



Classification of door closers in compliance with EN 1154:1996 + A1:2002

The requirements and test procedures for door closers are defined in European standard EN 1154:1996 + A1:2002 "Locks and Architectural Hardware - Controlled door closing devices". The requirements are classified using an six-digit designation system.

6-digit classification key in accordance with EN 1154:1996 + A1:2002

Position					
1	2	3	4	5	6
Category of use	Durability	Door closer size	Suitability for use on fire resistant/smoke control doors	Safety	Corrosion resistance

Meaning of individual positions in classification key:

Position	Possible grades	Meaning
1 Category of use ¹	3-4	3 = closing from opening angle > 105°
		4 = closed from opening angle 180°
2 Durability	8	8 = 500,000 test cycles
3 Door closer size ²	1-7	1 = door width: Max. 750 mm; test door weight: 20 kg
		2 = door width: Max. 850 mm; test door weight: 40 kg
		3 = door width: Max. 950 mm; test door weight: 60 kg
		4 = door width: Max. 1100 mm; test door weight: 80 kg
		5 = door width: Max. 1250 mm; test door weight: 100 kg
		6 = door width: Max. 1400 mm; test door weight: 120 kg
		7 = door width: Max. 1600 mm; test door weight: 160 kg
4 Suitability for use on fire resistant/smoke control doors	0-1	0 = not suitable for use on fire resistant and smoke control doors
		1 = suitable for use on fire resistant and smoke control doors 1996 + A1:2002: The prerequisite for this is the proof that the door closer does not adversely affect the fire resistance of the door in the fire test on typical fire resistant and smoke control doors. This verification management is outside the scope of application of this European standard
5 Safety	1	1 = all door closers must meet the essential safe usage requirements. For this reason, only grade 1 has been defined.
6 Corrosion resistance	0-5	0 = no defined corrosion resistance
		1 = low corrosion resistance
		2 = medium corrosion resistance
		3 = high corrosion resistance
		4 = extremely high corrosion resistance
		5 = extraordinarily high corrosion resistance

1996 + A1:2002:

¹ For all interior and external doors in public and other buildings where the willingness to take care is low and the probability of improper use of the door is likely.

Note 1: Classification in compliance with grade 4 requires standard installation in accordance with the manufacturer's specifications.

Note 2: For applications, where heavy duty use is expected, or with specially limited door opening angles the use of door closers with backcheck is recommended, or where the use of door stops is recommended.

² if a door closer is adjustable via several door closer sizes, the minimum and the maximum size must be specified (see also following table).



Definition of individual hinge grades:

Door closer size	Recommended door width max.	Test door weight kg	Closing moment Nm			Opening moment Nm between 0° and 60° max.	Door closer efficiency % between 0° and 4° min.	
			between 0° and 4° min.	max.	between 88° and 92° min.			at any other opening angle min.
1	750	20	9	13	3	2	26	50
2	850	40	13	18	4	3	36	50
3	950	60	18	26	6	4	47	55
4	1100	80	26	37	9	6	62	60
5	1250	100	37	54	12	8	83	65
6	1400	120	54	87	18	11	134	65
7	1,600	160	87	140	29	18	215	65

Definition of individual hinge grades:



• Class:

4 8 2-5 1 1 4

Position	Meaning
1 Category of use	Grade 4: Close from opening angle 180°
2 Durability	Grade 8: 500,000 cycles
3 Door closer size	Grade 2-5: Door width: Max. 850 mm; test door weight: 40 kg (grade 2) Door width: Max. 950 mm; test door weight: 60 kg, (grade 3) Door width: Max. 1,100 mm; test door weight: 80 kg, (grade 4) Door width: max. 1,250 mm; test door weight: 100 kg, (grade 5)
4 Suitability for use on fire resistant/smoke control doors	Grade 1: Suitable for use on fire resistant and smoke control doors
5 Safety	Grade 1: All door closers must meet the substantial safe usage requirements.
6 Corrosion resistance	Grade 4: Very high corrosion resistance

