TRI OMEGA INŽENJERING

Alga
TECHNOLOGICAL THINKING

Algalink

ELASTOMERNA LEŽIŠTA
ELASTOMERIC BEARINGS

Naslovna strana: Most Rion - Antirion – Grčka
Cover: Rion - Antirion bridge – Greece

Algasism Algapost Algalink Algajoint Algaart Algafix Algalab

TECHNOLOGICALTHINKING

Most Bahia u Kadizu - Španija

Bahia in Cadiz - Spain

Ležišta za konstrukcije

U očima nekompetentnog posmatrača, mostovi i velike građevinske konstrukcije izgledaju kao statičke građevine koje odolevaju uticaju gravitacije i prirodnim uticajima, zahvaljujući čvrstoći i krutosti.
Nema veće zablude od ove: inženjeri konstruktivci dobro znaju da se sve konstrukcije deformišu, skupljaju ili uvijaju pod uticajem opterećenja, tako da njihova dužina varira pod temperaturnim uticajem, tečenjem i skupljanjem betona.

Ležišta za konstrukcije su zapravo naprave koje omogućavaju korektan transfer opterećenja između konstruktivnih delova, istovremeno dozvoljavajući sva relativna kretanja, translaciju i rotaciju.

U skladu sa definicijom datom u Evropskim normama EN1337 “ležišta su elementi koji dozvoljavaju rotaciju između dva elementa konstrukcije i prenošenje opterećenja definisana u relevantnim zahtevima, kao i sprečavanje pomeranja (fiksna ležišta), dozvoljavanje pomeranja samo u jednom pravcu (vođena ležišta) ili pomeranja u svim pravcima u ravni (slobodna ležišta) u skladu sa zahtevima”.

Structural bearings

To the eyes of an incompetent observer, bridges and large civil engineering structures seems like static works, withstanding gravity and environmental effects thanks to their fixity and stiffness.
Nothing could be wrong more than that: as the structural engineer well knows all structures are deforming, defiecting or twisting under the effect of the superimposed loads, furthermore they vary their length due to temperature variations, creep and shrinkage of the concrete.
Structural bearings indeed are the devices allowing the correct transfer of the loads between the structural members, permitting at the same time all the necessary relative movements, translations and rotations.

In accordance with the definition given by the European Standard EN 1337 "Bearings are elements allowing rotation between two members of a structure and transmitting the loads defined in the relevant requirements as well as preventing displacements (fixed bearings), allowing displacements in only one direction (guided bearings) or in all directions of a plane (free bearings) as required".

Autoput King Fahd između Saudijske Arabije i Bahreina

King Fahd Causeway between Saudi Arabia and Bahrain

ALGABLOC

Armirana elastomerna ležišta

Armirana elastomerna ležišta prihvataju simultano opterećenje i deformacije u bilo kom pravcu. Čelične ploče su utopljene u gumu procesom vulkanizacije i glavna im je namena da povećaju nosivost ležišta. Čelične ploče su potpuno utopljene u elastomer, tako da su zaštićene od uticaja korozije. Spoj elastomernih ležišta sa konstrukcijom se ostvaruje preko gume ili preko čeličnih elemenata različitih oblika koji odgovaraju svim tipovima konstrukcija.

Horizontalna pomeranja do otprilike jedne polovine debljine gume i rotacije omogućava fleksibilnost gume.

Vertikalna opterećenja koja ova ležišta mogu da prime idu do 20.000 kN i više, dok horizontalna opterećenja, u zavisnosti od kombinacije opterećenja i visine ležišta idu od 5-10% od vertikalnog.

Dopuštena horizontalna pomeranja zavise od visine elastomera, odgovaraju tangencijalnoj deformaciji $\gamma = 1$.

Veća horizontalna pomeranja mogu se postići korišćenjem ALGAFLON ležišta, o kojima će biti reči kasnije.

Da bi se odredilo ALGABLOC ležište, obeležavanje je sledeće:

NB A(mm) x B(mm) x H(mm)

gde su A i B dimenzije osnove ležišta, a H njegova debljina. U katalogu su prikazani različiti tipovi ležišta u odnosu na način njihovog fiksiranja za konstrukciju s oznakom od NB1 do Nb6.

Upotrebom spoljnih čeličnih ploča i moždanika, otpor otpor horizontalnim uticajima može se mnogo povećati.

U tom slučaju oznake za identifikaciju ležišta su sledeće:

NBU A(mm) x B(mm) x H(mm)

za ležišta pomerljiva u jednom pravcu. A i B su dimenzije osnove, a H debljina ležišta.

NBF A(mm) x B(mm) x H(mm)

za fiksna ležišta. A i B su dimenzije osnove, a H debljina ležišta.

ALGAFLON

Armirana elastomerna ležišta sa teflonom (PTFE)

Ova ležišta se sastoje od armiranog elastomernog ležišta sa teflonskom pločom vulkaniziranom ili upuštenom u odgovarajuću čeličnu ploču.

Na vrhu je klizna ploča pokrivena prohronom i odgovarajuća teflonska ploča,a na dnu čelična ploča, vulkanizirana na elastomerno ležište, a omogućava vezu s konstrukcijom zavrtnjima ili moždanicima.

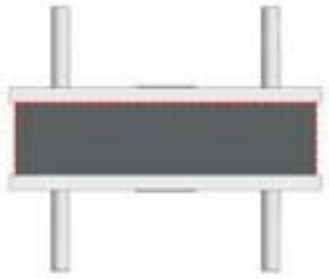
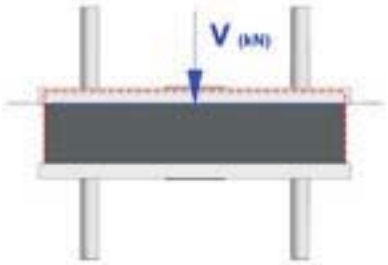
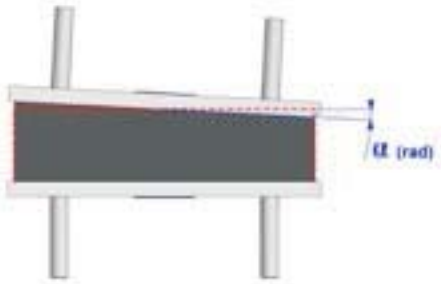
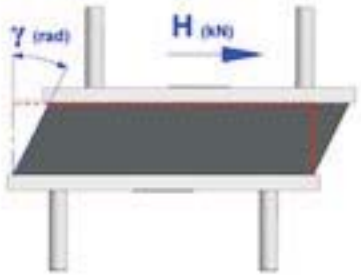
Oznake za identifikaciju ovih ležišta su:

NTU A(mm) x B(mm) x H(mm)

za klizna ležišta vođena u jednom pravcu, gde su A i B dimenzije osnove, a H debljina ležišta.

NTM A(mm) x B(mm) x H(mm)

za slobodna klizna ležišta, gde su A i B dimenzije osnove, a H debljina ležišta.

REAKCIJE GUMENIH LEŽIŠTA POD OPTERECENJEM *BEHAVIOUR OF LOADED RUBBER BEARING*	
	
NEDEFORMISANO LEŽIŠTE *UNDEFORMED BEARING*	IZGLED LEŽIŠTA POD VERTIKALNIM OPTEREĆENJEM *BEARING UNDER VERTICAL LOAD*
	
EFEKAT ROTACIJE *ROTATION EFFECT*	HORIZONTALNO OPTEREĆENJE / POMERANJE *HORIZONTAL LOAD / DISPLACEMENT EFFECT*

ALGABLOC

Laminated elastomeric bearings

Laminated elastomeric bearings support simultaneous loads and deformations in any direction. Steel plates are bonded to the rubber through a vulcanization process and have the main scope to increase the resistance of the bearings to the vertical loads. Steel plates are fully embedded in the elastomer so that they are protected against corrosion. The connection of the elastomeric bearings to the structure may be through the rubber itself or steel elements of various shapes suitable for any kind of structure. Horizontal movements up to approximately one half of the rubber thickness and rotations are allowed by the fiexibility of the rubber.

The vertical loads that these bearings can withstand can be up to about 20.000kN and more, while the horizontal loads, depending on the acting load combinations, and the height of the bearing, from 5% to 10% of the vertical ones. The allowable horizontal displacements, depending on the height of the elastomer, correspond to a tangential deformation γ = 1".

Higher horizontal movements can be reached utilizing the ALGAFLON bearings described below.

