

Cellular Buffers

TDB0180-0001a-E

Buffers for end stops/cranes, conveyor systems, hoists

Catalog number
018xxxx-xxxY



CONTENTS

	Page
1 General information	2
2 Examples of application	2
3 Wampfler standard cellular buffer quality	2
4 Quality degrees	3
5 Construction	4
5.1 With base plate	4
5.2 With threaded bolt	5
5.3 Lift buffer with steel plate	6

Quantity delivered:

Deviations from the order may occur on order-related manufacture and material cut. We reserve the right for a max. deviation of +/- 10%.

Cellular Buffers

TDB0180-0001a-E

Buffers for end stops/cranes, conveyor systems, hoists

1 General information

Cellular buffers have a strong absorption capacity with long compression length. As a result they produce low limit forces and favorable deceleration values.

Cellular buffers are made up of a spring body made of cellular Polyurethane-Elastomere with high structural stability. Their outstanding characteristic is their volume compressibility, which produces a low transverse elongation under pressure.

Cellular buffers are resistant against aliphatic hydrocarbons, such as oils and greases as well as ozone, UV-radiation and aging. You can expect a general resistance in technical application.

The cellular body is only limited resistant against hydraulic oil and degenerates when exposed to hot water and water vapor over a longer period. Cellular buffers are not resistant to strong acids and leaches. The operating temperature is between -20°C and $+80^{\circ}\text{C}$. Temporary temperature peaks of $+100^{\circ}\text{C}$ are practicable and do not harm the buffer. When exposed to -20°C the material becomes harder, which does however not affect the consistency of the material.

The mounting structure must be flat and rigidly. In order the buffer is an area of 1,5 x diameters for the diameter increase with compression to be considered.

2 Examples of application

Crane systems, storage and retrieval machines, smelter and rolling mill machines, handling technique, plant construction and engineering, hoist systems.

Conveyor, transport and gate systems that are equipped with form-locking drives (e.g. chain or toothed rack). Lift buffers for vertically moved loads such as hoists and counter weights.

3 Wampfler standard cellular buffer quality

Cellular Polyurethane-Elastomere with a volumetric weight of 0.53 g/cm^3

- Resilient and tear resistant
- Age resistant
- Material is volume compressible
- Operating temperature: -20°C to $+80^{\circ}\text{C}$

Special qualities and special constructions on inquiry.

Cellular Buffers

TDB0180-0001a-E

Buffers for end stops/cranes, conveyor systems, hoists

Cellular buffers product group 018111 and 018112 (see item 5.1).

The compatible type without safety device (018111) was stopped for the avoidance of the confounding danger. The series 018112 with integrated safety device against can be used over 3 m height. The sizes up to 200 mm of buffer diameters are the base plates from glass fiber reinforced plastic and integrated safety against falling equipped.

Starting from size 250 (optionally with size 200) the base plates from steel are two-way primed and. Buffer plate and body stucked together. These buffers have a cable safety device against crash of the buffer body within the range of the center line with failure of the sticking seam by environmental condition.

For use as safety element please consider the valid regulation for the final product and the result of the risk analyse for this task.

Recommended exchange interval: 5 years for safety-relevant applications.

4 Quality degrees

Abrasion resistance	2
Breaking elongation	2
Tear resistance	2
Rebound resistance	2
Tensile strength	2
Temp. resistance hot air	+80°C
Temp. resistance coldness	-20°C
Alkali resistance	4
Age resistance	2
Gasoline resistance	4
Electrical insulation resistance	3
Oil and grease resistance	2
Ozone resistance	1
Acid resistance	6
Hot water	3

Quality degrees:

1 = very good; 2 = good; 3 = satisfying; 4 = sufficient; 5 = deficient; 6 = insufficient

International abbreviation: PUR (cellular Polyurethane-Elastomere)

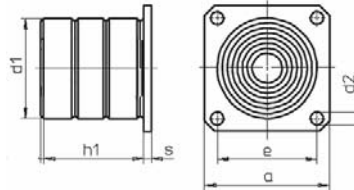
Cellular Buffers

TDB0180-0001a-E

Buffers for end stops/cranes, conveyor systems, hoists

5 Construction

5.1 With base plate



Design with plastic base plate and integrated safety device

Catalog number	W_{max} [J]	F [kN]	Weight [kg]	d_1 [mm]	h_1 [mm]	a [mm]	d_2 [mm]	e [mm]	s [mm]	PE ¹⁾ [pc.]	LZ ²⁾	
018112-080X040	168	50	0,4	80	40	110	Ø14	80	10	1	L	
018112-080X080	336		0,6		80					1	L	
018112-080X120	504		0,7		120					1	L	
018112-100X050	336	78	0,6	100	50	125		100		10	1	L
018112-100X100	672		0,9		100						1	L
018112-100X150	1008		1,15		150						1	L
018112-125X063	672	120	1,2	125	63	Ø18	125	12	1	L		
018112-125X125	1344		1,65		125				1	L		
018112-125X188	2016		2,25		190				1	L		
018112-160X080	1320	200	2,2	160	80		200		160	12	1	L
018112-160X160	2640		3,1		160						1	L
018112-160X240	3960		4,0		240						1	L
018112-200X100	2640	315	4,0	200	100	250	Ø22	200	14	1	L	
018112-200X200	5280		5,8		200					1	L	
018112-200X300	7920		7,5		300					1	L	

