11	25	167	16	25	70	59	17	10	30	203	197	50	5	25	16	12	M18×1.5	M14×1.5	40-1									
	28								28																											
	35								35																											
50	25	30		70	120	98	76		6 holes ø 13	35	170	18		30	58	20	40	208	200	60						35	22	45	28	15	M22×1.5	M16×1.5	-2			
	28									35																										
	36									42																										
63	32			40	83	140	115	90		8 holes ø 13.5	35	200	35	73	76	15	245	240	65	45		28	105		M27×2	M24×1.5	63-1									
	36										42																									
	45										45																									
80	40	50			108	175	145	115	8 holes ø 15.5		42	217	45		78	75	25	55	262	260		110				60	35	20	M33×2		M27×2	-2				
	45										48																									
	56										60																									
90	45			60	114	190	160	130		10 holes ø 18	48	252	50	89		85	30	70	30	307		305	135		60	35	20				M33×2	M33×2	-2			
	50										52																									
	63										68																									
100	50	70			127	210	180	145	8 holes ø 18		52	257	60		104	87	35	80	40	352		350	155		70	44		20	M33×2			M36×2	100-1			
	56										60																									
	70										72																									
110	56			80	140	225	195	160		10 holes ø 20	60	292	70	119		110	40	80	357	355		157	80		49	25	M42×2				M42×2	110-1				
	63										68																									
	80										80																									
125	63	90			152	240	210	175	10 holes ø 18		68	302	85		124	115	50	372	370	160		90	55		25			M42×2	M48×2		125-1					
	70										72																									
	90										90																									
140	70			100	168	260	225	190		10 holes ø 22	72	343	95	141		127	22	100	60	438		435	200			100	70		25		M48×2	M52×2	-2			
	80										80																									
	100										100																									
150	75	110			180	285	245	205	10 holes ø 22		76	353	105		155	143	50	120	80	500		495	245		110	70	25	M48×2				M56×2	150-1			
	85										85																									
	105										105																									
160	80			120	194	300	260	220		12 holes ø 32	80	393	115	155		143	50	120	80	500		495	245		110	70			25		M48×2	M60×2	160-1			
	90										90																									
	110										110																									
180	90	140			219	325	285	245	10 holes ø 24		90	343	95		141	127	22	100	60	438		435	200		100	70	25	M48×2				M68×2	180-1			
	100		100																																	
	125		120																																	
200	100		150	245	365	320	275	10 holes ø 26		100	353	105	155	143		50	120	80	500	495	245	110	70	25	M48×2	M76×3			-2							
	110									110																										
	140									125																										
220	110	160		272	405	355	305		12 holes ø 29	110	393	115		155	143	50	120	80	500	495	245	110	70			25	M48×2	M85×3	220-1							
	125									120																										
	125									120																										
250	140		180	299	450	390	330	12 holes ø 32		125	403	115	155		143	50	120	80	500	495	245	110	70	25	M48×2			M95×3	250-1							
	180									160																										
	180									160																										

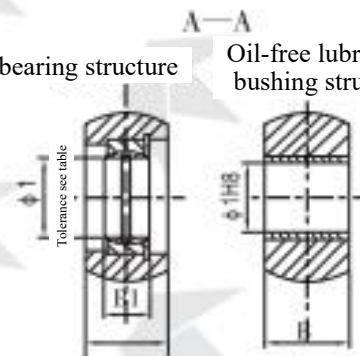


- Unmarked (without earrings)
- ... CR... (with bushing earrings)
- + QR... (with joint bearing earrings)

L1+S (stroke)

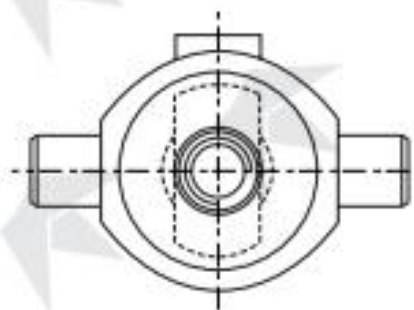


Oil-free lubricated bushing structure



-	Unmarked (without earrings)
+	CH···(with bushing earrings)
	QH···(with joint bearing earrings)

Technical drawing of a shaft-hub assembly with internal threads. The drawing shows a cross-section of a shaft with a hub. The shaft has a diameter of M2. The hub has a bore with a diameter of M2. The shaft is secured with a nut and washer. Dimensions L3, L6, L7, and LL are indicated. Section lines A-A and R are shown.