The mark utilized to describe ALGABLOC bearings is the following:

NB A(mm) x B(mm) x H(mm)

where A and B are the dimensions of the bearing in plan and H the thickness.

In the catalogue are shown the different types of fixings to the structures available, with the marks

NB1 to NB6

With the appropriate use of external steel plates and dowels, the resistance to the horizontal loads may be greatly increased. In that case the mark used to identify the bearings are the following:

NBU NB A(mm) x B(mm) x H(mm)

for the bearings restrained in one direction only. A and B are the dimensions of the bearing in plan and H the thickness

NBF NB A(mm) x B(mm) x H(mm)

for the bearings restrained in both directions. A and B are the dimensions of the bearing in plan and H the thickness

ALGAFLON

Laminated elastomeric bearings with PTFE

They consist of a laminated elastomeric bearing with a sheet of PTFE vulcanized or recessed in a suitable steel plate. There is a sliding plate on the top, plated with stainless steel and mating the PTFE sheet and a steel plate at the bottom, vulcanized to the elastomeric bearing and allowing the fixation to the structure through bolts or dowels.

The mark used to identify the bearings are the following:

NTU NB A(mm) x B(mm) x H(mm)

for the sliding guided bearings. A and B are the dimensions of the bearing in plan and H the thickness

NTM NB A(mm) x B(mm) x H(mm)

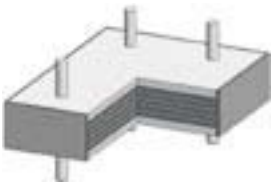
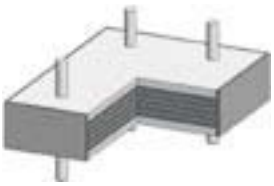
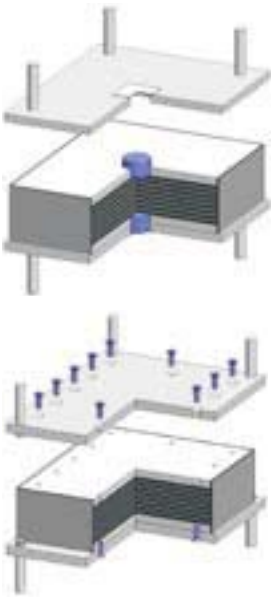
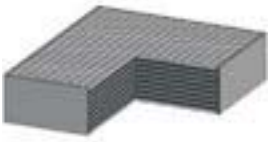
for the free sliding bearings. A and B are the dimensions of the bearing in plan and H the thickness

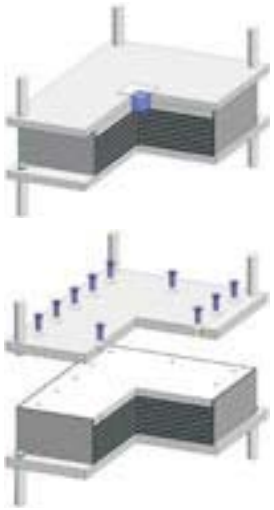
Opis različitih tipova ležišta

Proizvodnja Algabloc ležišta obuhvata veliki broj modela kako bi se udovoljilo različitim potrebama, kao i raznim metodama primene.
Mogu biti upotrebljavana na mostovima, vijaduktima, građevinskim i industrijskim konstrukcijama, čeličnim konstrukcijama, rezervoarima, silosima itd.
Sledi najkraći opis ALGABLOC ležišta. Više detalja je dato u tabelama s dimenzijama. Svi tipovi od NB do NB6 se proizvode sa pravougaonom i sa kružnim osnovom. Oznaka za kružno ležište je takva da se na oznaku za pravougaono ležište doda sufiks C, npr. NB je NBC.

Description of different bearing type

The production of the ALGABLOC bearings includes numerous models to satisfy the varied fields of employment and the different methods of application. They can be easily utilized in bridges or viaducts, civil and industrial constructions, metallic structures, reservoirs, silos, etc.
A brief description of the ALGABLOC models proposed in this catalogue here follows. More details are available in the dimension table in the following pages.
All types from NB to NB6 are available both in rectangular and circular shape.
The mark for the circular bearings is equal to the rectangular ones by adding a "C" suffix, for example NB is NBC

ALGABLOC NB NBC - kružna ležišta */ circular bearings*		Standardan tip ležišta koji se sastoji od naizmeničnih slojeva gume i čeličnih ploča bez ankernog sistema mehaničke prirode. *Is the standard type consisting of alternate layers of rubber and steel without any anchorage system of mechanical nature to the structure.*
ALGABLOC NB2 NBC2 - kružna ležišta */ circular bearings*		Istovetan sa NB tipom, ali završen s pločama odgovarajuće debljine sa rupama za glatke ankerne šipke. Uglavnom se upotrebljava za konstrukcije betonirane na licu mesta da bi se smanjio rizik od proklizavnja. . *Is equal to NB type but endowed with external plates of fit thickness, with holes for smooth anchorage bars. It is mainly used for cast in situ structures, to decrease the risk of skid.*
ALGABLOC NB3 NBC3 - kružna ležišta */ circular bearings*		Istovetan sa NB2 tipom, ali sa rupama sa lozom. Upotrebljava se kod čeličnih konstrukcija. *Is equal to NB2 type, endowed with external plates, but with threaded holes. Suitable for metallic structures.*
ALGABLOC NB4 NBC4 - kružna ležišta */ circular bearings*		Sličan tipu NB2, ali sa spoljnim ankernim pločama spojenim sa ležištem zavrtnjevima ili ankernim šipkama. . Upotrebljiv u svim tipovima konstrukcija, ali sa odgovarajućim spoljnim pločama. *Similar to NB2 but with external anchor plates connected to the bearing through pins or bolts . It can be used in any type of structure with proper connection plates.*
ALGABLOC NB5 NBC5 - kružna ležišta */ circular bearings*		Zavaren sa spoljnim pločama od orebrenog lima upasovane debljine NB5 može biti upotrebljen u svim tipovima konstrukcije. *Endowed with external checkered plates of fit thickness. NB5 can be employed in any type of structure.*

ALGABLOC NB6 NBC6 - kružna ležišta */ circular bearings*		Sa ankerima sa spoljne strane gume i sa spoljnim šipkama. Može biti opremljen spoljnim kontrapločama. *With anchors external to the rubber print and connection pins. It may be provided with external counterplates.*
ALGABLOC NBF		Fiksno ležište podobno da primi velike horizontalne sile. *With restrained horizontal deformation in both directions. Suitable to resist high horizontal forces.*
ALGABLOC NBU		Vođeno ležište u jednom pravcu koje može da primi bočnu silu upravnu na pravac pomeranja. U drugom pravcu ponaša se kao normalno gumeno ležište. *With restrained horizontal deformation in one direction. Suitable to resist high horizontal forces in the restrained direction. In the other direction they behave like a normal rubber bearing.*
ALGAFLON NTU		Gumeno ležište s kliznom pločom (nerđajući čelik+PTFE) i vođice. Ponaša se kao ležište koje kliza u jednom pravcu. Pogodno je za velika pomeranja u jednom pravcu. *Rubber bearing with sliding plate (stainless steel + PTFE) and guides. It behaves like a monodirectional sliding bearing. Suitable for large movements in one direction.*
ALGAFLON NTM		Gumeno ležište sa spoljnim kliznim pločama pomerljivo u oba pravca, sposobno da primi velika pomeranja. *Rubber multidirectional bearing with external sliding plate. Suitable for large movements in both directions.*

Kvalitet

ALGA radi u skladu sa sistemom kvaliteta IGQ od 1993. godine. Ovaj metod rada se primenjuje u svim sektorima kompanije i razvijao se zajedno sa kompanijom, počevši sa prvim odgovarajućim standardima kojima je inspirisan ALGIN sopstveni sistem kvaliteta UNI EN 29001, koji je orijentisan ka informisanju menadžmenta, dok nije dobila najnoviji UNI EN ISO 9001:2008 posebno usmeren ka potrebama klijenata i upravljanju resursima.

Quality

ALGA works with quality system certified by IGQ since 1993, this working method that affects all Company department, has grown over the years with the company, starting with the first reference standard which ALGA has inspired its own quality system, the UNI EN 29001, oriented to the information management that has helped the company's organizational growth, until to get the latest EN ISO 9001:2008 particularly addressed to the customer needs and managing resources.

