

d.o.o. za proizvodnju gumeno-tehničke robe

# TEHNOPREN

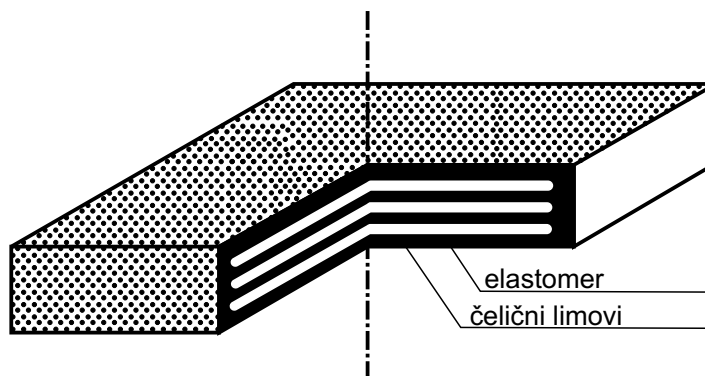
## ELASTOMERNI LEŽAJEVI



## OPIS I PRIMJENA TEHNOPREN ELASTOMERNIH LEŽAJEVA

Tehnopren elastomerni ležajevi su deformabilni građevinski elementi koji služe za prijenos opterećenja s jednog dijela konstrukcije na drugi.

Primjenjuju se u mostogradnji, u visokogradnji i kod industrijskih objekata, a mogu se upotrebljavati kod temperatura između  $-30^{\circ}\text{C}$  (234 K) i  $+50^{\circ}\text{C}$  (323 K). Dozvoljene su, međutim, kratkotrajne temperature do  $+70^{\circ}\text{C}$  (343 K).



**Standardni AEL**

Tehnopren elastomerni ležajevi omogućuju:

- istovremene pomake u dva okomita smjera
- istovremena zakretanja u tri okomite ravnine
- preuzimanje vertikalnih normalnih opterećenja
- preuzimanje horizontalnih opterećenja

Objekt može ležati samo na tehnpren elastomernim ležajevima bez upotrebe nepokretnih ležajeva.

U odnosu na uobičajene ležajeve sa tehnpren elastomernim ležajevima se mogu postići znatne uštede, posebno radi jednostavnog ugrađivanja i jeftinog održavanja. Tehnpren elastomerni ležajevi se proizvode od sintetskog kloropren kaučuka (npr. neopren, baypren) koji je otporan na starenje pod djelovanjem atmosferskih utjecaja koji obično vladaju na objektu. Između slojeva elastomera umeću se čelični limovi visoke čvrstoće koji se toplinskom vulkanizacijom spajaju sa slojevima elastomera.

Tehnopren elastomerni ležajevi se proizvode prema zahtjevima europske norme EN 1337-3:2005

Tehnopren elastomerni ležajevi su po pravilu pravokutni i okrugli. Tipovi sa oznakama prikazani su u tabeli 1.

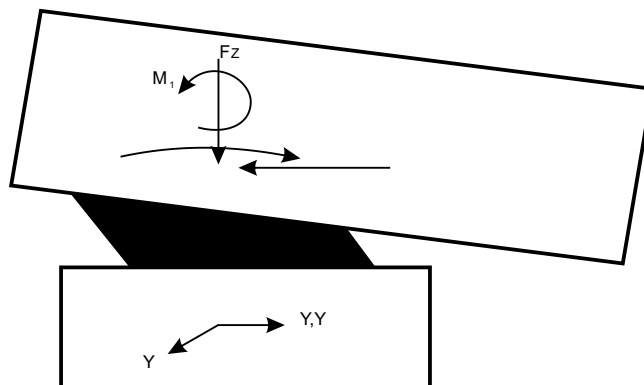
## DIMENZIJE

Tehnopren elastomerni ležajevi se proizvode prema standardnim veličinama prikazanim u tabelama 2, 3, 4 i 5.

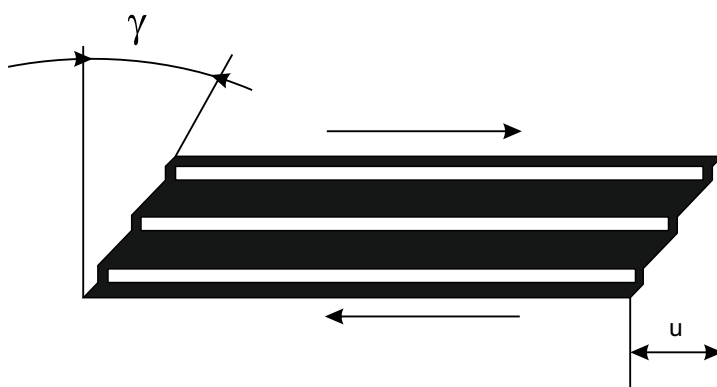
Po specijalnoj narudžbi mogu se proizvoditi i u drugim veličinama. U tom slučaju debljina sloja elastomera i debljina čeličnih limova odgovaraju debljinama najbližeg po površini manjeg ležaja standardne veličine.

## DOZVOLJENA OPTEREĆENJA I POMICANJA

Tehnopren elastomerni ležajevi mogu preuzeti opterećenja do 12.000 N i pomake do 180 mm zavisno od veličine ležaja, prema prikazanim tabelama. Za međuveličine određuje se dozvoljeno opterećenje na temelju dozvoljenog centričnog pritiska ( $\delta_d = V_d / A$ ) najbližeg manjeg formata ležaja. Deformacija od posmika paralelnog sa ravninom ležaja, kod ležaja debljine elastomera  $T \leq a/5$  odnosno  $D/5$  ne smije prekoračiti vrijednost  $\tan \gamma = 0,7$  pri čemu je:



$$\tan \gamma = \frac{\text{Horizontalni pomak } \mu}{\text{Debljina elastomera } T}$$



ako je debljina elastomera  $T = a/3,33$  odnosno  $D/3,33$ , onda je dozvoljena posmična deformacija  $\tan \gamma = 0,6$

Za  $a/5 < T < a/3,33$  odnosno  $D/5 < T < D/3,33$  dozvoljena posmična deformacija se linearno interpolira ( $0,6 < \tan \gamma < 0,7$ ).

Posmične deformacije u više pravaca treba vektorski zbrojiti. Pomake građevina paralelno sa ravninom ležaja moraju se odrediti prema tehničkim propisima. Pri tome se ne uzimaju u proračun sigurnosne mjere propisane za pokretne ležajeve. (valjkaste, klizne i sl.). Povratne sile nastale uslijed otpora ležaja deformiranju, ukoliko su nepovoljne, moraju se uzeti u obzir. Kod svih građevinskih konstrukcija, na koje ove povratne sile imaju utjecaj,

treba izvršiti posebnu provjeru za niske temperature jer kod niskih temperatura mogu nastupiti dodatne deformacije od posmika (npr. zbog pokretnih opterećenja).

Pri tome treba uzeti u obzir da je na temperaturi od - 30°C veličina  $G = 2\text{N/mm}^2$

Kutovi zakretanja ne smiju pri okretanju prekoračiti vrijednosti navedene u tablicama 2,3,4 i 5. Pri zakretanju oko obje osi, treba za svaku stranu napraviti pojedinačni dokaz. Zbroj kutova zakretanja ne smije prekoračiti vrijednosti navedene u tabelama 2,3,4 i 5 – kolona 9/3. Za međuveličine vrijedi kut zakretanja dozvoljen za najbližu veću stranicu ležaja standardnog formata pri istoj debljini sloja elastomera.

Pri zakretanju ležajeva, moraju se uzeti u obzir sljedeći računski povratni momenti, ukoliko djeluju nepovoljno:

za pravokutne ležajeve 
$$M = \frac{a^2 b G}{50 t^3} * \alpha$$

za pravokutne ležajeve 
$$M = \frac{D^6 G}{100 t^3} * \alpha$$

Pri tome je:

a – stranica normalna na os kuta zakretanja kod pravokutnih ležajeva

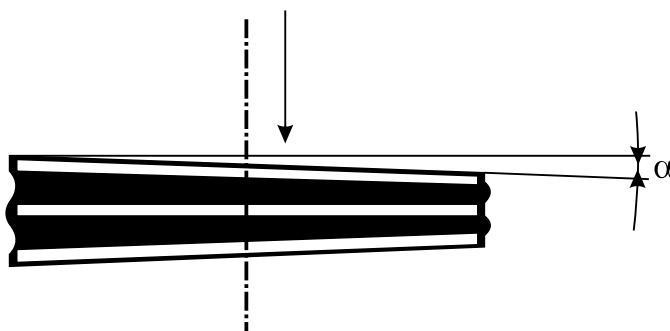
b – stranica paralelna s osi kuta zakretanja kod pravokutnih ležajeva

D – promjer kod okruglih ležajeva

t – debljina sloja elastomera

$\alpha$  - kut zakretanja po jednom sloju elastomera

G – modul posmika pri temperaturi od +10°C uzima se  $G = 1\text{N/mm}^2$



Kod svih građevinskih konstrukcija na koje imaju utjecaj ovi povratni momenti treba izvršiti poseban proračun za niske temperature jer kod niskih temperatura mogu nastupiti dodatna zakretanja ležaja (npr. zbog pokretnog opterećenja).

Da bi se mogao ispuniti neusidreni ležaj mora se ispuniti sljedeći uvjet:

Kod elstomernih ležajeva površine  $> 350 \cdot 450$  mm odnosno  $> \varnothing 350$  mm.

$$\frac{V_{\min}}{A} = \sigma_{\min} \geq 3,0 \text{ N/mm}^2$$

Kod elastomernih ležajeva površine  $> 350 \cdot 450$  mm odnosno  $> \varnothing 400$  mm.

$$\sigma_{\min} \geq 5,0 \text{ N/mm}^2$$

U slučaju kada je srednji centrični pritisak manji, ležajevi se moraju usidriti, jer bi inače došlo do njihova klizanja. Maksimalna horizontalna reakcija koju ležaj može primiti preko elastomera iznosi:

$$H_d = G \cdot A \cdot \tan \gamma.$$

U slučaju da je  $H > H_d$  mora se primjeniti veći ležaj ili ležaj tipa NAL-a odnosno NAL-b. Ako je potrebno, treba uzeti u obzir utjecaj smanjenja ukupne visine ležaja pod opterećenjem (zbijanja ležaja) na susjedni građevinski element. Nakon početnog sleganja ležaja od oko 1 mm mogu pod dozvoljenim opterećenjem nastati zbijanja od oko 2% debljine elastomera T. Kako veza naprezanja i zbijanja nije linearna, tj. prirast zbijanja opada sa porastom opterećenja, to je utjecaj kod zbijanja kod maksimalnih opterećenja (npr. od pokretnog opterećenja) relativno mali.

## **ZAŠTITA OD KOROZIJE**

Čelični dijelovi ležaja koji nisu presvučeni neoprenom, štite se od korozije na uobičajeni način.

## **UGRAĐIVANJE**

Da bi se spriječila neželjena naprezanja ležajeva, moraju površine građevinskih dijelova uz ležajeve biti međusobno paralelne, ravne i okomite na rezultantu od stalnog opterećenja.

Zbog toga po pravilu između ležaja i donje konstrukcije treba predvidjeti sloj za izravnanje (npr. trikosal debljine do 5 cm).

Kontaktne površine ležajeva i konstrukcije trebaju biti vodoravne, odnosno nagnute tako da pod utjecajem vlastite težine ili stalnog opterećenja (npr. pritiska zemlje) ne nastanu posmične deformacije ležajeva.

Ležajeve treba postaviti tako da se bez teškoća mogu izmijeniti (predvidjeti mogućnost prihvaćanja konstrukcije odgovarajućim hidrauličkim prešama).

Nije dozvoljeno postavljanje dva ili više ležajeva, jednog za drugim u uzdužnom smjeru konstrukcije na jednom osloncu. Ležajevi različitih veličina se ne mogu, zbog nejednakih krutosti, postavljati jedan pored drugog.

Upotreba tehнопren elastomernih ležajeva zajedno s drugim vrstama ležajeva dozvoljena je ako se na jednom osloncu upotrebljavaju samo ležajevi iste vrste. Ako je kontaktna površina ispod ili iznad ležaja oštećena, treba je sanirati podlijevanjem tako da se na onu stranu koja se podlijeva umeću klinovi i čelična ploča debljine minimalno 20 mm. Nakon stvrdavanja materijala za podlijevanje klinovi se moraju odstraniti.

Zavarivanje na pločama ležajeva s usidrenjem nije dozvoljeno.