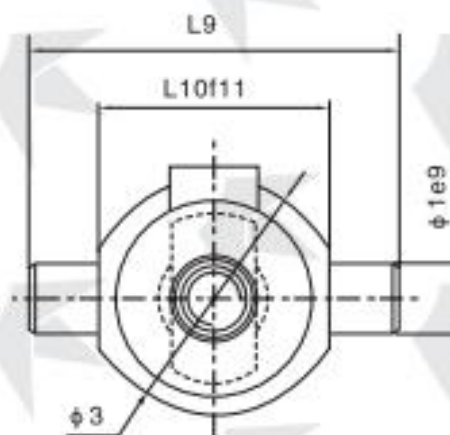




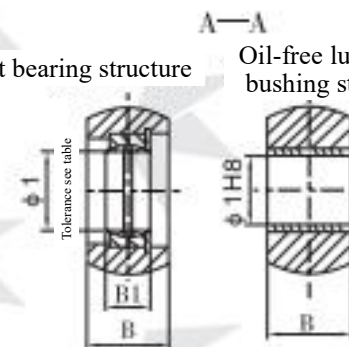
⑤

- Unmarked (without earrings)
- + CR... (with bushing earrings)
- + QR... (with joint bearing earrings)

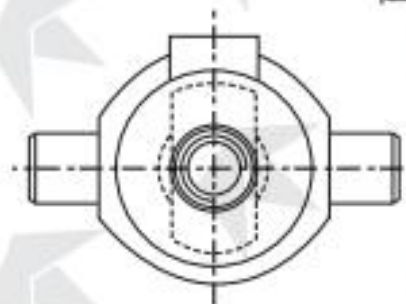
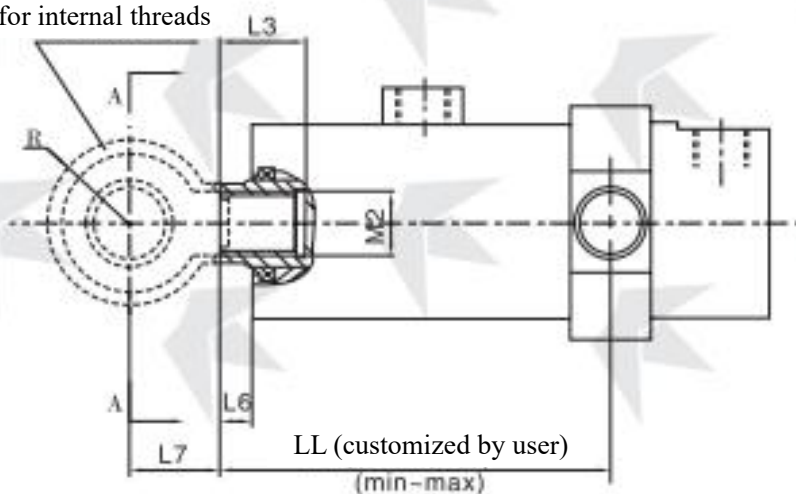
L1+S (stroke)



Oil-free lubricated bushing structure



- Unmarked (without earrings)
- + CH···(with bushing earrings)
- + QH···(with joint bearing earrings)

