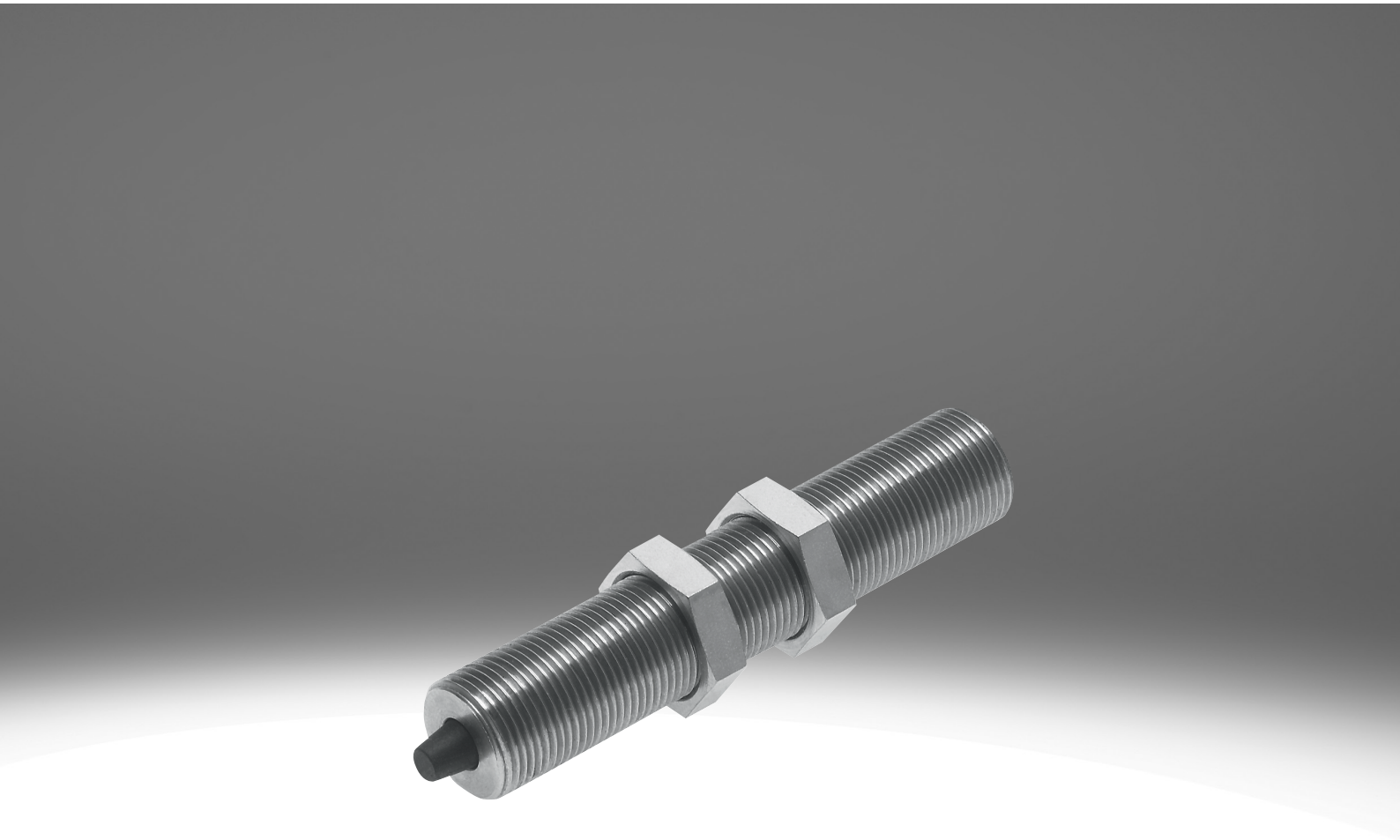
Shock absorber DYEF



Characteristics

At a glance Link dyef

- Mechanical shock absorber with flexible rubber buffer
- Either with adjustable or non-adjustable cushioning stroke
- Optionally with or without fixed stop
- Continuous mounting thread with internal hex

Diagrams Link dyef

The diagrams shown in this document are also available online. These can be used to display precise values.

