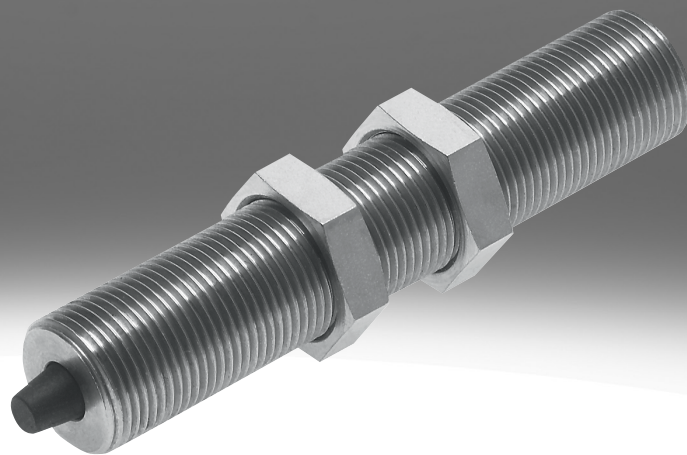


## Shock absorber DYEF

**FESTO**



## Characteristics

### At a glance

Further information → [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

### Product segmentation



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### Diagrams

Further information → [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 DYE-...-Y1

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

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## General technical data for DYE-...-Y1F

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

1) More information [www.festo.com/x/topic/crc](http://www.festo.com/x/topic/crc)

## Energy sources for DYE-...-Y1

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

## Energy sources for DYE-G8-...-Y1

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

## Energy sources for DYE-...-Y1F

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

## Weight for DYE-...-Y1

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

## Weights for DYE-G8-...-Y1

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

## Weight for DYE-...-S-...-Y1

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

## Datasheet

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

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

## Weight for DYEF-...-Y1F

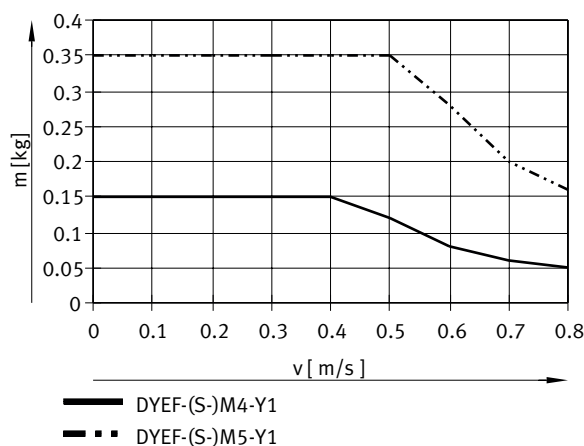
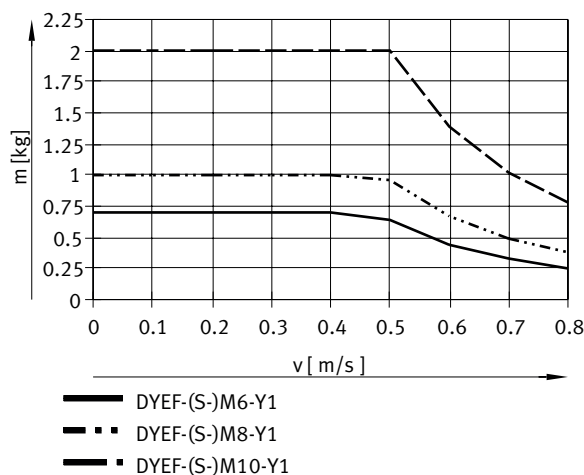
Size	M10	M12	M14	M16	M22	M4	M5	M6	M8
Product weight	19.7 g	39.6 g	77.3 g	104 g	200 g	1.6 g	2.9 g	5.1 g	11.9 g