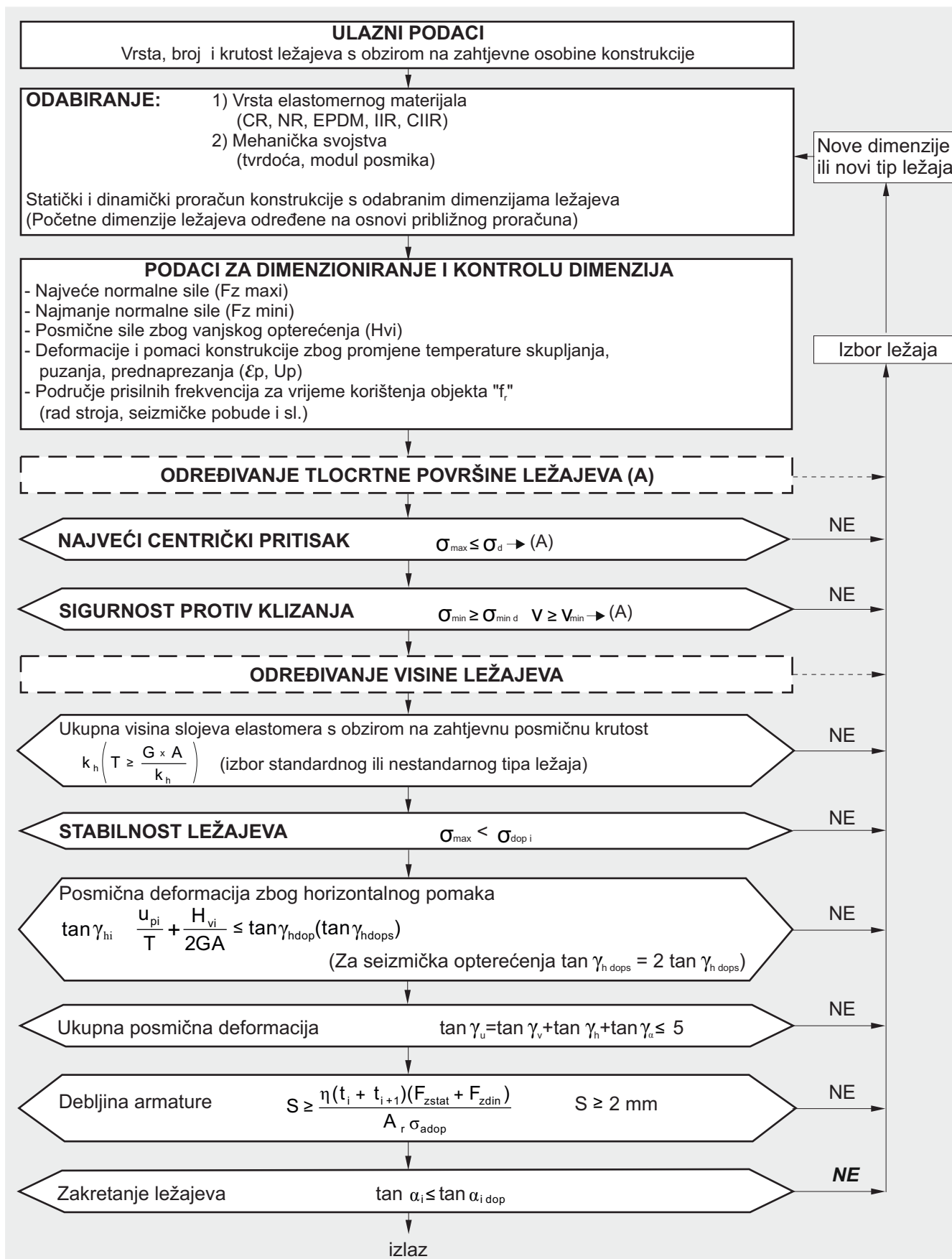
Odgovarajućim zaštitnim mjerama treba osigurati da ležajevi ne dolaze u dodir sa mastima, razrjeđivačima i sl., a naročito ne sa ustajalim uljem.

Elementi na kontaktnim površinama sa ležajem trebaju biti konstruirani i izvedeni tako da mogu izdržati predviđena opterećenja bez većih lokalnih deformacija.

Ako se prilikom ugrađivanja zahtijevaju prednamješteni ležajevi, prednamještanje uvijek izvodi proizvođač ležajeva. Prednamještanje treba izvoditi tako da se ležajevi ne mogu više deformirati prije stupanja u funkciju tako da su osigurani kod transporta. Ležajeve treba tako dimenzionirati da se prednamještanje ne treba mijenjati na gradilištu. Naknadne promjene su dozvoljene samo onda ako ih uz odgovornost proizvođača ležajeva izvode njegovi ili od njega upućeni stručnjaci. Dijelovi ležajeva s obzirom na potrebno prednamještanje treba tako međusobno povezati, da se na početku svog funkcioniranja, odnosno u određenom momentu, nalaze u projektiranom položaju i obliku. Proizvođač tehнопren elastomernih ležajeva daje za takve ležajeve pomoćne konstrukcije. Ako se ležajevi moraju isporučiti u dijelovima na gradilištu ih trebaju složiti stručnjaci ili proizvođač ležajeva, ili od njega obučeni stručnjaci.



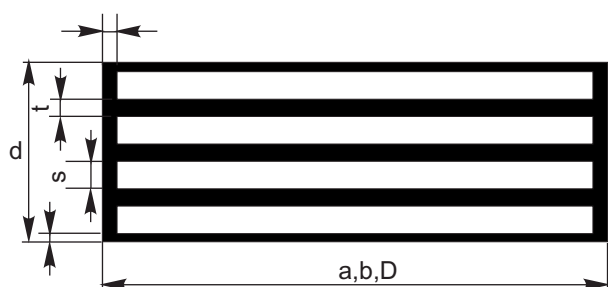
## Dijagram toka dimenzioniranja AEL za statička i dinamička opterećenja



Tablica 1

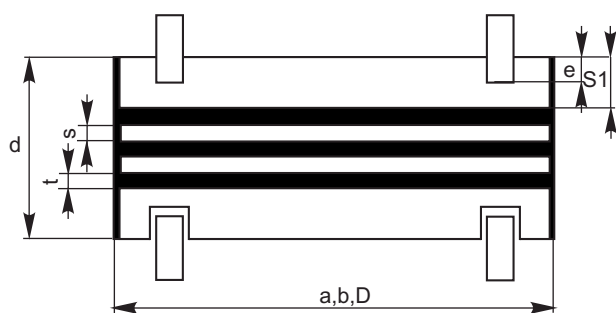
| Veličina<br>elastomernog ležaja | Za tip ležaja | Oznaka         | Jed. mjere | 100×100<br>do<br>200×400<br>200 | 250×400<br>do<br>300×400<br>250 do<br>350 | 350×450<br>do<br>500×600<br>400 do<br>550 | 600<br>650 | 600×700<br>700×800<br>700 do<br>900 | 800×800<br>900×900 |
|---------------------------------|---------------|----------------|------------|---------------------------------|-------------------------------------------|-------------------------------------------|------------|-------------------------------------|--------------------|
|                                 |               |                |            | mm                              | mm                                        | mm                                        | mm         | mm                                  | mm                 |
| Broj sidara                     | 2,4           | -              | kom        | 1                               | 2                                         | 4                                         | 6          | 6                                   | 6                  |
| Dužina sidra                    | 2,4           | l              | mm         | 120                             | 120                                       | 150                                       | 150        | 150                                 | 150                |
| Promjer sidra                   | 2,4           | d <sub>1</sub> | mm         | 20                              | 20                                        | 30                                        | 30         | 40                                  | 40                 |
| Vanjska ploča lež.              | 2,4           | S <sub>1</sub> | mm         | 15                              | 15                                        | 20                                        | 20         | 20                                  | 20                 |
| Vanjske sidrene pl.             | 4             | S <sub>2</sub> | mm         | 15                              | 15                                        | 20                                        | 20         | 20                                  | 20                 |
| Debljina ploče                  | 4             | S <sub>4</sub> | mm         | 10                              | 10                                        | 10                                        | 10         | 10                                  | 10                 |
| Promjer ploče                   | 4             | d <sub>3</sub> | mm         | 60                              | 80                                        | 190                                       | 380        | 380                                 | 380                |
| Dubina usidrenja                | 2             | e              | mm         | 12                              | 12                                        | 15                                        | 15         | 15                                  | 15                 |
| Debljina ploče                  | 5             | S <sub>3</sub> | mm         | 10                              | 10                                        | 10                                        | 10         | 10                                  | 10                 |





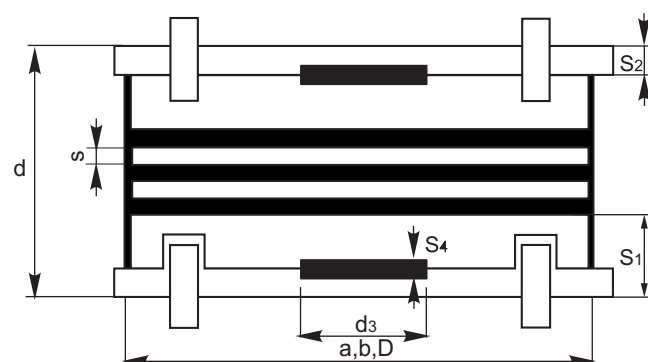
**Din 1441**  
**Tip 1**  
Neusidreni elastomerni ležaj

**EN 1337-3**  
**Tip B**



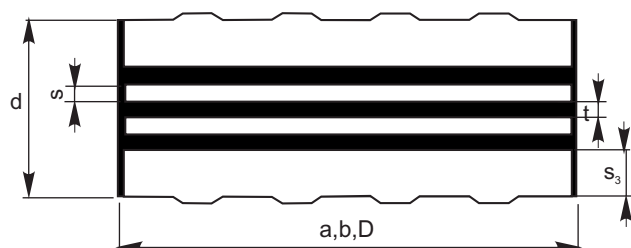
**Tip 2**  
Usidreni u svim smjerovima pomični elastomerni ležaj;  
Usidrenje pomoću trnova ili vijaka

**Tip C**



**Tip 4**  
Usidreni u svim smjerovima pomični elastomerni ležaj;  
Usidrenje pomoću okruglih ploča moždanika

**Tip C**

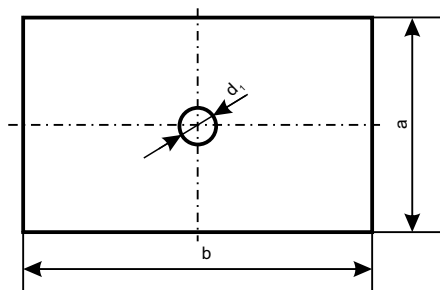


**Tip 5**  
Usidreni u svim smjerovima pomični elastomerni ležaj;  
Usidrenje pomoću suznog rebrastog lima

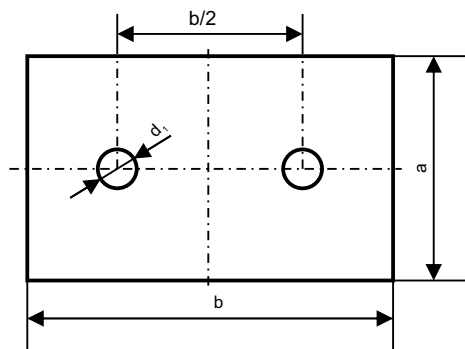
**Tip C**

**Napomena: Prema narudžbi mogu se naručiti i nestandardni AEL**

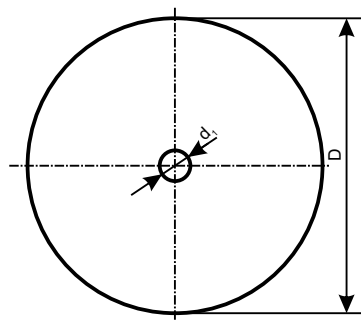
## Raspored sidara za elastomerne ležajeve tip 2 i tip 4 (tip C prema EN 1337-3)