Standardi

ALGA proizvodi elastomerna ležišta u skladu sa EN 1337 deo 3 sa CE markacijom, izdata od NB 1833; eventualno klizni delovi se proizvode u skladu sa EN 1337 deo 2. Sledeći tipovi ALGA elastomernih ležišta, klasifikacija prema tabeli 2 evropskih standarda odgovaraju sledećim tipovima ALGA proizvodnje:

Ležišta tipa A, ALGABLOC NB ili NBC
Ležišta tipa B, ALGABLOC NB ili NBC
Ležišta tipa C "dozvoljeno fiksiranje", ALGABLOC NB2, NB3, NB4 ili NB6
Ležišta tipa C "profilisano", ALGABLOC NB5
Ležišta tipa D, ALGAFLON NTU ili NTM (klizna samo za ireverzibilna pomeranja)
Ležišta tipa E, ALGAFLON NTU ili NTM
Ležišta tipa F, ALGASTRISCIA NS

Na poseban zahtev klijenta, moguće je proizvesti ležišta sa najčešćim internacionalnim standardima, kao što je AASHTO ili po posebnim zahtevima.

Standards

ALGA manufactures elastomeric bearings in accordance with EN 1337 part 3, provided with CE-marking, issued by NB 1833; eventual sliding parts are manufactured in accordance with EN 1337 Part 2. The following types of ALGA elastomeric bearings, classified according Table 2 European standards, are corresponding to the following types produced by ALGA

Bearings type A, ALGABLOC NB o NBC
Bearings type B, ALGABLOC NB o NBC
Bearings type C "allowing fixing", ALGABLOC NB2, NB3, NB4 o NB6
Bearings type C "profiled", ALGABLOC NB5
Bearings type D, ALGAFLON NTU o NTM (sliding only for irreversibile movements)
Bearings type E, ALGAFLON NTU o NTM
Bearings type F, ALGASTRISCIA NS

It is also possible to produce bearings according to the most common international standards such as AASHTO or according to specific customer requirements.

Materrijali i prozvodnja

Alga elastomerna ležišta se proizvode upotrebom prirodne gume kao osnovnog polimera. Za posebne uslove korišćenja ili specifične potrebe kupaca, može se upotrebiti polihloropren kao elastomerni bazni polimer. Fizičke i mehaničke osobine prirodne gume i polihloroprenske gume su date u tabeli koja sledi.
Treba istaći da su mehaničke osobine ova dva materijala ekvivalentne, dok je razlika u hemijskoj otpornosti na ozonsko starenjena strani polihloroprena zahvaljujući slobodnim vezama u njegovoj strukturi, ali je prirodna guma bolja u odnosu na kristalizaciju i efekat krtosti na niskim temperaturama.
Ceo proces proizvodnje ALGINIH elastomernih ležišta sa CE oznakom je pod kontrolom kroz operacione instrukcije, plan kontrole kvaliteta i dokumentaciju za evidentiranje rezultata kontrole kvaliteta, posebno kod kontrole ulaznih sirovih materijala, proizvodnih parametara i završne obrade, što daje sigurnost da svi proizvodi u isporuci odgovaraju posebnim zahtevima za osobine i trajnost.
Parametri u nastavku su osnova za elastomer, upotrebljen u proizvodnji ležišta tipova ALGABLOC i ALGAFLON.

Materials and production

ALGA elastomeric bearings are normally manufactured using natural rubber as a base polymer. For particular service conditions, or for specific customer requirements, the supports can be produced using polychloroprene as elastomeric polymer based. The physical and mechanical performances for natural rubber and polychloroprene rubber are shown in the tables below. It shall be noted that the mechanical properties of the two compounds are equivalent, whereas there is a difference in chemical resistance to the ozone attack where the polychloroprene rubber prevail due to the lack of free links in its structure, but there is also an effect of embrittlement and crystallization at low temperature for which the natural rubber behaves better. The whole process of production linked to the ALGA elastomeric CE marked bearings is kept under control by the operating instructions, quality control plans and documents for quality recording; in particular the raw materials checks, the production parameters and finishing give reasonable assurance that all products delivered meet the specified requirements for performance and durability. The parameters below mentioned are the base of the elastomer used in the production of the supports ALGABLOC and ALGAFLON.

FIZIČKO-MEHANIČKE OSOBINE ZA ELASTOMERNA LEŽIŠTA			
PARAMETRI	STANDARD	NOMINALNA VREDNOST	UZORKOVANJE
G MODUL	EN 1337-3 4.3.1.1.	0.9 MPa ± 0.15 MPa	
ZATEZNA ČVRSTOĆA	ISO 37 tip 2		

Zaštita od korozije

Čelični delovi ALGA ležišta koji su izloženi atmosferskoj koroziji, zaštićeni su od korozije dvokomponentnim visokokvalitetnim bojama koje osiguravaju dobro prijanjanje za podlogu, tako da zaštita traje godinama i omogućava lake popravke boje po završenoj montaži ležišta, jer upotrebljeni premazi imaju tzv. "tolerantnu površinu". Trajnost zaštite od korozije je testirana i atestirana od strane Politehniče laboratorije iz Milana u skladu sa EN 1337 deo 9 - Zaštita.

U slučaju specifičnih tehničkih zahteva ili zbog teških atmosferskih uslova, ALGA može isporučiti svoje proizvode sa specijalnom antikorozivnom zaštitom izvedenom u skladu sa ISO 12944, gde je propisano da prva popravka AKZ može biti tek posle 15 godina od nanošenja, i u morskoj atmosferi gde je trajanje propisano klasom C sa 5M H trajnosti i u industrijskoj s ciklusom trajnosti C 51 H.

Ispitivanje

ALGA laboratorija izvodi na elastomernim ležištima proizvedenim u ALGI sva ispitivanja zahtevana evropskim i internacionalnim standardima, posebno u skladu sa EN 1337 deo 3. Sva ispitivanja izvode se rutinski po zahtevu iz poglavlja 8.3, tabela 5, koja predviđa ispitivanja u zavisnosti od obima proizvodnje, koja treba da dokažu vertikalnu krutost i adheziju između čelika i slojeva gume, da verifikuje fabričku kontrolu procesa proizvodnje i da osigura ispravnu funkciju ležišta kada bude instalirano u konstrukciju.

Trajnost

ALGA elastomerna ležišta su projektovana, na osnovu njihove upotrebe u običnim konstrukcijama, sa mnimalnim vremenom upotrebe od najmanje 50 godina kako je definisano u NTC 2088, odeljak 2.4.

Isporuka i skladištenje

Sva ležišta se isporučuju gotova i spremna za montažu, sa individualnim komponentama spojenim crvenim vezama za paletu. Svako ležište je obeleženo aluminijumskom pločicom na kojoj su navedene glavne karakteristike.

Ukoliko ležišta ne budu montirana odmah po dolasku na gradilište, izvođač, odnosno krajnji korisnik mora da osigura sigurno skladištenje, tj. da ih zaštiti od nečistoće, vlage ili bilo kog drugog oštećenja.

Održavanje

Ležišta su projektovana i proizvedena tako da se smanje intervencije u cilju minimalnog održavanja.
Ukoliko ne dođe do oštećenja konstrukcije (požar, zemljotres, snažni udari...), ležišta zahtevaju samo vizuelnu proveru svakih 5 godina najmanje, kako bi se utvrdila čistoća površine oko ležišta i integritet spoljne površine gume i zaštite od korozije.

Corrosion protection

The ALGA bearings steel parts, exposed to atmospheric corrosion, are protected with corrosion protection based to two-pack high-solids paints, ensuring a good bond to the substrate, that ensures good protection over the years, and allow easy touch-up operation after the complete bearings' installation, because the products used are classified as "surface tolerant". The corrosion protection cycle has been tested and certified by the laboratory of the Politecnico di Milano, in accordance with EN 1337 Part 9 - Protections.
Where are required by special specifications, or under severe weather conditions, ALGA can provide their products with special protection against corrosion, performed according to ISO 12944, where the prediction of first major maintenance can be scheduled after at least 15 years from the service, both in the marine environment, where the cycle is identified with class C with 5M H durability, and industrial, with durability cycle C 5I H.

Test

ALGALAB performs, on ALGA elastomeric bearings production, all the tests required by European and International standards; in particular, according to EN 1337 Part 3, all tests are performed routinely in accordance with Chapter 8.3 - Table 5 - which provides, according to volumes production, tests to verify the vertical stiffness, the horizontal stiffness and adhesion between steel and rubber layers, to verify the factory the production control process and ensure the correct functioning of support when installed on the structure.