Design with steel base plate and safety rope

018112-200X200-A	5280	315	5,8	200	200	250	Ø22	200	14	1	3		
018112-200X300-A	7920		7,5		300					1	3		
018112-250X125	5280	490	12,9	250	125	315	Ø21	250	12	1	7		
018112-250X250	10560		16,2		250					1	1		
018112-250X375	15840		19,6		375					1	1		
018112-315X158	10560	780	22,2	315	158			400		315	12	1	7
018112-315X315	21120		29,0		315							1	1
018112-315X475	31680		35,9		475							1	1
018112-400X200	21120	1260	43,8	400	200	500	Ø25	400	15	1	1		
018112-400X400	42240		57,6		400					1	7		
018112-400X600	63360		70,4		600					1	7		
018112-500X250	42240	2000	74,6	500	250			600		500	15	1	7
018112-500X500	84480		101,1		500							1	1
018112-500X750	126720		128,0		750							1	7
018112-600X300	72360	2880	130,0	600	300	730	600	20	1	7			
018112-600X600	144720		176,0		600				1	7			
018112-600X900	217080		222,0		900				1	7			

Cellular Buffers

TDB0180-0001a-E

Buffers for end stops/cranes, conveyor systems, hoists

5.2 With threaded bolt



Catalog number	W_{max} [J]	F [kN]	Weight [kg]	d_1 [mm]	h_1 [mm]	d_2 [mm]	h_2 [mm]	l [mm]	PE ¹⁾ [pc.]	LZ ²⁾
018121-080X040	168	50	0,21	80	40	M12	2,5	35	1	L
018121-080X080	336		0,31		80				1	L
018121-080X120	504		0,42		120				1	L
018121-100X050	336	78	0,31	100	50	M12	3,15	35	1	L
018121-100X100	672		0,52		100				1	L
018121-100X150	1008		0,72		150				1	L
018121-125X063	672	120	0,51	125	63	M12	4	35	1	L
018121-125X125	1344		0,91		125				1	L
018121-125X188	2016		1,32		188				1	L
018121-160X080	1320	200	0,95	160	80	M12	5	35	1	L
018121-160X160	2640		1,80		160				1	L
018121-160X240	3960		2,66		240				1	L
018121-200X100	2640	315	1,76	200	100	M12	6	35	1	4
018121-200X200	5280		3,43		200				1	4
018121-200X300	7920		5,09		300				1	4
018121-250X125	5280	490	5,40	250	125	M24	8	80	1	4
018121-250X250	10560		8,47		250				1	L
018121-250X375	15840		11,53		375				1	4
018121-315X158	10560	780	8,49	315	158	M24	10	80	1	4
018121-315X315	21120		14,64		315				1	L
018121-315X475	31680		20,79		475				1	4
018121-400X200	21120	1260	16,48	400	200	M30	12,5	80	1	4
018121-400X400	42240		29,04		400				1	4
018121-400X600	63360		41,60		600				1	4

Tolerances of the cellular buffers according to ISO 3302-1M4

1) = packing unit = minimum order quantity

2) = delivery time; L = on stock, 1 = one week, 2 = two weeks, a.s.o.

Cellular Buffers

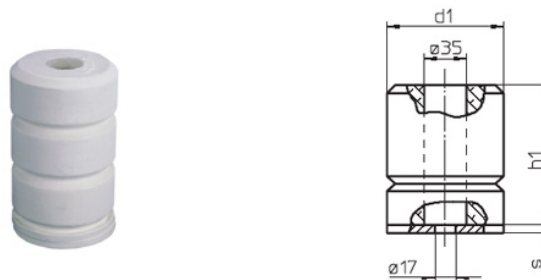
TDB0180-0001a-E

Buffers for end stops/cranes, conveyor systems, hoists

5.3 Lift buffer with steel plate

The design check for the lift buffers listed in the table has been made according to the hoisting directives 95/16/EG. The permissible load zones are documented for each lift buffer type by the certificate No. An EC design check certificate can be provided for each lift buffer type.

Lifts with lower speed than the maximum nominal speed taken as a basis for the design check, are for the same load zone, when the loads from cabin / working load or counter load are within the values m_{max} and m_{min} .



Catalog number	Nominal speed [m/s]						Max. comp. length. [mm]	G [kg]	d ₁ [mm]	h ₁ [mm]	s [mm]	PE ¹⁾
	0,4		0,63		1,00							
	Permissible impact mass [kg]											
	max.	min.	max.	min.	max.	min.						
018230-100X160	1344	103	1030	128	927	128	144	1,07	100	160	8	1
018230-125X100	1661	153	1504	263	1486	263	90	1,38	125	100	8	1
018230-125X160	1504	128	1344	263	1106	263	144	1,75		160		1
018230-125X200	1661	103	1504	153	1442	253	180	1,98		200		1
018230-140X100	2744	203	2120	203	1980	203	90	1,93	140	100	10	1
018230-140X200	2451	203	2120	278	1966	278	180	2,66		200		1
018230-165X160	3434	278	3117	395	3035	465	144	3,40	165	160	10	1
018230-165X220	4079	203	4079	303	3919	777	198	4,04		220		1
018230-220X160	7567	465	7043	568	6500	1344	144	5,54	220	160	10	1
018230-220X220	8132	465	8000	727	8000	1604	198	6,72		220		1

Tolerances of the cellular buffers according to ISO 3302-1M4

1) = packing unit = minimum order quantity

2) = delivery time; L = on stock, 1 = one week, 2 = two weeks, a.s.o.