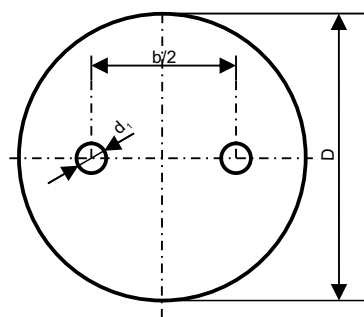
100 x 100 - 200 x 400



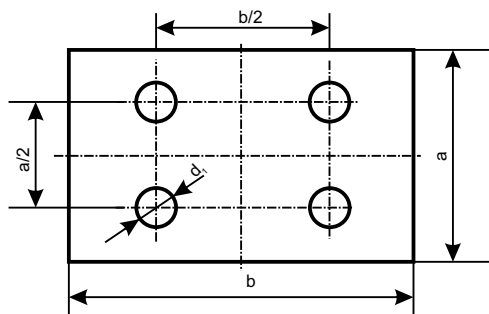
250 x 400 - 300 x 400



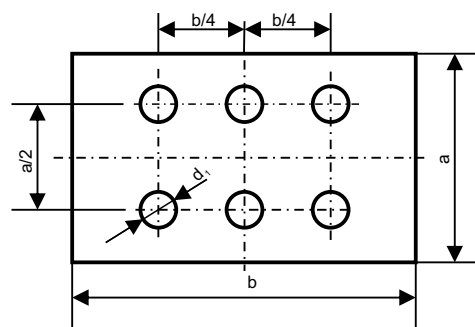
D = 250



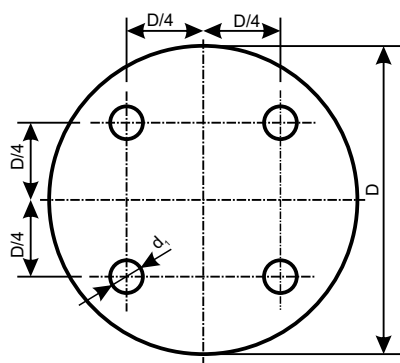
D = 250 - D = 350



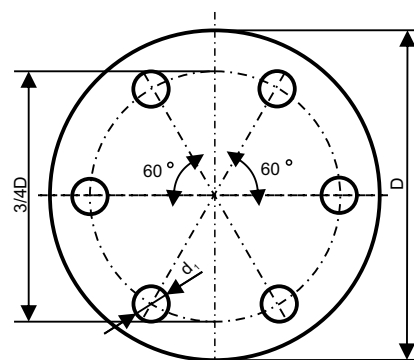
350 x 450 - 500 x 600



600 x 700 - 900 x 900



D = 400 - D = 500



D = 600 - D = 900

Tablica 2

| Širina × dužina, promjer      | Dopušteno opterećenje | Visina ležaja |       |       |       | Debljina elastomera |           | Broj slojeva elastomera | Debljina sloja elastomera | Debljina lima | Dopušteni pomak |           | Dopušteni kut zakretanja                                                            |                                                                                     |                                                                                     |                                                                                     |
|-------------------------------|-----------------------|---------------|-------|-------|-------|---------------------|-----------|-------------------------|---------------------------|---------------|-----------------|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                               |                       | Tip 1         | Tip 2 | Tip 4 | Tip 5 | Tip 1               | Tip 2,4,5 |                         |                           |               | Tip 1           | Tip 2,4,5 |  |  |  |  |
| a×b, D                        | Fz                    | d             |       |       |       | T                   |           | n                       | t                         | s             | V=+ -           |           | n,                                                                                  |                                                                                     |                                                                                     |                                                                                     |
| mm                            | kN                    | mm            |       |       |       | mm                  |           | -                       | mm                        | mm            | mm              |           | ‰                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| 100×100<br>100×150<br>100×200 | 100<br>150<br>200     | 14            |       |       |       | 10                  |           | 1                       | 5                         | 2             | 7,0             |           | 4,0                                                                                 | 3,0                                                                                 | 5,0                                                                                 |                                                                                     |
|                               |                       | 21            | 42    | 72    | 32    | 15                  | 10        | 2                       |                           |               | 10,5            | 7,0       | 8,0                                                                                 | 6,0                                                                                 | 10,0                                                                                |                                                                                     |
|                               |                       | 28            | 49    | 79    | 39    | 20                  | 15        | 3                       |                           |               | 14,0            | 10,5      | 12,0                                                                                | 9,0                                                                                 | 15,0                                                                                |                                                                                     |
|                               |                       | 35            | 56    | 86    | 46    | 25                  | 20        | 4                       |                           |               | 16,3            | 14,0      | 16,0                                                                                | 12,0                                                                                | 20,0                                                                                |                                                                                     |
|                               |                       | 42            | 63    | 93    | 53    | 30                  | 25        | 5                       |                           |               | 18,0            | 16,3      | 20,0                                                                                | 15,0                                                                                | 25,0                                                                                |                                                                                     |
|                               |                       |               | 70    | 100   | 60    |                     | 30        | 6                       |                           |               |                 | 18,0      | 24,0                                                                                | 18,0                                                                                | 30,0                                                                                |                                                                                     |
|                               |                       |               |       |       |       |                     |           |                         |                           |               |                 |           |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 150×200                       | 300                   | 14            |       |       |       | 10                  |           | 1                       | 5                         | 2             | 7,0             |           | 3,0                                                                                 | 3,0                                                                                 | 4,0                                                                                 |                                                                                     |
|                               |                       | 21            | 42    | 72    | 32    | 15                  | 10        | 2                       |                           |               | 10,5            | 7,0       | 6,0                                                                                 | 6,0                                                                                 | 8,0                                                                                 |                                                                                     |
|                               |                       | 28            | 49    | 79    | 39    | 20                  | 15        | 3                       |                           |               | 14,0            | 10,5      | 9,0                                                                                 | 9,0                                                                                 | 13,0                                                                                |                                                                                     |
|                               |                       | 35            | 56    | 86    | 46    | 25                  | 20        | 4                       |                           |               | 17,5            | 14,0      | 12,0                                                                                | 12,0                                                                                | 17,0                                                                                |                                                                                     |
|                               |                       | 42            | 63    | 93    | 53    | 30                  | 25        | 5                       |                           |               | 21,0            | 17,5      | 15,0                                                                                | 15,0                                                                                | 21,0                                                                                |                                                                                     |
|                               |                       | 49            | 70    | 100   | 60    | 35                  | 30        | 6                       |                           |               | 23,3            | 21,0      | 18,0                                                                                | 18,0                                                                                | 25,0                                                                                |                                                                                     |
|                               |                       | 56            | 77    | 107   | 67    | 40                  | 35        | 7                       |                           |               | 25,3            | 23,3      | 21,0                                                                                | 21,0                                                                                | 29,0                                                                                |                                                                                     |
|                               |                       | 63            | 84    | 114   | 74    | 45                  | 40        | 8                       |                           |               | 27,0            | 25,3      | 24,0                                                                                | 24,0                                                                                | 33,0                                                                                |                                                                                     |
|                               |                       |               | 91    | 121   | 81    |                     | 45        | 9                       |                           |               |                 | 27,0      | 27,0                                                                                | 27,0                                                                                | 37,0                                                                                |                                                                                     |
|                               |                       |               |       |       |       |                     |           |                         |                           |               |                 |           |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 200×250<br>200×300<br>Ø 200   | 625<br>750<br>314     | 19            |       |       |       | 13                  |           | 1                       | 8                         | 3             | 9,1             |           | 3,0                                                                                 | 2,5                                                                                 | 4,0                                                                                 | 4,0                                                                                 |
|                               |                       | 30            | 49    | 79    | 39    | 21                  | 16        | 2                       |                           |               | 14,7            | 11,2      | 6,0                                                                                 | 5,0                                                                                 | 8,0                                                                                 | 8,0                                                                                 |
|                               |                       | 41            | 60    | 90    | 50    | 29                  | 24        | 3                       |                           |               | 20,3            | 16,8      | 9,0                                                                                 | 7,5                                                                                 | 12,0                                                                                | 12,0                                                                                |
|                               |                       | 52            | 71    | 101   | 61    | 37                  | 32        | 4                       |                           |               | 25,9            | 22,4      | 12,0                                                                                | 10,0                                                                                | 16,0                                                                                | 16,0                                                                                |
|                               |                       | 63            | 82    | 112   | 72    | 45                  | 40        | 5                       |                           |               | 30,4            | 28,0      | 15,0                                                                                | 12,5                                                                                | 20,0                                                                                | 20,0                                                                                |
|                               |                       | 74            | 93    | 123   | 83    | 53                  | 48        | 6                       |                           |               | 33,7            | 31,7      | 18,0                                                                                | 15,0                                                                                | 24,0                                                                                | 24,0                                                                                |
|                               |                       | 85            | 104   | 134   | 94    | 61                  | 56        | 7                       |                           |               | 36,3            | 34,7      | 21,0                                                                                | 17,5                                                                                | 28,0                                                                                | 28,0                                                                                |
| 200×400                       | 1000                  | 19            |       |       |       | 13                  |           | 1                       | 8                         | 3             | 9,1             |           | 3,0                                                                                 | 1,2                                                                                 | 4,0                                                                                 |                                                                                     |
|                               |                       | 30            | 49    | 79    | 39    | 21                  | 16        | 2                       |                           |               | 14,7            | 11,2      | 6,0                                                                                 | 2,4                                                                                 | 8,0                                                                                 |                                                                                     |
|                               |                       | 41            | 60    | 90    | 50    | 29                  | 24        | 3                       |                           |               | 20,3            | 16,8      | 9,0                                                                                 | 3,6                                                                                 | 12,0                                                                                |                                                                                     |
|                               |                       | 52            | 71    | 101   | 61    | 37                  | 32        | 4                       |                           |               | 25,9            | 22,4      | 12,0                                                                                | 4,8                                                                                 | 16,0                                                                                |                                                                                     |
|                               |                       | 63            | 82    | 112   | 72    | 45                  | 40        | 5                       |                           |               | 30,4            | 28,0      | 15,0                                                                                | 6,0                                                                                 | 20,0                                                                                |                                                                                     |
|                               |                       | 74            | 93    | 123   | 83    | 53                  | 48        | 6                       |                           |               | 33,7            | 31,7      | 18,0                                                                                | 7,2                                                                                 | 24,0                                                                                |                                                                                     |
|                               |                       | 85            | 104   | 134   | 94    | 61                  | 56        | 7                       |                           |               | 36,3            | 34,7      | 21,0                                                                                | 8,4                                                                                 | 28,0                                                                                |                                                                                     |
| 250×400<br>Ø 250              | 1250<br>613           | 19            |       |       |       | 13                  |           | 1                       | 8                         | 3             | 9,1             |           | 2,5                                                                                 | 1,2                                                                                 | 3,0                                                                                 | 4,0                                                                                 |
|                               |                       | 30            | 49    | 79    | 39    | 21                  | 16        | 2                       |                           |               | 14,7            | 11,2      | 5,0                                                                                 | 2,4                                                                                 | 5,0                                                                                 | 8,0                                                                                 |
|                               |                       | 41            | 60    | 90    | 50    | 29                  | 24        | 3                       |                           |               | 20,3            | 16,8      | 7,5                                                                                 | 3,6                                                                                 | 8,0                                                                                 | 12,0                                                                                |
|                               |                       | 52            | 71    | 101   | 61    | 37                  | 32        | 4                       |                           |               | 25,9            | 22,4      | 10,0                                                                                | 4,8                                                                                 | 10,0                                                                                | 16,0                                                                                |
|                               |                       | 63            | 82    | 112   | 72    | 45                  | 40        | 5                       |                           |               | 31,5            | 28,0      | 12,5                                                                                | 6,0                                                                                 | 13,0                                                                                | 20,0                                                                                |
|                               |                       | 74            | 93    | 123   | 83    | 53                  | 48        | 6                       |                           |               | 36,5            | 33,6      | 15,0                                                                                | 7,2                                                                                 | 16,0                                                                                | 24,0                                                                                |
|                               |                       | 85            | 104   | 134   | 94    | 61                  | 56        | 7                       |                           |               | 40,0            | 37,9      | 17,5                                                                                | 8,4                                                                                 | 18,0                                                                                | 28,0                                                                                |
|                               |                       | 96            | 115   | 154   | 105   | 69                  | 64        | 8                       |                           |               | 43,1            | 41,2      | 20,0                                                                                | 9,6                                                                                 | 21,0                                                                                | 32,0                                                                                |
|                               |                       |               | 126   | 156   | 116   |                     | 72        | 9                       |                           |               |                 | 44,1      | 22,5                                                                                | 10,8                                                                                | 23,0                                                                                | 36,0                                                                                |
|                               |                       |               |       |       |       |                     |           |                         |                           |               |                 |           |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 300×400<br>Ø 300              | 1800<br>883           | 19            |       |       |       | 13                  |           | 1                       | 8                         | 3             | 9,1             |           | 2,0                                                                                 | 1,2                                                                                 | 2,0                                                                                 | 3,0                                                                                 |
|                               |                       | 30            | 49    | 79    | 39    | 21                  | 16        | 2                       |                           |               | 14,7            | 11,2      | 4,0                                                                                 | 2,4                                                                                 | 4,0                                                                                 | 6,0                                                                                 |
|                               |                       | 41            | 60    | 90    | 50    | 29                  | 24        | 3                       |                           |               | 20,3            | 16,8      | 6,0                                                                                 | 3,6                                                                                 | 7,0                                                                                 | 9,0                                                                                 |
|                               |                       | 52            | 71    | 101   | 61    | 37                  | 32        | 4                       |                           |               | 25,9            | 22,4      | 8,0                                                                                 | 4,8                                                                                 | 9,0                                                                                 | 12,0                                                                                |
|                               |                       | 63            | 82    | 112   | 72    | 45                  | 40        | 5                       |                           |               | 31,5            | 28,0      | 10,0                                                                                | 6,0                                                                                 | 11,0                                                                                | 15,0                                                                                |
|                               |                       | 74            | 93    | 123   | 83    | 53                  | 48        | 6                       |                           |               | 37,1            | 33,6      | 12,0                                                                                | 7,2                                                                                 | 13,0                                                                                | 18,0                                                                                |
|                               |                       | 85            | 104   | 134   | 94    | 61                  | 56        | 7                       |                           |               | 42,5            | 39,2      | 14,0                                                                                | 8,4                                                                                 | 15,0                                                                                | 21,0                                                                                |
|                               |                       | 96            | 115   | 154   | 105   | 69                  | 64        | 8                       |                           |               | 46,2            | 44,0      | 16,0                                                                                | 9,6                                                                                 | 18,0                                                                                | 24,0                                                                                |
|                               |                       | 107           | 126   | 156   | 116   | 77                  | 72        | 9                       |                           |               | 49,5            | 47,5      | 18,0                                                                                | 10,8                                                                                | 20,0                                                                                | 27,0                                                                                |
|                               |                       | 118           | 137   | 167   | 127   | 85                  | 80        | 10                      |                           |               | 52,4            | 50,7      | 20,0                                                                                | 12,0                                                                                | 22,0                                                                                | 30,0                                                                                |
|                               |                       |               | 148   | 178   | 138   |                     | 88        | 11                      |                           |               |                 | 53,4      | 22,0                                                                                | 13,2                                                                                | 24,0                                                                                | 33,0                                                                                |
|                               |                       |               |       |       |       |                     |           |                         |                           |               |                 |           |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

