

P+S POLYURETHAN-ELASTOMERE GMBH & CO. KG

The **dynamic and highly resilient** construction elements made of polyurethane elastomers have been impressing customers in the lift industry since 1972.

Both compact and foamed elastomers are characterised by outstanding technical properties. Customers from all over the world rely on the environmentally friendly elastomers from P+S.

Creative solution competence, a **strong knowledge of the industry**, modern polyurethane materials, as well as a **high degree in adherence to**

lead times and service orientation, are essential components of our corporate culture.

With the achievement of our **certifications**:

- ISO 9001:2015 (Quality Management)
- ISO 14001:2015 (Environmental Management)
- ISO 45001:2018 (Occupational Health/Safety)
- ISO 50001:2018 (Energy Management)

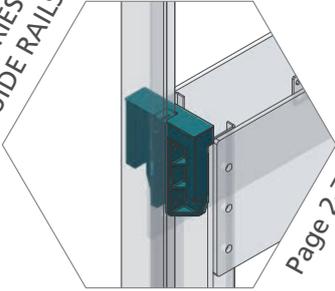
We are regularly confirmed that we design our processes to be efficient as well as sustainable and energy-saving.



CONTENTS

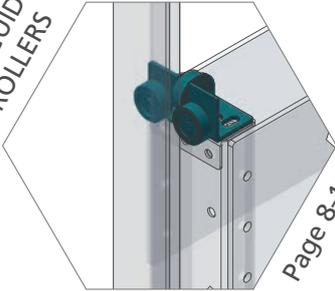


ACCESSORIES FOR
GUIDE RAILS



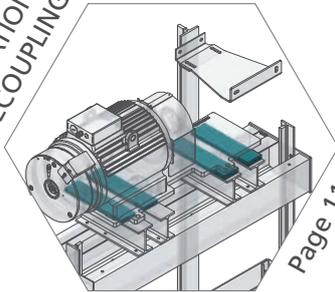
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ROLLER GUIDES &
ROLLERS



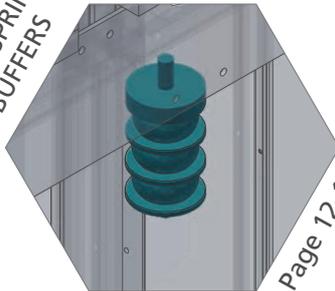
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SOLUTIONS FOR
VIBRATION
DECOUPLING



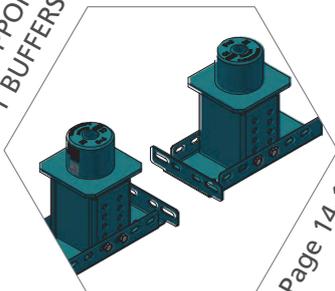
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CABLE SPRING
BUFFERS

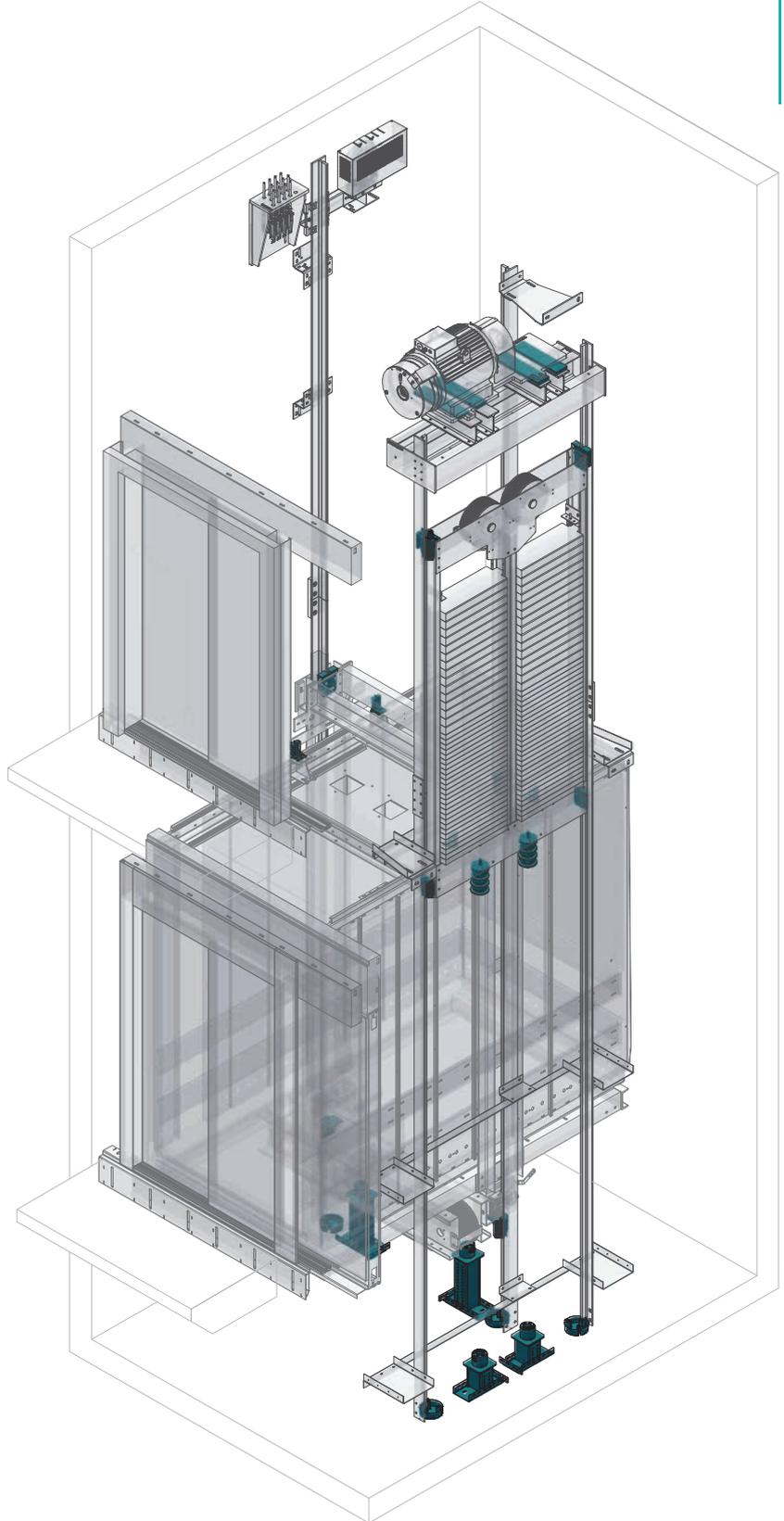


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BUFFER SUPPORTS &
LIFT BUFFERS



Page 14-17

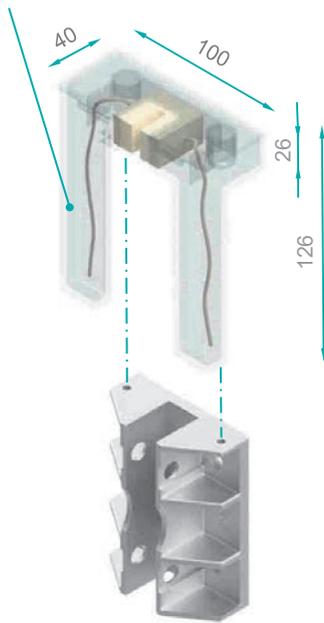


ACCESSORIES FOR GUIDE RAILS

GUIDE RAIL LUBRICATOR 100

Item no.: 780305001

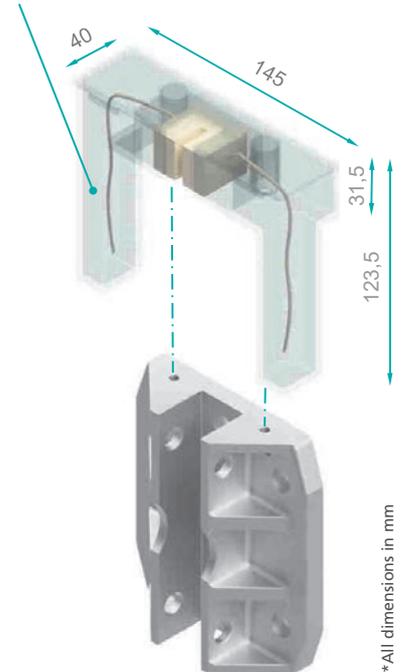
- mounting with M6 connecting screws
- max. volume: 40 ml
- for guide rail widths up to 16 mm
- very compact in combination with our 100 mm guide shoe



