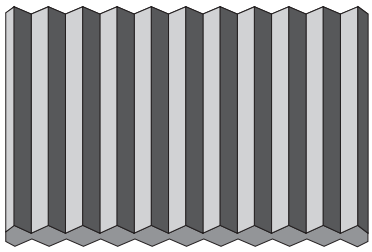
Pyramid bearings

Pyramid bearings t = 10 mm

non-reinforced elastomer bearing



Supervisory approval no. Z 16.3-195. With marking.

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Function and Use

The pyramid bearing (or pyramid band) is a non-reinforced elastomer system. Due to its profiled section, it has "spring elastic" properties and many uses.

It is suitable for both **component support** (individual bearing or linear bearing) and for **vibration insulation** and **structure-borne sound insulation**.

Material

The pyramid bearing consists of vulcanisate based on EPDM (ethylene propylen ter-rubber). The production is subject to official quality control.

Defining the permissible static stresses

1. Definition of the bearing class to DIN 4141, part 3 (according to the conditions of use)
2. Determination of the bearing size (edge-to-edge distances to DIN 4141 part 15, para 5.3 shall be complied with)
3. Proving the bearing

   The permissible stresses can be taken from the design table.

Design table

Dimensions		perm. stresses					
				Torsion angle Δ a			
				Bearing 1 class for torsion above:		Bearing 2 class for torsion above:	
Depth a mm	Width b mm	mean pressure s_m N/mm²	perm. load F KN	a ‰	b ‰	a ‰	b ‰
50	100	4.8	24.0			60	30
	150	5.4	40.5			60	25
	200	5.7	57.0			60	20
	250	6.0	75.0			60	17
	300	6.1	91.5			60	15
	350	6.2	108.5			60	12
	400	6.3	126.0			60	10
	1000	6.8	340.0			60	4
	∞					60	0
100	100	7.1	71.0	23	23	30	30
	150	8.6	129.0	20	14	30	25
	200	9.6	192.0	18	10	30	20
	250	10.0	250.0	17	8	30	17
	300	10.0	300.0	17	7	30	15
	350	10.0	350.0	17	6	30	12
	400	10.0	400.0	17	5	30	10
	1000	10.0	1000.0	17	2	30	4
	∞					30	0
150	150	10.0	225.0	14	14	25	25
	200	10.0	300.0	14	10	25	20
	250	10.0	375.0	14	8	25	17
	300	10.0	450.0	14	7	25	15
	350	10.0	525.0	14	6	25	12
	400	10.0	600.0	14	5	25	10
	1000	10.0	1500.0	14	2	25	4
	∞					25	0
200	200	10.0	400.0	10	10	20	20
	250	10.0	500.0	10	8	20	17
	300	10.0	600.0	10	7	20	15
	350	10.0	700.0	10	6	20	12
	400	10.0	800.0	10	5	20	10
	450	10.0	900.0	10	4	20	8
	500	10.0	1000.0	10	4	20	7
	1000	10.0	2000.0	10	2	20	4
	∞					20	0

Bearing thickness: unloaded: t = 10 mm; loaded: t_b = 7 mm
Maximum displacement distance: Δw = ± 5 mm
*Intermediate values may be interpreted linearly.