| Širina × dužina, promjer  | Dopušteno opterećenje | Visina ležaja |       |       |       | Debljina elastomera |           | Broj slojeva elastomera | Deblji- na sloja elastomera | Deblji- na lima | Dopušteni pomak |           | Dopušteni kut zakretanja                                                            |                                                                                     |                                                                                     |                                                                                     |
|---------------------------|-----------------------|---------------|-------|-------|-------|---------------------|-----------|-------------------------|-----------------------------|-----------------|-----------------|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                           |                       | Tip 1         | Tip 2 | Tip 4 | Tip 5 | Tip 1               | Tip 2,4,5 |                         |                             |                 | Tip 1           | Tip 2,4,5 |  |  |  |  |
|                           |                       | d             |       |       |       | T                   |           |                         |                             |                 | n               | t         | s                                                                                   | V=+-                                                                                |                                                                                     | n,α                                                                                 |
| a×b, D                    | Fz                    | mm            |       |       |       | mm                  |           | -                       | mm                          | mm              | mm              |           | ‰                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Ø 350                     | 1202                  | 24            |       |       |       | 16                  |           | 1                       | 11                          | 4               | 11,2            |           |                                                                                     |                                                                                     |                                                                                     | 4,0                                                                                 |
|                           |                       | 39            | 56    | 86    | 46    | 27                  | 22        | 2                       |                             |                 | 18,9            | 15,4      |                                                                                     |                                                                                     |                                                                                     | 8,0                                                                                 |
|                           |                       | 54            | 71    | 101   | 61    | 38                  | 33        | 3                       |                             |                 | 26,6            | 23,1      |                                                                                     |                                                                                     |                                                                                     | 12,0                                                                                |
|                           |                       | 69            | 86    | 116   | 76    | 49                  | 44        | 4                       |                             |                 | 34,3            | 30,8      |                                                                                     |                                                                                     |                                                                                     | 16,0                                                                                |
|                           |                       | 84            | 101   | 131   | 91    | 60                  | 55        | 5                       |                             |                 | 42,0            | 38,5      |                                                                                     |                                                                                     |                                                                                     | 20,0                                                                                |
|                           |                       | 99            | 116   | 146   | 106   | 71                  | 66        | 6                       |                             |                 | 49,7            | 46,2      |                                                                                     |                                                                                     |                                                                                     | 24,0                                                                                |
|                           |                       | 114           | 131   | 161   | 121   | 82                  | 77        | 7                       |                             |                 | 54,6            | 52,4      |                                                                                     |                                                                                     |                                                                                     | 28,0                                                                                |
|                           |                       | 129           | 146   | 171   | 136   | 93                  | 88        | 8                       |                             |                 | 59,0            | 57,1      |                                                                                     |                                                                                     |                                                                                     | 32,0                                                                                |
|                           |                       | 144           | 161   | 191   | 151   | 104                 | 99        | 9                       |                             |                 | 62,7            | 61,1      |                                                                                     |                                                                                     |                                                                                     | 36,0                                                                                |
| 350×450                   | 2360                  | 24            |       |       |       | 16                  |           | 1                       | 11                          | 4               | 11,2            |           | 2,5                                                                                 | 2,0                                                                                 | 3,0                                                                                 |                                                                                     |
|                           |                       | 39            | 66    | 106   | 46    | 27                  | 22        | 2                       |                             |                 | 18,9            | 15,4      | 5,0                                                                                 | 4,0                                                                                 | 6,0                                                                                 |                                                                                     |
|                           |                       | 54            | 81    | 121   | 61    | 38                  | 33        | 3                       |                             |                 | 26,6            | 23,1      | 7,5                                                                                 | 6,0                                                                                 | 9,0                                                                                 |                                                                                     |
|                           |                       | 69            | 96    | 136   | 76    | 49                  | 44        | 4                       |                             |                 | 34,3            | 30,8      | 10,0                                                                                | 8,0                                                                                 | 12,0                                                                                |                                                                                     |
|                           |                       | 84            | 111   | 151   | 91    | 60                  | 55        | 5                       |                             |                 | 42,0            | 38,5      | 12,5                                                                                | 10,0                                                                                | 15,0                                                                                |                                                                                     |
|                           |                       | 99            | 126   | 166   | 106   | 71                  | 66        | 6                       |                             |                 | 49,5            | 46,2      | 15,0                                                                                | 12,0                                                                                | 19,0                                                                                |                                                                                     |
|                           |                       | 114           | 141   | 181   | 121   | 82                  | 77        | 7                       |                             |                 | 54,6            | 52,4      | 17,5                                                                                | 14,0                                                                                | 22,0                                                                                |                                                                                     |
|                           |                       | 129           | 156   | 196   | 136   | 93                  | 88        | 8                       |                             |                 | 59,0            | 57,1      | 20,0                                                                                | 16,0                                                                                | 26,0                                                                                |                                                                                     |
|                           |                       | 144           | 171   | 211   | 151   | 104                 | 99        | 9                       |                             |                 | 62,7            | 61,1      | 22,5                                                                                | 18,0                                                                                | 29,0                                                                                |                                                                                     |
|                           |                       |               |       | 226   |       |                     |           |                         |                             |                 |                 |           |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                           |                       |               |       | 241   |       |                     |           |                         |                             |                 |                 |           |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 400×500<br>Ø 400          | 3000<br>1885          | 24            |       |       |       | 16                  |           | 1                       | 11                          | 4               | 11,2            |           | 2,0                                                                                 | 1,5                                                                                 | 2,0                                                                                 | 3,0                                                                                 |
|                           |                       | 39            | 66    | 106   | 46    | 27                  | 22        | 2                       |                             |                 | 18,9            | 15,4      | 4,0                                                                                 | 3,0                                                                                 | 5,0                                                                                 | 6,0                                                                                 |
|                           |                       | 54            | 81    | 121   | 61    | 38                  | 33        | 3                       |                             |                 | 26,6            | 23,1      | 6,0                                                                                 | 4,5                                                                                 | 8,0                                                                                 | 9,0                                                                                 |
|                           |                       | 69            | 96    | 136   | 76    | 49                  | 44        | 4                       |                             |                 | 34,3            | 30,8      | 8,0                                                                                 | 6,0                                                                                 | 10,0                                                                                | 12,0                                                                                |
|                           |                       | 84            | 111   | 151   | 91    | 60                  | 55        | 5                       |                             |                 | 42,0            | 38,5      | 10,0                                                                                | 7,5                                                                                 | 13,0                                                                                | 15,0                                                                                |
|                           |                       | 99            | 126   | 166   | 106   | 71                  | 66        | 6                       |                             |                 | 49,5            | 46,2      | 12,0                                                                                | 9,0                                                                                 | 15,0                                                                                | 18,0                                                                                |
|                           |                       | 114           | 141   | 181   | 121   | 82                  | 77        | 7                       |                             |                 | 57,0            | 53,9      | 14,0                                                                                | 10,5                                                                                | 18,0                                                                                | 21,0                                                                                |
|                           |                       | 129           | 156   | 196   | 136   | 93                  | 88        | 8                       |                             |                 | 62,1            | 59,8      | 16,0                                                                                | 12,0                                                                                | 20,0                                                                                | 24,0                                                                                |
|                           |                       | 144           | 171   | 211   | 151   | 104                 | 99        | 9                       |                             |                 | 66,6            | 64,6      | 18,0                                                                                | 13,5                                                                                | 22,0                                                                                | 27,0                                                                                |
|                           |                       | 159           | 186   | 226   | 166   | 115                 | 110       | 10                      |                             |                 | 70,4            | 68,8      | 20,0                                                                                | 15,0                                                                                | 24,0                                                                                | 30,0                                                                                |
|                           |                       |               | 201   | 241   | 181   |                     | 121       | 11                      |                             |                 |                 | 72,3      | 22,0                                                                                | 17,0                                                                                |                                                                                     | 33,0                                                                                |
| 450×600<br>Ø 450          | 4050<br>2385          | 24            |       |       |       | 16                  |           | 1                       | 11                          | 4               | 11,2            |           | 2,0                                                                                 | 1,2                                                                                 | 2,0                                                                                 | 3,0                                                                                 |
|                           |                       | 39            | 66    | 106   | 46    | 27                  | 22        | 2                       |                             |                 | 18,9            | 15,4      | 4,0                                                                                 | 2,4                                                                                 | 4,0                                                                                 | 6,0                                                                                 |
|                           |                       | 54            | 81    | 121   | 61    | 38                  | 33        | 3                       |                             |                 | 26,6            | 23,1      | 6,0                                                                                 | 3,6                                                                                 | 7,0                                                                                 | 9,0                                                                                 |
|                           |                       | 69            | 96    | 136   | 76    | 49                  | 44        | 4                       |                             |                 | 34,3            | 30,8      | 8,0                                                                                 | 4,8                                                                                 | 9,0                                                                                 | 12,0                                                                                |
|                           |                       | 84            | 111   | 151   | 91    | 60                  | 55        | 5                       |                             |                 | 42,0            | 38,5      | 10,0                                                                                | 6,0                                                                                 | 11,0                                                                                | 15,0                                                                                |
|                           |                       | 99            | 126   | 166   | 106   | 71                  | 66        | 6                       |                             |                 | 49,7            | 46,2      | 12,0                                                                                | 7,2                                                                                 | 13,0                                                                                | 18,0                                                                                |
|                           |                       | 114           | 141   | 181   | 121   | 82                  | 77        | 7                       |                             |                 | 57,4            | 53,9      | 14,0                                                                                | 8,4                                                                                 | 15,0                                                                                | 21,0                                                                                |
|                           |                       | 129           | 156   | 196   | 136   | 93                  | 88        | 8                       |                             |                 | 64,5            | 61,6      | 16,0                                                                                | 9,6                                                                                 | 18,0                                                                                | 24,0                                                                                |
|                           |                       | 144           | 171   | 211   | 151   | 104                 | 99        | 9                       |                             |                 | 69,6            | 67,3      | 18,0                                                                                | 10,8                                                                                | 20,0                                                                                | 27,0                                                                                |
|                           |                       | 159           | 186   | 226   | 166   | 115                 | 110       | 10                      |                             |                 | 74,1            | 72,1      | 20,0                                                                                | 12,0                                                                                | 22,0                                                                                | 30,0                                                                                |
|                           |                       | 174           | 201   | 241   | 181   | 126                 | 121       | 11                      |                             |                 | 78,1            | 76,4      | 22,0                                                                                | 13,2                                                                                | 24,0                                                                                | 33,0                                                                                |
|                           | 216                   | 256           | 196   |       | 132   | 12                  |           | 80,1                    | 24,0                        | 14,4            | 26,0            | 36,0      |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| 500×600<br>Ø 500<br>Ø 550 | 4500<br>2945<br>3562  | 24            |       |       |       | 16                  |           | 1                       | 11                          | 4               | 11,2            |           | 2,0                                                                                 | 1,2                                                                                 | 2,0                                                                                 | 2,0                                                                                 |
|                           |                       | 39            | 66    | 106   | 46    | 27                  | 22        | 2                       |                             |                 | 18,9            | 15,4      | 4,0                                                                                 | 2,4                                                                                 | 4,0                                                                                 | 4,0                                                                                 |
|                           |                       | 54            | 81    | 121   | 61    | 38                  | 33        | 3                       |                             |                 | 26,6            | 23,1      | 6,0                                                                                 | 3,6                                                                                 | 7,0                                                                                 | 6,0                                                                                 |
|                           |                       | 69            | 96    | 136   | 76    | 49                  | 44        | 4                       |                             |                 | 34,3            | 30,8      | 8,0                                                                                 | 4,8                                                                                 | 9,0                                                                                 | 8,0                                                                                 |
|                           |                       | 84            | 111   | 151   | 91    | 60                  | 55        | 5                       |                             |                 | 42,0            | 38,5      | 10,0                                                                                | 6,0                                                                                 | 11,0                                                                                | 10,0                                                                                |
|                           |                       | 99            | 126   | 166   | 106   | 71                  | 66        | 6                       |                             |                 | 49,7            | 46,2      | 12,0                                                                                | 7,2                                                                                 | 13,0                                                                                | 12,0                                                                                |
|                           |                       | 114           | 141   | 181   | 121   | 82                  | 77        | 7                       |                             |                 | 57,4            | 53,9      | 14,0                                                                                | 8,4                                                                                 | 15,0                                                                                | 14,0                                                                                |
|                           |                       | 129           | 156   | 196   | 136   | 93                  | 88        | 8                       |                             |                 | 65,1            | 61,6      | 16,0                                                                                | 9,6                                                                                 | 18,0                                                                                | 16,0                                                                                |
|                           |                       | 144           | 171   | 211   | 151   | 104                 | 99        | 9                       |                             |                 | 72,0            | 69,3      | 18,0                                                                                | 10,8                                                                                | 20,0                                                                                | 18,0                                                                                |
|                           |                       | 159           | 186   | 226   | 166   | 115                 | 110       | 10                      |                             |                 | 77,1            | 74,8      | 20,0                                                                                | 12,0                                                                                | 22,0                                                                                | 20,0                                                                                |
|                           |                       | 174           | 201   | 241   | 181   | 126                 | 121       | 11                      |                             |                 | 81,7            | 79,6      | 22,0                                                                                | 13,2                                                                                | 24,0                                                                                | 22,0                                                                                |
|                           |                       | 189           | 216   | 256   | 196   | 137                 | 132       | 12                      |                             |                 | 85,8            | 83,9      | 24,0                                                                                | 14,4                                                                                | 26,0                                                                                | 24,0                                                                                |
|                           |                       | 204           | 231   | 271   | 211   | 148                 | 143       | 13                      |                             |                 | 89,4            | 87,8      | 26,0                                                                                | 15,6                                                                                | 29,0                                                                                | 26,0                                                                                |