GUIDE RAIL LUBRICATOR 140

Item no.: 780305000

- mounting with M6 connecting screws
- max. volume: 40 ml
- for guide rail widths up to 16 mm
- compatible with all P+S guide shoes

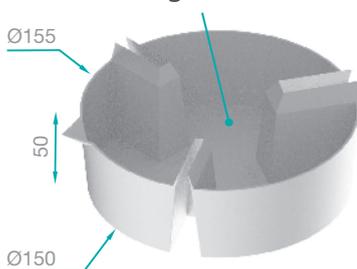


*All dimensions in mm

OIL COLLECTOR ROUND

Item no.: 780306002

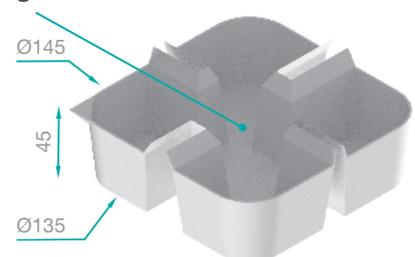
- filling volume 500 ml
- universal application for guide rail widths 5 to 16 mm
- incl. pouring aid
- resistant to oils and greases



OIL COLLECTOR SQUARE

Item no.: 780306004

- filling volume 500 ml
- universal application for guide rail widths 5 to 16 mm
- for guide widths of 13 – 16 mm rail depth of 32 and 45 mm
- incl. pouring aid
- resistant to oils and greases



OVERVIEW OF GUIDE SHOES

ALUMINIUM

- high material quality
- high breaking loads
- precise manufacture
- high tolerance accuracy



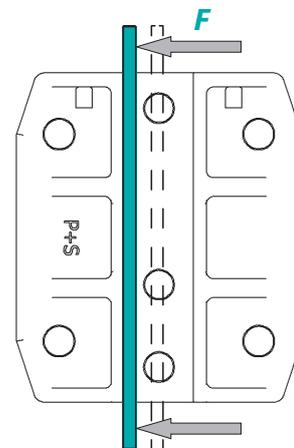
PLASTIC

- lightweight
- precision component
- 100% recyclable
- excellent material combination

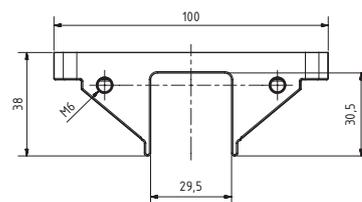
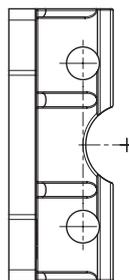
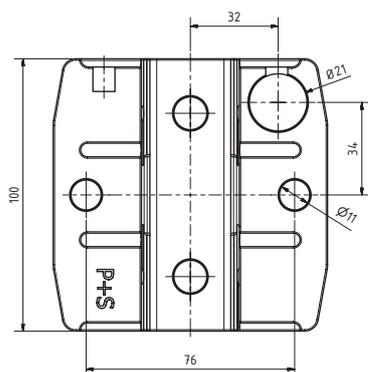


BREAKING LOADS

SIZE	MATERIAL	BREAKING LOAD [kN]
HSMK100	Aluminium	30
HSMK100	Plastic	15
WSMK100	Aluminium	20
HSMKB100	Aluminium	28
HSM140	Aluminium	80
HSM140	Plastic	25
WSM140	Aluminium	40
HSML180	Aluminium	75
WSML180	Aluminium	70



HSMKB100 | Aluminium item no: 780300009



*All dimensions in mm

SUITABLE INSERTS FOR HSMKB100

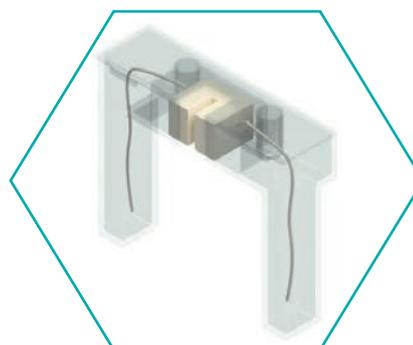
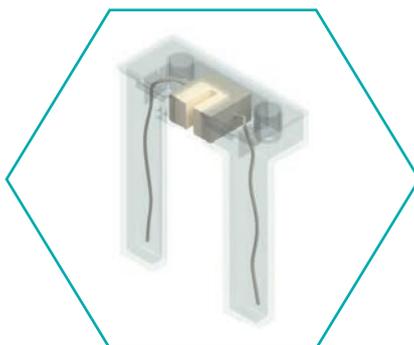
FOR GUIDE RAIL WIDTH [mm]	MATERIAL / ITEM NO.:					
	DT	DT-GF	PE	PEC	PA	PU
9	-	-	780309051	780310051	-	-
10	-	-	780309052	780310052	-	-
16	-	-	780309058	780310058	-	-

Other dimensions possible on request.