$$\frac{\text{LL (customized by user)}}{(\text{min-max})}$$


UG···Z intermediate hinge shaft type

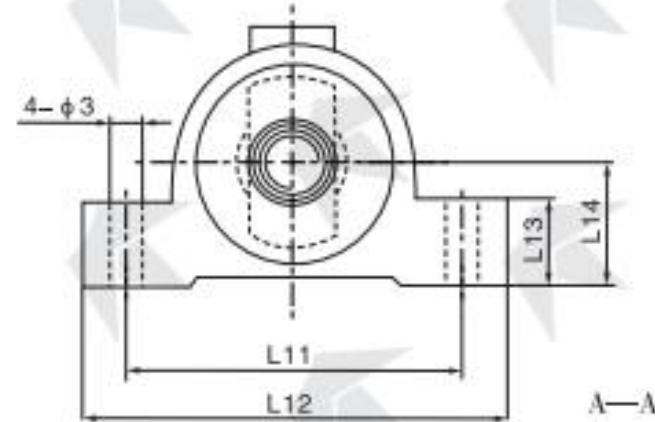
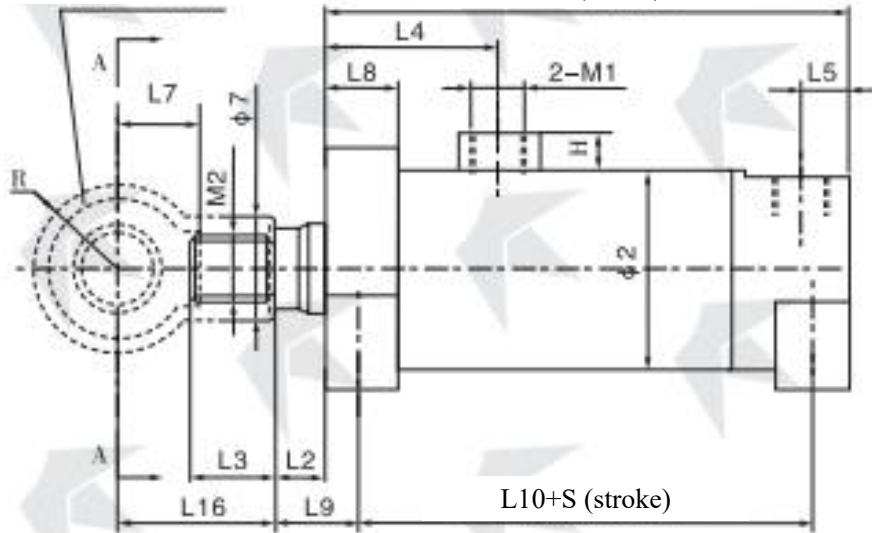
Cylinder diameter	Rod diameter	ø1		ø2	ø3	ø7	L (LL)		LI	L2	L3	L4		L5	L6	L7	L8	L9	L10 (fl1)	L16	R	B	B1	H	M1	M2	Rod end earring															
		Dimensions	Bearing hole tolerance				min	max				Non-cushion	Cushion Y														CR	QR	CH	QH												
40	20	20	0-0.010	58	70	25	124 (118)	113+S (107+S)	167	16	25	70	59	17	10	30	28	110	70	50	25	16	12	M18×1.5	M14×1.5	40-1																
	28					35																			M16×1.5	-2																
																									M22×1.5	-3																
50	25	30		70	80	28	129 (121)	112+S (104+S)	170	18	30		58	20	15	40	34	130	80	60	35	22			15	M22×1.5	M20×1.5	50-1														
	28					35																					M22×1.5	-2														
	36					42																					M27×2	-3														
63	32			40	83	100	35	143 (138)	132+S (127+S)	200	35	73	76	20	15	40	34	155	100	65	35	22					15	M22×1.5	M24×1.5	63-1												
	36						42																						M27×2	-2												
	45						45																						M33×2	-3												
80	40	40			108	120	42	142 (140)	121+S (139+S)	217	45	78	75	25	55	44	185	125	105	45	28	20							M27×2	M30×2	80-1											
	45						48																							M33×2	-2											
	56						60																							M42×2	-3											
90	45			50	114	135	48	147 (145)	149+S (147+S)	252	50	89	85	30	18	70	54	245	170	135	60			35						20	M27×2	M33×2	90-1									
	50						52																									M36×2	-2									
	63						68																									M48×2	-3									
100	50	50			127	150	52	168 (166)	153+S (151+S)	257	55	90	90	30	18	70	54	260	185	140	60			35		20						M33×2	M36×2	100-1								
	56						60																										M42×2	-2								
	70						72																										M52×2	-3								
110	56			60	140	165	60	169 (167)	158+S (156+S)	267	60	104	87	35	40	80	64	305	215	157	70			44				25					M42×2	M42×2	110-1							
	63						68																											M48 × 2	-2							
	80						80																											M60×2	-3							
125	63	70			152	185	68	183 (181)	175+S (173+S)	292	65	114	105	35	40	90	74	360	255	180	80			49					25					M48×2	M48×2	125-1						
	70						72																												M52×2	-2						
	90						90																												M68×2	-3						
140	70			80	168	210	72	203 (201)	177+S (175+S)	297	70	119	110	35	40	90	74	360	255	180	80			49							25				M48×2	M52×2	140-1					
	80						80																													M60×2	-2					
	100						100																													M76×3	-3					
150	75	90			180	222	76	208 (206)	182+S (180+S)	302	75	124	115	35	40	90	74	360	255	180	80			49								25				M48×2	M56×2	150-1				
	85						85																														M64×2	-2				
	105						105																														M80×3	-3				
160	80			100	194	235	80	213 (211)	205+S (202+S)	343	85	129	122	35	40	90	74	360	255	180	80			49									25				M48×2	M60×2	160-1			
	90						90																															M68×2	-2			
	110						110																															M85×3	-3			
180	90	110			219	270	90	233 (230)	208+S (205+S)	353	95	141	127	35	40	90	74	360	255	180	80			49										25				M48×2	M68×2	180-1		
	100		100				M76×3																-2																			
	125		120				M95×3																-3																			
200	100		120	245	295	100	250 (247)	225+S (222+S)	393	105	146	143	50	90	110	94	455	320	225	100	60		25	M48×2											M76×3				200-1			
	110					110																			M85×3										-2							
	140					125																			M100×3										-3							
220	110	130		272	330	110	262 (259)	226+S (223+S)	403	115	155		50	90	120	102	500	350	245	110	70				25										M48×2	M85×3			220-1			
	125					120																					M95×3									-2						
	160					140																					M125×3									-3						
250	125		140	299	335	125	275 (272)							90	120	102	500	350	245	110	70						25									M48×2	M95×3		250-1			
	140					125																M100×3															-2					
	180					160																M145×3															-3					

Foot and rod end external thread type: UG...D...