| Širina ×<br>dužina,<br>promjer | Dopu-<br>teno<br>optere-<br>ćenje | Visina ležaja             |                       |       |       | Debljina<br>elastomera |           | Broj<br>slojeva<br>elasto-<br>mera | Deblji-<br>na sloja<br>elasto-<br>mera | Deblji-<br>na<br>lima | Dopušteni pomak |           | Dopušteni kut zakretanja |      |      |      |
|--------------------------------|-----------------------------------|---------------------------|-----------------------|-------|-------|------------------------|-----------|------------------------------------|----------------------------------------|-----------------------|-----------------|-----------|--------------------------|------|------|------|
|                                |                                   | Tip 1                     | Tip 2                 | Tip 4 | Tip 5 | Tip 1                  | Tip 2,4,5 |                                    |                                        |                       | Tip 1           | Tip 2,4,5 |                          |      |      |      |
|                                |                                   | d                         |                       |       |       | T                      |           |                                    |                                        |                       | n               | t         | s                        | V=+- |      | n,α  |
| a×b, D<br>mm                   | Fz<br>kN                          | mm                        |                       |       |       | mm                     |           | -                                  | mm                                     | mm                    | mm              |           | ‰                        |      |      |      |
| 600×700<br>fi 600<br>fi 650    | 6300<br>4240<br>4977              | 30                        |                       |       |       | 20                     |           | 1                                  | 15                                     | 5                     | 14,0            |           | 2,0                      | 1,5  | 3,0  | 2,0  |
|                                |                                   | 50                        | 75                    | 115   | 55    | 35                     | 30        | 2                                  |                                        |                       | 24,5            | 21,0      | 4,0                      | 3,0  | 5,0  | 4,0  |
|                                |                                   | 70                        | 95                    | 135   | 75    | 50                     | 45        | 3                                  |                                        |                       | 35,0            | 31,5      | 6,0                      | 4,5  | 8,0  | 6,0  |
|                                |                                   | 90                        | 115                   | 155   | 95    | 65                     | 60        | 4                                  |                                        |                       | 45,5            | 42,0      | 8,0                      | 6,0  | 10,0 | 8,0  |
|                                |                                   | 110                       | 135                   | 175   | 115   | 80                     | 75        | 5                                  |                                        |                       | 56,0            | 52,5      | 10,0                     | 7,5  | 13,0 | 10,0 |
|                                |                                   | 130                       | 155                   | 195   | 135   | 95                     | 90        | 6                                  |                                        |                       | 66,5            | 63,0      | 12,0                     | 9,0  | 15,0 | 12,0 |
|                                |                                   | 150                       | 175                   | 215   | 155   | 110                    | 105       | 7                                  |                                        |                       | 77,0            | 73,5      | 14,0                     | 10,5 | 18,0 | 14,0 |
|                                |                                   | 170                       | 195                   | 235   | 175   | 125                    | 120       | 8                                  |                                        |                       | 86,5            | 84,0      | 16,0                     | 12,0 | 20,0 | 16,0 |
|                                |                                   | 190                       | 215                   | 255   | 195   | 140                    | 135       | 9                                  |                                        |                       | 93,3            | 91,1      | 18,0                     | 13,5 | 23,0 | 18,0 |
|                                |                                   | 210                       | 235                   | 275   | 215   | 155                    | 150       | 10                                 |                                        |                       | 99,5            | 97,5      | 20,0                     | 15,0 | 25,0 | 20,0 |
|                                |                                   | 230                       | 255                   | 295   | 235   | 170                    | 165       | 11                                 |                                        |                       | 104,8           | 103,1     | 22,0                     | 16,5 | 28,0 | 22,0 |
|                                |                                   |                           | 275                   | 315   | 255   |                        | 180       | 12                                 |                                        |                       |                 | 108,0     | 24,0                     | 18,0 | 30,0 | 24,0 |
| 700×800<br>Ø 700<br>Ø 750      | 8400<br>5772<br>6625              | 30                        |                       |       |       | 20                     |           | 1                                  | 15                                     | 5                     | 14,0            |           | 2,0                      | 1,2  | 2,0  | 2,0  |
|                                |                                   | 50                        | 75                    | 115   | 55    | 35                     | 30        | 2                                  |                                        |                       | 24,5            | 21,0      | 4,0                      | 2,4  | 5,0  | 4,0  |
|                                |                                   | 70                        | 95                    | 135   | 75    | 50                     | 45        | 3                                  |                                        |                       | 35,0            | 31,5      | 6,0                      | 3,6  | 7,0  | 6,0  |
|                                |                                   | 90                        | 115                   | 155   | 95    | 65                     | 60        | 4                                  |                                        |                       | 45,5            | 42,0      | 8,0                      | 4,8  | 9,0  | 8,0  |
|                                |                                   | 110                       | 135                   | 175   | 115   | 80                     | 75        | 5                                  |                                        |                       | 56,0            | 52,5      | 10,0                     | 6,0  | 11,0 | 10,0 |
|                                |                                   | 130                       | 155                   | 195   | 135   | 95                     | 90        | 6                                  |                                        |                       | 66,0            | 63,0      | 12,0                     | 7,2  | 13,0 | 12,0 |
|                                |                                   | 150                       | 175                   | 215   | 155   | 110                    | 105       | 7                                  |                                        |                       | 77,0            | 73,5      | 14,0                     | 8,4  | 15,0 | 14,0 |
|                                |                                   | 170                       | 195                   | 235   | 175   | 125                    | 120       | 8                                  |                                        |                       | 87,5            | 84,0      | 16,0                     | 9,6  | 18,0 | 16,0 |
|                                |                                   | 190                       | 215                   | 255   | 195   | 140                    | 135       | 9                                  |                                        |                       | 98,0            | 94,5      | 18,0                     | 10,8 | 21,0 | 18,0 |
|                                |                                   | 210                       | 235                   | 275   | 215   | 155                    | 150       | 10                                 |                                        |                       | 105,2           | 102,9     | 20,0                     | 12,0 | 23,0 | 20,0 |
|                                |                                   | 230                       | 255                   | 295   | 235   | 170                    | 165       | 11                                 |                                        |                       | 111,7           | 109,6     | 22,0                     | 13,2 | 25,0 | 22,0 |
|                                |                                   | 250                       | 275                   | 315   | 255   | 185                    | 180       | 12                                 |                                        |                       | 117,6           | 115,7     | 24,0                     | 14,4 | 28,0 | 24,0 |
|                                |                                   | 270                       | 295                   | 335   | 275   | 200                    | 195       | 13                                 |                                        |                       | 122,9           | 121,2     | 26,0                     | 15,6 | 30,0 | 26,0 |
|                                |                                   |                           | 315                   | 355   | 295   |                        | 210       | 14                                 |                                        |                       |                 | 126,0     | 28,0                     | 16,8 | 32,0 | 28,0 |
| 800×800<br>Ø 800               | 9600<br>7536                      | 33                        |                       |       |       | 23                     |           | 1                                  | 18                                     | 5                     | 16,1            |           | 2,0                      | 2,0  | 3,0  | 2,0  |
|                                |                                   | 56                        | 81                    | 121   | 61    | 41                     | 36        | 2                                  |                                        |                       | 28,7            | 25,2      | 4,0                      | 4,0  | 6,0  | 4,0  |
|                                |                                   | 79                        | 104                   | 144   | 84    | 59                     | 54        | 3                                  |                                        |                       | 41,3            | 37,8      | 6,0                      | 6,0  | 8,0  | 6,0  |
|                                |                                   | 102                       | 127                   | 167   | 107   | 77                     | 72        | 4                                  |                                        |                       | 53,9            | 50,4      | 8,0                      | 8,0  | 11,0 | 8,0  |
|                                |                                   | 125                       | 150                   | 190   | 130   | 95                     | 90        | 5                                  |                                        |                       | 66,5            | 63,0      | 10,0                     | 10,0 | 14,0 | 10,0 |
|                                |                                   | 148                       | 173                   | 213   | 153   | 113                    | 108       | 6                                  |                                        |                       | 79,1            | 75,6      | 12,0                     | 12,0 | 17,0 | 12,0 |
|                                |                                   | 171                       | 196                   | 236   | 176   | 131                    | 126       | 7                                  |                                        |                       | 91,7            | 88,2      | 14,0                     | 14,0 | 20,0 | 14,0 |
|                                |                                   | 194                       | 219                   | 259   | 199   | 149                    | 144       | 8                                  |                                        |                       | 104,3           | 100,8     | 16,0                     | 16,0 | 22,0 | 16,0 |
|                                |                                   | 217                       | 242                   | 282   | 222   | 167                    | 162       | 9                                  |                                        |                       | 115,4           | 113,4     | 18,0                     | 18,0 | 25,0 | 18,0 |
|                                |                                   | 240                       | 265                   | 305   | 245   | 185                    | 180       | 10                                 |                                        |                       | 123,7           | 121,5     | 20,0                     | 20,0 | 28,0 | 20,0 |
|                                |                                   | 263                       | 288                   | 328   | 268   | 203                    | 198       | 11                                 |                                        |                       | 131,2           | 129,2     | 22,0                     | 22,0 | 31,0 | 22,0 |
|                                |                                   | 286                       | 311                   | 351   | 291   | 221                    | 216       | 12                                 |                                        |                       | 137,8           | 136,0     | 24,0                     | 24,0 | 34,0 | 24,0 |
|                                |                                   | 309                       | 334                   | 374   | 314   | 239                    | 234       | 13                                 |                                        |                       | 143,7           | 142,0     | 26,0                     | 26,0 | 36,0 | 26,0 |
|                                |                                   | 900×900<br>Ø 900<br>Ø 850 | 12150<br>9538<br>8507 | 33    |       |                        |           | 23                                 |                                        |                       |                 | 1         | 18                       | 5    | 16,1 |      |
| 56                             | 81                                |                           |                       | 121   | 61    | 41                     | 36        | 2                                  | 28,7                                   | 25,2                  | 3,0             | 3,0       |                          |      | 4,0  | 3,0  |
| 79                             | 104                               |                           |                       | 144   | 84    | 59                     | 54        | 3                                  | 41,3                                   | 37,8                  | 4,5             | 4,5       |                          |      | 6,0  | 5,0  |
| 102                            | 127                               |                           |                       | 167   | 107   | 77                     | 72        | 4                                  | 53,9                                   | 50,4                  | 6,0             | 6,0       |                          |      | 8,0  | 6,0  |
| 125                            | 150                               |                           |                       | 190   | 130   | 95                     | 90        | 5                                  | 66,5                                   | 63,0                  | 7,5             | 7,5       |                          |      | 11,0 | 8,0  |
| 148                            | 173                               |                           |                       | 213   | 153   | 113                    | 108       | 6                                  | 79,1                                   | 75,6                  | 9,0             | 9,0       |                          |      | 13,0 | 9,0  |
| 171                            | 196                               |                           |                       | 236   | 176   | 131                    | 126       | 7                                  | 91,7                                   | 88,2                  | 10,5            | 10,5      |                          |      | 15,0 | 11,0 |
| 194                            | 219                               |                           |                       | 259   | 199   | 149                    | 144       | 8                                  | 104,3                                  | 100,8                 | 12,0            | 12,0      |                          |      | 17,0 | 12,0 |
| 217                            | 242                               |                           |                       | 282   | 222   | 167                    | 162       | 9                                  | 116,9                                  | 113,4                 | 13,5            | 13,5      |                          |      | 19,0 | 14,0 |
| 240                            | 265                               |                           |                       | 305   | 245   | 185                    | 180       | 10                                 | 128,4                                  | 126,0                 | 15,0            | 15,0      |                          |      | 21,0 | 15,0 |
| 263                            | 288                               |                           |                       | 328   | 268   | 203                    | 198       | 11                                 | 136,9                                  | 134,6                 | 16,5            | 16,5      |                          |      | 23,0 | 17,0 |
| 286                            | 311                               |                           |                       | 351   | 291   | 221                    | 216       | 12                                 | 144,6                                  | 142,6                 | 18,0            | 18,0      |                          |      | 25,0 | 18,0 |
| 309                            | 334                               |                           |                       | 374   | 314   | 239                    | 234       | 13                                 | 151,6                                  | 149,8                 | 19,5            | 19,5      |                          |      | 27,0 | 20,0 |
| 332                            | 357                               |                           |                       | 397   | 337   | 257                    | 252       | 14                                 | 157,9                                  | 156,2                 | 21,0            | 21,0      |                          |      | 29,0 | 21,0 |
|                                | 380                               |                           |                       | 420   | 360   |                        | 270       | 15                                 |                                        | 162,0                 | 22,5            | 22,5      |                          |      | 32,0 | 23,0 |

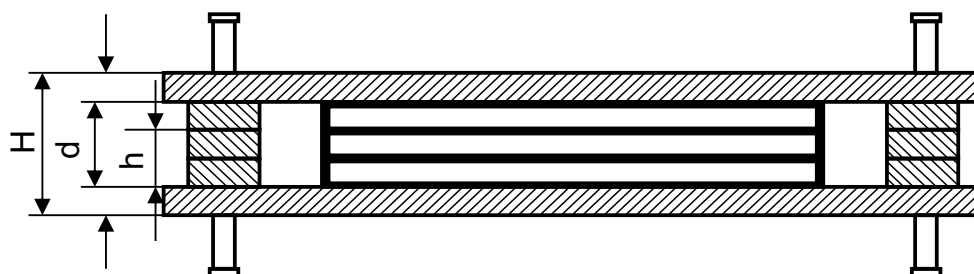
## Dopušteni pritisak i kut zakretanja

Tablica 3

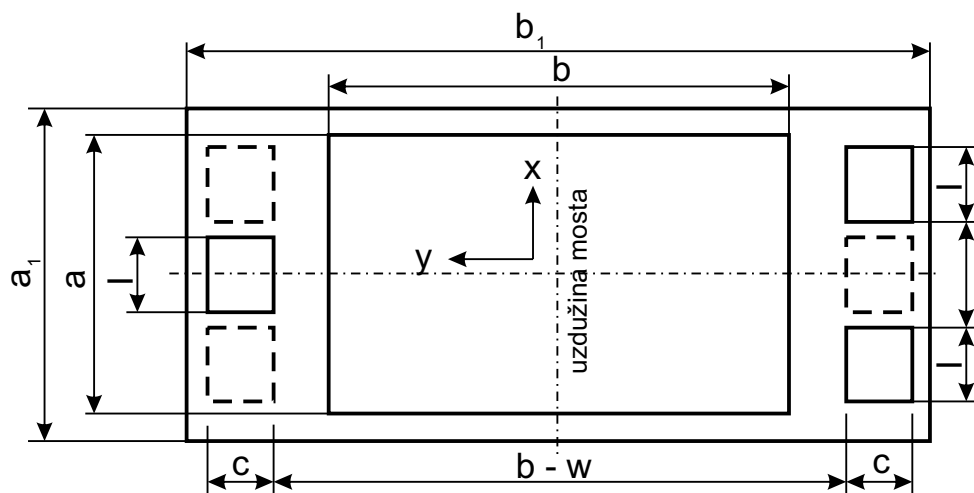
| Površina osnovice | Debljina sloja elastomera | Dopušteni srednji pritisak | Dopušteni kut zakretanja po jednom sloju elastomera za zakretanje |                                     |                                     |
|-------------------|---------------------------|----------------------------|-------------------------------------------------------------------|-------------------------------------|-------------------------------------|
|                   |                           |                            | Paralelno s većom stranicom osnov.                                | Paralelno s manjom stranicom osnov. | Koso s obzirom na stranice osnovice |
| mm                | mm                        | N/mm <sup>2</sup>          | arc.                                                              | arc.                                | arc.                                |
| 100×100           | 5                         | 10,0                       | 0,0040                                                            | 0,0040                              | 0,0056                              |
| 100×150           | 5                         | 10,0                       | 0,0040                                                            | 0,0030                              | 0,0050                              |
| 150×200           | 5                         | 10,0                       | 0,0030                                                            | 0,0030                              | 0,0042                              |
| 200×250           | 8                         | 12,5                       | 0,0030                                                            | 0,0025                              | 0,0040                              |
| 200×300           | 8                         | 12,5                       | 0,0030                                                            | 0,0020                              | 0,0035                              |
| 200×400           | 8                         | 12,5                       | 0,0030                                                            | 0,0012                              | 0,0030                              |
| 250×400           | 8                         | 12,5                       | 0,0025                                                            | 0,0012                              | 0,0026                              |
| 300×400           | 8                         | 15,0                       | 0,0020                                                            | 0,0012                              | 0,0022                              |
| Ø 200             | 8                         | 10,0                       |                                                                   | 0,0040                              |                                     |
| Ø 250             | 8                         | 12,5                       |                                                                   | 0,0040                              |                                     |
| Ø 300             | 8                         | 12,5                       |                                                                   | 0,0030                              |                                     |
| 350×450           | 11                        | 15,0                       | 0,0025                                                            | 0,0020                              | 0,0032                              |
| 400×500           | 11                        | 15,0                       | 0,0020                                                            | 0,0015                              | 0,0025                              |
| 450×600           | 11                        | 15,0                       | 0,0020                                                            | 0,0012                              | 0,0022                              |
| 500×600           | 11                        | 15,0                       | 0,0020                                                            | 0,0012                              | 0,0022                              |
| 600×700           | 15                        | 15,0                       | 0,0020                                                            | 0,0015                              | 0,0025                              |
| 700×800           | 15                        | 15,0                       | 0,0020                                                            | 0,0012                              | 0,0023                              |
| 800×800           | 18                        | 15,0                       | 0,0020                                                            | 0,0020                              | 0,0028                              |
| 900×900           | 18                        | 15,0                       | 0,0015                                                            | 0,0015                              | 0,0021                              |
| Ø 350             | 11                        | 12,5                       |                                                                   | 0,0040                              |                                     |
| Ø 400             | 11                        | 15,0                       |                                                                   | 0,0030                              |                                     |
| Ø 450             | 11                        | 15,0                       |                                                                   | 0,0030                              |                                     |
| Ø 500             | 11                        | 15,0                       |                                                                   | 0,0020                              |                                     |
| Ø 600             | 15                        | 15,0                       |                                                                   | 0,0020                              |                                     |
| Ø 700             | 15                        | 15,0                       |                                                                   | 0,0020                              |                                     |
| Ø 800             | 18                        | 15,0                       |                                                                   | 0,0020                              |                                     |
| Ø 900             | 18                        | 15,0                       |                                                                   | 0,0015                              |                                     |