Suitable Guide Rail Lubricator

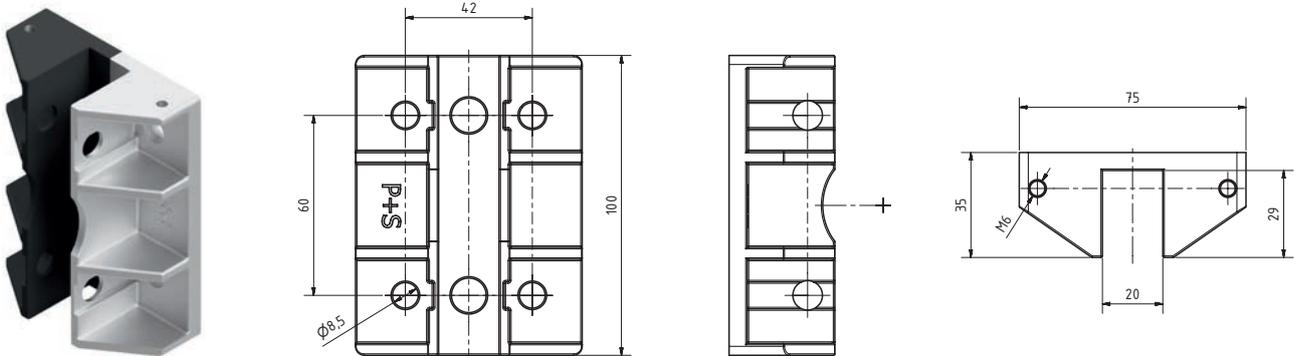
Rail oiler 100:
Item no.: 780305001

Rail oiler 140:
Item no.: 780305000

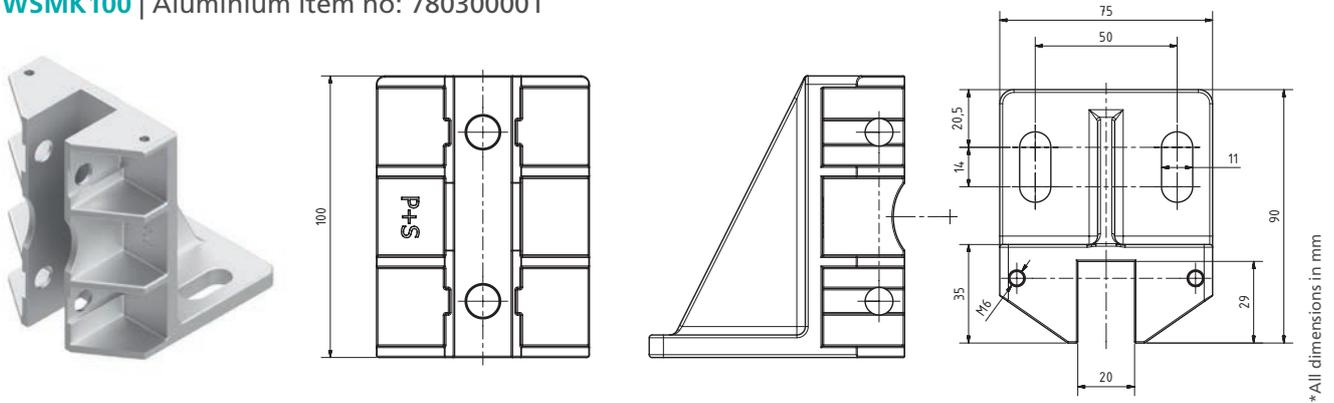


GUIDE SHOES AND INSERTS – SIZE 100

HSMK100 | Aluminium item no: 780300008 | Plastic item no.: 780300108



WSMK100 | Aluminium item no: 780300001



SUITABLE INSERTS FOR HSMK100 & WSMK100

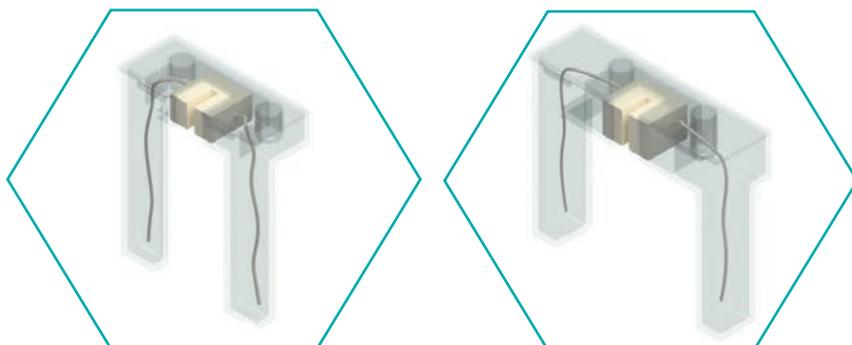
FOR GUIDE RAIL WIDTH [mm]	MATERIAL / ITEM NO.:					
	DT	DT-GF	PE	PEC	PA	PU
5	780311001	780311031	780309001	780310005	780307001	780308001
7	-	-	780309005	780310025	-	-
9	780311002	780311032	780309024	780310002	780307002	780308002
10	780311003	780311033	780309003	780310003	780307003	780308003
16	-	-	780309030	-	-	-

Other dimensions possible on request.

Suitable Guide Rail Lubricator

Rail oiler 100:
Item no.: 780305001

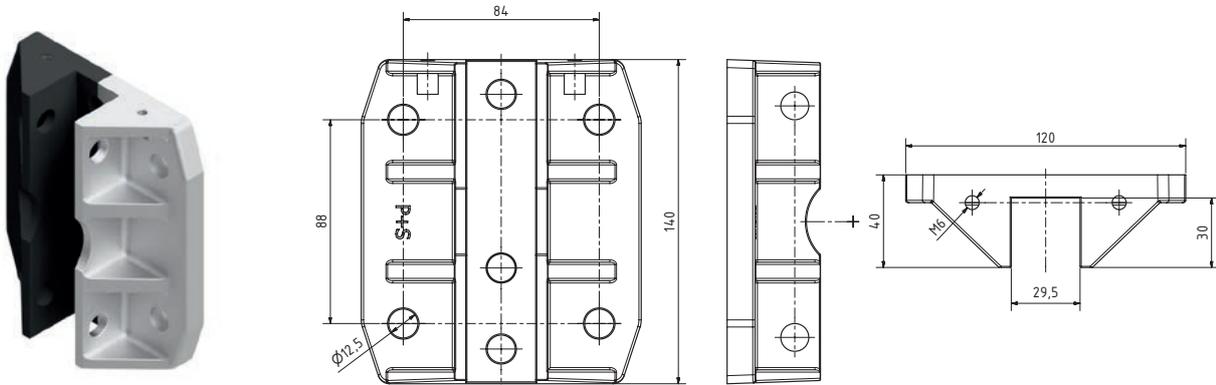
Rail oiler 140:
Item no.: 780305000



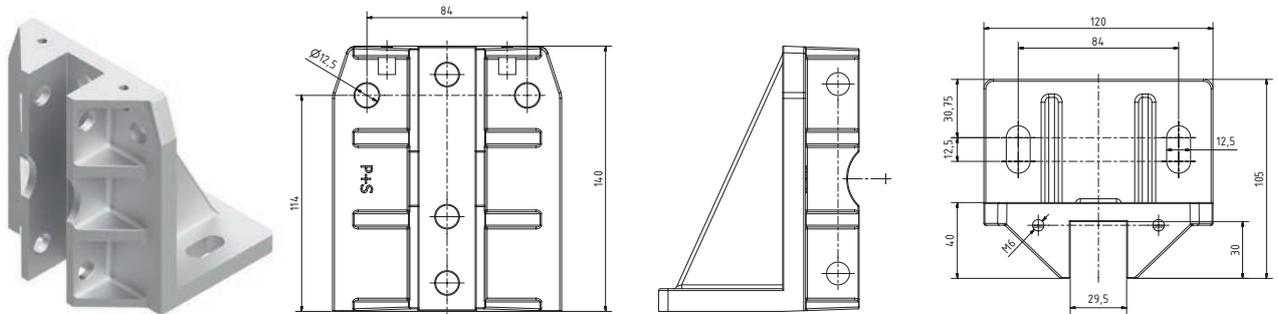
GUIDE SHOES AND INSERTS – SIZE 140



HSM140 | Aluminium item no: 780300002 | Plastic item no.: 780300102



WSM140 | Aluminium item no: 780300003



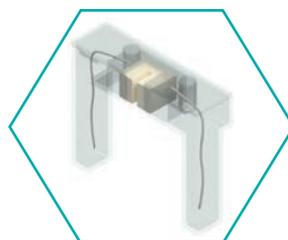
SUITABLE INSERTS FOR HSM140 & WSM140

FOR GUIDE RAIL WIDTH [mm]	MATERIAL / ITEM NO.:					
	DT	DT-GF	PE	PEC	PA	PU
5	-	-	780309000	-	-	-
6	-	-	780309027	780310027	-	-
8	780311008	780311038	780309008	780310006	780307018	780308018
9	780311005	780311035	780309007	780310007	780307005	780308005
10	780311006	780311036	780309006	780310008	780307012	780308012
12	-	-	780309016	780310016	-	-
14	-	-	780309010	780310010	-	-
15	-	-	780309004	780310004	-	-
16	780311009	780311039	780309012	780310012	780307009	780308009
19	-	-	780309026	-	-	-

Other dimensions possible on request.