- Unmarked (without earrings)
+ CR... (with bushing earrings)
+ QR... (with joint bearing earrings)

Earring for external threads

$L1+S$ (stroke)



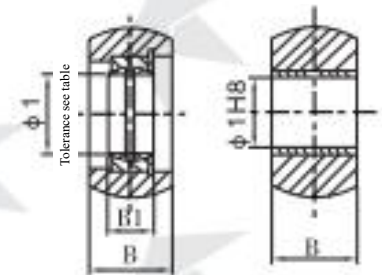
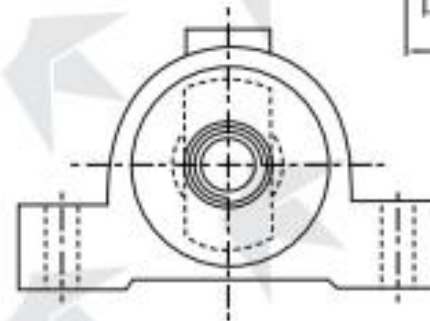
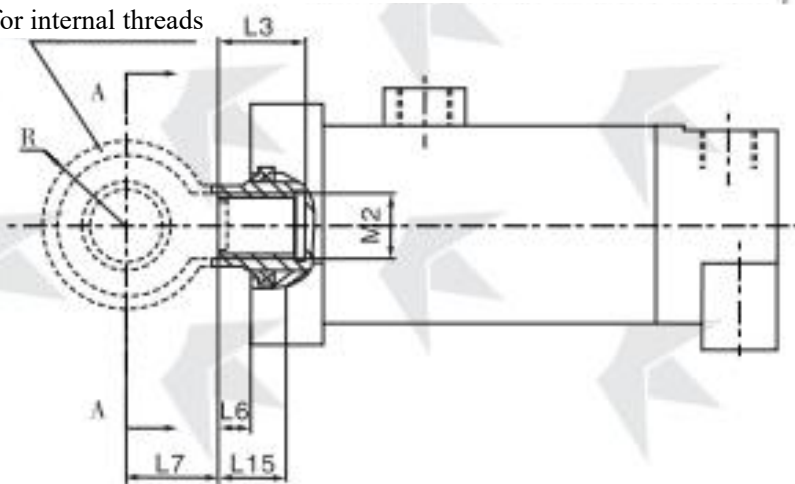
Joint bearing structure

Oil-free lubricated bushing structure

Foot and rod end internal thread type: UG...DN...

- Unmarked (without earrings)
+ CH... (with bushing earrings)
+ QH... (with joint bearing earrings)

Earring for internal threads

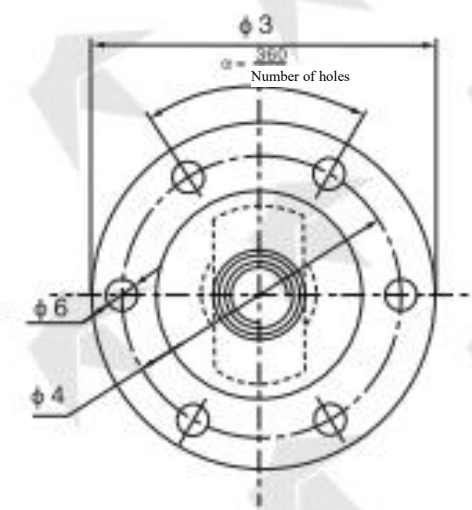
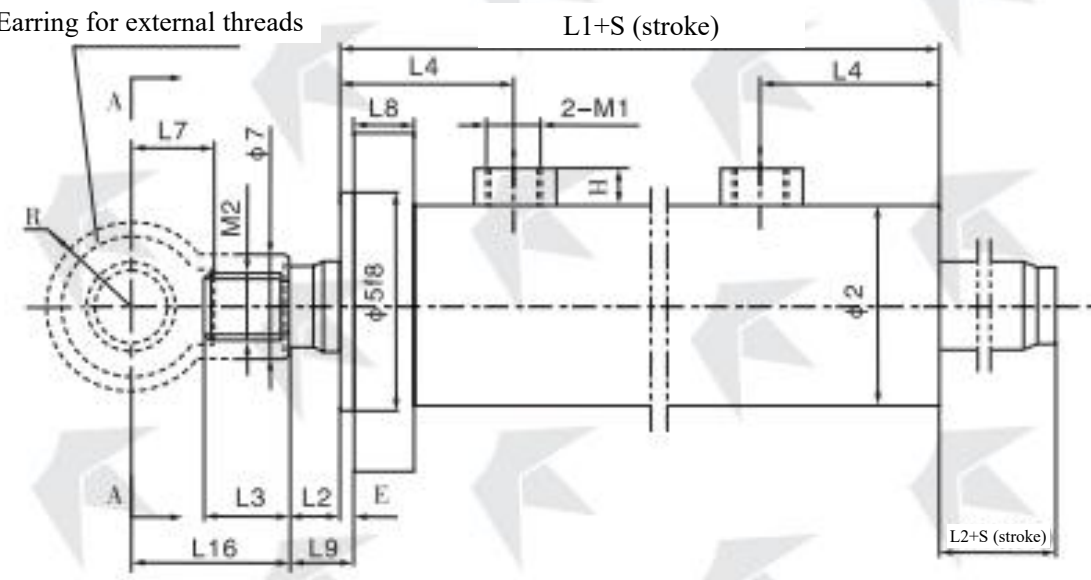


13

Front flange and rod end internal thread type: UGD...Q...