## AEL SA NAPRAVOM ZA SPREČAVANJE POMAKA

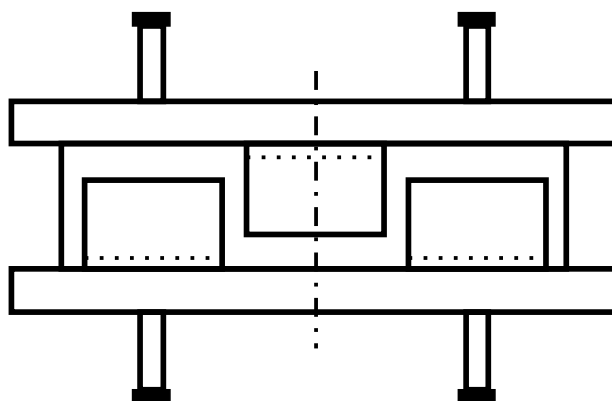
*Nepomičan u uzdužnom smjeru AEL-a*



*Uzdužni presjek*



*Tlocrt (donja ploča/gornja ploča)*



*Pogled sa strane*



Tablica 4

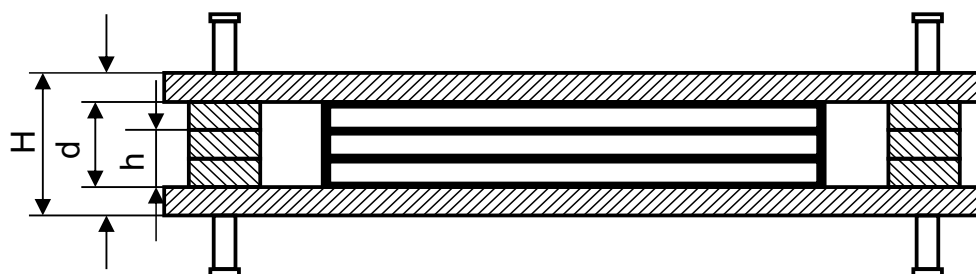
| Dimenzije ležaja                       |     | Dopuštena horizontalna sila | Dimenzije pridržane konstrukcije                                     |                          |     | Broj moždanika |
|----------------------------------------|-----|-----------------------------|----------------------------------------------------------------------|--------------------------|-----|----------------|
| a×b<br>Ø                               | d   | H <sub>dozv</sub>           | Dimenzija ploče<br>a1×b1                                             | Dimenzija letve<br>c×l h |     | Ø 22<br>n      |
| mm                                     | mm  | kN                          | mm                                                                   | mm                       | mm  | kom            |
| 150×200                                | 21  | 172                         | 190×345 do 395                                                       | 40×50                    | 15  | 4              |
|                                        | 28  | 200                         |                                                                      | 40×50                    | 20  |                |
|                                        | 35  | 180                         |                                                                      | 40×50                    | 25  |                |
|                                        | 42  | 160                         |                                                                      | 40×50                    | 30  |                |
|                                        | 49  | 144                         |                                                                      | 40×50                    | 40  |                |
|                                        | 56  | 132                         |                                                                      | 40×50                    | 40  |                |
|                                        | 63  | 140                         |                                                                      | 50×50                    | 50  |                |
| Ø 200<br>200×250<br>200×300<br>200×400 | 30  | 230                         | 240×370 do 435<br>240×420 do 485<br>240×470 do 535<br>240×560 do 630 | 50×60                    | 20  | 6              |
|                                        | 41  | 264                         |                                                                      | 50×60                    | 30  |                |
|                                        | 52  | 228                         |                                                                      | 50×60                    | 40  |                |
|                                        | 63  | 204                         |                                                                      | 50×60                    | 50  |                |
|                                        | 74  | 204                         |                                                                      | (60)×60                  | 60  |                |
|                                        | 85  | 182                         |                                                                      | (60)×60                  | 60  |                |
| Ø 250<br>250×400                       | 30  | 289                         | 290×440 do 500<br>290×590 do 650                                     | 60×80                    | 20  | 8              |
|                                        | 41  | 318                         |                                                                      | 60×80                    | 30  |                |
|                                        | 52  | 346                         |                                                                      | 60×80                    | 40  |                |
|                                        | 63  | 310                         |                                                                      | 60×80                    | 50  |                |
|                                        | 74  | 280                         |                                                                      | 60×80                    | 60  |                |
|                                        | 85  | 254                         |                                                                      | 60×80                    | 60  |                |
|                                        | 96  | 230                         |                                                                      | 60×80                    | 80  |                |
| Ø 300<br>300×400                       | 30  | 289                         | 340×525 do 565<br>340×590 do 665                                     | 60×90                    | 20  | 8              |
|                                        | 41  | 319                         |                                                                      | 60×90                    | 30  |                |
|                                        | 52  | 388                         |                                                                      | 60×90                    | 40  |                |
|                                        | 63  | 350                         |                                                                      | 60×90                    | 50  |                |
|                                        | 74  | 318                         |                                                                      | 60×90                    | 60  |                |
|                                        | 85  | 288                         |                                                                      | 60×90                    | 60  |                |
|                                        | 96  | 264                         |                                                                      | 60×90                    | 80  |                |
|                                        | 107 | 242                         |                                                                      | 60×90                    | 80  |                |
|                                        | 118 | 224                         |                                                                      | 60×90                    | 80  |                |
| Ø 350<br>350×450                       | 54  | 436                         | 390×565 do 640<br>390×665 do 740                                     | 60×120                   | 40  | 10             |
|                                        | 69  | 468                         |                                                                      | 60×120                   | 50  |                |
|                                        | 84  | 402                         |                                                                      | 60×120                   | 60  |                |
|                                        | 99  | 360                         |                                                                      | 60×120                   | 80  |                |
|                                        | 114 | 326                         |                                                                      | 60×120                   | 80  |                |
|                                        | 129 | 296                         |                                                                      | 60×120                   | 80  |                |
|                                        | 144 | 272                         |                                                                      | 60×120                   | 100 |                |
| Ø 400<br>400×500                       | 54  | 576                         | 440×670 do 745<br>440×755 do 845                                     | 80×120                   | 40  | 10             |
|                                        | 69  | 518                         |                                                                      | 80×120                   | 50  |                |
|                                        | 84  | 468                         |                                                                      | 80×120                   | 60  |                |
|                                        | 99  | 422                         |                                                                      | 80×120                   | 80  |                |
|                                        | 114 | 384                         |                                                                      | 80×120                   | 80  |                |
|                                        | 129 | 350                         |                                                                      | 80×120                   | 80  |                |
|                                        | 144 | 322                         |                                                                      | 80×120                   | 100 |                |
| Ø 450<br>450×600                       | 159 | 296                         | 490×705 do 850<br>490×855 do 1000                                    | 80×120                   | 100 | 10             |
|                                        | 174 | 274                         |                                                                      | (100)×120                | 120 |                |

| Dimenzije ležaja          |     | Dopuštena horizontalna sila | Dimenzije pridržane konstrukcije                         |                             |     | Broj moždanika |
|---------------------------|-----|-----------------------------|----------------------------------------------------------|-----------------------------|-----|----------------|
| a×b<br>Ø                  | d   | H <sub>doz</sub>            | Dimenzija ploče<br>a1×b1                                 | Dimenzija letve<br>c×l<br>h |     | Ø 22<br>n      |
| mm                        | mm  | kN                          | mm                                                       | mm                          | mm  | kom            |
| Ø 500<br>Ø 550<br>500×600 | 54  | 580                         | 540×755 do 920<br>590×820 do 970<br>540×885 do 1020      | 80×150                      | 40  | 12             |
|                           | 69  | 642                         |                                                          | 80×150                      | 50  |                |
|                           | 84  | 588                         |                                                          | 80×150                      | 60  |                |
|                           | 99  | 538                         |                                                          | 80×150                      | 80  |                |
|                           | 114 | 494                         |                                                          | 80×150                      | 80  |                |
|                           | 129 | 454                         |                                                          | 80×150                      | 80  |                |
|                           | 144 | 420                         |                                                          | 80×150                      | 100 |                |
|                           | 159 | 388                         |                                                          | 80×150                      | 100 |                |
|                           | 174 | 412                         |                                                          | 100×150                     | 120 |                |
|                           | 189 | 386                         |                                                          | 100×150                     | 120 |                |
|                           | 204 | 362                         |                                                          | 100×150                     | 150 |                |
| Ø 600<br>Ø 650<br>600×700 | 70  | 738                         | 640×870 do 1050<br>690×920 do 1100<br>640×970 do 1150    | 80×175                      | 60  | 12             |
|                           | 90  | 666                         |                                                          | 80×175                      | 80  |                |
|                           | 110 | 600                         |                                                          | 80×175                      | 80  |                |
|                           | 130 | 540                         |                                                          | 80×175                      | 100 |                |
|                           | 150 | 504                         |                                                          | 80×175                      | 100 |                |
|                           | 170 | 504                         |                                                          | 100×175                     | 120 |                |
|                           | 190 | 462                         |                                                          | 100×175                     | 120 |                |
|                           | 210 | 428                         |                                                          | 100×175                     | 150 |                |
|                           | 230 | 396                         |                                                          | 100×175                     | 150 |                |
| Ø 700<br>Ø 750<br>700×800 | 70  | 738                         | 740×970 do 1190<br>790×1045 do 1240<br>740×1035 do 1165  | 80×175                      | 60  | 16             |
|                           | 90  | 666                         |                                                          | 80×175                      | 80  |                |
|                           | 110 | 600                         |                                                          | 80×175                      | 80  |                |
|                           | 130 | 540                         |                                                          | 80×175                      | 100 |                |
|                           | 150 | 504                         |                                                          | 80×175                      | 100 |                |
|                           | 170 | 504                         |                                                          | 100×175                     | 120 |                |
|                           | 190 | 462                         |                                                          | 100×175                     | 120 |                |
|                           | 210 | 428                         |                                                          | 100×175                     | 150 |                |
|                           | 230 | 396                         |                                                          | 100×175                     | 150 |                |
|                           | 250 | 370                         |                                                          | 100×175                     | 150 |                |
|                           | 270 | 346                         |                                                          | 100×175                     | 200 |                |
| Ø 800<br>800×800          | 79  | 880                         | 840×1175 do 1330                                         | 100×200                     | 60  | 16             |
|                           | 102 | 797                         |                                                          | 100×200                     | 80  |                |
|                           | 125 | 716                         |                                                          | 100×200                     | 100 |                |
|                           | 148 | 648                         |                                                          | 100×200                     | 100 |                |
|                           | 171 | 588                         |                                                          | 100×200                     | 120 |                |
|                           | 194 | 536                         |                                                          | 100×200                     | 120 |                |
|                           | 217 | 624                         |                                                          | 100×500                     | 150 |                |
|                           | 240 | 576                         |                                                          | 100×500                     | 150 |                |
|                           | 263 | 536                         |                                                          | 100×500                     | 200 |                |
|                           | 286 | 500                         |                                                          | 100×500                     | 200 |                |
|                           | 309 | 468                         |                                                          | 100×500                     | 200 |                |
| Ø 850<br>Ø 900<br>900×900 | 79  | 1078                        | 890×1175 do 1410<br>940×1225 do 1460<br>940×1225 do 1460 | 100×250                     | 60  | 16             |
|                           | 102 | 994                         |                                                          | 100×250                     | 80  |                |
|                           | 125 | 910                         |                                                          | 100×250                     | 100 |                |
|                           | 148 | 834                         |                                                          | 100×250                     | 100 |                |
|                           | 171 | 766                         |                                                          | 100×250                     | 120 |                |
|                           | 194 | 704                         |                                                          | 100×250                     | 120 |                |
|                           | 217 | 802                         |                                                          | 150×250                     | 150 |                |
|                           | 240 | 746                         |                                                          | 150×250                     | 150 |                |
|                           | 263 | 698                         |                                                          | 150×250                     | 200 |                |
|                           | 286 | 654                         |                                                          | 150×250                     | 200 |                |
|                           | 309 | 614                         |                                                          | 150×250                     | 200 |                |
|                           | 332 | 598                         |                                                          | 150×250                     | 200 |                |