Allocation

[G8]	Version G8

For mini slides DGST

Design type

[S]	Short

Particularly suitable for applications where space is critical

Geometric characteristics

[Y1]	Internal hex

The shock absorber can be adjusted using the hexagon socket

Stop

[F]	With fixed stop

Metal end position on the shock absorber housing

Special material properties

[F1A]	Recommended for production plants for manufacturing lithium-ion batteries, F1A

Metals with more than 1% copper, zinc or nickel by mass are excluded from use. Exceptions are nickel in steel, chemically nickel-plated surfaces, circuit boards, cables, electrical plug connectors and coils

Type code

001	Series	
DYEF	Shock absorber	

002	Allocation	
	None	
G8	Version G8	

003	Design type	
	Standard	
S	Short	

004	Size	
M4	M4x0.5	
M5	M5x0.5	
M6	M6x0.5	
M8	M8x1	
M10	M10x1	
M12	M12x1	
M14	M14x1	
M16	M16x1	
M22	M22x1.5	

005	Geometric characteristics	
Y1	Internal hex	

006	Stop	
	None	
F	With fixed stop	

007	Special material properties	
	None	
F1A	Recommended for production plants for manufacturing lithium-ion batteries, F1A	

Datasheet

General technical data for DYEF-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14	M16
Stroke	0.9 mm	1.5 mm		1.3 mm	1 mm	1.2 mm		1.3 mm
Cushioning	Elastic cushioning rings/pads at both ends without metal fixed stop							
Cushioning length	0.9 mm	1.5 mm		1.3 mm	1 mm	1.2 mm		1.3 mm
Type of mounting	Via threaded sleeve Via lock nut							Via lock nut
Max. impact speed	0.8 m/s							
Mounting position	optional							
Ambient temperature	-10 ... 60°C							0 ... 60°C
Corrosion resistance class CRC [1]	2 - Moderate corrosion stress							

1) More information www.festo.com/x/topic/crc

General technical data for DYEF-...-Y1F

Size	M4	M5	M6	M8	M10	M12	M14	M16	M22
Stroke	1.7 mm	2.8 mm	3.1 mm	3.4 mm	3.7 mm	4.2 mm	5 mm	4.8 mm	7 mm
Cushioning	Elastic cushioning rings/pads at both ends with metal fixed stop								
Cushioning length	1.7 mm	2.8 mm	3.1 mm	3.4 mm	3.7 mm	4.2 mm	5 mm	4.8 mm	7 mm
Type of mounting	Via threaded sleeve Via lock nut					Via lock nut			
Max. impact speed	0.8 m/s								
Mounting position	optional								
Ambient temperature	0 ... 60°C								
Corrosion resistance class CRC [1]	2 - Moderate corrosion stress								

1) More information www.festo.com/x/topic/crc

Energy sources for DYEF-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14	M16
Max. energy consumption per stroke	0.015 J	0.05 J	0.08 J	0.12 J	0.25 J	0.35 J	0.45 J	0.55 J

Energy sources for DYEF-G8-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14
Max. energy consumption per stroke	0.018 J	0.05 J	0.08 J	0.12 J	0.25 J	0.35 J	0.45 J

Energy sources for DYEF-...-Y1F

Size	M4	M5	M6	M8	M10	M12	M14	M16	M22
Max. energy consumption per stroke	0.005 J	0.02 J	0.03 J	0.04 J	0.06 J	0.12 J	0.2 J	0.25 J	1.2 J

Weight for DYEF-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14	M16
Product weight	2.1 g	3.6 g	6 g	14 g	23 g	45.5 g	82.5 g	106 g

Weights for DYEF-G8-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14
Product weight	5 g	8.4 g	11.7 g	23 g	41 g	72.5 g	136.5 g

Weight for DYEF-...-S-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14	M16
Product weight	1.1 g	2 g	3 g	8.6 g	12 g	15 g	31 g	40 g

