

SAFETY BRAKES



SAFETY DEVICES FOR ROLLING SHUTTERS WITHOUT SPRINGS

DESCRIPTION

The safety brake is a safety device for rolling shutters without springs performing two functions:

- A bearing support for the shutter's shaft
- A mechanical brake blocking the fall of the shutter if a sudden acceleration occurs.

It is made up of antioxiding materials, consists of a central body with a hollow shaft and is supported by a floating metal base preventing any tube eccentricity (except M1A/H, P200). The GAPOSA safety brakes are equipped with a patented shock-absorber system and a microswitch for disconnecting the electrical supply to the motor when the brake locks.

In order to select the most suitable model for the best application, a good understanding of the safety brake data is essential.

Nominal torque

It is the key value to select the most appropriate safety brake according to the weight of the shutter and the diameter of the tube. Make sure that the torque of the operator is less than the nominal torque of the safety brake.

Locking torque

It is the maximum stress which the safety brake is subjected to when it stops the rotation of the shaft.

Working speed

It refers to the number of revolutions where the safety brake works as a simple support without functioning as a safety device. The speed of the shutter tube has to be within this value.

RANGE

M1A/H 80 Nm
P200 137 Nm
M3A 258 Nm

M4A 404 Nm
M7A 708 Nm
M10A 1000 Nm

M15A 1551 Nm
M20A 2200 Nm
M30A 3109 Nm

SAFETY BRAKES

M1A P200

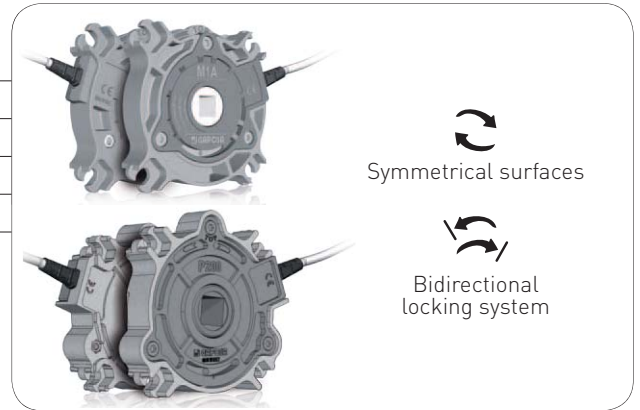
Safety brakes with symmetrical surfaces for installation without conditions



M1A

P200

	M1A	P200
Nominal torque (Nm)	80	137
Locking torque (Nm)	573	503
Working speed (rpm)	22	20
Screw tightening torque (Nm)	4	4.0
Approval number	TorFV 10/154	-
Weight (Kg)	0.85	1

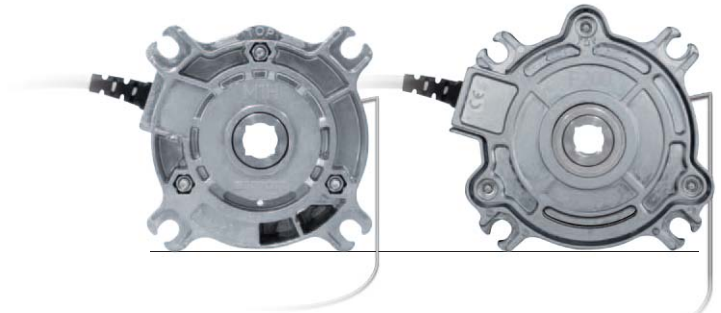


Symmetrical surfaces

Bidirectional locking system

M1H / P200H

H versions featuring a **free rolling pre-set**. The brake is supplied in free rolling condition, meaning the locking component is disabled until a cord is pulled out thus activating it.



M3A

Nominal torque (Nm)	258
Locking torque (Nm)	978
Working speed (rpm)	16
Screw tightening torque (Nm)	5.5
Approval number	TorFV 7/125
Weight (Kg)	2.1



M4A
M7A
M10A

	M4A	M7A	M10A
Nominal torque (Nm)	404	708	1000
Locking torque (Nm)	1979	3299	3560
Working speed (rpm)	14	12	12
Screw tightening torque (Nm)	5	6	8
Approval number	TorFV 5/065	TorFV 5/066	TorFV 5/067
Weight (Kg)	4.7	10	12.5