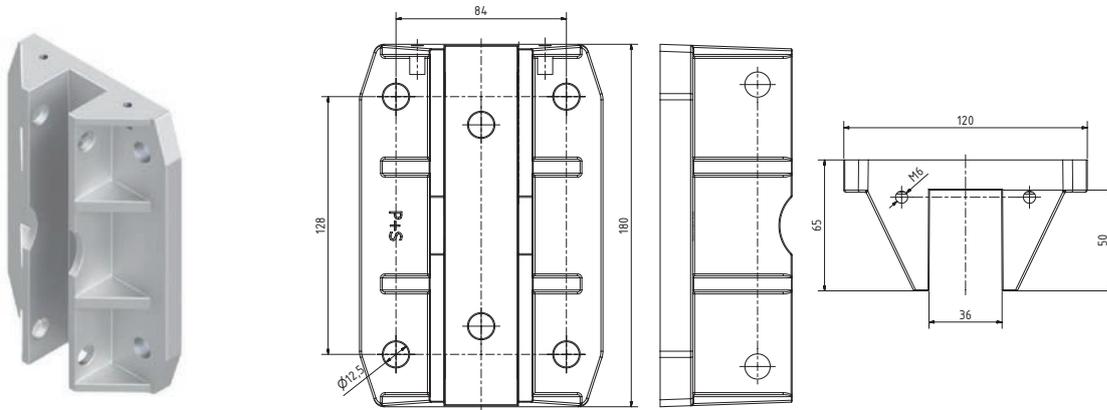
Suitable Guide Rail Lubricator

Rail oiler 140:
Item no.: 780305000

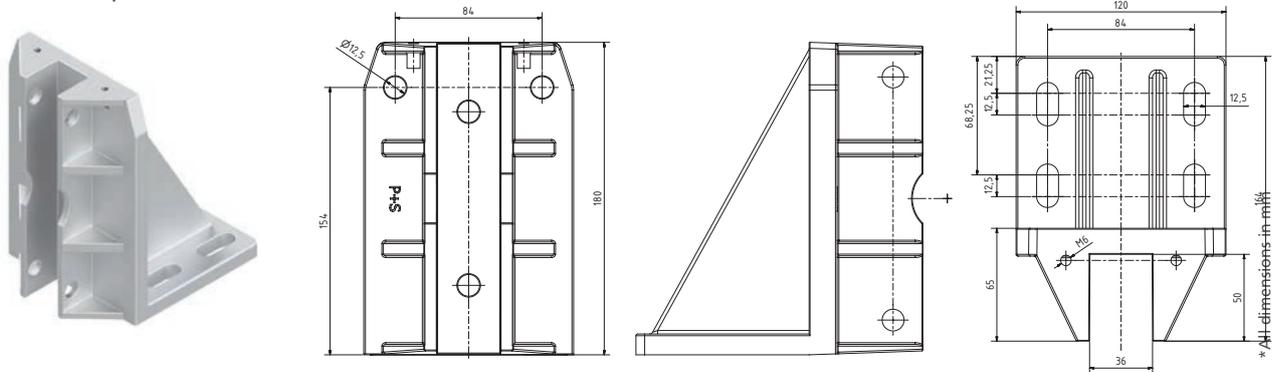


GUIDE SHOES AND INSERTS – SIZE 180

HSML180 | Aluminium item no: 780300004



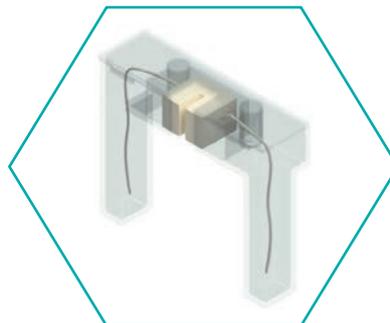
WSML180 | Aluminium item no: 780300005



SUITABLE INSERTS FOR HSML180 & WSML180

FOR GUIDE RAIL WIDTH [mm]	MATERIAL / ITEM NO.:					
	DT	DT-GF	PE	PEC	PA	PU
9	-	-	780309017	780310017	-	-
10	-	-	780309015	780310015	-	-
12	-	-	780309018	780310018	-	-
14	-	-	780309028	780310028	-	-
16	-	-	780309014	780310014	-	-
19	-	-	780309023	780310023	-	-
28.6	-	-	780309029	-	-	-

Other dimensions possible on request.



Suitable Guide Rail Lubricator

Rail oiler 140:
Item no.: 780305000

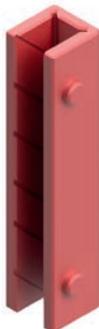
TECHNICAL PROPERTIES OF THE INSERTS



Material:
Diepotex
[DT]



Material:
Diepotex-GF
[DT-GF]



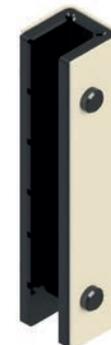
Material:
Polyurethane
[TPU]



Material:
Polyamide
[PA]



Material:
Polyethylene
[PE]



Material:
PE + cell-insert
[PEC]

MATERIAL COMPARISON

MATERIAL	COL- OUR	HARDNESS [SHORE D]	v MAX. [m/s]	NOISE EMISSION	WEAR RESISTANCE	SLIDING PERFOR- MANCE	SLIDING SURFACE	COEFFICIENT OF FRICTION	
								DRY	LUBRICATED
DT		75°	3	+	++	+++	with grooves	0.15 ± 0.05	< 0.07
DT-GF		70°	3	++	++	++	with grooves	0.25 ± 0.05	< 0.07
TPU		45°	1	+++	+	+	with grooves	-	0.75 ± 0.1
PA		65°	1.6	+	++	++	with grooves	-	0.60 ± 0.1
PE		60°	3	+	+++	+++	flat	0.15 ± 0.05	< 0.07
PEC		60°	3	+++	+++	+++	flat	0.15 ± 0.05	< 0.07

PERMISSIBLE LOAD

MATERIAL	PERMISSIBLE SURFACE PRESSURE [N/mm ²]	INSERTS FOR SIZE 100 (values for 5 mm rail)		INSERTS FOR SIZE 140 (values for 16 mm rail)		INSERTS FOR SIZE 180 (values for 16 mm rail)	
		MAX. FORCE - TO CENTRE - [N]	MAX. FORCE - AT SIDE- [N]	MAX. FORCE - TO CENTRE - [N]	MAX. FORCE - AT SIDE- [N]	MAX. FORCE - TO CENTRE - [N]	MAX. FORCE - AT SIDE- [N]
DT	7.5	3250	14300	14750	19500	-	-
DT-GF	7.5	3250	14300	14750	19500	-	-
TPU	0.7	350	1750	1550	2450	-	-
PA	1.2	600	3000	2700	4200	-	-
PE	10	4400	19450	20050	26600	25900	57000
PEC	10	4400	19450	20050	26600	25900	57000

Please note: The values given are recommendations! Testing by means of a long-term creep test.

ROLLER GUIDES

- 8 different sizes allow individual design depending on the load
- Rollers coated with the high-performance polyurethane Vulkollan® (The name Vulkollan® is a registered trademark of COVESTRO DEUTSCHLAND AG)
- Adjustable technical properties
- Shore hardness adaptability possible

- Alternatively, the coating can also be requested with our in-house material Diepothan®, please use our Download Portal for more information

DOWNLOAD PORTAL



VULKOLLAN® COATING

- high load capacity
- reduction of vibrations
- low rolling resistance
- resistant to oils & greases