## Weight for DYEF-G8-...-Y1F

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

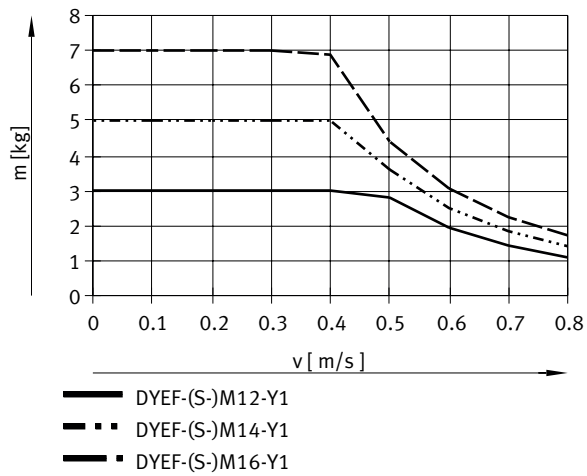
## Materials

Size	M10	M12	M14	M16	M22	M4	M5	M6	M8
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		VDMA24364-B2-L VDMA24364-B1/B2-L			

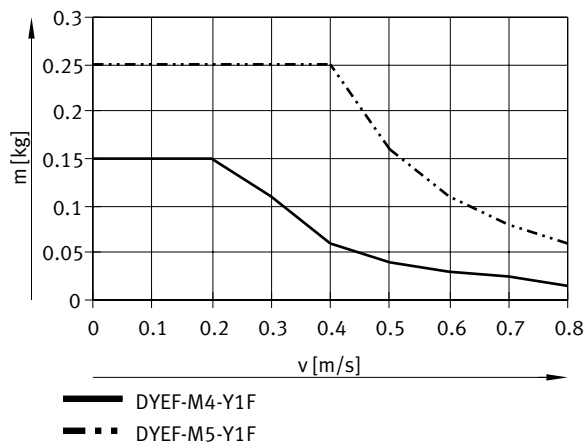
Impact velocity  $v$  as a function of mass  $m$  – DYEF-(S-)M4/M5-Y1Impact velocity  $v$  as a function of mass  $m$  – DYEF-(S-)M6/M8/M10-Y1

Datasheet

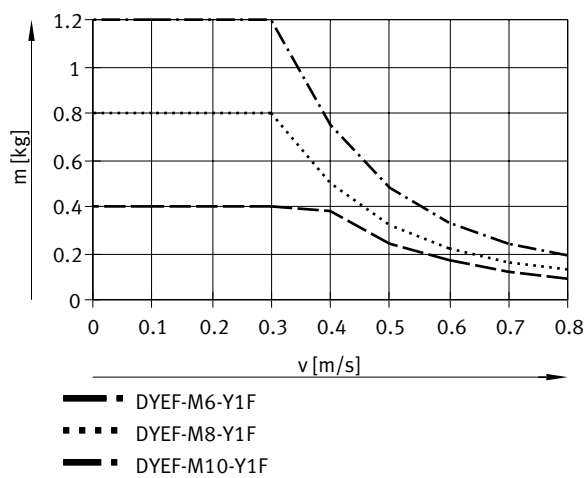
Impact velocity  $v$  as a function of mass  $m$  – DYEF-(S)-M12/M14/M16-Y1



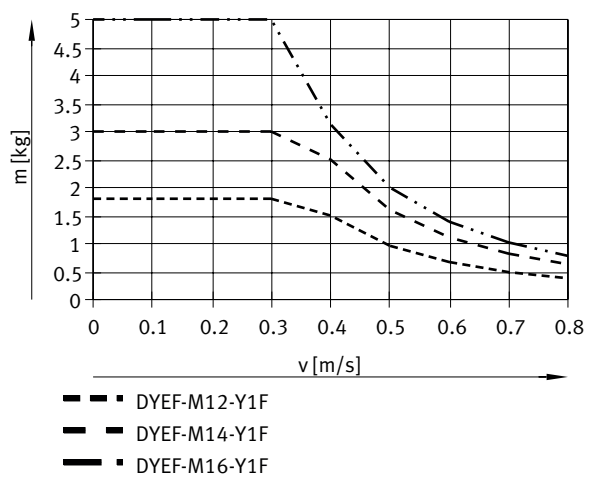
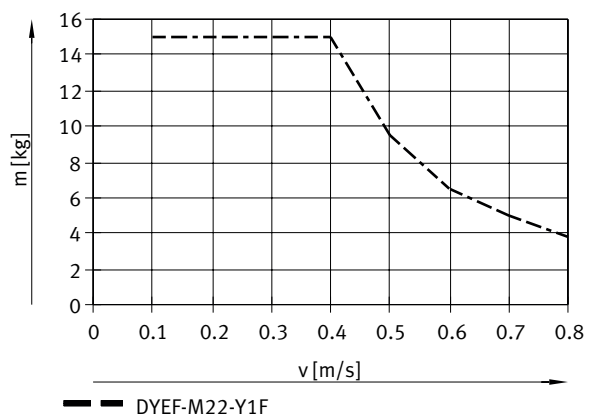
Impact velocity  $v$  as a function of mass  $m$  – DYEF-M4/M5-Y1F