M15A
M20A
M30A

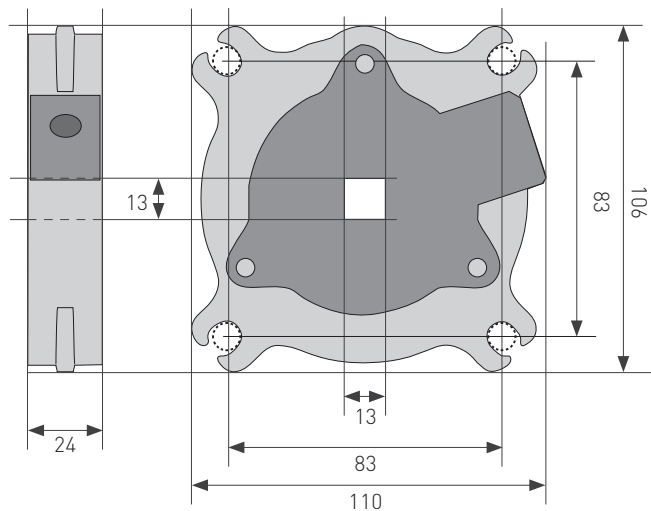
	M15A	M20A	M30A
Nominal torque (Nm)	1551	2200	3109
Locking torque (Nm)	8842	16588	-
Working speed (rpm)	18	12	12
Screw tightening torque (Nm)	12	26	30
Approval number	TorFV 7/126	TorFV 10/155	-
Weight (Kg)	19.5	20	45



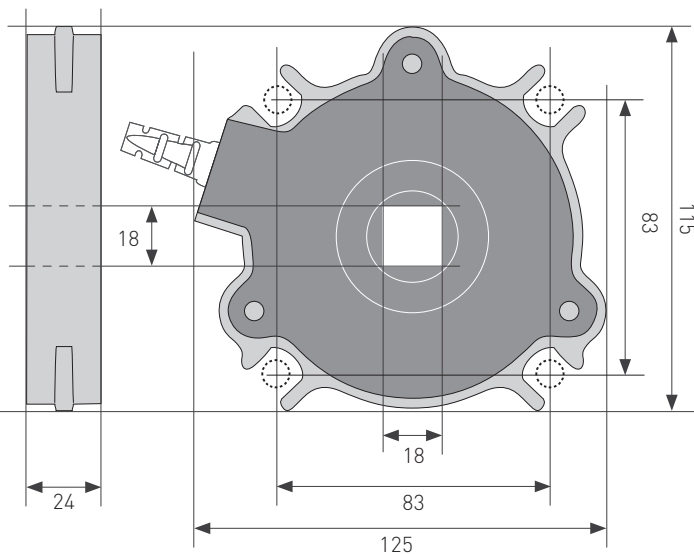
SAFETY BRAKE

Dimensions (mm)

