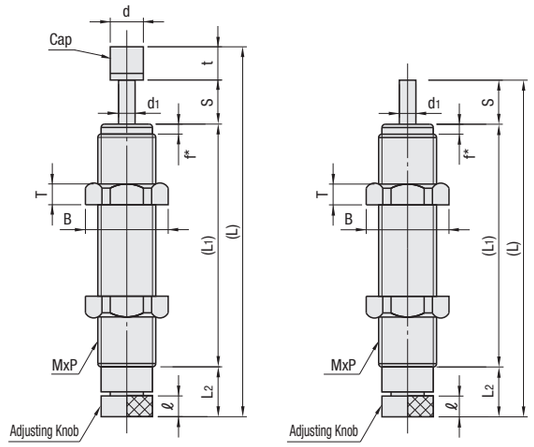
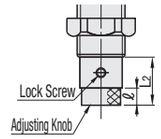
Shock Absorbers
Water & Coolant Resistant Type

■ Shock Absorbers
Water & Coolant Resistant Type

MACC (Cap) **MACS** (No Cap)

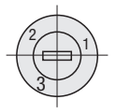


(No.1612, 2016 Shape of Adjustable Part)



(No.0806, 1008, 1210 Shape of Adjustable Part)

(Adjustable Part)



No.	Material (Main Body)	Surface Treatment
0806	EN 1.4305 Equiv.	-
1008, 1210, 1410, 1612	Free Cutting Steel	Electroless Nickel Plating
2016	EN 1.0038 Equiv.	
Cap	Polyacetal	-

- f* is the dimension of thread dia. M14 or smaller. M16 or larger is threaded to the tip.
- Avoid parallel use of Adjustable Type as synchronization of shock absorption characteristics is difficult.
- Impact force can be easily adjusted by turning the adjusting knob on the bottom.
- Operating Ambient Temperature: -5 ~ 70°C

Part Number			Thread Dia. MxP	Stroke S	Max. Absorbed Energy (E) per Impact (J)	Max. Absorbed Energy (E) per Minute (J)	Max. Equiv. Mass (me)(kg)	Piston Rod Return Force (N)	Max. Drag Value (N)	(L)	(L1)	L2	ℓ	d	d1	t	f	B (Wrench Flats)	T	MACC Unit Price	MACC Volume Discount Rate	MACS Unit Price	MACS Volume Discount Rate
Type	No.	Velocity																		1 ~ 4 pc(s).	5 ~ 10 pcs.	1 ~ 4 pc(s).	5 ~ 10 pcs.
MACC (Cap) / MACS (No Cap)	0806	M	M8 x 0.75	6	1.4	36.7	15	9 or Less	670	64 (59)	47	6	3	6	2.5	5	2.3	12.7 (11)	2				
	1008	L	M10 x 1.0	8	1.47	58.8	10	9 or Less	637	79.5 (73.2)	56.7	8.5	3.5	6	2.4	6.3	1.6	14.2 (13)	3				
		M			1.76		2.5																
		H																					
	1210	L	M12 x 1.0	10	2.94	98	30	13 or Less	1470	90.6 (82.6)	67.6	5	-	8	3.5	8	1.5	16.2 (14)	4				
		M			4.9		4																
		H																					
	1410	L	M14 x 1.5	10	3.92	147	30	14 or Less	1813	108.2 (98.2)	77.8	10.4	5	10	4	10	1.7	19.6 (17)	6				
		M			5.88		35																
		H					4.5																
	1612	L	M16 x 1.5	12	9.8	235	50	20 or Less	2646	122.7 (107.7)	81.2	14.5	4.5	13.5	5	15	-	20 (19)	6				
		M					10																
		H																					
	2016	L	M20 x 1.5	16	29.4	343	300	33 or Less	3528	137 (120)	86	18	4	18	6	17	-	27.7 (24)	8				
		M					200																
		H					120																

- L Dimension values in ( ) are for MACS Type.

kgf・m=Jx0.101972 kgf=Nx0.101972

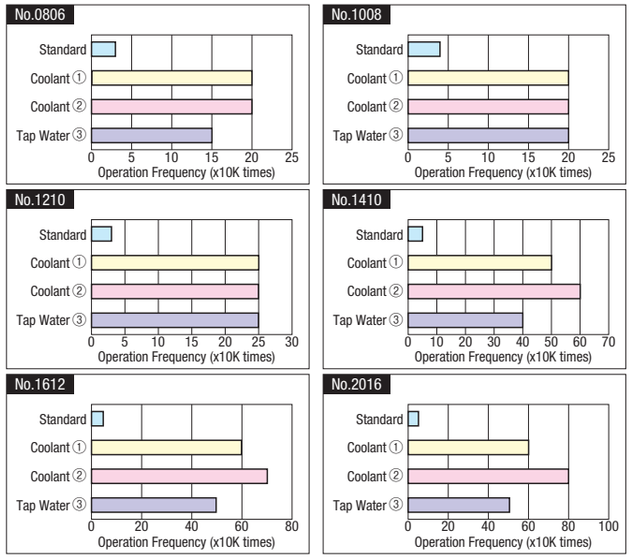
Collision Velocity Type	Collision Velocity Range	Max. Operating Cycle
Low Speed L	0.3~1m/s	60cycle/min*
Medium Speed M	0.3~2m/s	
High Speed H	0.7~3m/s	

- * For No.0806, max. operating cycle should be 45cycle/min.

Ordering Example — Part Number: MACC1008H

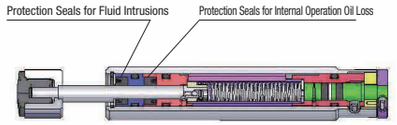
■ Features of Water & Coolant Resistant Type
- Having a structure of protection seals for fluid intrusions makes usable in wet conditions, suitable for machine tools and related applications.
- Replacement is possible with Standard Type since mounting O.D. screw size is the same.
- Suitable for water-soluble cutting oil A1 [JIS K2241-2000], but also available for water-insoluble cutting oil or under wet conditions. (In case of using water instead of water-soluble cutting oil, the durability may be inferior.)

■ Durability Test Data (Ref.)
Test Condition
- Coolant①:JIS A1 Emulsion Water-Soluble Cutting Oil (Yushiro Chemical Industry Co., Ltd. Yushiroken FGE330 Dilution 20 times)
- Coolant②:JIS N1 Water-Insoluble Cutting Oil (Yushiro Chemical Industry Co., Ltd. Yushiro Oil CG8)
- ③: Tap Water
- Load: Ø40 Air Cylinder (Cylinder Propulsion only)
- Collision Cycle: 30/min. ・Dripping: 4cc/min.

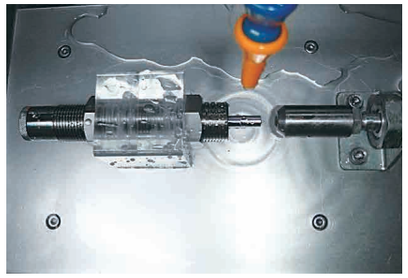


- Durability results may vary depending on each test condition. Testing fluid or volume may affect the results. Prior tests are recommended to obtain appropriate results.
- When used in environments where the piston rods are kept from fluid contacts, the internal oil may be lost by premature leakage.

■ Inner Structure



■ Test Scene



■ App. Example
Rotating Table Stopper [Dedicated Machining Equipment]