HIGH QUALITY BALL BEARING

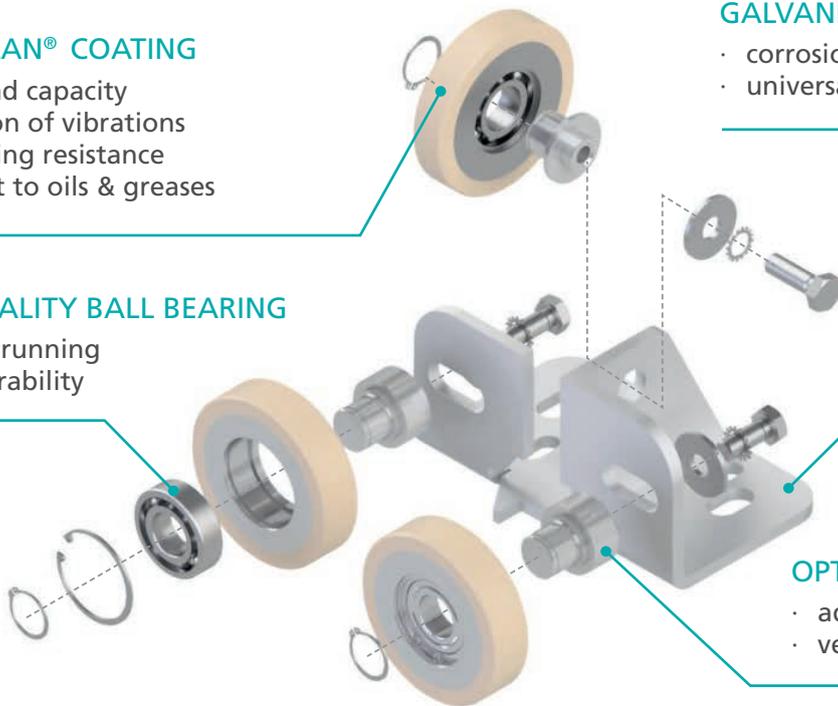
- smooth running
- high durability

GALVANISED ROLLER BLOCK

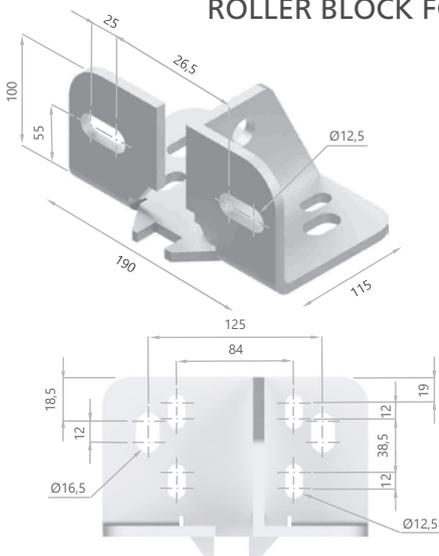
- corrosion-resistant
- universal usability

OPTIMISED ROLLER AXLE

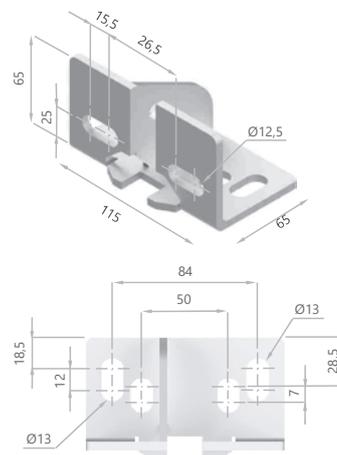
- adjustable
- very easy to install



ROLLER BLOCK FOR **RFS**

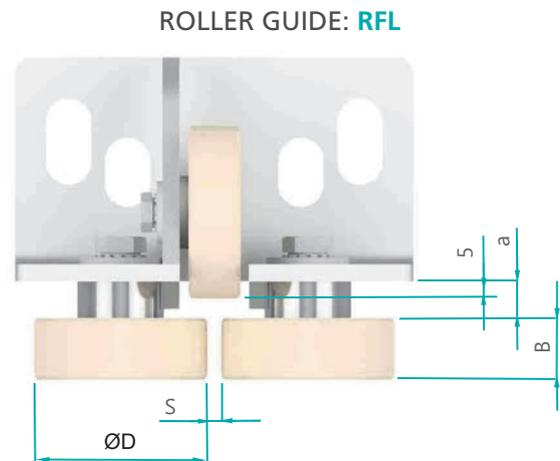
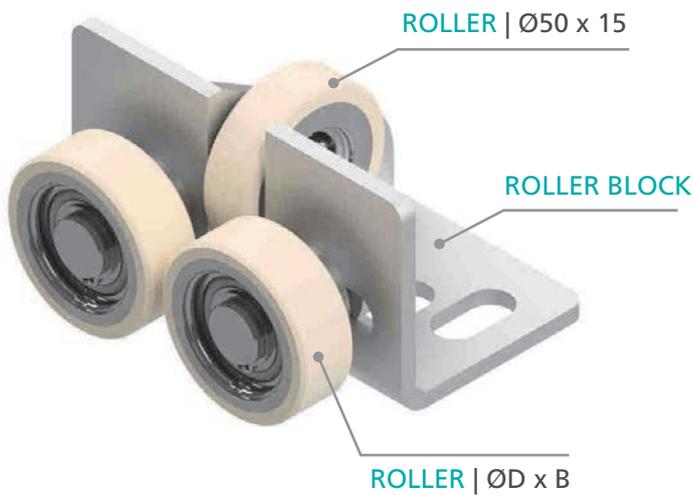


ROLLER BLOCK FOR **RFL**

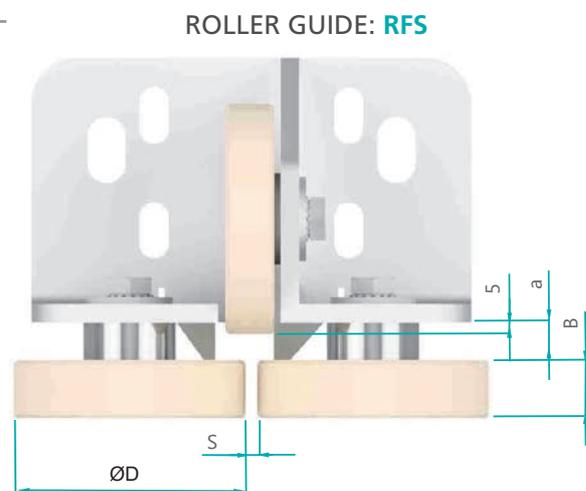
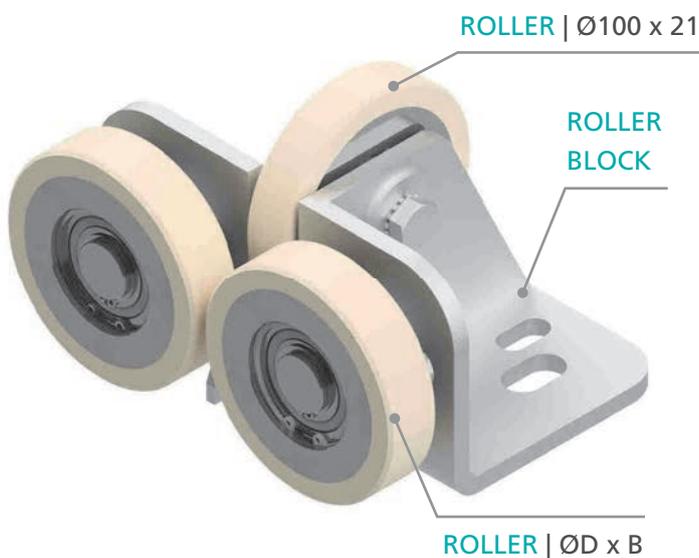


*All dimensions in mm

TECHNICAL PROPERTIES OF THE ROLLER GUIDES



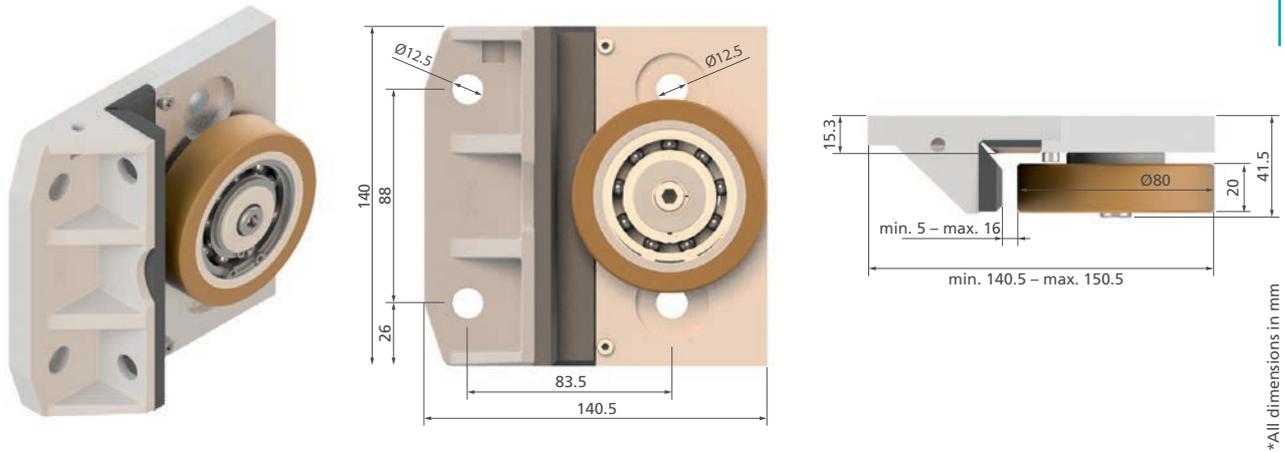
ITEM NUMBER	S [mm]	ØD [mm]	B [mm]	a [mm]	LOAD RANGE [N] AT v [m/s]			HARDNESS [SHORE A]
					0.63	1	2.5	
780300050	5-18	50	18	10.5	895	850	810	93°
780300051	5-18	60	18	10.5	1055	1000	950	93°



