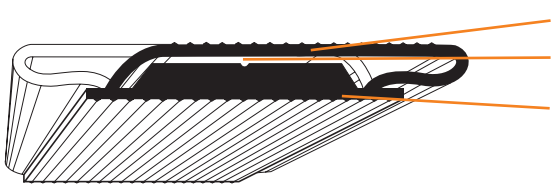
ESZ Sliding point rubber bearing GLS-P DBP



WILFRIED BECKER GMBH
Elastomer Service Zentrale

Weilerhöfe 1
41564 Kaarst-Büttgen

Telefon (0 21 31) 75 81 00
Telefax (0 21 31) 75 81 11

E-Mail: info@esz-becker.de
Internet: www.baulager.de

INFORMATION REGARDING THE USE OF BEARINGS AND TYPES OF DELIVERY

1. Purpose

The ESZ sliding point rubber bearing GLS-P DBP allows safe sliding between concrete (or timber) construction components under conditions of high bearing compression. The bearing is intended for installation between prefab parts or concrete components cast in situ, or a combination of these. 3 bearing widths (100, 150 and 200 mm) are provided for this purpose.
The bearing thickness is 10 mm.

2. Working principle

The elastomer core together with the elastomer jacket surrounding it acts to dissipate vertical loads and, at the same time, serves as a reservoir and dispenser for the lubricant. Long-lasting sliding between the core and the jacket is assured by the silicone grease lubricant, which is also used in bridge bearing construction. The self-contained design protects against environmental influences, bearing failure and the effects of wear, and guarantees low starting friction and a very low friction coefficient for a long period of time.

3. Deformation

The permissible sliding distance is ± 25 mm for all bearing types. Bearing cushioning of < 25% is to be expected when subject to the maximum permissible vertical load.

4. Mating surfaces

Standard case is reinforced concrete mating surfaces. The bearings should be laid within the reinforcement to prevent concrete spalling. Slight unevenness in the mating surfaces can be compensated by the elastomer material on the upper and lower sides.

5. Temperature range in use

The bearing is intended for use within a temperature range of -35° C to +70° C.

6. Fire resistance classes

A slightly modified design of the bearing complies with fire resistance class F 90-B as defined by DIN 4102.

7. Tests/Quality Assurance

The ESZ sliding point rubber bearing GLS-P DBP has a General Building Authority Test Certificate for use in accordance with DIN 4141-3, bearing class 2. Production is officially externally monitored.

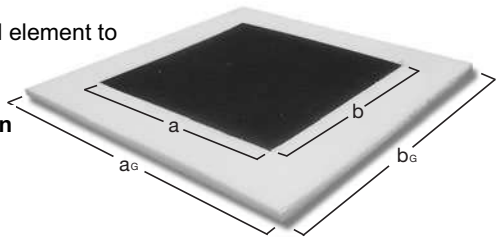
8. Supplied as

- for prefab construction: Type BnF

the bearing can be placed under the structural element to be supported with no further actions.

- for in-situ concrete construction: Type Obn

the bearing is manufactured ready for casting with a sliding space protection body in accordance with the adjacent sketch.



9. Advantages

simple to install
no contamination of the sliding surfaces
good frictional adhesion to the adjacent construction components
can be cut from the roll on the construction site

© ESZ Wilfried Becker GmbH

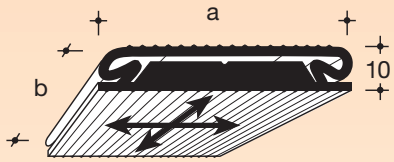
(Subject to further technical development)

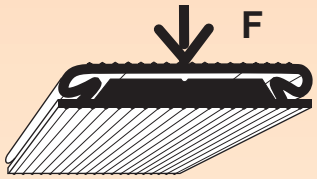
5.4.2.3/1000/11.05/SD

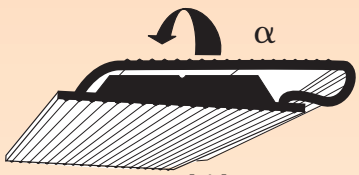
ESZ Sliding point rubber bearing GLS-P^{DBP}

Design table

(Permissible loads from characteristic exposure)







a* b t [mm]	Perm.F [kN]	Perm.α [‰] a	b
100 x 100 x 10	120,0	43,8	35,0
100 x 150 x 10	180,0	43,8	23,0
100 x 200 x 10	240,0	43,8	17,5
100 x 300 x 10	360,0	43,8	11,6
100 x 400 x 10	480,0	43,8	8,7
100 x 500 x 10	600,0	43,8	7,0
150 x 150 x 10	292,5	26,9	23,0
150 x 200 x 10	390,0	26,9	17,5
150 x 250 x 10	487,5	26,9	14,0
150 x 300 x 10	585,0	26,9	11,6
150 x 400 x 10	780,0	26,9	8,7
150 x 500 x 10	975,0	26,9	7,0
200 x 200 x 10	540,0	19,4	17,5
200 x 250 x 10	675,0	19,4	14,0
200 x 300 x 10	810,0	19,4	11,6
200 x 350 x 10	945,0	19,4	10,0

* The width of the supporting elastomer core is 20 mm less than the side length specified for a.
Minimum compression 1 N/mm², specifications apply to the use of reinforced concrete mating surfaces.
Permissible sliding distance u = ± 25 mm crosswise and perpendicular to bearing side a. The side length b can be freely selected.

TECHNICAL DATA

1. Compressive stress Perm. σ_m = 15 N/mm² $\frac{t}{}$ (bearing side dimension a ³ b ³ 100 mm)

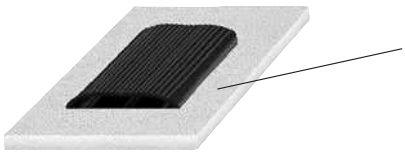
2. Torsion Perm. α = 0,35 x $\frac{\sqrt{a - 20}}{t}$ x 10^3 (‰)

where: t = 10 mm (elastomer thickness)
a = bearing side perpendicular to the axis of rotation (mm)

3. Displacement Perm. u = ± 25 mm crosswise and perpendicular to bearing side a.

4. Coefficient of friction μ < 0,03 x F (-25° C ≤ T ≤ +70° C, σ_m ≥ 10 N/mm²)

RFP TEXT



Supply and installation of sliding point rubber bearings as a support for concrete construction elements for central introduction of forces into the beam and for absorbing torsions in the ceiling. The bearing must allow a displacement of at least ±25 mm, possess a friction coefficient of < 0.03 and have a General Building Authority Test Certificate.

Bearing type: **ESZ sliding point rubber bearing**
Load / type: _____ KN
Format sliding bearing (elastomer body): _____ mm (a x b)
Fire resistance class F-90 B required: yes / no
Documentary proof of frictional coefficient for temperatures ranging to: 0° C/-10° C/-20° C/-35°C
Format incl. blind formwork: _____ mm (a_G x b_G)
(when used with in-situ concrete)
Quantity: _____ pieces
Manufacturer: ESZ W. Becker GmbH, 41564 Kaarst
Tel. 0 21 31 /75 81 00, Fax 0 21 31 /75 81 11

MATERIALS

Elastomer: The ESZ sliding point rubber bearing GLS-P ^{DBP} consists of an elastomer on the basis of the synthetic rubber EPDM in building authority-approved quality.

© ESZ Wilfried Becker GmbH

(Subject to further technical development)