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

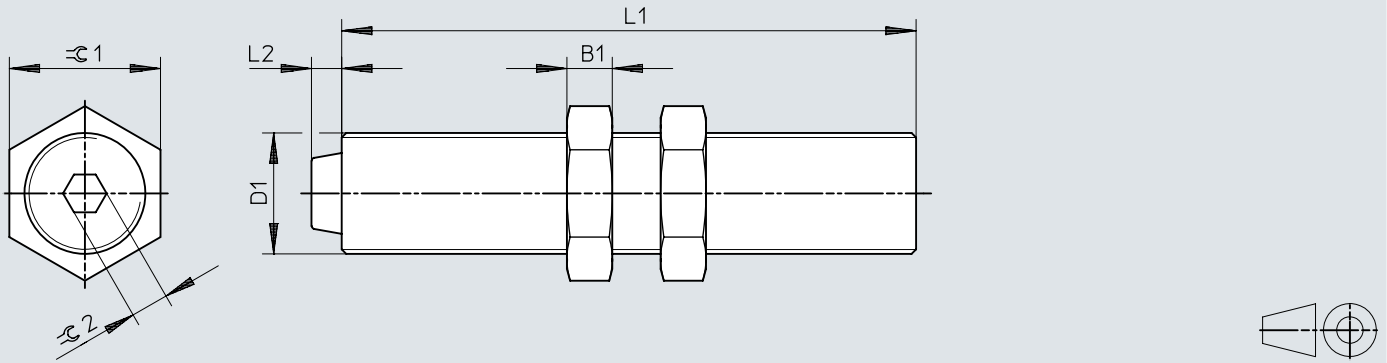


## Datasheet

Impact velocity  $v$  as a function of mass  $m$  – DYEF-M12/M14/M16-Y1FImpact velocity  $v$  as a function of mass  $m$  – DYEF-M22-Y1F

## Dimensions

Dimensions – DYEF-...-Y1 – long version

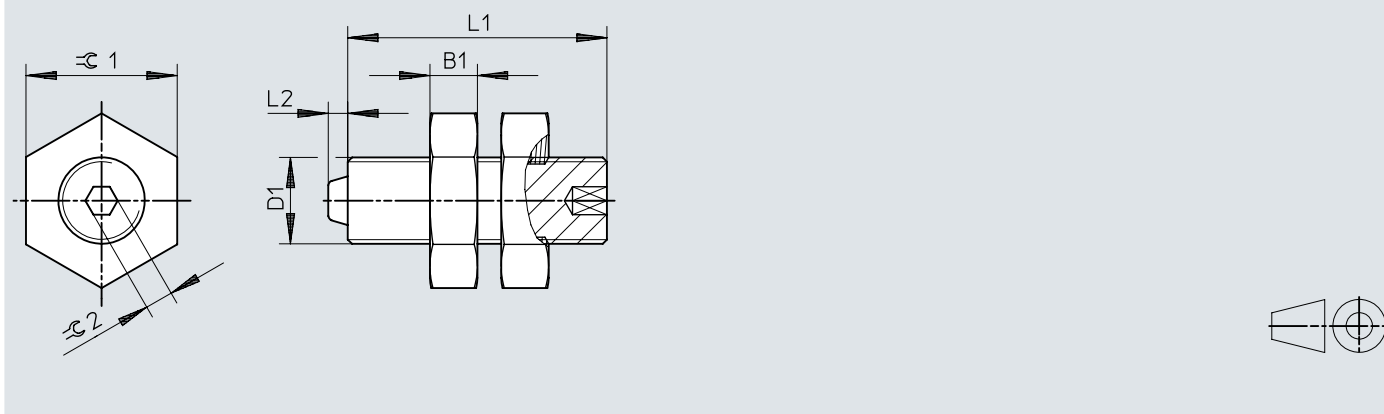
Download CAD data → [www.festo.com](http://www.festo.com)