*All dimensions in mm

ITEM NUMBER	S [mm]	ØD [mm]	B [mm]	a [mm]	LOAD RANGE [N] AT v [m/s]			HARDNESS [SHORE A]
					0.63	1	2.5	
780300060	5 - 25	100	25	16	2420	2300	2000	93°
780300061	5 - 25	100	30	13.5	2850	2700	2350	93°
780300062	5 - 25	100	40	8.5	3800	3600	3200	93°
780300066	5 - 25	125	25	16	3075	2900	2500	93°
780300063	5 - 25	125	30	13.5	3600	3400	3100	93°
780300064	5 - 25	125	40	8.5	5690	5400	4710	93°

SPECIAL ROLLER GUIDES AND SPARE PARTS PROGRAM



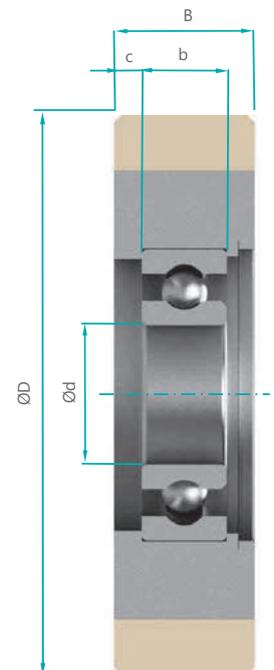
*All dimensions in mm

ROLLER GUIDE RS 140

ITEM NUMBER	RAIL WIDTH [mm]	ROLLER (ØD x W)	LOAD RANGE [N] AT v [m/s]			HARDNESS [SHORE A]
			0.63	1	2.5	
780300093	5	80 x 20	1600	1500	1350	93°
780300094	9	80 x 20	1600	1500	1350	93°
780300095	16	80 x 20	1600	1500	1350	93°

SPARE PARTS PROGRAM FOR ROLLERS

ITEM NUMBER	ØD [mm]	Ød [mm]	B [mm]	b [mm]	c [mm]	BEARING SIZE	LOAD RANGE [N] AT v [m/s]		
							0.63	1	2.5
701554194	21.3	5	8	5	1.5	625-2RS	160	150	140
707513590	32	8	12	7	2.5	608-ZZ	320	300	285
701700590	40	10	15	8	3.5	6000-ZZ	580	550	520
701701590	50	10	15	8	3.5	6000-ZZ	740	700	660
701702590	55	10	15	8	3.5	6000-ZZ	790	750	705
707202590	50	17	18	10	4	6003-ZZ	895	850	810
701703590	60	17	18	10	4	6003-ZZ	1055	1000	950
701704590	60	20	20	12	4	6004-ZZ	1160	1100	1045
701705590	70	20	16	12	1.25	6004-ZZ	1160	1100	1045
701706590	70	20	20	12	4	6004-ZZ	1370	1300	1235
701707590	70	25	25	15	5	6205-ZZ	1700	1600	1430
790906590	80	25	20	15	3.5	6006-2RS	1600	1500	1350
701708590	80	25	21	15	2.85	6205-ZZ	1700	1600	1430
701709590	80	25	25	15	5	6205-ZZ	1900	1800	1550
701710590	90	25	21	15	2.85	6205-ZZ	1790	1700	1480
701711590	90	25	25	15	5	6205-ZZ	2215	2100	1830
701712590	100	25	21	15	2.85	6205-ZZ	2000	1900	1660
701713590	100	25	25	15	5	6205-ZZ	2420	2300	2000
702567590	100	25	30	12	7.5	6205-ZZ	2850	2700	2350
702568590	100	25	40	15	12.5	6205-ZZ	3800	3600	3200
701714590	110	25	20	15	4	6205-ZZ	2150	2000	1750
701715590	110	25	21	15	2.85	6205-ZZ	2230	2100	1820
701716590	110	25	25	15	5	6205-ZZ	2645	2500	2190
701717590	110	25	30	15	7.5	6205-ZZ	3160	3000	2600
701718590	120	25	21	15	2.85	6205-ZZ	2420	2300	2000
701719590	120	25	25	15	5	6205-ZZ	2830	2700	2350
701720590	120	25	30	15	7.5	6205-ZZ	3470	3300	2870
701721590	125	25	21	15	2.85	6205-ZZ	2540	2400	2100
701722590	125	25	25	15	5	6205-ZZ	3075	2900	2500
701723590	125	25	30	15	7.5	6205-ZZ	3600	3400	3100
702570590	125	25	40	15	12.5	6205-ZZ	4750	4500	3900
701740590	150	25	40	15	12.5	6205-ZZ	5690	5400	4710
702602590	180	25	30	15	7.5	6205-ZZ	5160	4900	4250





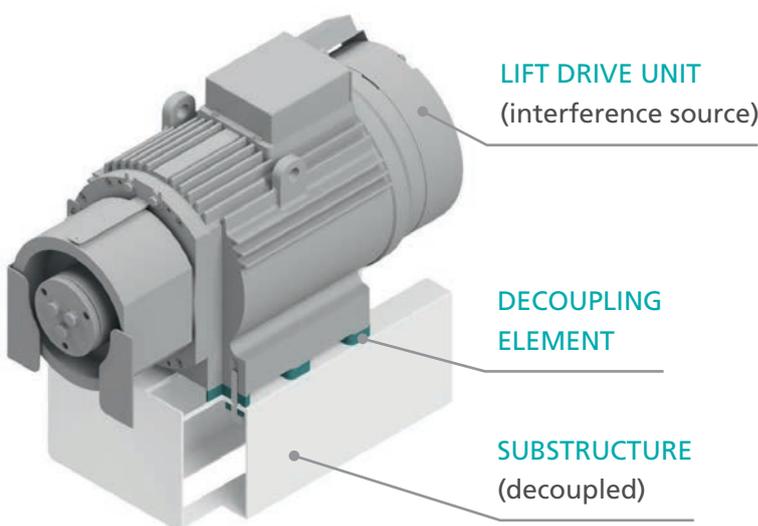
Our **VULKOCCELL®** and **DIEPOLAST®** groups of materials are widely used in many areas of lift construction. Dynamic springs in lifts cars or load-bearing structures, active vibration decoupling of motors and suspension of lift cables by spring packages are just some of the areas where the excellent technical properties of these materials can be used. Reducing unwanted vibrations, structure-borne noise and noise emissions are the primary goals and result in a high degree of quietness and ride comfort.