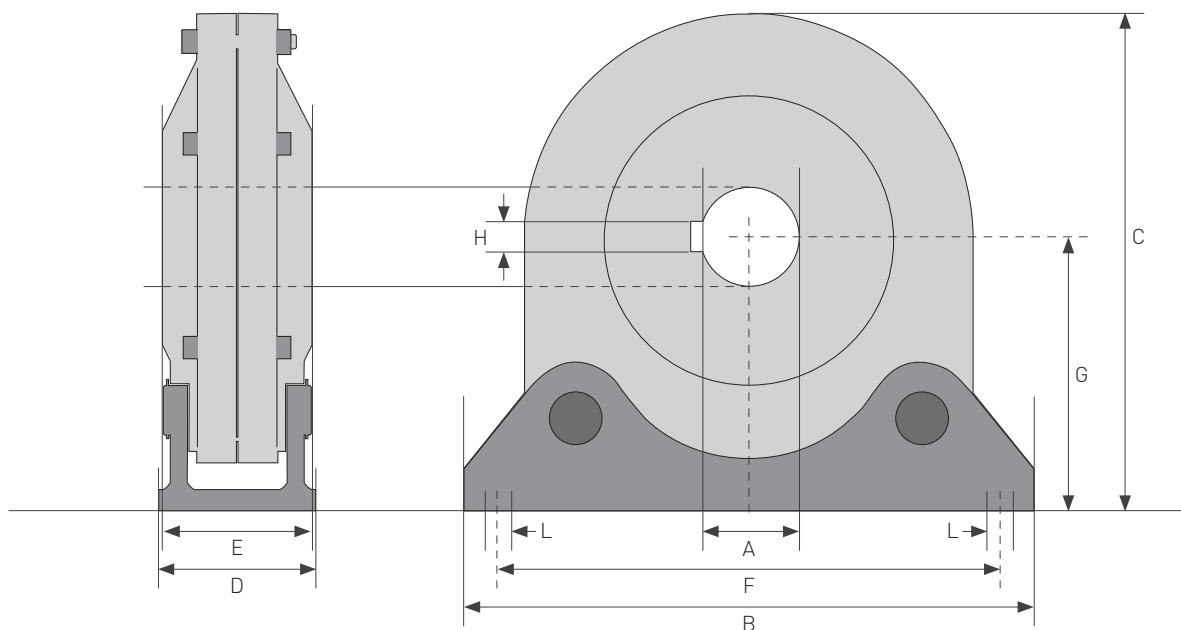
M1A / M1H



P200 / P200H



M3A M4A M7A M10A M15A M20A M30A



Segment (mm)	M3A	M4A	M7A	M10A	M15A	M20A	M30A
A	25	30	40	40	50	65	70
B	165	216	268	280	320	345	415
C	158	202	255	260	265	290	348
D	33	56	56	71	71	71	104
E	30	50	55	57	58	63	105
F	145	186	240	240	290	315	365
G	91	122	151	156	140	153	191
H	8	8	12	12	14	18	20
L (Ø)	9	12	16	16	17	17	22
Fastening screws	2 x M8	2 x M10	2 x M14	2 x M14	2 x M16	2 x M16	2 x M20

Adjustable caps

Adjustable caps (CLIP) - M1A



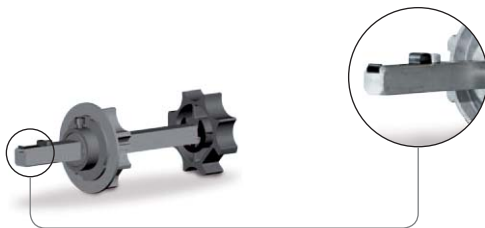
SQUARE SHAFT 13 mm - LENGTH 250 mm

AXCL135725	for 70 mm octagonal tube
AXCL137825	for 78 mm round tube
AXCL138925	for 89 mm Deprat tube

SQUARE SHAFT 13 mm - LENGTH 600 mm

AXCL138960	for 89 mm Deprat tube
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Adjustable caps (CLIP) - P200



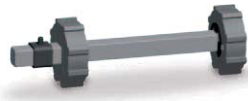
SQUARE SHAFT 18 mm - LENGTH 250 mm

AXCL185725	for 70 mm octagonal tube
AXCL187825	for 78 mm round tube
AXCL187025	for 70 mm round tube
AXCL188925	for 89 mm Deprat tube
AXCL1810125	for 101.6x3.6 mm round tube
AXCL18101225	for 101.6x2.0 mm round tube

SQUARE SHAFT 18 mm - LENGTH 600 mm

AXCL188960	for 89 mm Deprat tube
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Adjustable caps (STANDARD) - M1A



SQUARE SHAFT 13 mm - LENGTH 250 mm

AXC135725	for 70 mm octagonal tube
AXC13ZF8025	for 80 mm ZF round tube
AXC13589	for 89 mm Deprat tube
AXCR131012	for 101,6x3,6 mm round tube
AXCR1370	for 70 mm round tube
AXC130625	for 60 mm octagonal tube

Adjustable caps (STANDARD) - P200



SQUARE SHAFT 18 mm - LENGTH 250 mm

AXC5725	for 70 mm octagonal tube
AXCZF6425	for ZF 64 mm tube - Max motor torque allowed: 40Nm
AXCZF8025	for 80 mm ZF round tube
AXCR7025	for 70 mm round tube
AXCD58925	for 89 mm Deprat tube
AXCR10125	for 101.6x3.6 mm round tube
AXCR101225	for 101.6x2.0 mm round tube

SQUARE SHAFT 18 mm - LENGTH 600 mm

AXCD58960	for 89 mm Deprat tube
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Adjustable caps (STANDARD) - M3A



SQUARE SHAFT 25 mm - LENGTH 300 mm

AXCR3101	for 101.6x3.6 mm round tube
AXCR31012	for 101.6x2.0 mm round tube
AXCR3133	for 133.6x2.5 mm round tube
AXCR31334	for 133.4x4.0 mm round tube
AXCR3159	for 159x4.5 mm round tube
AXCR3168	for 168x4.5 mm round tube
ACR316829	for 168x2.9 mm round tube

SAFETY BRAKES Selection table

The following table helps you to select the right safety brake according to the weight and sizes of the shutter and the tube diameter.

P200

Ø TUBE x THICKNESS (mm) ▶		70x2.6			83x1.5			88.9x3.2			98x2		
SHUTTER HEIGHT (m) ▶		3	5	7	3	5	7	3	5	7	3	5	7
SHUTTER WIDTH (m) ▶	3	150	86	57	129	75	50	207	174	117	198	139	95
	5	150	86	57	129	75	50	188	174	117	182	139	95
	7	150	86	57	129	75	50	174	174	117	170	139	95
	9	150	86	57	129	75	50	164	165	117	161	139	95
	11	150	86	57	129	75	50	156	157	117	154	139	95

SHUTTER MAXIMUM WEIGHT (Kg)