	B1	D1	L1	L2 +0,3	$\varnothing 1$	$\varnothing 2$
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

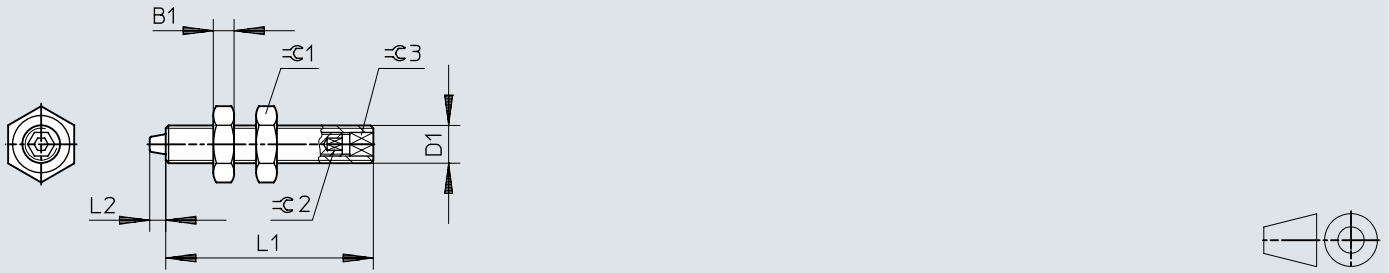
Dimensions – DYEF-...-S-...-Y1 – short version

Download CAD data → [www.festo.com](http://www.festo.com)

	B1	D1	L1	L2	$\approx 1$	$\approx 2$
				+0,3		
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](http://www.festo.com)


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

## Accessories


DYEF-...-Y1 – Long version						
	Size	Stroke	Cushioning	Allocation	Part no.	Type
	M10	1 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	None	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
	M4	0.9 mm			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


DYEF-G8-...-Y1 – Long version						
	Size	Stroke	Cushioning	Allocation <sup>1)</sup>	Part no.	Type
	M10	1 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	Version G8	★ 8073906	DYEF-G8-M10-Y1
	M12	1.2 mm			★ 8073907	DYEF-G8-M12-Y1
	M14				★ 8073908	DYEF-G8-M14-Y1
	M4	0.9 mm			★ 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

1) Version G8 = for mini slide DGST

DYEF-G8-...-Y1 – Long version, for manufacturing Li-ion batteries						
	Size	Stroke	Cushioning	Allocation <sup>1)</sup>	Part no.	Type
	M10	1 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	Version G8	8131074	DYEF-G8-M10-Y1-F1A
	M12	1.2 mm			8132355	DYEF-G8-M12-Y1-F1A
	M14				8132356	DYEF-G8-M14-Y1-F1A
	M4	0.9 mm			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


1) Version G8 = for mini slide DGST


DYEF-S-...-Y1 – Short version						
	Size	Stroke	Cushioning	Allocation	Part no.	Type
	M10	1 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	None	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
	M4	0.9 mm			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

DYEF-G8-S-...-Y1 – Short version						
	Size	Stroke	Cushioning	Allocation <sup>1)</sup>	Part no.	Type
	M10	1 mm	Elastic cushioning rings/pads at both ends without metal fixed stop	Version G8	8159474	DYEF-G8-S-M10-Y1
	M12	1.2 mm			8159475	DYEF-G8-S-M12-Y1
	M14				8159476	DYEF-G8-S-M14-Y1
	M4	0.9 mm			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

1) Version G8 = for mini slide DGST

## Accessories

DYEF-...-Y1F – Long version						
	Size	Stroke	Cushioning	Allocation	Part no.	Type
	M10	3.7 mm	Elastic cushioning rings/pads at both ends with metal fixed stop	None	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
	M4	1.7 mm			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			

DYEF-G8-...-Y1F – Long version						
	Size	Stroke	Cushioning	Allocation <sup>1)</sup>	Part no.	Type
	M10	3.7 mm	Elastic cushioning rings/pads at both ends with metal fixed stop	Version G8	8160238	DYEF-G8-M10-Y1F
	M4	1.7 mm			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

1) Version G8 = for mini slide DGST