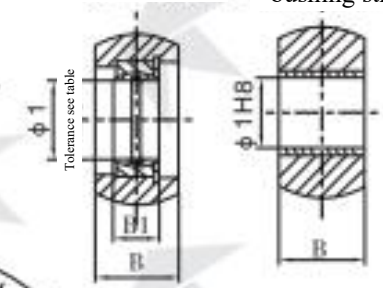
- Unmarked (without earrings)
- + CR... (with bushing earrings)
- + QR... (with joint bearing earrings)

Earring for external threads



Joint bearing structure

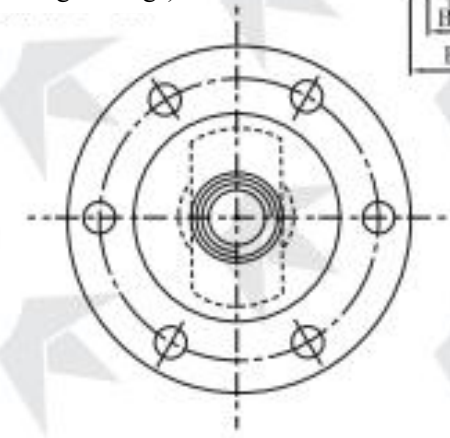
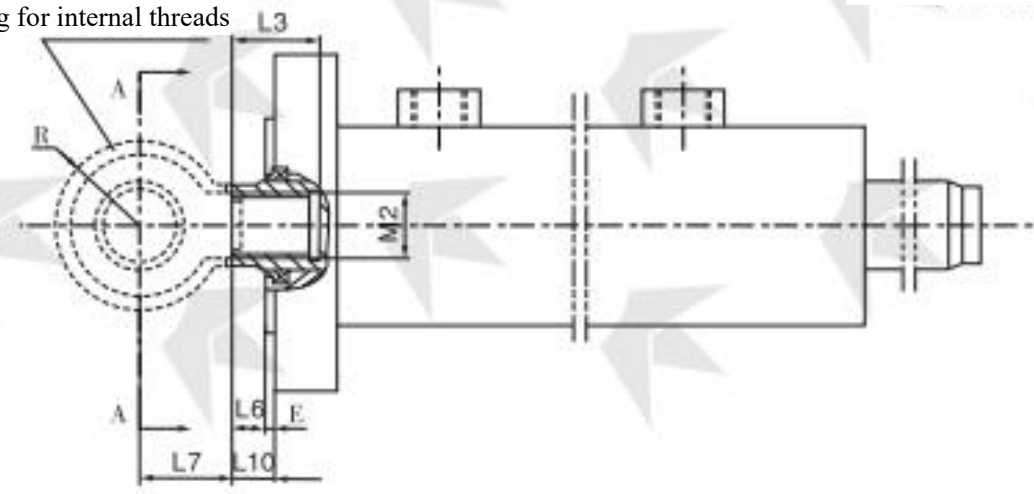
Oil-free lubricated
bushing structure



Front flange and rod end internal thread type: UGD...QN...

- Unmarked (without earrings)
- + CH... (with bushing earrings)
- + QH... (with joint bearing earrings)

Earring for internal threads



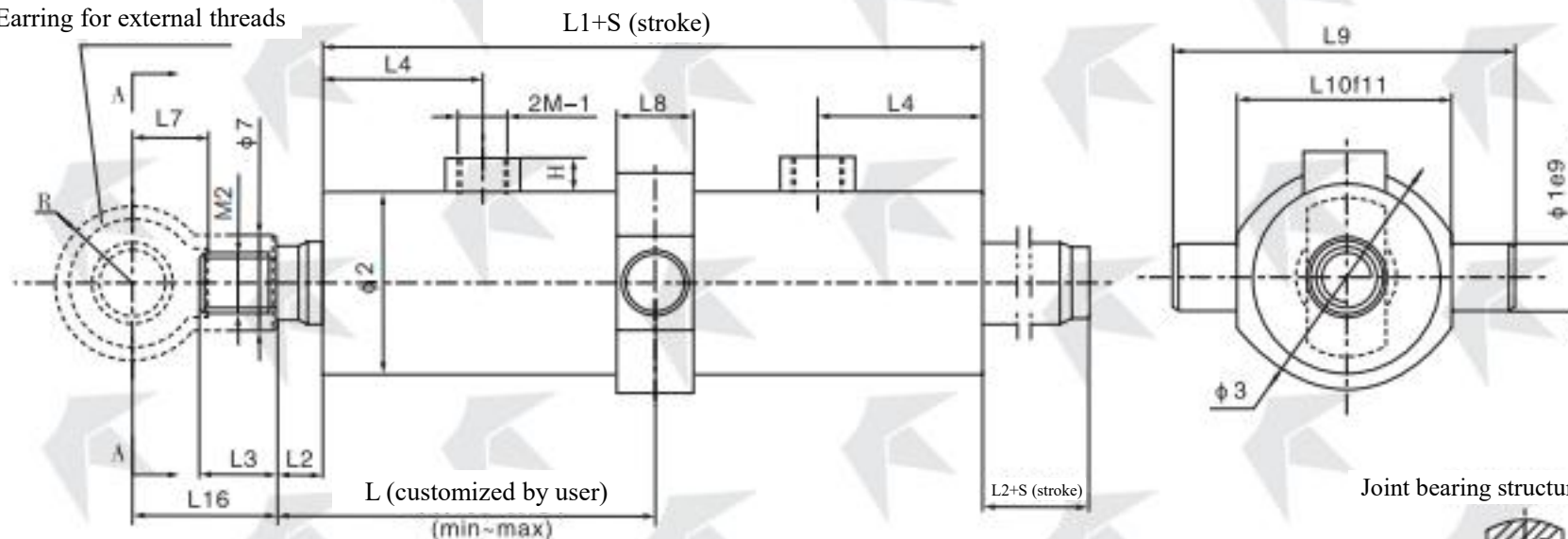
UGD···D front flange type constant velocity cylinder