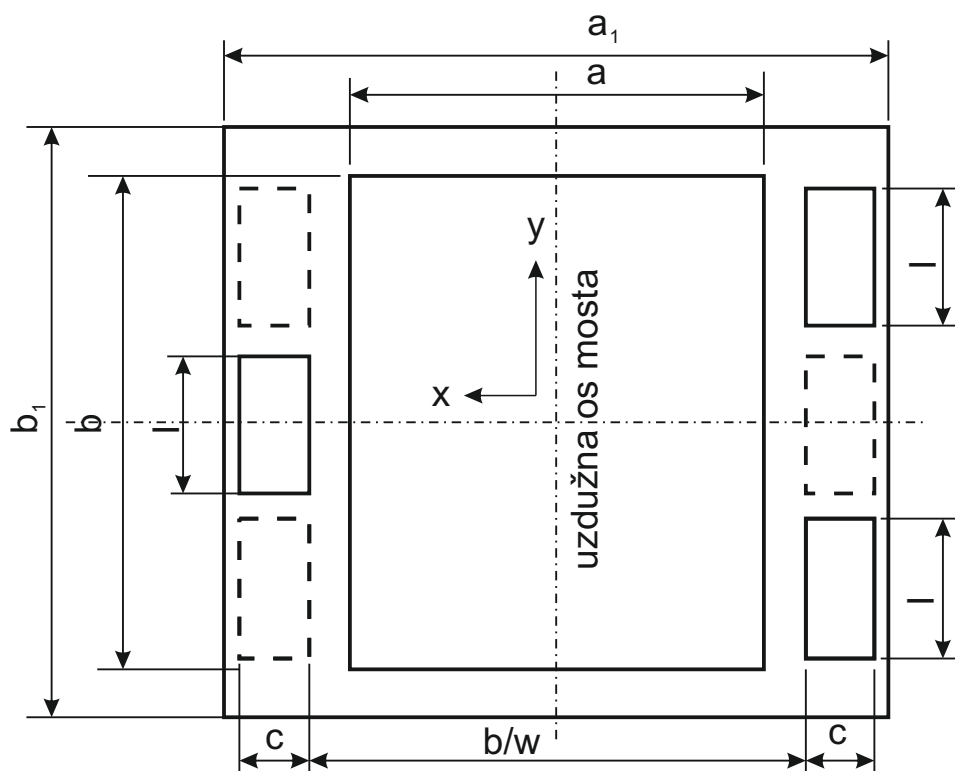
Napomena: Debljine sidrenih ploča se određuju prema dimenziji elastomernog ležaja.  
 Za tlocrtne površine do a=300 x b=400 (Ø350) debljina ploče je 15 mm.  
 Za tlocrtne površine preko a=300 x b=400 (Ø 350) debljina ploče je 20 mm.

## AEL SA NAPRAVOM ZA SPREČAVANJE POMAKA

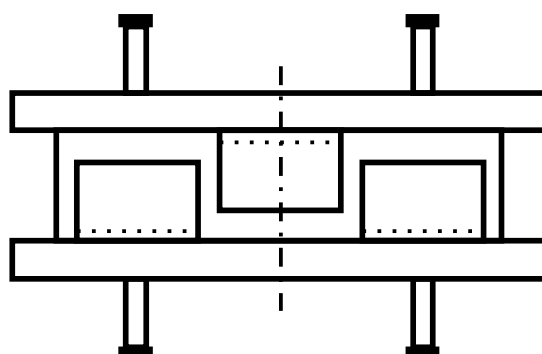
*Nepomičan u poprečnom smjeru AEL-b*



*Uzdužni presjek*



*Tlocrt (donja ploča/gornja ploča)*



*Pogled sa strane*

Tablica 5

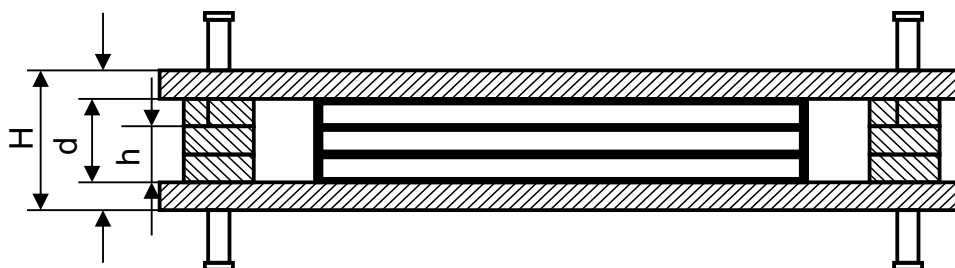
| Dimenzije ležaja                       |     | Dopuštena horizontalna sila | Dimenzije pridržane konstrukcije                                     |                          |     | Broj moždanika |
|----------------------------------------|-----|-----------------------------|----------------------------------------------------------------------|--------------------------|-----|----------------|
| a×b<br>Ø                               | d   | H <sub>doz</sub>            | Dimenzija ploče<br>a1×b1                                             | Dimenzija letve<br>c×l h |     | Ø 22<br>n      |
| mm                                     | mm  | kN                          | mm                                                                   | mm                       | mm  | kom            |
| 150×200                                | 21  | 172                         | 295 do 345×240                                                       | 40×50                    | 15  | 4              |
|                                        | 28  | 200                         |                                                                      | 40×50                    | 20  |                |
|                                        | 35  | 180                         |                                                                      | 40×50                    | 25  |                |
|                                        | 42  | 160                         |                                                                      | 40×50                    | 30  |                |
|                                        | 49  | 144                         |                                                                      | 40×50                    | 40  |                |
|                                        | 56  | 132                         |                                                                      | 40×50                    | 40  |                |
|                                        | 63  | 140                         |                                                                      | 50×50                    | 50  |                |
| Ø 200<br>200×250<br>200×300<br>200×400 | 30  | 230                         | 370 do 435×240<br>370 do 435×290<br>370 do 435×340<br>370 do 435×440 | 50×60                    | 20  | 6              |
|                                        | 41  | 264                         |                                                                      | 50×60                    | 30  |                |
|                                        | 52  | 228                         |                                                                      | 50×60                    | 40  |                |
|                                        | 63  | 204                         |                                                                      | 50×60                    | 50  |                |
|                                        | 74  | 204                         |                                                                      | (60)×60                  | 60  |                |
|                                        | 85  | 182                         |                                                                      | (60)×60                  | 60  |                |
| Ø 250<br>250×400                       | 30  | 289                         | 440 do 500×290<br>440 do 500×440                                     | 60×80                    | 20  | 8              |
|                                        | 41  | 318                         |                                                                      | 60×80                    | 30  |                |
|                                        | 52  | 346                         |                                                                      | 60×80                    | 40  |                |
|                                        | 63  | 310                         |                                                                      | 60×80                    | 50  |                |
|                                        | 74  | 280                         |                                                                      | 60×80                    | 60  |                |
|                                        | 85  | 254                         |                                                                      | 60×80                    | 60  |                |
|                                        | 96  | 230                         |                                                                      | 60×80                    | 80  |                |
| Ø 300<br>300×400                       | 30  | 289                         | 490 do 565×340<br>490 do 565×440                                     | 60×90                    | 20  | 8              |
|                                        | 41  | 319                         |                                                                      | 60×90                    | 30  |                |
|                                        | 52  | 388                         |                                                                      | 60×90                    | 40  |                |
|                                        | 63  | 350                         |                                                                      | 60×90                    | 50  |                |
|                                        | 74  | 318                         |                                                                      | 60×90                    | 60  |                |
|                                        | 85  | 288                         |                                                                      | 60×90                    | 60  |                |
|                                        | 96  | 264                         |                                                                      | 60×90                    | 80  |                |
|                                        | 107 | 242                         |                                                                      | 60×90                    | 80  |                |
|                                        | 118 | 224                         |                                                                      | 60×90                    | 80  |                |
| Ø 350<br>350×450                       | 54  | 436                         | 565 do 640×390<br>565 do 640×490                                     | 60×120                   | 40  | 10             |
|                                        | 69  | 468                         |                                                                      | 60×120                   | 50  |                |
|                                        | 84  | 402                         |                                                                      | 60×120                   | 60  |                |
|                                        | 99  | 360                         |                                                                      | 60×120                   | 80  |                |
|                                        | 114 | 326                         |                                                                      | 60×120                   | 80  |                |
|                                        | 129 | 296                         |                                                                      | 60×120                   | 80  |                |
|                                        | 144 | 272                         |                                                                      | 60×120                   | 100 |                |
| Ø 400<br>400×500                       | 54  | 576                         | 655 do 745×440<br>655 do 745×540                                     | 80×120                   | 40  | 10             |
|                                        | 69  | 518                         |                                                                      | 80×120                   | 50  |                |
|                                        | 84  | 468                         |                                                                      | 80×120                   | 60  |                |
|                                        | 99  | 422                         |                                                                      | 80×120                   | 80  |                |
|                                        | 114 | 384                         |                                                                      | 80×120                   | 80  |                |
|                                        | 129 | 350                         |                                                                      | 80×120                   | 80  |                |
|                                        | 144 | 322                         |                                                                      | 80×120                   | 100 |                |
|                                        | 159 | 296                         |                                                                      | 80×120                   | 100 |                |
| Ø 450<br>450×600                       | 54  | 576                         | 705 do 810×490<br>705 do 810×640                                     | 80×120                   | 40  | 10             |
|                                        | 69  | 518                         |                                                                      | 80×120                   | 50  |                |
|                                        | 84  | 468                         |                                                                      | 80×120                   | 60  |                |
|                                        | 99  | 422                         |                                                                      | 80×120                   | 80  |                |
|                                        | 114 | 384                         |                                                                      | 80×120                   | 80  |                |
|                                        | 129 | 350                         |                                                                      | 80×120                   | 80  |                |
|                                        | 144 | 322                         |                                                                      | 80×120                   | 100 |                |
|                                        | 159 | 296                         |                                                                      | 80×120                   | 100 |                |
|                                        | 174 | 274                         |                                                                      | (100)×120                | 120 |                |

| Dimenzije ležaja          |     | Dopuštena horizontalna sila | Dimenzije pridržane konstrukcije                         |                          |     | Broj moždanika |
|---------------------------|-----|-----------------------------|----------------------------------------------------------|--------------------------|-----|----------------|
| a×b<br>Ø                  | d   | H <sub>doz</sub>            | Dimenzija ploče<br>a1×b1                                 | Dimenzija letve<br>c×l h |     | Ø 22<br>n      |
| mm                        | mm  | kN                          | mm                                                       | mm                       | mm  | kom            |
| Ø 500<br>Ø 550<br>500×600 | 54  | 580                         | 805 do 970×590<br>755 do 920×640                         | 80×150                   | 40  | 12             |
|                           | 69  | 642                         |                                                          | 80×150                   | 50  |                |
|                           | 84  | 588                         |                                                          | 80×150                   | 60  |                |
|                           | 99  | 538                         |                                                          | 80×150                   | 80  |                |
|                           | 114 | 494                         |                                                          | 80×150                   | 80  |                |
|                           | 129 | 454                         |                                                          | 80×150                   | 80  |                |
|                           | 144 | 420                         |                                                          | 80×150                   | 100 |                |
|                           | 159 | 388                         |                                                          | 80×150                   | 100 |                |
|                           | 174 | 412                         |                                                          | 100×150                  | 120 |                |
|                           | 189 | 386                         |                                                          | 100×150                  | 120 |                |
|                           | 204 | 362                         |                                                          | 100×150                  | 150 |                |
| Ø 600<br>Ø 650<br>600×700 | 70  | 738                         | 870 do 1150×640<br>920 do 1100×690<br>870 do 1050×740    | 80×175                   | 60  | 12             |
|                           | 90  | 666                         |                                                          | 80×175                   | 80  |                |
|                           | 110 | 600                         |                                                          | 80×175                   | 80  |                |
|                           | 130 | 540                         |                                                          | 80×175                   | 100 |                |
|                           | 150 | 504                         |                                                          | 80×175                   | 100 |                |
|                           | 170 | 504                         |                                                          | 100×175                  | 120 |                |
|                           | 190 | 462                         |                                                          | 100×175                  | 120 |                |
|                           | 210 | 428                         |                                                          | 100×175                  | 150 |                |
|                           | 230 | 396                         |                                                          | 100×175                  | 150 |                |
|                           |     |                             |                                                          | 100×175                  | 200 |                |
| Ø 700<br>Ø 750<br>700×800 | 70  | 738                         | 970 do 1190×740<br>1020 do 1240×790<br>970 do 1190×840   | 80×175                   | 60  | 16             |
|                           | 90  | 666                         |                                                          | 80×175                   | 80  |                |
|                           | 110 | 600                         |                                                          | 80×175                   | 80  |                |
|                           | 130 | 540                         |                                                          | 80×175                   | 100 |                |
|                           | 150 | 504                         |                                                          | 80×175                   | 100 |                |
|                           | 170 | 504                         |                                                          | 100×175                  | 120 |                |
|                           | 190 | 462                         |                                                          | 100×175                  | 120 |                |
|                           | 210 | 428                         |                                                          | 100×175                  | 150 |                |
|                           | 230 | 396                         |                                                          | 100×175                  | 150 |                |
|                           | 250 | 370                         |                                                          | 100×175                  | 150 |                |
|                           | 270 | 346                         |                                                          | 100×175                  | 200 |                |
| Ø 800<br>800×800          | 79  | 880                         | 1125 do 1330×840                                         | 100×200                  | 60  | 16             |
|                           | 102 | 797                         |                                                          | 100×200                  | 80  |                |
|                           | 125 | 716                         |                                                          | 100×200                  | 100 |                |
|                           | 148 | 648                         |                                                          | 100×200                  | 100 |                |
|                           | 171 | 588                         |                                                          | 100×200                  | 120 |                |
|                           | 194 | 536                         |                                                          | 100×200                  | 120 |                |
|                           | 217 | 624                         |                                                          | 100×500                  | 150 |                |
|                           | 240 | 576                         |                                                          | 100×500                  | 150 |                |
|                           | 263 | 536                         |                                                          | 100×500                  | 200 |                |
|                           | 286 | 500                         |                                                          | 100×500                  | 200 |                |
|                           | 309 | 468                         |                                                          | 100×500                  | 200 |                |
| Ø 850<br>Ø 900<br>900×900 | 79  | 1078                        | 1175 do 1410×890<br>1225 do 1460×940<br>1225 do 1460×940 | 100×250                  | 60  | 16             |
|                           | 102 | 994                         |                                                          | 100×250                  | 80  |                |
|                           | 125 | 910                         |                                                          | 100×250                  | 100 |                |
|                           | 148 | 834                         |                                                          | 100×250                  | 100 |                |
|                           | 171 | 766                         |                                                          | 100×250                  | 120 |                |
|                           | 194 | 704                         |                                                          | 100×250                  | 120 |                |
|                           | 217 | 802                         |                                                          | 150×250                  | 150 |                |
|                           | 240 | 746                         |                                                          | 150×250                  | 150 |                |
|                           | 263 | 698                         |                                                          | 150×250                  | 200 |                |
|                           | 286 | 654                         |                                                          | 150×250                  | 200 |                |
|                           | 309 | 614                         |                                                          | 150×250                  | 200 |                |
|                           | 332 | 598                         |                                                          | 150×250                  | 200 |                |