Datasheet

Weight for DYEF-G8-S-...-Y1

Size	M4	M5	M6	M8	M10	M12	M14
Product weight	3.5 g	4.8 g	6.9 g	14.6 g	26 g	41 g	67 g

Weight for DYEF-...-Y1F

Size	M4	M5	M6	M8	M10	M12	M14	M16	M22
Product weight	1.6 g	2.9 g	5.1 g	11.9 g	19.7 g	39.6 g	77.3 g	104 g	200 g

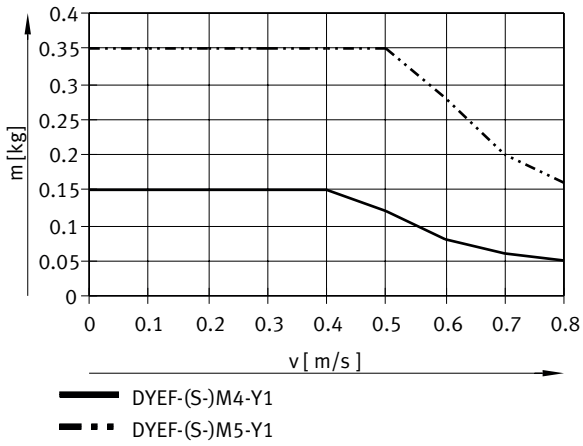
Weight for DYEF-G8-...-Y1F

Size	M4	M5	M6	M8	M10
Product weight	4.5 g	7.6 g	10.8 g	20.9 g	37.6 g

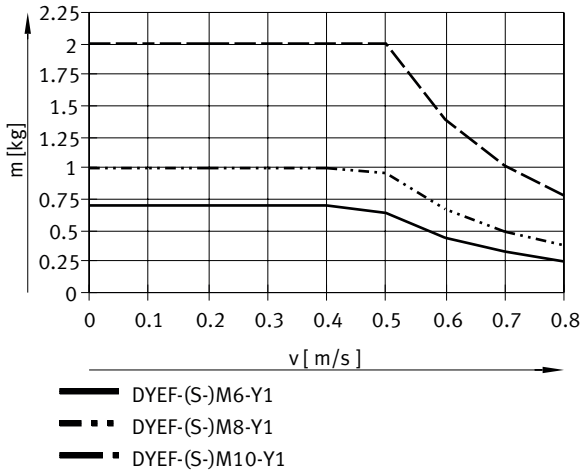
Materials

Size	M4	M5	M6	M8	M10	M12	M14	M16	M22
Material housing	High-alloy steel								
Material seals	NBR								
Note on materials	RoHS-compliant								
LABS (PWIS) conformity	VDMA24364-B2-L VDMA24364-B1/B2-L							VDMA24364-B1/B2-L	