Service life

The ALGA elastomeric bearings are designed, baseing on their use for ordinary structures, with a minimum service life of at least 50 years, as defined in the NTC 2008, chapter 2.4

Delivery and storage

All the bearings are dispatched assembled and ready for installation, with the individual components connected by red painted clamps and main characteristics marked on an aluminium label.
If the bearings are not installed immediately after their arrival on site, the final user has to make sure that they are properly stored, i.e. protected against dirt, humidity and any other damage whatsoever.

Maintenance

The bearings have been designed and manufactured in order to reduce maintenance interventions to a minimum level.
If nothing special happens on the structure (i.e. fire, earthquakes, violent impacts...) the bearings need only a visual inspection every five years at least, to verify cleanness of the area round them and integrity of the external surface of the rubber and of the corrosion protection.

Gore: Autoput Istok -Zapad - Alžir
Desno: Vijadukt Sakarya - Turska

Left: East - West Highway - Algeria
Abowe: Sakarya Viaduct - Turkey

Montaža ležišta

Glavna procedura za najčešće slučajeve:

1. Izvesti osnovu do kote nekoliko santimetara niže od konačne kote. Ostaviti ankerne rupe dvostrukog prečnika ankera u betonu na mestu za ankerisanje.

2. Postaviti ležište na odgovarajuću kotu pomoću klinova ili špindli i postaviti oplatu oko ležišta.

3. Podlivku izvesti neskupljajućim cementnim ili epoksidnim malterom. Podlivku ne treba armirati ukoliko je njena debljina manja ili jednaka sledećim vrednostima:

- 50 mm ili:

- $0{,}1 \times \frac{\text{površina čeličnog lima}}{\text{perimetar čeličnog lima}} + 15\,\text{mm}$

4. Postavljanje oplate konstrukcije iznad ležišta i brtvljenje oko ležišta.

5. Betoniranje konstrukcije.

Za bliže detalje videti EN 1337-11.

Installation

The principal steps for the most frequent cases:

1. Casting of the infrastructure up to a level a few centimeters lower than the final level of the bearing. Tubes (for example corrugated steel sheets) of double diameter than the anchors shall be left in the concrete at the positions of the anchor brackets;

2. Positioning of the bearing at the proper level with the aid of wedges or regulating screws and placing of a formwork surrounding the bearing;

3. Casting of the joint in the non-shrink mortar or epoxy mortar. The mortar joint shall not be reinforced if its thickness is less or equal to the following values:

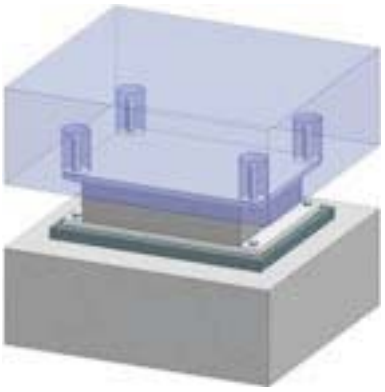
- *50 mm or*

- $0{,}1 \times \frac{\textit{area - metallic - plates}}{\textit{perimeter - metallic - plates}} + 15\,\text{mm}$

4. Placing of the formwork of the superstructure and sealing it around the bearing.

5. Casting of the superstructure.

For further details, please see EN 1337-11.



Elastomerna ležišta prema EN 1337-3

Gumena ležišta data u ovom katalogu su projektovana prema EN 1337-3. Standard EN 1337 nalaže proveru:

- maksimalne deformacije od vertikalnog opterećenja, rotacije i horizontalnih uticaja, kao što su opterećenja i pomeranja ležišta
- minimalne debljine unutrašnjih i spoljnih limova
- maksimalne rotacije
- stabilnosti ležišta (ispupčenja)

Tabela sa dimenzijama Procedura za izbor ležišta

Ležišta zavise od više uslova opterećenja i pomeranja. U nameri da pomogne projektantu da izabere odgovarajuće ležište, ALGA je razvila seriju standardnih dimenzija, projektovanih za dva najznačajnija uslova opterećenja.

Kombinacija1 (Combo1)
Opterećenje i pomeranje po ULS
Maksimalno vertikalno opterećenje:
- horizontalna deformacija gume $\gamma = 0.2$
- Horizontalno pomeranje $sx = 20\% \, v_{x,max}$
- Rotacija $\alpha_a = 0.01$rad

Ova kombinacija odgovara vertikalnom opterećenju V=Vmax koje je maksimalno za ležište.

Kombinacija 2 (Combo2)
Opterećenje i pomeranje po ULS
Maksimalni horizontalni uticaji:
- Horizontalna deformacija gume $\gamma = 1$
- Horizontalno pomeranje $sx = v_{x,max}$
- Rotacija $\alpha_a = 0.005$rad

Ova kombinacija odgovara maksimalnih horizontalnim uticajima koji deluju na ležište, kao zbir uticaja sila i pomeranja.

Da bi se izabralo odgovarajuće ležište, potrebni su sledeći podaci:
- Vertikalno opterećenje
- Horizontalno opterećenje
- Horizontalno pomeranja
- Rotacija
- Maksimalna veličina ležišta

U nastavku je dat primer proračuna za izbor dimenzija ležišta:
1. Prema tipu konstrukcije i potrebnom sistemu ankerovanja izabrati tip ležišta (NB, NB2, NB3, NB4, NB5, NB6).
2. Projektni podaci

Projektni podaci - Opterećenja i pomeranja po ULS	
Ležište tipa NB4	
Vertikalno opterećenje	V_{ed} = 1550 kN
Horizontalno opterećenje	H_{ed} = 65 kN
Pomeranje	$s_x = \pm$ 40 mm

NB: Opterećenja i deformacije su simultani

Elastomeric bearings according to EN 1337-3

Rubber bearings prescribed in this catalogue are designed according to EN 1337-3. The European standard EN 1337 imposes to check:

- *Maximum strains due to vertical load, rotations and horizontal solicitations, such as loads or displacements*
- *Minimum thickness of the internal and external steel plates*
- *Maximum rotation*
- *Bearing stability (buckling)*

Dimensional tables Procedure for the choiche of the bearings

Bearings may be subjected to several load and displacement conditions. In order to help the designer to choose the correct product, ALGA developed a series of standard sizing, designed considering 2 significant load conditions.

Combination 1 (Combo1)
Loads and displacements at the ULS
Maximum vertical load
- *Horizontal rubber strain $\gamma = 0.2$*
- *Horizontal displacement $sx = 20\% \, vx,max$*
- *Rotation $\alpha a = 0.01$rad*

This combination refers to a vertical load V=Vmax which is the maximum allowable for the bearing.

Combination 2 (Combo2)
Loads and displacements at the ULS
Maximum horizontal solicitations
- *Horizontal rubber strain $\gamma = 1$*
- *Horizontal displacement $sx = vx,max$*
- *Rotation $\alpha a = 0.005$rad*

This combination refers to the maximum horizontal solicitation acting on the bearing, given by the sum of the contributions of forces and displacements simultaneously agents.

In order to choose the correct bearing you may need the following datas:
- *Vertical load*
- *Horizontal load*
- *Horizontal displacement*
- *Rotation*
- *Maximum size of the bearing*

Here follows a calculation example to determine the correct bearing size.
1. According to the type of structure and the anchor system needed, choose the bearing among the different types as described in the previous sections (NB, NB2, NB3, NB4, NB5, NB6).
2. Project data

Design data - Loads and displacements at the ULS	
Bearing type NB4	
Vertical load	*Ved = 1550 kN*
Horizontal load	*Hed = 65 kN*
Displacements	*sx = ± 40 mm*

NB. Loads and deformations are simultaneaously agents.

3. Odrediti odgovarajuću kombinaciju opterećenja
Ispravna kombinacija opterećenja se može odrediti računajući sa faktorom projektovanog horizontalnog i vertikalnog opterećenja. Ukoliko je faktor < 3%, odgovara Combo1, a ako je >3%, odgovara Com o2.