VULKOCCELL®

- ◊ high volume compressibility
- ◊ low transverse elongation with a high dynamic load capacity
- ◊ excellent spring properties
- ◊ low damping
- ◊ high service life is achieved by adapting to the load

DIEPOLAST®

- ◊ excellent decoupling properties
- ◊ low spring deflections with high amplitudes
- ◊ extremely wide selection of basic types allow precise configuration for the area of application
- ◊ standardised hydrolysis-resistant, which allows use in regions with high humidity



DOWNLOAD PORTAL

Detailed information on our materials can be found in our Download Portal:



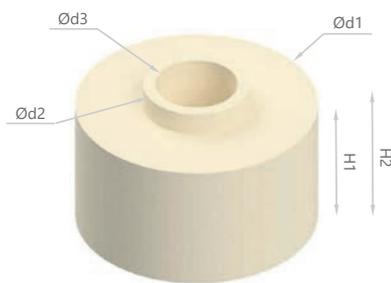
CABLE SPRING BUFFER



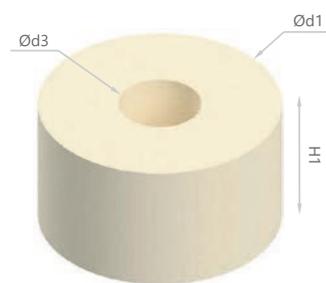
- excellent technical properties due to the use of our Vulkocell® material
- can be used in the lift car as well at the counterweight
- large spring range with low overall height
- spring range is adjustable through the use of several buffer elements
- low transverse expansion due to high volume compressibility
- very good resistance to mineral oils and greases
- please contact us, if you require different dimensions
- for higher loads our elastomer springs made of Diepothan can be used, further information can be found in our [Download Portal](#)

INSTRUCTIONS FOR USE:

- the spring elements can be installed with a defined pre-tension
- the maximum dynamic load should not exceed 65% of the nominal height, this would lead to varying spring characteristics
- we recommend a visual inspection of the spring elements as part of the maintenance of the lift system
- several elements should be used on **top of each other** : Metal intermediate plates should be used with a diameter approx. 40% greater than the nominal diameter of the spring element
- several elements should be used **next to each other** : Sufficient distance must be ensured to guarantee free compression



TYPE A



TYPE B

ITEM NO.:	d1 [mm]	d2 [mm]	d3 [mm]	H1 [mm]	H2 [mm]	ITEM NO.:	d1 [mm]	d3 [mm]	H1 [mm]
288037058	40	27	17	17	20	288037158	40	17	17
288029058	50	22	13	28	33	288030058	50	13	28
288031058	50	22	17	28	33	288032058	50	17	28
288038058	55	27	21	27	30	288038158	55	21	27
288033058	65	27	21	28	33	288034058	65	21	28
288035058	80	27	25	28	33	288036058	80	25	28

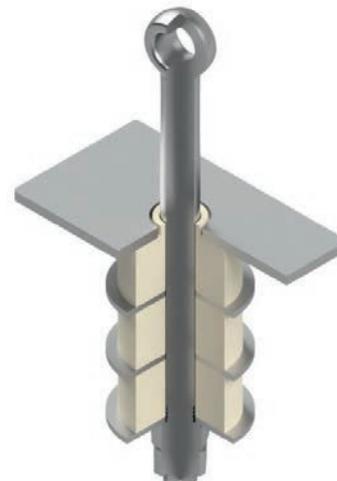
TECHNICAL PROPERTIES OF THE CABLE SPRING BUFFERS



VERSION 1 - Type A
RED CHARACTERISTIC
CURVE

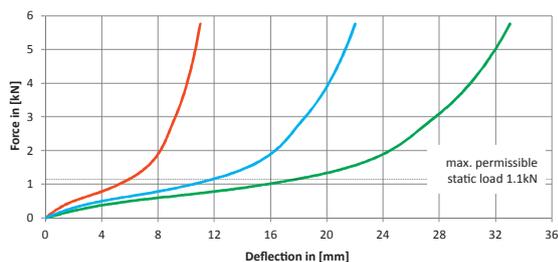


VERSION 2 - Type A + Type B
BLUE CHARACTERISTIC
CURVE

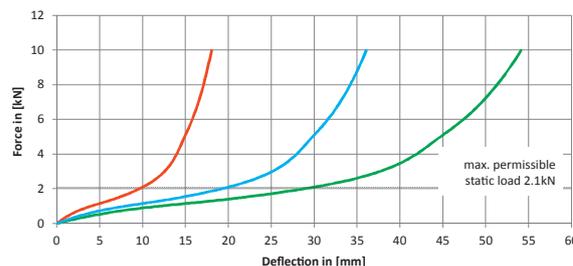


VERSION 3 - Type A + Type B + Type B
GREEN CHARACTERISTIC
CURVE

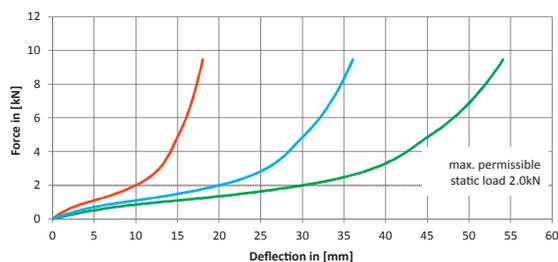
Size: $\varnothing 40 \times 17 \times 17$ mm
Item no.: 288037058 / 288037158



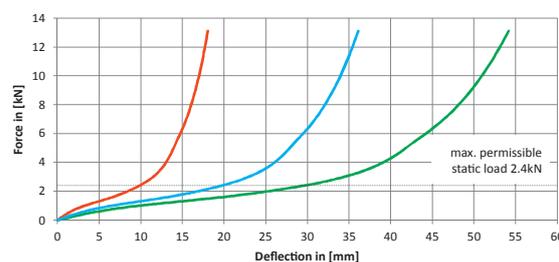
Size: $\varnothing 50 \times 13 \times 28$ mm
Item no.: 288029058 / 288030058



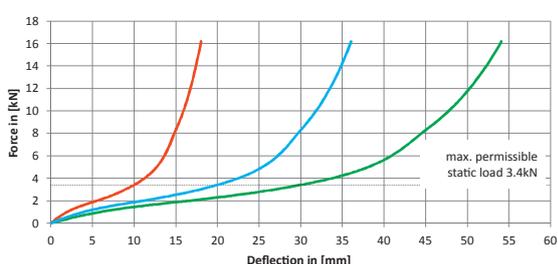
Size: $\varnothing 50 \times 17 \times 28$ mm
Item no.: 288031058 / 288032058



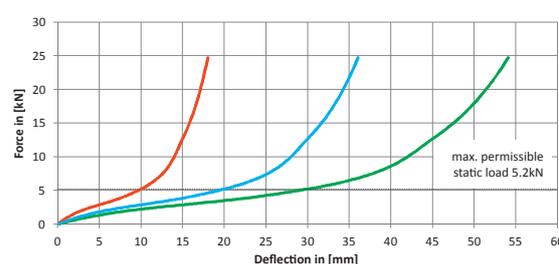
Size: $\varnothing 55 \times 21 \times 27$ mm
Item no.: 288038058 / 288038158