Impact velocity v as a function of mass m – DYEF-(S-)M4/M5-Y1

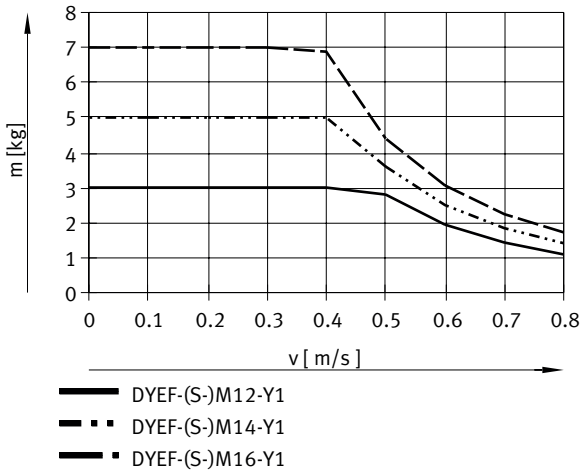


Impact velocity v as a function of mass m – DYEF-(S-)M6/M8/M10-Y1

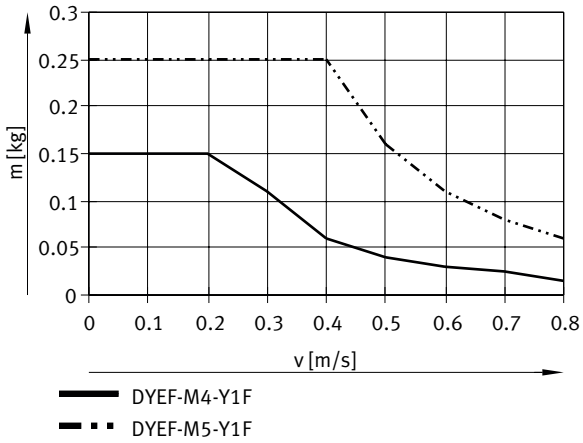


Datasheet

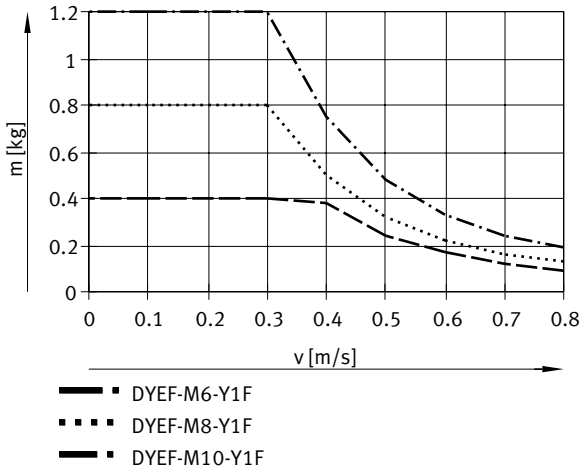
Impact velocity v as a function of mass m – DYEF-(S-)M12/M14/M16-Y1