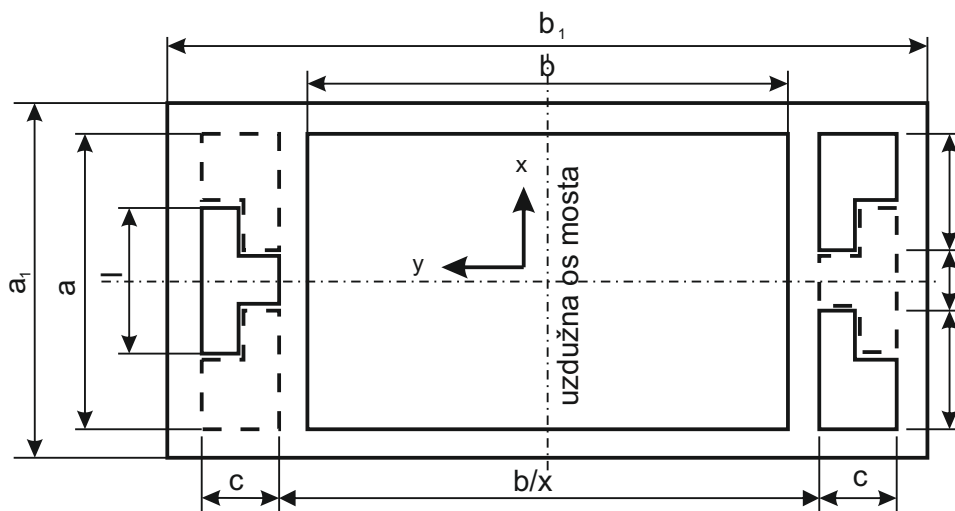
Napomena: Debljine sidrenih ploča se određuju prema dimenziji elastomernog ležaja.  
 Za tlocrtnu površinu do a=300 x b=400 (Ø 350) debljina ploče je 15 mm.  
 Za tlocrtnu površinu preko a=300 x b=400 (Ø 350) debljina ploče je 20 mm.

## AEL SA NAPRAVOM ZA SPREČAVANJE POMAKA

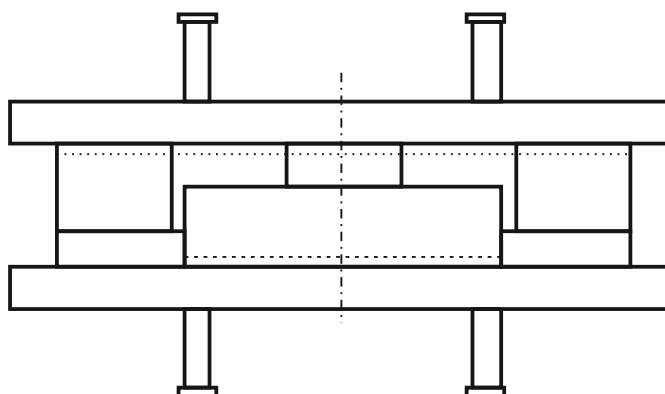
*Nepomičan u uzdužnom i poprečnom smjeru AEL-f*



*Uzdužni presjek*



*Tlocrt (donja ploča / gornja ploča)*



*Pogled sa strane*

Tablica 6

| Dimenzije ležaja                       |     | Dopuštena horizontalna sila | Dimenzije pridržane konstrukcije         |                 |     | Broj moždanika |
|----------------------------------------|-----|-----------------------------|------------------------------------------|-----------------|-----|----------------|
| a×b<br>Ø                               | d   | H <sub>doz</sub>            | Dimenzija ploče                          | Dimenzija letve |     | Ø 22           |
|                                        |     |                             | a1×b1                                    | c×l             | h   | n              |
| mm                                     | mm  | kN                          | mm                                       | mm              | mm  | kom            |
| 150×200                                | 21  | 172                         | 190×310                                  | 30              | 15  | 4              |
|                                        | 28  | 200                         |                                          | 30              | 20  |                |
|                                        | 35  | 180                         |                                          | 30              | 25  |                |
|                                        | 42  | 160                         |                                          | 30              | 30  |                |
|                                        | 49  | 144                         |                                          | 30              | 40  |                |
|                                        | 56  | 132                         |                                          | 30              | 40  |                |
|                                        | 63  | 140                         |                                          | 30              | 50  |                |
| Ø 200<br>200×250<br>200×300<br>200×400 | 30  | 230                         | 240×330<br>240×380<br>240×430<br>240×530 | 40              | 20  | 6              |
|                                        | 41  | 264                         |                                          | 40              | 30  |                |
|                                        | 52  | 228                         |                                          | 40              | 40  |                |
|                                        | 63  | 204                         |                                          | 40              | 50  |                |
|                                        | 74  | 204                         |                                          | 40              | 60  |                |
|                                        | 85  | 182                         |                                          | 40              | 60  |                |
| Ø 250<br>250×400                       | 30  | 289                         | 290×400<br>290×550                       | 50              | 20  | 8              |
|                                        | 41  | 318                         |                                          | 50              | 30  |                |
|                                        | 52  | 346                         |                                          | 50              | 40  |                |
|                                        | 63  | 310                         |                                          | 50              | 50  |                |
|                                        | 74  | 280                         |                                          | 50              | 60  |                |
|                                        | 85  | 254                         |                                          | 50              | 60  |                |
|                                        | 96  | 230                         |                                          | 50              | 80  |                |
| Ø 300<br>300×400                       | 30  | 289                         | 340×470<br>340×570                       | 60              | 20  | 8              |
|                                        | 41  | 319                         |                                          | 60              | 30  |                |
|                                        | 52  | 388                         |                                          | 60              | 40  |                |
|                                        | 63  | 350                         |                                          | 60              | 50  |                |
|                                        | 74  | 318                         |                                          | 60              | 60  |                |
|                                        | 85  | 288                         |                                          | 60              | 60  |                |
|                                        | 96  | 264                         |                                          | 60              | 80  |                |
|                                        | 107 | 242                         |                                          | 60              | 80  |                |
|                                        | 118 | 224                         |                                          | 60              | 80  |                |
| Ø 350<br>350×450                       | 54  | 436                         | 390×540<br>390×640                       | 70              | 40  | 10             |
|                                        | 69  | 468                         |                                          | 70              | 50  |                |
|                                        | 84  | 402                         |                                          | 70              | 60  |                |
|                                        | 99  | 360                         |                                          | 70              | 80  |                |
|                                        | 114 | 326                         |                                          | 70              | 80  |                |
|                                        | 129 | 296                         |                                          | 70              | 80  |                |
|                                        | 144 | 272                         |                                          | 70              | 100 |                |
| Ø 400<br>400×500                       | 54  | 576                         | 440×610<br>440×710                       | 80              | 40  | 10             |
|                                        | 69  | 518                         |                                          | 80              | 50  |                |
|                                        | 84  | 468                         |                                          | 80              | 60  |                |
|                                        | 99  | 422                         |                                          | 80              | 80  |                |
|                                        | 114 | 384                         |                                          | 80              | 80  |                |
|                                        | 129 | 350                         |                                          | 80              | 80  |                |
|                                        | 144 | 322                         |                                          | 80              | 100 |                |
|                                        | 159 | 296                         |                                          | 80              | 100 |                |
| Ø 450<br>450×600                       | 54  | 576                         | 490×680<br>490×830                       | 90              | 40  | 10             |
|                                        | 69  | 518                         |                                          | 90              | 50  |                |
|                                        | 84  | 468                         |                                          | 90              | 60  |                |
|                                        | 99  | 422                         |                                          | 90              | 80  |                |
|                                        | 114 | 384                         |                                          | 90              | 80  |                |
|                                        | 129 | 350                         |                                          | 90              | 80  |                |
|                                        | 144 | 322                         |                                          | 90              | 100 |                |
|                                        | 159 | 296                         |                                          | 90              | 100 |                |
|                                        | 174 | 274                         |                                          | 90              | 120 |                |

| Dimenzije ležaja          |     | Dopuštena horizontalna sila | Dimenzije pridržane konstrukcije |                        |     | Broj moždanika |
|---------------------------|-----|-----------------------------|----------------------------------|------------------------|-----|----------------|
| a×b<br>Ø                  | d   | H <sub>doz</sub>            | Dimenzija ploče<br>a1×b1         | Dimenzija letve<br>c×l |     | Ø 22<br>n      |
| mm                        | mm  | kN                          | mm                               | mm                     | mm  | kom            |
| Ø 500<br>Ø 550<br>500×600 | 54  | 580                         | 590×800<br>540×850               | 100                    | 40  | 12             |
|                           | 69  | 642                         |                                  | 100                    | 50  |                |
|                           | 84  | 588                         |                                  | 100                    | 60  |                |
|                           | 99  | 538                         |                                  | 100                    | 80  |                |
|                           | 114 | 494                         |                                  | 100                    | 80  |                |
|                           | 129 | 454                         |                                  | 100                    | 80  |                |
|                           | 144 | 420                         |                                  | 100                    | 100 |                |
|                           | 159 | 388                         |                                  | 100                    | 100 |                |
|                           | 174 | 412                         |                                  | 100                    | 120 |                |
|                           | 189 | 386                         |                                  | 100                    | 120 |                |
|                           | 204 | 362                         |                                  | 100                    | 150 |                |
| Ø 600<br>Ø 650<br>600×700 | 70  | 738                         | 640×890<br>690×940<br>640×990    | 120                    | 60  | 12             |
|                           | 90  | 666                         |                                  | 120                    | 80  |                |
|                           | 110 | 600                         |                                  | 120                    | 80  |                |
|                           | 130 | 540                         |                                  | 120                    | 100 |                |
|                           | 150 | 504                         |                                  | 120                    | 100 |                |
|                           | 170 | 504                         |                                  | 120                    | 120 |                |
|                           | 190 | 462                         |                                  | 120                    | 120 |                |
|                           | 210 | 428                         |                                  | 120                    | 150 |                |
|                           | 230 | 396                         |                                  | 120                    | 150 |                |
| Ø 700<br>Ø 750<br>700×800 | 70  | 738                         | 740×1030<br>790×1080<br>740×1130 | 140                    | 60  | 16             |
|                           | 90  | 666                         |                                  | 140                    | 80  |                |
|                           | 110 | 600                         |                                  | 140                    | 80  |                |
|                           | 130 | 540                         |                                  | 140                    | 100 |                |
|                           | 150 | 504                         |                                  | 140                    | 100 |                |
|                           | 170 | 504                         |                                  | 140                    | 120 |                |
|                           | 190 | 462                         |                                  | 140                    | 120 |                |
|                           | 210 | 428                         |                                  | 140                    | 150 |                |
|                           | 230 | 396                         |                                  | 140                    | 150 |                |
|                           | 250 | 370                         |                                  | 140                    | 150 |                |
|                           | 270 | 346                         |                                  | 140                    | 200 |                |
| Ø 800<br>800×800          | 79  | 880                         | 840×1170                         | 160                    | 60  | 16             |
|                           | 102 | 797                         |                                  | 160                    | 80  |                |
|                           | 125 | 716                         |                                  | 160                    | 100 |                |
|                           | 148 | 648                         |                                  | 160                    | 100 |                |
|                           | 171 | 588                         |                                  | 160                    | 120 |                |
|                           | 194 | 536                         |                                  | 160                    | 120 |                |
|                           | 217 | 624                         |                                  | 160                    | 150 |                |
|                           | 240 | 576                         |                                  | 160                    | 150 |                |
|                           | 263 | 536                         |                                  | 160                    | 200 |                |
|                           | 286 | 500                         |                                  | 160                    | 200 |                |
|                           | 309 | 468                         |                                  | 160                    | 200 |                |
| Ø 850<br>Ø 900<br>900×900 | 79  | 1078                        | 890×1260<br>940×1310<br>940×1310 | 180                    | 60  | 16             |
|                           | 102 | 994                         |                                  | 180                    | 80  |                |
|                           | 125 | 910                         |                                  | 180                    | 100 |                |
|                           | 148 | 834                         |                                  | 180                    | 100 |                |
|                           | 171 | 766                         |                                  | 180                    | 120 |                |
|                           | 194 | 704                         |                                  | 180                    | 120 |                |
|                           | 217 | 802                         |                                  | 180                    | 150 |                |
|                           | 240 | 746                         |                                  | 180                    | 150 |                |
|                           | 263 | 698                         |                                  | 180                    | 200 |                |
|                           | 286 | 654                         |                                  | 180                    | 200 |                |
|                           | 309 | 614                         |                                  | 180                    | 200 |                |
|                           | 332 | 598                         |                                  | 180                    | 200 |                |

Napomena: Debljine sidrenih ploča se određuju prema dimenziji elastomernog ležaja.

Za tlocrtne površine do a=300 x b=400 (Ø 350) debljina ploče je 15 mm.

Za tlocrtne površine preko a=300 x b=400 (Ø 350) debljina ploče je 20 mm.





d.o.o. za proizvodnju gumeno-tehničke robe

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