Assembly

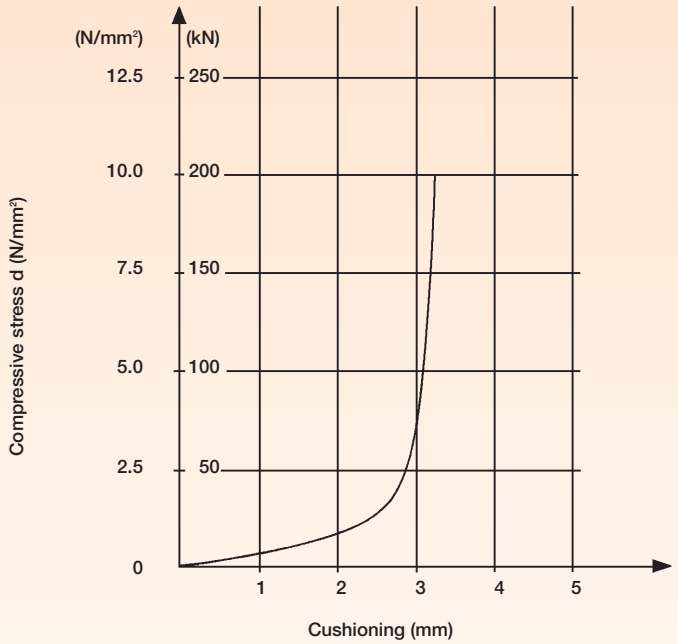
In precast reinforced concrete construction, the ESZ pyramid bearing (or pyramid band) is placed in the centre of the supported position, without special assembly measures. As regards edge-to-edge distances, the rules of DIN 4141 part 15, para. 5.3 shall be observed.

Fire resistance grading

Due to its thickness and material, based on a test by the Institut für Baustoffkunde [Institute of Construction Material Science] at Braunschweig University, the pyramid bearing can be assigned to fire resistance grading F90 B without further measures.
Conditions:
a x b ≥ 150 x 150 mm²
Report no. 3166/1589

Static central loading on ESZ-PYRAMID BAND

non-load thickness = 10 mm

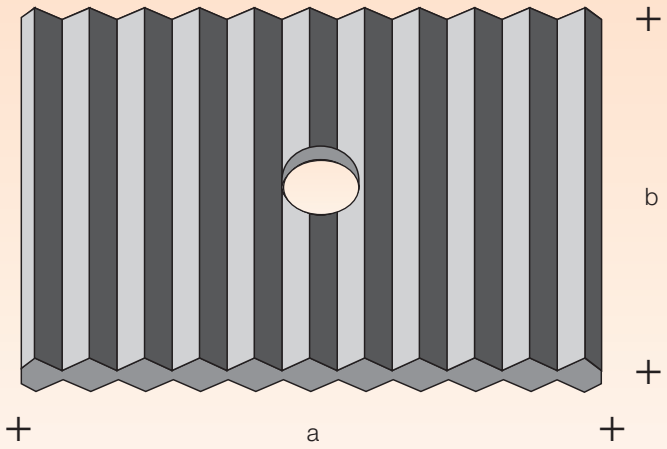


Dimensions/supplied as

1. Ready and cut to size

We cut the pyramid bearing to the dimensions required and, if necessary, provide them with a mandrel hole.

Order text:
Pyramid band: a x b x t
with/without mandrel hole
Ø ____ centrally/
or dimensional chain

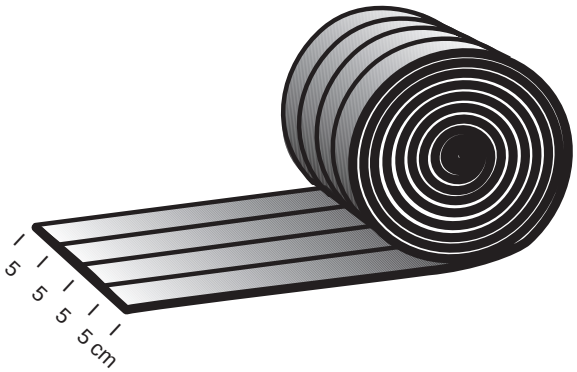


Ready and cut to size, with mandrel hole

2. Rolls

A tear-off seam every 5 cm.

Rolls – order text:
ESZ pyramid band on rolls
__ rolls à __ m length,
__ mm wide x __ mm thick



Thickness/mm	Width/mm	Length/m	m² /roll
5*	50	20	1.0
	150	20	3.0
	200	20	4.0
10	50	10	0.5
	100	10/20	1.0/2.0
	150	10/20	1.5/3.0
	200	10/20	2.0/4.0
15*	200	10	2.0
20*	200	10	2.0

* These thicknesses do not have supervisory approval. They were developed for footstep sound and vibration protection. Please consult us regarding the use as a construction bearing for general building construction.