3. Determine the correct load combination
The correct load combination may be determined calculating the ratio between the design loads HEd e VEd. If the ratio is < 3% refer to combo1, if it is > 3% refer to combo2.

$$\frac{H_{Ed}}{V_{Ed}} = \frac{65kN}{1550kN} \times 100 = 4{,}2\% \xrightarrow{\text{rapporto>3\%}} \text{Com o 2}$$

4. Fiksirati horizontalnu krutost

4. Fix the horizontal stiffness

DATA	NB5		NB2														hg	Com o 1			Com o 2			Kh
					NB4																			
	Ht	W	Ht	W	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	Kg	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm
NB2/4/5 250x300xHt	61	20,2	71	26,9	71	101	47,2	270	320	30	15	2	20	80	-	250	32	1891	14	6,4	1613	68	32,0	2,11
	72	22,7	82	29,4	82	112	49,8	270	320	30	15	2	20	80	-	250	40	1953	14	8,0	1583	68	40,0	1,69
	83	25,3	93	32,0	93	123	52,3	270	320	30	15	2	20	80	-	250	48	1643	14	9,6	1369	68	48,0	1,41

Iz ove ta ele, u koloni Com o2, uzeti ležište s dozvoljenim vertikalnim opterećenjem što bliže projektovanom vertikalnom opterećenju i odgovarajućoj horizontalnoj krutosti Kh=1,69kN/mm. Proveriti da li je izabrana horizontalna krutost odgovarajuća projektovanoj, u suprotnom, u skladu s tim promeniti ležište.

From the table, in the combo2 column, take the bearing with the vertical allowable load as close as possible to the vertical design load and the corresponding horizontal stiffness Kh=1.69 kN/mm. Check if the horizontal stiffness of the choosen bearing is consistent with the design otherwise change bearing accordingly.

5. Određivanje ekvivalenta horizontalnih opterećenja i pomeranja

5. Determine the equivalent horizontal loads and displacements

$$H = H_{Ed} + s_x \times K_h = 65 + 40 \times 1{,}69 = 133kN$$

$$s^* = \frac{H_{Ed}}{K_h} + s_x = \frac{65}{1{,}69} + 40 = 78mm$$

6. Izbor ležišta

6. Choose the bearing

DATA	NB5		NB2														hg	Com o 1			Com o 2			Kh
					NB4																			
	Ht	W	Ht	W	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	Kg	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm
NB2/4/5 300x500xHt	116	65,9	126	79,2	126	156	118,4	320	520	55	15	2	25	100	-	440	72	3714	27	14,4	2937	135	72,0	1,88
	127	70,9	137	84,3	137	167	123,4	320	520	55	15	2	25	100	-	440	80	3714	27	16,0	2546	135	80,0	1,69
	138	76,0	148	89,4	148	178	128,5	320	520	55	15	2	25	100	-	440	88	3003	27	17,6	2226	135	88,0	1,53

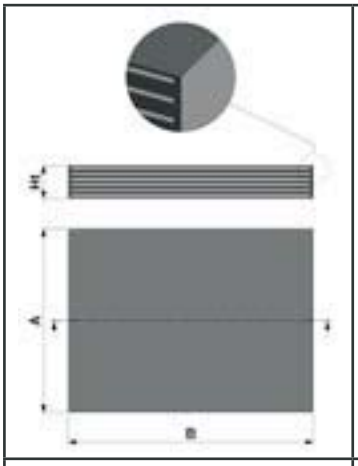
Iz tabele u koloni Combo2 izabrati ležište tako da zadovoljava horizontalno opterećenje i pomeranje što bliže kalkulisanom u tački 5. Takođe proveriti da li je projektovano vertikalno opterećenje (u ovom slučaju 1550 kN) manje od dozvoljenog za izabrano ležište (2546 kN).
Sada se identifikuje oznaka ležišta, u ovom slučaju to je NB4 300x500x137, gde je visina ležišta 137 Ht.
Ukoliko se ležište ne može pronaći u tabeli, znači da uslovi opterećenja zahtevaju detaljan projekat. U tom slučaju Tehnički sektor ALGE će izraditi specifičan projekat.

From the table, in the combo2 column, take the bearing with the allowable horizontal load and displacement as close as possible with the calculated ones at point 5. Also check that the vertical design load (1550 kN in this case) is minor than the allowable load of the chosen bearing (2546 kN).

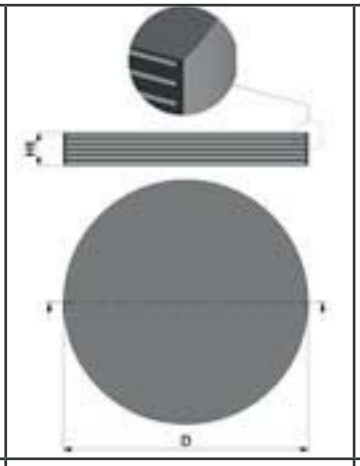
Now identify the bearing mark, in this case NB4 300x500x137, where 137 is the bearing height Ht.
If it is not possible to find bearing from the dimension tables, it means that the loading conditions require a more focused design. In this case ALGA technical department will perform a specific design.

Da bi se osiguralo ispravno funkcionisanje ležišta, uvek se mora voditi računa o pritisku.
Standard EN1337-3 zahteva minimalni pritisak od 3 N/mm. Ovaj uslov uvek mora biti pravilno proveren.

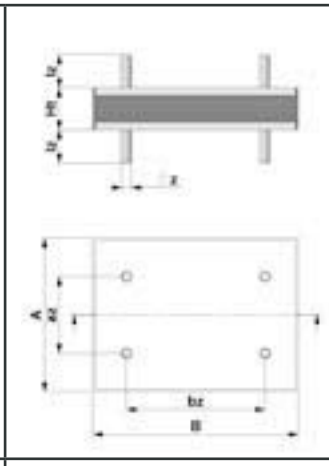
In order to ensure the proper functioning of the bearing, it must always be subject to compression. The EN1337-3 requires a minimum pressure of 3 N / mm 2. This condition has always to be properly checked".