Cylinder diameter	Rod diameter	ø1		ø2	ø3	ø4	ø5 f8	ø6	ø7	L1	L2	L3	L4		L5	L6	L7	L8	L9	L10	L16	E	R	B	B1	H	M1	M2	Rod end earring			
		Dimensions	Bearing hole tolerance										Non-cushion	Cushion Y															CR	QR	CH	QH
40	20	20	0-0.010	58	104	84	64	6 holes ø 11	25	192	16	25	70	59	17	30	21	50	5	25	16	12	M18×1.5	M14×1.5	40-1							
	28								35																							
	25								28																							
50	28	30		70	120	98	76	6 holes ø 11	35	192	18	30	58	20	40	23	60	35		22	15			M22×1.5	M22×1.5	-3						
	36								42																							
	32								35																							
63	36	40		83	140	115	90	6 holes ø 13	42	232	35	73	76	15	20	65	45	28		15					M22×1.5	M24×1.5	63-1					
	45								45																							
	40								48																							
80	45	50	108	175	145	115	8 holes ø 13.5	48	245	45	78	75	25	55	105	60	35	28	15			M22×1.5	M30×2			80-1						
	56							60																								
	45							48																								
90	50	60	114	190	160	130	8 holes ø 15.5	52	285	20	55	90	90	30	70	23	135	60			35		15	M27×2		M33×2	90-1					
	63							58																								
	50							68																								
100	56	70	127	210	180	145	8 holes ø 18	60	275	50	89	85	30	18	30	25	130	60		35	20				M33×2	M36×2	100-1					
	70							72																								
	56							60																								
110	63	80	140	225	195	160	10 holes ø 18	68	285	20	55	90	90	30	70	23	135	60	35	20		M33×2				M42×2	110-1					
	80							80																								
	63							68																								
125	70	90	152	240	210	175	10 holes ø 18	72	298	60	104	87	30	18	30	25	140	60	35				20	M33×2		M48×2	125-1					
	90							90																								
	70							72																								
140	80	100	168	260	225	190	10 holes ø 20	80	328	65	114	105	35	80	40	155	70	44	20		M33×2				M52×2	140-1						
	100							100																								
	75							76																								
150	85	110	180	285	245	205	10 holes ø 22	85	333	70	119	110	35	80	50	157	70	44		20		M33×2			M60×2	-2						
	105							105																								
	80							80																								
160	90	125	194	300	260	220	10 holes ø 22	90	343	75	124	115	40	90	60	35	180	80					49	25	M48×2	M64×2	-2					
	110							110																								
	90							90																								
180	100	80	219	325	285	245	10 holes ø 24	100	376	85	129	122	50	90	60	32	200	10	90		55		25			M48×2	M68×2	180-1				
	125							120																								
	100							110																								
200	110	90	245	365	320	275	10 holes ø 26	125	396	95	141	127	50	110	70	35	225	100	70	25	M48×2	M76×3					200-1					
	140							125																								
	110							140																								
220	125	100	272	405	355	305	10 holes ø 29	120	436	105	146	143	50	120	245	110	70	110	60			25		M48×2	M85×3		220-1					
	160							140																								
	125							125																								
250	140	180	299	450	390	330	12 holes ø 32	125	446	115	155	155	50	120	245	110	70	110	60				25		M48×2	M95×3	250-1					
	180							160																								
	140							125																								

Intermediate hinge shaft and rod end external thread
type: UGD...Z...