Impact velocity v as a function of mass m – DYEF-M4/M5-Y1F

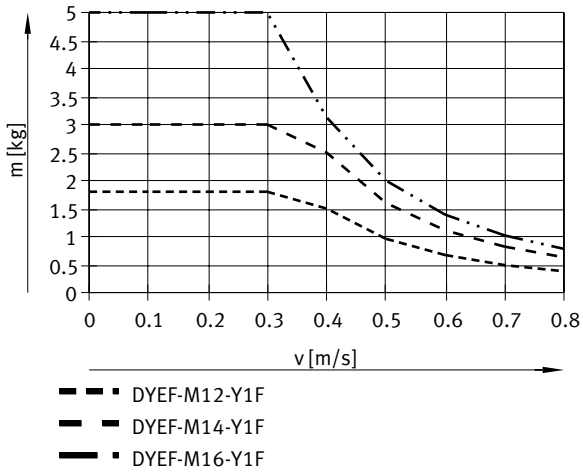


Impact velocity v as a function of mass m – DYEF-M6/M8/M10-Y1F

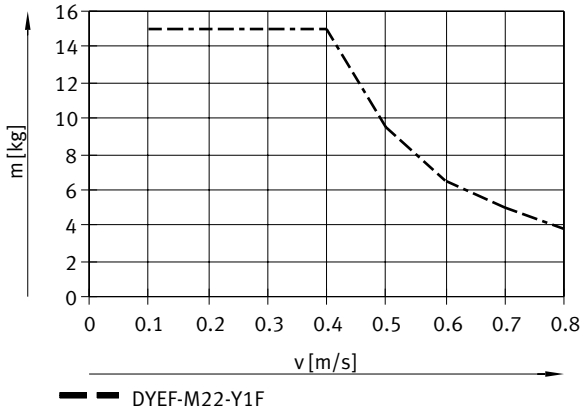


Datasheet

Impact velocity v as a function of mass m – DYEF-M12/M14/M16-Y1F

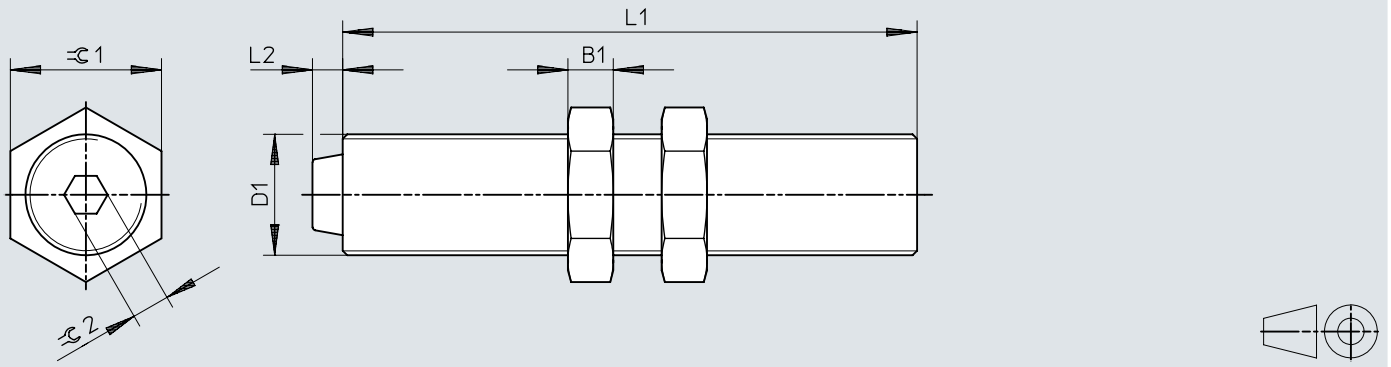


Impact velocity v as a function of mass m – DYEF-M22-Y1F



Dimensions

Dimensions – DYEF-...-Y1 – long version Download CAD data www.festo.com

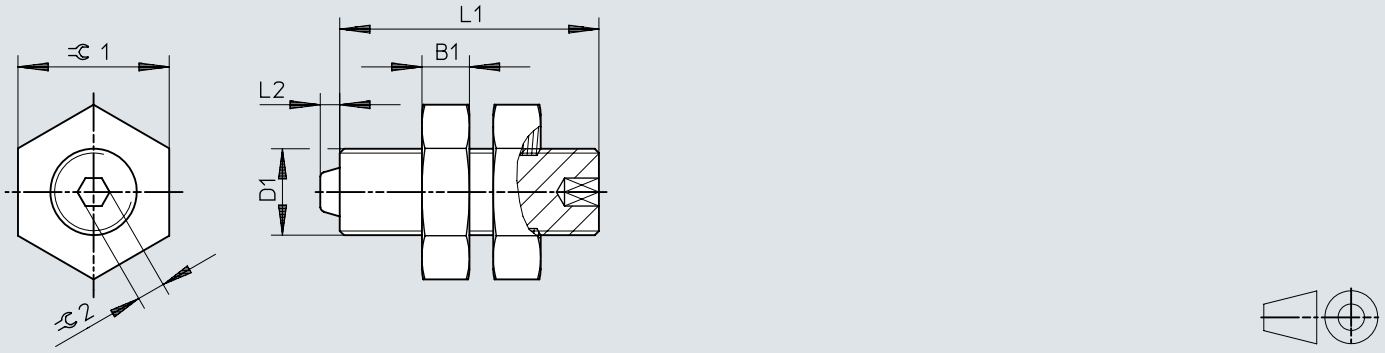


	B1	D1	L1	L2 +0,3	⫽1	⫽2
DYEF-M4-Y1	2,2	M4x0,5	22	0,9	7	1,5
DYEF-M5-Y1	2,7	M5x0,5	26	1,8	8	1,5
DYEF-M6-Y1	2,5	M6x0,5	30	1,8	8	2
DYEF-M8-Y1	3	M8x1	38	2	10	2,5
DYEF-M10-Y1	3,5	M10x1	41	1,8	13	3
DYEF-M12-Y1	4	M12x1	54	2	15	4
DYEF-M14-Y1	5	M14x1	72	2	17	4
DYEF-M16-Y1	5	M16x1	75	2	19	5