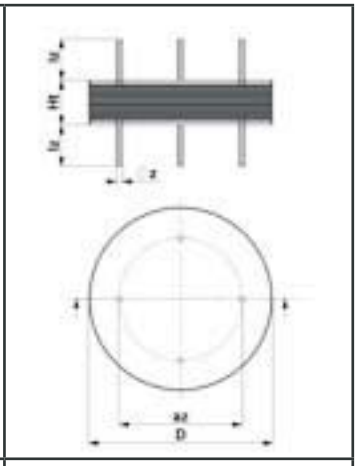
NB



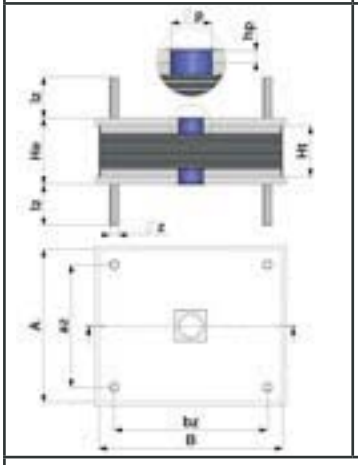
NBC

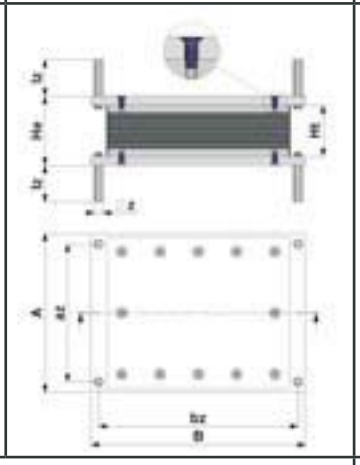


NB2

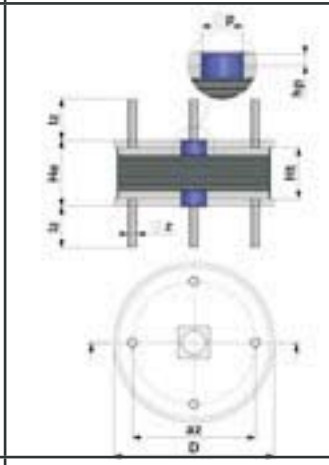


NBC2

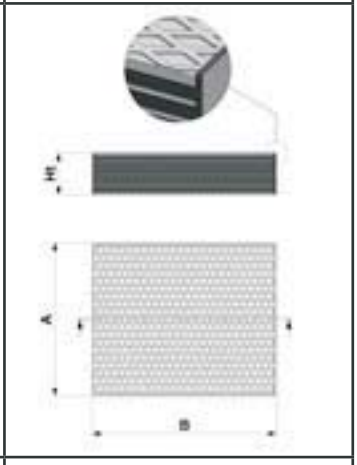




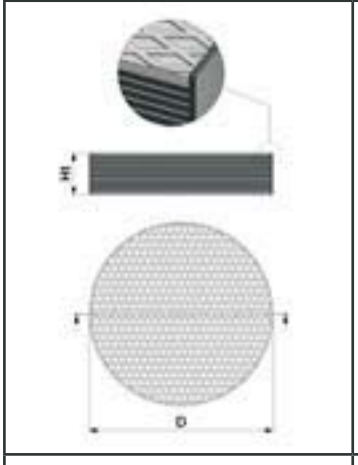
NB4



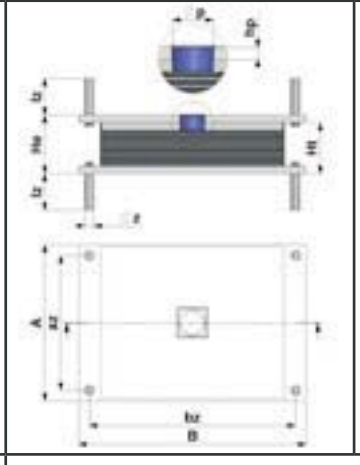
NBC4

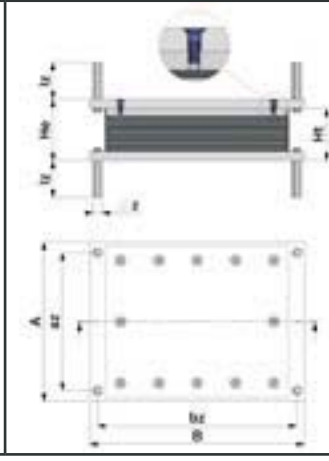


NB5

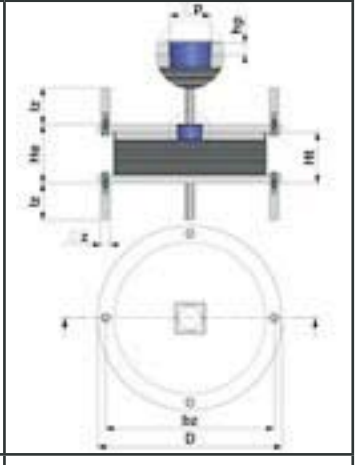


NBC5





NB6



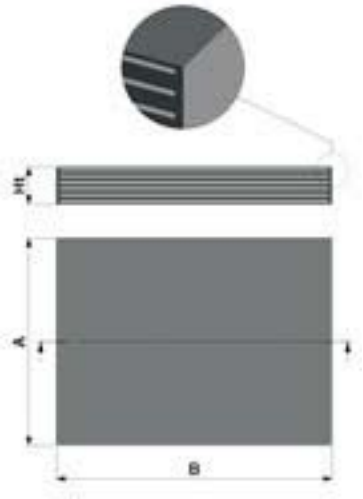
NBC6

Com o 1
deformacija gume γ = 0,2
rubber shear strain γ = 0,2
rotacija / *rotation* 0.01 rad
V=Vmax

Com o 2
deformacija gume γ = 0,2
rubber shear strain γ = 1,0
rotacija / *rotazion* 0.005 rad
H=Hmax

Ht	visina ležišta *height of bearing*	hp	visina moždanika i anker-ploče *height of pin and height of masonry plates*	hg	visina gume *height of rubber*		
He	visina ležišta s kontraločama *height of bearing with counterplates*	nz	broj ankera *N° anchors*	V	vertikalno opterećenje *vertical load*		
W	peso appoggio *weight of bearing*	Φz	prečnik ankera diameter of anchors	H	horizontalno opterećenje *horizontal load*		
A - B	dimensione elemento *bearing dimension*	lz	dužina ankera *lenght of anchors*	lz	dužina ankera *lenght of anchors*		
Φp	diametro perno *pin diameter*	az-z	razmak ankera *interaxis of anchors*	az-z	razmak ankera *interaxis of anchors*		

NB



Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht visina ležišta / *height of bearing*

W težina ležišta / *weight of bearing*

A-B dimenzije ležišta / *bearing dimension*

hg visina gume / *height of rubber*

V vertikalno opterećenje / *vertical load*

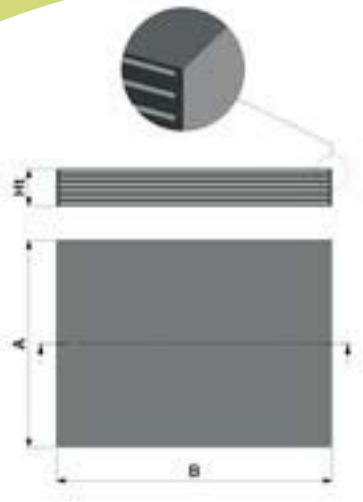
H horizontalno opterećenje / *horizontal load*

s* ekvivalent pomeranja / *equivalent displacement*

Kh horizontalna krutost / *horizontal stiffness*

DATA	Dimenzije			hg	Com o 1			Com o 2			Kh	W
	Ht	A	B		V	H	s*	V	H	s*		
	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm	kG
NB 100x100xHt	21	100	100	10	125	3	3,0	100	11	12,3	0,90	0,7
	28	100	100	15	123	2	4,0	95	10	17,4	0,60	0,9
	35	100	100	20	91	2	5,0	69	9	19,4	0,45	1,1
	42	100	100	25	71	2	6,0	50	7	20,5	0,36	1,3
	49	100	100	30	59	2	7,0	38	6	21,2	0,30	1,6
	56	100	100	35	49	2	8,0	29	6	21,4	0,26	1,8
NB 100x150xHt	21	100	150	10	238	4	3,0	191	19	14,1	1,35	1,0
	28	100	150	15	235	4	4,0	183	18	19,9	0,90	1,3
	35	100	150	20	174	3	5,0	133	15	22,0	0,68	1,7
	42	100	150	25	137	3	6,0	97	12	23,0	0,54	2,0
	49	100	150	30	113	3	7,0	74	11	23,6	0,45	2,3
	56	100	150	35	95	3	8,0	57	9	23,7	0,39	2,7
	63	100	150	40	82	3	9,0	45	8	23,4	0,34	3,0
NB 100x200xHt	21	100	200	10	361	5	3,0	290	27	15,0	1,80	1,3
	28	100	200	15	357	5	4,0	277	24	20,0	1,20	1,8
	35	100	200	20	264	5	5,0	202	21	23,6	0,90	2,2
	42	100	200	25	209	4	6,0	148	18	24,6	0,72	2,7
	49	100	200	30	171	4	7,0	113	15	25,1	0,60	3,1
	56	100	200	35	145	4	8,0	88	13	25,1	0,51	3,6
	63	100	200	40	125	4	9,0	68	11	24,7	0,45	4,0
NB 150x150xHt	21	150	150	10	388	6	3,0	367	30	15,0	2,03	1,5
	28	150	150	15	437	5	4,0	375	27	20,0	1,35	2,0
	35	150	150	20	460	5	5,0	371	25	25,0	1,01	2,5
	42	150	150	25	439	5	6,0	361	24	30,0	0,81	3,0
	49	150	150	30	363	5	7,0	286	24	35,0	0,68	3,5
	56	150	150	35	308	5	8,0	233	23	40,0	0,58	4,0
	63	150	150	40	268	5	9,0	194	22	42,8	0,51	4,5
NB 150x200xHt	21	150	200	10	607	8	3,0	575	41	15,0	2,70	2,0
	28	150	200	15	685	7	4,0	588	36	20,0	1,80	2,7
	35	150	200	20	720	7	5,0	580	34	25,0	1,35	3,3
	42	150	200	25	688	6	6,0	565	32	30,0	1,08	4,0
	49	150	200	30	568	6	7,0	448	32	35,0	0,90	4,7
	56	150	200	35	483	6	8,0	366	31	40,0	0,77	5,3
	63	150	200	40	419	6	9,0	304	30	45,0	0,68	6,0

NB



Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht visina ležišta / *height of bearing*