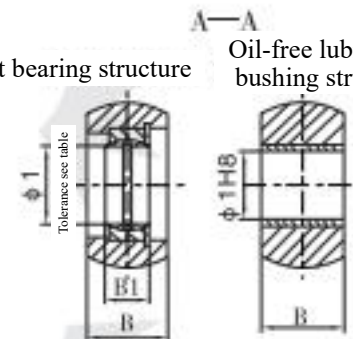
- Unmarked (without earrings)
CR... (with bushing earrings)
+ QR... (with joint bearing earrings)

Earring for external threads



Joint bearing structure

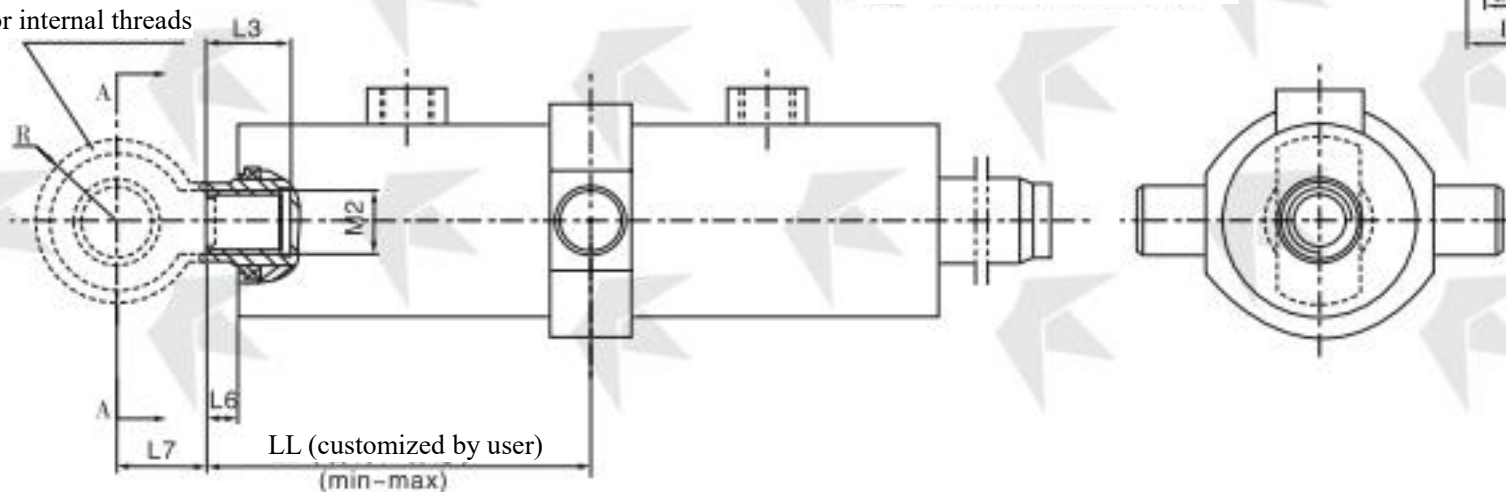
Oil-free lubricated
bushing structure



Intermediate hinge shaft and rod end internal thread type: UGD...ZN...

- Unmarked (without earrings)
CH... (with bushing earrings)
+ QH... (with joint bearing earrings)