Dimensions

Dimensions – DYEF-...-S-...-Y1 – short version

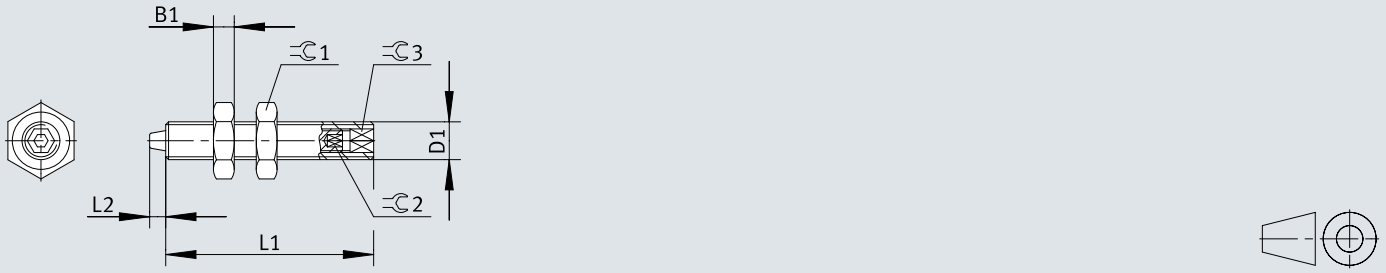
Download CAD data www.festo.com



	B1	D1	L1	L2 +0,3	⌀1	⌀2
DYEF-S-M4-Y1	2,2	M4x0,5	12	0,9	7	1,5
DYEF-S-M5-Y1	2,7	M5x0,5	14,5	1,8	8	1,5
DYEF-S-M6-Y1	2,5	M6x0,5	15	1,8	8	2
DYEF-S-M8-Y1	3	M8x1	23,5	2	10	2,5
DYEF-S-M10-Y1	3,5	M10x1	21	1,8	13	3
DYEF-S-M12-Y1	4	M12x1	20	2	15	4
DYEF-S-M14-Y1	5	M14x1	28	2	17	4
DYEF-S-M16-Y1	5	M16x1	31,5	2	19	5

Dimensions

Dimensions – DYEF-...-Y1F – long version Download CAD data www.festo.com



	B1	D1	L1	L2	⌀1	⌀2	⌀3
DYEF-M4-Y1F[1)]	2,2	M4x0,5	22	1,7 $_{+0,3/-0,2}$	7	1,3	2,5
DYEF-M5-Y1F	2,7	M5x0,5	26	2,8 $_{\pm 0,3}$	8	1,5	3
DYEF-M6-Y1F	2,5	M6x0,5	30	3,1 $_{\pm 0,3}$	8	2	4
DYEF-M8-Y1F	3	M8x1	38	3,4 $_{+0,3/-0,5}$	10	2,5	5
DYEF-M10-Y1F	3,5	M10x1	41	3,7 $_{\pm 0,3}$	13	3	6
DYEF-M12-Y1F	4	M12x1	54	4,2 $_{\pm 0,3}$	15	4	8
DYEF-M14-Y1F	5	M14x1	72	5 $_{\pm 0,3}$	17	4	8
DYEF-M16-Y1F	5	M16x1	75	4,8 $_{\pm 0,3}$	19	5	10
DYEF-M22-Y1F	5	M22x1,5	78	7 $_{\pm 0,3}$	27	5	10

Accessories

DYEF-...-Y1 – Long version

	Size	Stroke	Cushioning	Allocation	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	None	1179810	DYEF-M4-Y1
	M5	1.5 mm			1179818	DYEF-M5-Y1
	M6				1179831	DYEF-M6-Y1
	M8	1.3 mm			1179834	DYEF-M8-Y1
	M10	1 mm			1179837	DYEF-M10-Y1
	M12	1.2 mm			1179840	DYEF-M12-Y1
	M14				1179863	DYEF-M14-Y1
	M16	1.3 mm			1179879	DYEF-M16-Y1

