Shock Absorbing Bumpers

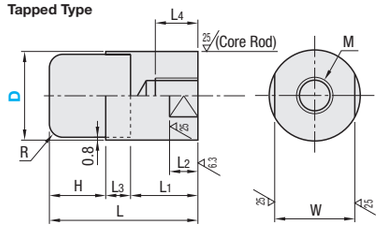
Tapped, Threaded

■ Bumpers provided with shock and sound absorbing effect, made of soft shock-absorbing material.
This product is the replacement for GELMR and GELMF. The bumper part has changed from a 2-layered construction to a 1-layered construction, and the hardness has changed.

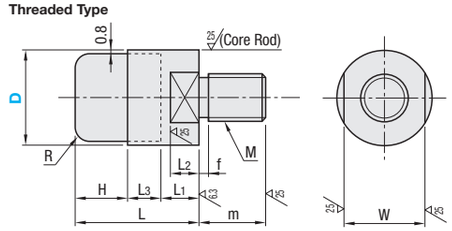
Type		Material		Hardness
Tapped	Threaded	Bumper	Core Rod	
GELSMR	GELSMF	Viscoelastic Elastomer (Gray)	304 Stainless Steel	Asker F85

A coating agent is applied to reduce stickiness.

Tapped Type



Threaded Type



Part Number Type	D	H	L	L_1	L_2	L_3	L_4	M	W	R	Unit Price
Tapped Type GELSMR	12	8	22	11	4	3	7	M5 x 0.8	10	2	
	16	10	28	14	5	4	11	M6 x 1.0	14	3	
	16A		31	17			14	M8 x 1.25			
	20	13	35	17	6	5	14	M8 x 1.25	17	3	
	20A		39	21			16	M10 x 1.25 (Fine)			
	30	15	44	24	8	5	20	M12 x 1.75	27	3	
	30A		46	26			22	M14 x 1.5 (Fine)			

Part Number Type	D	H	L	L_1	L_2	L_3	M	W	m	f	R	Unit Price
Threaded Type GELSMF	12	8	16	5	4	3	M5 x 0.8	10	8	1.5	2	
	16	10	20	6	5	4	M6 x 1.0	14	10	2	3	
	20	13	26	8	6	5	M8 x 1.25	17	12	2	3	
	30	15	30	10	8	5	M10 x 1.5	27	14	2.5	3	

Ordering Example — Part Number: GELSMR16A

■ Precautions for Use

- Do not stick or cut with sharpened objects.
- Do not tear or twist.
- Insert it only from the vertical direction.
- Keep away from fire.
- Do not use detergents.

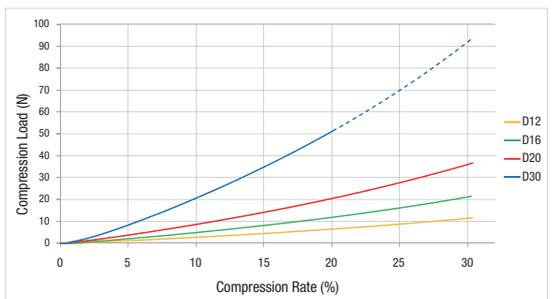
• Characteristic Values of Shock Absorbing Bumpers

Item	Unit	Value
Specific Gravity	-	1.0
Hardness	Asker F	85
Tensile Strength	Mpa	1.15
Elongation	%	680
Heat Resistance	°C	100
Low Temp. Resistance	°C	-10

■ Compressive Load Test Results

D	12	16	20	30
30% Compression Load Average (N)	11.1	20.8	35.7	(93)*
20% Compression Load Average (N)	6.3	11.6	20.3	51.4
15% Compression Load Average (N)	4.4	8.0	14.1	35.0

*Be aware that using D30 with a compressive load of 20% or over may result in damage.



• Test Conditions

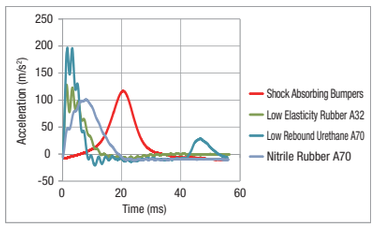
Average value measured when compressed by a static load. (Measured 3 times)
These are not guaranteed values but an example as a set of measured values.
The compression rates are for the total length of the bumper part (H + L3).

■ Elasticity of Shock Absorbing Bumpers

• Shock Absorbing Bumper • Urethane, Shore A50

A major characteristic is the three-dimensional slow recovery, the function to recover after compression slowly and in multiple directions.
Pressed as thin as shown in the photo and recovers to the original shape gradually after being released from pressure.

■ Drop-Weight Test Data



• Test Conditions

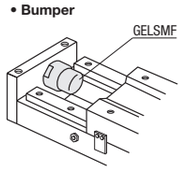
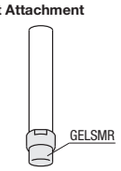
Samples:
Ø30 × 20 mm
Drop Weight: 16.2 kg
Drop Height: 25 mm
Collision Velocity: 0.71m/s
Testing Instrument:
IM10T-30HV
(made by IMATEK)
Ambient Temperature:
15°C

• From Test Results

Compared with other materials, the shock absorbing bumper results in a much smoother curve from the impact to the peak and the return to normal afterward.
This is because the material transmits energy dispersing in multiple directions, while absorbing impact force.
From these characteristics, noise reduction effect can be expected.
(Please note that results may differ depending on conditions of use.)

Example

• Bumper



• Shaft Attachment