Ø TUBE x THICKNESS (mm) ▶		101.6x3.6			108x3.6			125x1.5			133.3x4		
SHUTTER HEIGHT (m) ▶		3	5	7	3	5	7	3	5	7	3	5	7
SHUTTER WIDTH (m) ▶	3	196	197	175	190	191	193	173	174	121	168	171	174
	5	181	182	175	177	178	180	166	166	121	163	166	168
	7	169	170	171	167	168	169	158	159	121	158	159	121
	9	160	161	162	158	160	161	151	152	121	150	153	155
	11	153	154	155	152	153	154	146	146	121	145	148	150

SHUTTER MAXIMUM WEIGHT (Kg)

M3A

Ø TUBE x THICKNESS (mm) ▶		88.9x3.2			101.6x3.6			108x3.6			133.3x4			159x4.5			168x4.5		
SHUTTER HEIGHT (m) ▶		3	5	7	3	5	7	3	5	7	3	5	7	3	5	7	3	5	7
SHUTTER WIDTH (m) ▶	3	285	285	285	360	312	279	351	306	275	314	284	259	279	260	242	267	252	235
	5	168	165	165	245	245	245	279	279	275	314	283	259	278	260	241	266	251	235
	7	112	112	112	167	167	167	191	191	191	314	283	258	278	259	259	265	250	234

SHUTTER MAXIMUM WEIGHT (Kg)

M4A

Ø TUBE x THICKNESS (mm) ▶		133.3x4			159x4.5			168x4.5			177.8x5			193.7x5.4			219.1x5.9		
SHUTTER HEIGHT (m) ▶		3	5	7	3	5	7	3	5	7	3	5	7	3	5	7	3	5	7
SHUTTER WIDTH (m) ▶	3	493	425	375	434	387	348	412	373	338	392	359	327	360	336	309	312	300	280
	5	345	345	345	430	384	345	408	369	333	387	354	322	353	329	303	303	290	272
	7				389	380	342	386	364	330	382	349	318	347	323	297	293	281	263

SHUTTER MAXIMUM WEIGHT (Kg)

M7A

Ø TUBE x THICKNESS (mm) ▶		177.8x5			193.7x5.4			219.1x5.9			244.5x6.3			267x7.1		
SHUTTER HEIGHT (m) ▶		3	5	7	3	5	7	3	5	7	3	5	7	3	5	7
SHUTTER WIDTH (m) ▶	3	553	510	467	509	480	444	446	433	408	394	389	373	353	351	341
	5	548	506	464	505	475	470	439	426	402	384	380	364	340	339	329
	7	545	503	460	499	470	435	432	419	396	375	371	355	328	327	318

SHUTTER MAXIMUM WEIGHT (Kg)

M10A

Ø TUBE x THICKNESS (mm) ▶	193.7x5.4			219.1x5.9			244.5x6.3			267x7.1			298.5x7.1			323.9x8			
SHUTTER HEIGHT (m) ▶	3	5	7	3	5	7	3	5	7	3	5	7	3	5	7	3	5	7	
SHUTTER WIDTH (m) ▶	3	823	759	692	721	686	637	632	616	581	564	557	533	486	484	472		427	421
	5	816	753	687	711	676	629	619	603	570	547	540	517	465	463	451		399	393
	7	809	746	681	701	667	619	606	590	557	529	522	500	443	441	430		370	365

SHUTTER MAXIMUM WEIGHT (Kg)

M15A

Ø TUBE x THICKNESS (mm) ▶	219.1x5.9			244.5x6.3			267x7.1			298.5x7.1			323.9x8			368x8			419x8.8		
SHUTTER HEIGHT (m) ▶	3	5	7	3	5	7	3	5	7	3	5	7	3	5	7	3	5	7	3	5	
SHUTTER WIDTH (m) ▶	3	1160	1142	1095	1139	1033	1007	948	944	933	843	840	837	767	767	765	665	664	663	567	566
	5	1156	1138	1091	1033	1028	1002	941	937	926	834	831	828	757	756	754	650	649	648	546	545
	7	868	868	868	1028	1023	997	934	931	919		822	820	746	744	742	635		633	523	524

SHUTTER MAXIMUM WEIGHT (Kg)

M20A

Ø TUBE x THICKNESS (mm) ▶	244.5x6.3	267x7.1	298.5x7.1	323.9x8	355.6x8	368x8	406.4x8.8	419x8.8	457.2x10	508x11
SHUTTER MAXIMUM WEIGHT (Kg) ▶	1615	1480	1320	1220	1110	1073	970	940	860	775

M30A

Ø TUBE x THICKNESS (mm) ▶	244.5x6.3	267x7.1	298.5x7.1	323.9x8	355.6x8	368x8	406.4x8.8	419x8.8	457.2x10	508x11
SHUTTER MAXIMUM WEIGHT (Kg) ▶	2300	2100	1880	1730	1575	1520	1382	1339	1227	1100