DYEF-G8-...-Y1 – Long version

	Size	Stroke	Cushioning	Allocation [1]	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	Version G8	8073902	DYEF-G8-M4-Y1
	M5	1.5 mm			8073903	DYEF-G8-M5-Y1
	M6				8073904	DYEF-G8-M6-Y1
	M8	1.3 mm			8073905	DYEF-G8-M8-Y1
	M10	1 mm			8073906	DYEF-G8-M10-Y1
	M12	1.2 mm			8073907	DYEF-G8-M12-Y1
	M14				8073908	DYEF-G8-M14-Y1

1) Version G8 = for mini slide DGST

DYEF-G8-...-Y1 – Long version, for manufacturing Li-ion batteries

	Size	Stroke	Cushioning	Allocation [1]	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	Version G8	8131070	DYEF-G8-M4-Y1-F1A
	M5	1.5 mm			8131071	DYEF-G8-M5-Y1-F1A
	M6				8131072	DYEF-G8-M6-Y1-F1A
	M8	1.3 mm			8131073	DYEF-G8-M8-Y1-F1A
	M10	1 mm			8131074	DYEF-G8-M10-Y1-F1A
	M12	1.2 mm			8132355	DYEF-G8-M12-Y1-F1A
	M14				8132356	DYEF-G8-M14-Y1-F1A

1) Version G8 = for mini slide DGST

DYEF-S-...-Y1 – Short version

	Size	Stroke	Cushioning	Allocation	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	None	1152500	DYEF-S-M4-Y1
	M5	1.5 mm			1152507	DYEF-S-M5-Y1
	M6				1152524	DYEF-S-M6-Y1
	M8	1.3 mm			1152536	DYEF-S-M8-Y1
	M10	1 mm			1152959	DYEF-S-M10-Y1
	M12	1.2 mm			1153004	DYEF-S-M12-Y1
	M14				1153017	DYEF-S-M14-Y1
	M16	1.3 mm			1153023	DYEF-S-M16-Y1

DYEF-G8-S-...-Y1 – Short version

	Size	Stroke	Cushioning	Allocation [1]	Part no.	Type
	M4	0.9 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	Version G8	8159470	DYEF-G8-S-M4-Y1
	M5	1.5 mm			8159471	DYEF-G8-S-M5-Y1
	M6				8159472	DYEF-G8-S-M6-Y1
	M8	1.3 mm			8159473	DYEF-G8-S-M8-Y1
	M10	1 mm			8159474	DYEF-G8-S-M10-Y1
	M12	1.2 mm			8159475	DYEF-G8-S-M12-Y1
	M14				8159476	DYEF-G8-S-M14-Y1

1) Version G8 = for mini slide DGST

Accessories

DYEF-...-Y1F – Long version

	Size	Stroke	Cushioning	Allocation	Part no.	Type
	M4	1.7 mm	Elastic cushioning rings/pads at both ends with metal fixed stop	None	548370	DYEF-M4-Y1F
	M5	2.8 mm			548371	DYEF-M5-Y1F
	M6	3.1 mm			548372	DYEF-M6-Y1F
	M8	3.4 mm			548373	DYEF-M8-Y1F
	M10	3.7 mm			548374	DYEF-M10-Y1F
	M12	4.2 mm			548375	DYEF-M12-Y1F
	M14	5 mm			548376	DYEF-M14-Y1F
	M16	4.8 mm			548377	DYEF-M16-Y1F
	M22	7 mm			1113706	DYEF-M22-Y1F

DYEF-G8-...-Y1F – Long version

	Size	Stroke	Cushioning	Allocation [1]	Part no.	Type
	M4	1.7 mm	Elastic cushioning rings/pads at both ends with metal fixed stop	Version G8	8160234	DYEF-G8-M4-Y1F
	M5	2.8 mm			8160235	DYEF-G8-M5-Y1F
	M6	3.1 mm			8160236	DYEF-G8-M6-Y1F
	M8	3.4 mm			8160237	DYEF-G8-M8-Y1F
	M10	3.7 mm			8160238	DYEF-G8-M10-Y1F

1) Version G8 = for mini slide DGST