W težina ležišta / *weight of bearing*

A-B dimenzije ležišta / *bearing dimension*

hg visina gume / *height of rubber*

V vertikalno opterećenje / *vertical load*

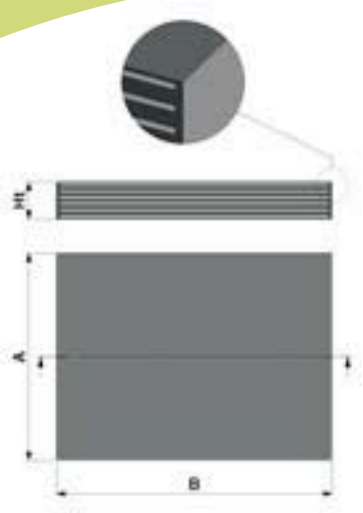
H horizontalno opterećenje / *horizontal load*

s* ekvivalent pomeranja / *equivalent displacement*

Kh horizontalna krutost / *horizontal stiffness*

DATA	Dimenzije			hg	Com o 1			Com o 2			Kh	W
	Ht	A	B		V	H	s*	V	H	s*		
	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm	kG
NB 150x300xHt	21	150	300	10	1087	12	3,0	1029	61	15,0	4,05	3,0
	28	150	300	15	1225	11	4,0	1052	54	20,0	2,70	4,0
	35	150	300	20	1289	10	5,0	1039	51	25,0	2,03	5,0
	42	150	300	25	1231	10	6,0	1011	49	30,0	1,62	6,0
	49	150	300	30	1018	9	7,0	803	47	35,0	1,35	7,0
	56	150	300	35	865	9	8,0	655	46	40,0	1,16	8,0
	63	150	300	40	751	9	9,0	544	46	45,0	1,01	9,0
	70	150	300	45	662	9	10,0	458	45	50,0	0,90	10,0
NB 200x250xHt	30	200	250	16	954	12	4,2	852	59	21,0	2,81	4,9
	41	200	250	24	1028	11	5,8	848	54	29,0	1,88	6,6
	52	200	250	32	1033	10	7,4	823	52	37,0	1,41	8,3
	63	200	250	40	819	10	9,0	655	51	45,0	1,13	10,0
	74	200	250	48	676	10	10,6	516	50	53,0	0,94	11,7
	85	200	250	56	574	10	12,2	416	49	60,5	0,80	13,4
	96	200	250	64	497	10	13,8	341	43	61,4	0,70	15,1
	107	200	250	72	438	10	15,4	283	39	61,7	0,63	16,8
NB 200x300xHt	30	200	300	16	1248	14	4,2	1115	71	21,0	3,38	5,9
	41	200	300	24	1345	13	5,8	1109	65	29,0	2,25	7,9
	52	200	300	32	1351	12	7,4	1077	62	37,0	1,69	10,0
	63	200	300	40	1071	12	9,0	858	61	45,0	1,35	12,0
	74	200	300	48	884	12	10,6	675	60	53,0	1,13	14,0
	85	200	300	56	751	12	12,2	544	59	61,0	0,96	16,1
	96	200	300	64	651	12	13,8	446	54	63,9	0,84	18,1
	107	200	300	72	573	12	15,4	370	48	64,0	0,75	20,1
NB 200x400xHt	30	200	400	16	1869	19	4,2	1670	95	21,0	4,50	7,8
	41	200	400	24	2015	17	5,8	1662	87	29,0	3,00	10,6
	52	200	400	32	2024	17	7,4	1612	83	37,0	2,25	13,3
	63	200	400	40	1604	16	9,0	1285	81	45,0	1,80	16,0
	74	200	400	48	1325	16	10,6	1011	80	53,0	1,50	18,7
	85	200	400	56	1125	16	12,2	816	78	61,0	1,29	21,4
	96	200	400	64	975	16	13,8	669	76	67,5	1,13	24,1
	107	200	400	72	859	15	15,4	555	67	67,4	1,00	26,8
NB 250x300xHt	30	250	300	16	1530	18	4,2	1523	89	21,0	4,22	7,3
	41	250	300	24	1771	16	5,8	1580	82	29,0	2,81	9,9
	52	250	300	32	1883	16	7,4	1574	78	37,0	2,11	12,4
	63	250	300	40	1944	15	9,0	1544	76	45,0	1,69	15,0
	74	250	300	48	1636	15	10,6	1333	75	53,0	1,41	17,5
	85	250	300	56	1392	15	12,2	1094	74	61,0	1,21	20,1
	96	250	300	64	1209	15	13,8	914	73	69,0	1,05	22,6
	107	250	300	72	1067	14	15,4	774	72	77,0	0,94	25,2

NB



Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht visina ležišta / *height of bearing*

W težina ležišta / *weight of bearing*

A-B dimenzije ležišta /*bearing dimension*

hg visina gume / *height of rubber*

V vertikalno opterećenje / *vertical load*

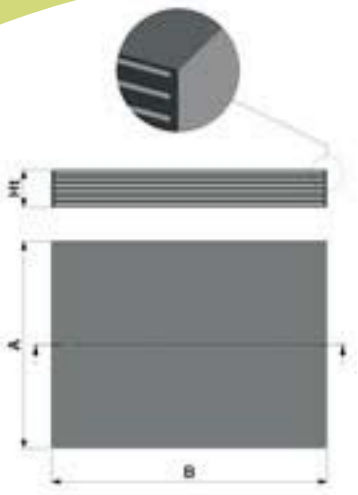
H horizontalno opterećenje / *horizontal load*

s* ekvivalent pomeranja / *equivalent displacement*

Kh horizontalna krutost / *horizontal stiffness*

DATA	Dimenzije			hg	Com o 1			Com o 2			Kh	W
	Ht	A	B		V	H	s*	V	H	s*		
	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm	kG
NB 250x400xHt	30	250	400	16	2329	24	4,2	2318	118	21,0	5,63	9,8
	41	250	400	24	2695	22	5,8	2405	109	29,0	3,75	13,2
	52	250	400	32	2866	21	7,4	2396	104	37,0	2,81	16,6
	63	250	400	40	2959	20	9,0	2350	101	45,0	2,25	20,0
	74	250	400	48	2490	20	10,6	2030	99	53,0	1,88	23,4
	85	250	400	56	2119	20	12,2	1665	98	61,0	1,61	26,8
	96	250	400	64	1841	19	13,8	1391	97	69,0	1,41	30,2
	107	250	400	72	1625	19	15,4	1179	96	77,0	1,25	33,6
NB 250x500xHt	30	250	500	16	3174	30	4,2	3158	148	21,0	7,03	12,2
	41	250	500	24	3672	27	5,8	3277	136	29,0	4,69	16,5
	52	250	500	32	3905	26	7,4	3265	130	37,0	3,52	20,7
	63	250	500	40	4032	25	9,0	3202	127	45,0	2,81	25,0
	74	250	500	48	3393	25	10,6	2766	124	53,0	2,34	29,2
	85	250	500	56	2888	25	12,2	2269	123	61,0	2,01	33,5
	96	250	500	64	2509	24	13,8	1896	121	69,0	1,76	37,7
	107	250	500	72	2214	24	15,4	1606	120	77,0	1,56	42,0
NB 300x400xHt	41	300	400	24	3185	26	5,8	3112	131	29,0	4,50	15,8
	52	300	400	32	3543	25	7,4	3185	125	37,0	3,38	19,9
	63	300	400	40	3748	24	9,0	3182	122	45,0	2,70	24,0
	74	300	400	48	3875	24	10,6	3141	119	53,0	2,25	28,1
	85	300	400	56	3497	24	12,2	2883	118	61,0	1,93	32,1
	96	300	400	64	3042	23	13,8	2434	116	69,0	1,69	36,2
	107	300	400	72	2688	23	15,4	2085	116	77,0	1,50	40,3
	118	300	400	80	2405	23	17,0	1806	115	85,0	1,35	44,3
NB 300x500xHt	41	300	500	24	4384	33	5,8	4284	163	29,0	5,63	19,8
	52	300	500	32	4877	31	7,4	4384	156	37,0	4,22	24,9
	63	300	500	40	5158	30	9,0	4380	152	45,0	3,38	30,0
	74	300	500	48	5334	30	10,6	4324	149	53,0	2,81	35,1
	85	300	500	56	4814	29	12,2	3968	147	61,0	2,41	40,2
	96	300	500	64	4188	29	13,8	3350	146	69,0	2,11	45,2
	107	300	500	72	3700	29	15,4	2870	144	77,0	1,88	50,3
	118	300	500	80	3311	29	17,0	2486	143	85,0	1,69	55,4
NB 300x600xHt	41	300	600	24	5634	39	5,8	5505	196	29,0	6,75	23,7
	52	300	600	32	6268	37	7,4	5634	187	37,0	5,06	29,9
	63	300	600	40	6629	36	9,0	5629	182	45,0	4,05	36,0
	74	300	600	48	6855	36	10,6	5557	179	53,0	3,38	42,1
	85	300	600	56	6187	35	12,2	5099	176	61,0	2,89	48,2
	96	300	600	64	5382	35	13,8	4306	175	69,0	2,53	54,3
	107	300	600	72	4756	35	15,4	3689	173	77,0	2,25	60,4
	118	300	600	80	4255	34	17,0	3195	172	85,0	2,03	66,5