Earring for internal threads



UGD...Z intermediate hinge shaft type constant velocity cylinder

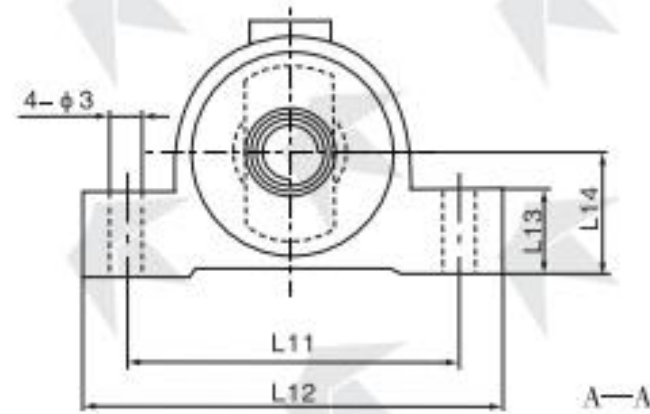
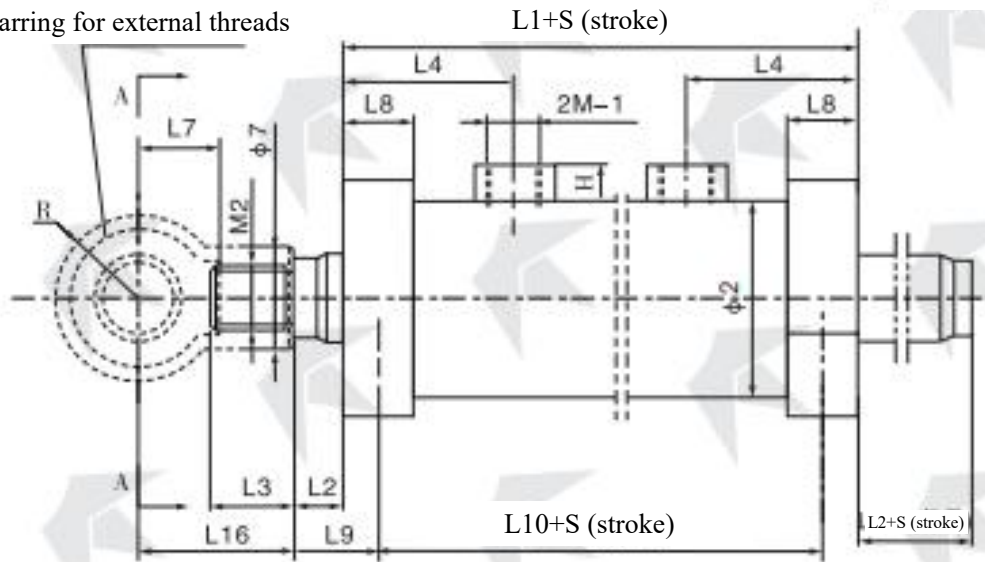
Cylinder diameter	Rod diameter	ø 1		ø2	ø3	ø7	L (LL)		L1	L2	L3	L4		L6	L7	L8	L9	L10 (f11)	L16	R	B	B1	H	M1	M2	Rod end earring							
		Dimensions	Bearing hole tolerance				min	max				Non-cushion	Cushion Y													CR	QR	CH	QH				
40	20	20	0-0.010	58	70	25	124 (118)	100+S (94+S)	192	16	25	70	59	10	30	28	110	70	50	25	16	12	M18×1.5	M14×1.5	40-1								
	22					28																		M16×1.5	-2								
	28					35																		M22×1.5	-3								
50	25	30		70	80	28	129 (121)	99+S (91+S)	192	18	30		58		73	76	15	40	34	130	80			60	35	22	15	M22×1.5	M20×1.5	50-1			
	28					35																							M22×1.5	-2			
	36					42																							M27×2	-3			
63	32			40	83	100	35	143 (138)	129+S (124+S)	232	35	78	75	55		44		185	125	105	45	28	20	M27×2	M24×1.5	63-1							
	36						42																		M27×2	-2							
	45						45																		M33×2	-3							
80	40	50			108	120	42	142 (140)	143+S (141+S)	245	45		78		75	70	54	245	170	135	60	35			25	M33×2	M30×2	80-1					
	45						48																				M33×2	-2					
	56						60																				M42×2	-3					
90	45			50	114	135	48	147 (145)	138+S (136+S)	245	45	78	75	70	54		200	140	110	45	28	25	M33×2	M33×2			90-1						
	50						52																	M36×2			-2						
	63						68																	M48×2			-3						
100	50	50	127		150	52	168 (166)	147+S (145+S)	275	50	89	85	18		70	54	230	155	130	60	35			20	M27×2	M36×2	100-1						
	56					60																				M42×2	-2						
	70					72																				M52×2	-3						
110	56		50	140	165	60	169 (167)	156+S (154+S)	285	55	90	90		18	70	54	245	170	135	60	35	25	M27×2			M42×2	110-1						
	63					68																				M48×2	-2						
	80					80																				M60×2	-3						
125	63	60		152	185	68	183 (181)	155+S (153+S)	298	60	104	87	22		80	64	305	215	157	70	44			25	M33×2	M48×2	125-1						
	70					72																				M52×2	-2						
	90					90																				M68×2	-3						
140	70		70	168	210	72	203 (201)	165+S (163+S)	328	65	114	105		22	80	64	290	200	155	70	44	25	M33×2			M52×2	140-1						
	80					80																				M60×2	-2						
	100					100																				M76×3	-3						
150	75	70		180	222	76	208 (206)	165+S (163+S)	333	70	119	110	22		80	64	305	215	157	70	44			25	M33×2	M56×2	150-1						
	85					85																				M64×2	-2						
	105					105																				M80×3	-3						
160	80		80	194	235	80	213 (211)	170+S (168+S)	343	75	124	115		22	80	64	320	230	160	70	44	25	M42×2			M60×2	160-1						
	90					90																				M68×2	-2						
	110					110																				M85×3	-3						
180	90	80		219	270	90	233 (230)	193+S (190+S)	376	85	129	122	22		90	74	360	255	180	80	49			25	M42×2	M68×2	180-1						
	100					100																				M76×3	-2						
	125					120																				M95×3	-3						
200	100		100	245	295	100	250 (247)	196+S (193+S)	396	95	141	127		22	100	84	405	285	200	90	55	25	M48×2			M76×3	200-1						
	110					110																				M85×3	-2						
	140					125																				M100×3	-3						
220	110	90		272	330	110	262 (259)	224+S (221+S)	436	105	146	143	22		110	94	455	320	225	100	60			25	M48×2	M125×3	220-1						
	125					120																				M95×3	-2						
	160					140																				M100×3	-3						
250	125		100	299	335	120	275 (272)	221+S (218+S)	446	115	155	155		22	120	102	500	350	245	110	70	25	M48×2			M95×3	250-1						
	140					125																				M100×3	-2						
	180					160																				M145×3	-3						

Constant velocity cylinder

Earring for external threads

Intermediate hinge shaft and rod end external thread type: UGD...Z...

- Unmarked (without earrings)
+ CR... (with bushing earrings)
+ QR... (with joint bearing earrings)



Joint bearing structure

Oil-free lubricated bushing structure

Foot and rod end internal thread type: UGD...DN...

Earring for internal threads

- Unmarked (without earrings)
+ CH... (with bushing earrings)
+ QH... (with joint bearing earrings)