Size: $\varnothing 65 \times 21 \times 28$ mm
Item no.: 288033058 / 288034058

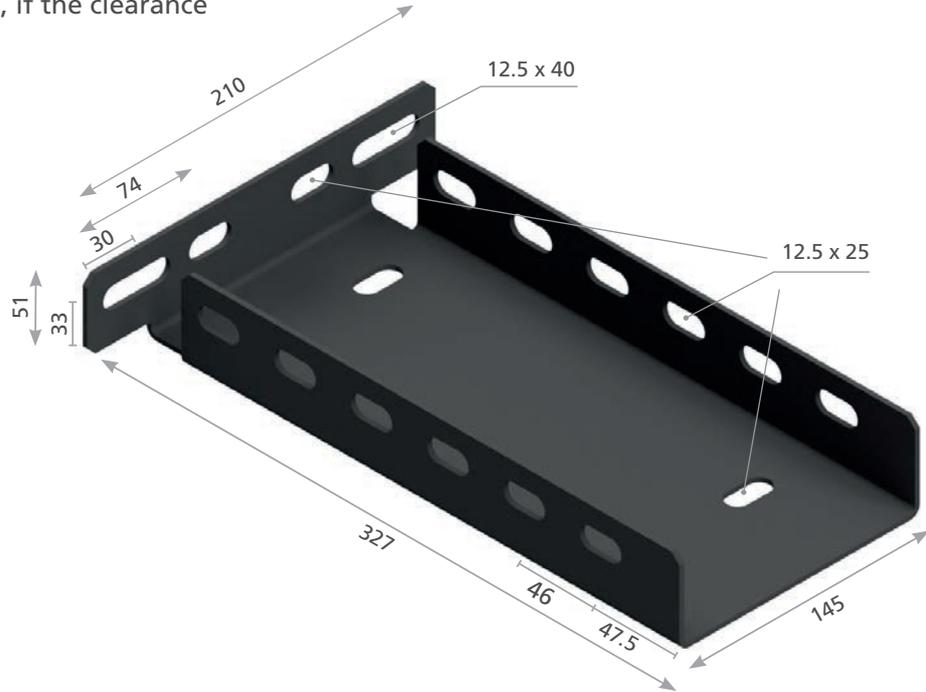


Size: $\varnothing 80 \times 25 \times 28$ mm
Item no.: 288035058 / 288036058

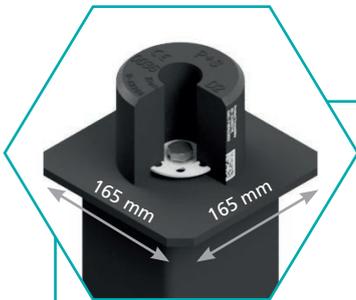


BUFFER SUPPORTS

- made of powder-coated sheet steel
- height-adjustable
- can be used in new buildings, but also as a retrofit installation
- height can be adjusted in the shaft pit
- can also be adjusted, if the clearance changes
- can be mounted on existing steel part or also via bolt anchors in the floor
- certified according to EN 81-20:2020
- maximum load per buffer support 2000 kg
- maximum nominal speed 1m/s



*All dimensions in mm



Optimally designed for the mounting our D series lift buffers, as no additional steel plate is required.



BUFFER SUPPORT 1
Item no.: 780320001
H: 193 – 293 mm



BUFFER SUPPORT 2
Item no.: 780320002
H: 290 – 415 mm



BUFFER SUPPORT 3
Item no.: 780320003
H: 416 – 716 mm



BUFFER SUPPORT 4
Item no.: 780320004
H: 696 – 1021 mm



BUFFER SUPPORT 5
Item no.: 780320005
H: 1005 – 1405 mm

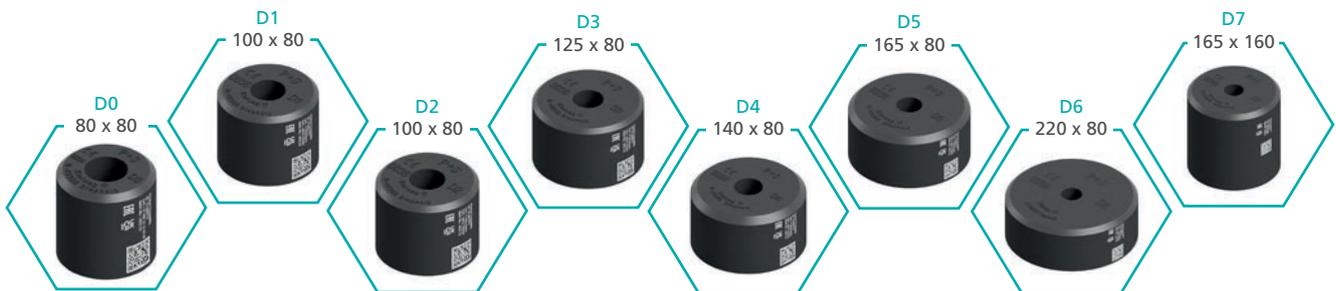
Scope of delivery: Base plate, U-profile part 1, U-profile part 2 with buffer plate, small parts bag and assembly instructions

THE LATEST GENERATION OF LIFT BUFFERS



D-SERIES

- made from **DIEPOCELL® BM**
- hydrolysis resistant material
- perfectly adapted and certified according to EN 81 -20/-50:2020
- certified according to BS EN 81 -20/-50:2020
- excellent damping properties
- certified according to EAC
- type tests carried out in accordance with the Lift Directive 2014/33/EU
- version with QR code for optimal traceability
- quality proven over many years
- already sold more than 2 million times



D55 AND D85 SERIES

- made from the proven material **DIEPOCELL® BM**
- improved technical properties
- extension of the load ranges
- load ranges also for this series for nominal speeds of 0.63 m/s and 1 m/s
- replacement of existing buffers with smaller buffer sizes possible
- less space required in the installation situation
- certified according to EN 81 -20/-50:2020, as well as BS EN 81 -20-50:2020



Certificates for our lift buffers can be downloaded in our [Download portal](#):



Further certificates are available on request!

OVERVIEW OF CERTIFICATIONS AND LOAD RANGES

BUFFER SIZE (ØD [mm] X H [mm])	ITEM NUMBER			LOAD RANGE (MIN[kg] - MAX[kg])**		CERTIFICATIONS				
	TYPE A	TYPE C	TYPE D*	0.63 m/s	1 m/s	EU	UKCA	EAC	ASME 17.1	
80 x 80 mm										
 D0	211800074	211800174	211800774	120 – 1200	180 – 600	✓	✓	✓		
 D0-55	211800075	211800175	211800775	160 – 2100	320 – 1200	✓	✓			
 D0-85	211800078	211800178	211800778	200 – 3200	350 – 1700	✓	✓			
100 x 80 mm										
 D1	211801074	211801174	211801774	200 – 1500	220 – 700	✓	✓	✓	✓	
 D2	211802074	211802174	211802774	250 – 3200	330 – 1250	✓	✓	✓	✓	
 D2-55	211802075	211802175	211802775	250 – 4200	500 – 2100	✓	✓		✓	
 D2-85	211802078	211802178	211802778	400 – 6000	700 – 3000	✓	✓			
125 x 80 mm										
 D3	211803074	211803174	211803774	500 – 5200	600 – 1850	✓	✓	✓	✓	
 D3-85	211803078	211803178	211803778	700 – 9300	1000 – 4300	✓	✓			
140 x 80 mm										
 D4	211804074	211804174	211804774	320 – 4000	450 – 1500	✓	✓	✓		
 D4-85	211804078	211804178	211804778	800 – 10200	1600 – 5700	✓	✓			
165 x 80 mm										
 D5	211805074	211805174	211805774	600 – 7500	650 – 2700	✓	✓	✓	✓	
 D5-55	211805075	211805175	211805775	600 – 7500	850 – 3800	✓	✓			
220 x 80 mm										
 D6	211806074	211806174	211806774	950 – 9400	1500 – 5500	✓	✓	✓		
165 x 160 mm										
 D7	211807074	211807074	211807774	310 – 5800	310 – 3600	✓	✓	✓		

* Type D is the most economical and sustainable mounting type

** Valid for certifications for EU and UKCA

OVERVIEW OF VERSIONS AND CONNECTION DIMENSIONS



CERTIFIED VERSIONS:



* All dimensions in mm

CONNECTION DIMENSIONS FOR MOUNTING

BUFFER SIZE (ØD [mm] X H [mm])	TYPE A S [mm]	TYPE C			
		A [mm]	E [mm]	d [mm]	S [mm]
80 x 80 mm	4	105	80	12	4
100 x 80 mm	4	130	100	14	6
125 x 80 mm	4	155	125	18	6
140 x 80 mm	6	180	140	18	6
165 x 80 mm	6	205	165	18	6
220 x 80 mm	6	260	220	18	6
165 x 160 mm	6	205	165	18	6

The central bore diameter for mounting is Ø17mm for all buffer sizes of mounting types A and D