NB



Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht visina ležišta / *height of bearing*

W težina ležišta / *weight of bearing*

A-B dimenzije ležišta / *bearing dimension*

hg visina gume / *height of rubber*

V vertikalno opterećenje / *vertical load*

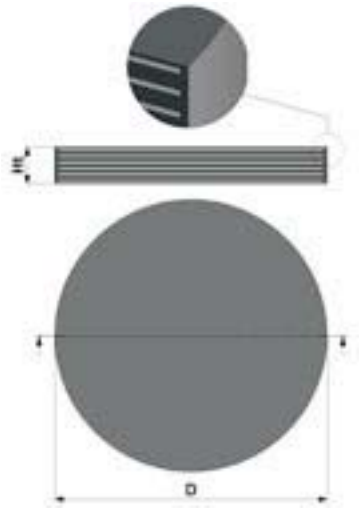
H horizontalno opterećenje / *horizontal load*

s* ekvivalent pomeranja / *equivalent displacement*

Kh horizontalna krutost / *horizontal stiffness*

DATA	Dimenzije			hg	Com o 1			Com o 2			Kh	W
	Ht	A	B		V	H	s*	V	H	s*		
	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm	kG
NB 400x500xHt	54	400	500	33	5219	41	7,6	5057	207	38,0	5,45	35,0
	69	400	500	44	5767	40	9,8	5158	200	49,0	4,09	44,1
	84	400	500	55	6078	39	12,0	5142	196	60,0	3,27	53,3
	99	400	500	66	6272	39	14,2	5068	194	71,0	2,73	62,4
	114	400	500	77	5489	38	16,4	4525	192	82,0	2,34	71,6
	129	400	500	88	4775	38	18,6	3818	190	93,0	2,05	80,7
	144	400	500	99	4219	38	20,8	3268	189	104,0	1,82	89,8
	159	400	500	110	3774	38	23,0	2827	188	115,0	1,64	99,0
NB 400x700xHt	54	400	700	33	8434	58	7,6	8172	290	38,0	7,64	49,0
	69	400	700	44	9319	56	9,8	8335	281	49,0	5,73	61,8
	84	400	700	55	9822	55	12,0	8309	275	60,0	4,58	74,6
	99	400	700	66	10134	54	14,2	8189	271	71,0	3,82	87,4
	114	400	700	77	8871	54	16,4	7313	268	82,0	3,27	100,2
	129	400	700	88	7716	53	18,6	6170	266	93,0	2,86	113,0
	144	400	700	99	6818	53	20,8	5281	265	104,0	2,55	125,8
	159	400	700	110	6099	53	23,0	4570	263	115,0	2,29	138,6
NB 400x800xHt	54	400	800	33	10119	66	7,6	9805	332	38,0	8,73	56,0
	69	400	800	44	11179	64	9,8	10001	321	49,0	6,55	70,6
	84	400	800	55	11785	63	12,0	9970	314	60,0	5,24	85,2
	99	400	800	66	12159	62	14,2	9825	310	71,0	4,36	99,9
	114	400	800	77	10643	61	16,4	8774	307	82,0	3,74	114,5
	129	400	800	88	9258	61	18,6	7403	304	93,0	3,27	129,1
	144	400	800	99	8180	61	20,8	6336	303	104,0	2,91	143,7
	159	400	800	110	7318	60	23,0	5483	301	115,0	2,62	158,4
NB 500x600xHt	54	500	600	33	7254	62	7,6	8460	311	38,0	8,18	52,5
	69	500	600	44	8931	60	9,8	9039	301	49,0	6,14	66,2
	84	500	600	55	9911	59	12,0	9273	295	60,0	4,91	79,9
	99	500	600	66	10545	58	14,2	9334	290	71,0	4,09	93,6
	114	500	600	77	10976	58	16,4	9297	288	82,0	3,51	107,3
	129	500	600	88	11285	57	18,6	9198	285	93,0	3,07	121,1
	144	500	600	99	10001	57	20,8	8227	284	104,0	2,73	134,8
	159	500	600	110	8958	56	23,0	7193	282	115,0	2,45	148,5
	174	500	600	121	8105	56	25,2	6347	281	126,0	2,23	162,2
NB 500x700xHt	69	500	700	44	11180	70	9,8	11316	351	49,0	7,16	77,2
	84	500	700	55	12410	69	12,0	11609	344	60,0	5,73	93,2
	99	500	700	66	13201	68	14,2	11685	339	71,0	4,77	109,2
	114	500	700	77	13743	67	16,4	11638	335	82,0	4,09	125,2
	129	500	700	88	14130	67	18,6	11514	333	93,0	3,58	141,2
	144	500	700	99	12520	66	20,8	10299	331	104,0	3,18	157,2
	159	500	700	110	11215	66	23,0	9005	329	115,0	2,86	173,2
	174	500	700	121	10147	66	25,2	7946	328	126,0	2,60	189,2

NBC



Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht visina ležišta / *height of bearing*

W težina ležišta / *weight of bearing*

D prečnik ležišta / *bearing diameter*

hg visina gume / *height of rubber*

V vertikalno opterećenje / *vertical load*

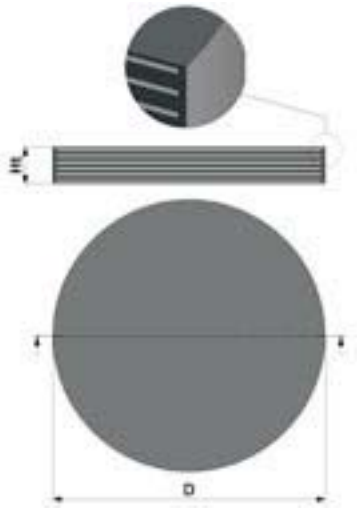
H horizontalno opterećenje / *horizontal load*

s* ekvivalent pomeranja / *equivalent displacement*

Kh horizontalna krutost / *horizontal stiffness*

DATA	Dimenzije		hg	Com o 1			Com o 2			Kh	W
	Ht	D		V	H	s*	V	H	s*		
	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm	kG
NBC 150xHt	21	150	10	328	5	3,0	310	24	15,0	1,59	1,2
	28	150	15	370	4	4,0	317	21	20,0	1,06	1,6
	35	150	20	389	4	5,0	314	20	25,0	0,80	2,0
	42	150	25	370	4	6,0	304	19	30,0	0,64	2,4
	49	150	30	306	4	7,0	241	19	35,0	0,53	2,7
	56	150	35	260	4	8,0	197	18	40,0	0,45	3,1
	63	150	40	226	4	9,0	164	18	44,2	0,40	3,5
	70	150	45	199	4	10,0	138	16	44,7	0,35	3,9
NBC 200xHt	30	200	16	560	7	4,2	501	37	21,0	1,77	3,1
	41	200	24	604	7	5,8	498	34	29,0	1,18	4,1
	52	200	32	606	7	7,4	484	33	37,0	0,88	5,2
	63	200	40	480	6	9,0	384	32	45,0	0,71	6,3
	74	200	48	396	6	10,6	302	31	53,0	0,59	7,3
	85	200	56	337	6	12,2	244	30	58,5	0,50	8,4
	96	200	64	292	6	13,8	200	26	59,4	0,44	9,5
	107	200	72	257	6	15,4	166	23	59,8	0,39	10,5
NBC 250xHt	30	250	16	948	12	4,2	943	58	21,0	2,76	4,8
	41	250	24	1097	11	5,8	979	53	29,0	1,84	6,5
	52	250	32	1166	10	7,4	975	51	37,0	1,38	8,1
	63	250	40	1204	10	9,0	956	50	45,0	1,10	9,8
	74	250	48	1012	10	10,6	825	49	53,0	0,92	11,5
	85	250	56	862	10	12,2	677	48	61,0	0,79	13,1
	96	250	64	748	10	13,8	566	48	69,0	0,69	14,8
	107	250	72	661	9	15,4	479	47	77,0	0,61	16,5
NBC 300xHt	41	300	24	1679	15	5,8	1640	77	29,0	2,65	9,3
	52	300	32	1867	15	7,4	1679	74	37,0	1,99	11,7
	63	300	40	1975	14	9,0	1677	72	45,0	1,59	14,1
	74	300	48	2042	14	10,6	1656	70	53,0	1,33	16,5
	85	300	56	1842	14	12,2	1518	69	61,0	1,14	18,9
	96	300	64	1602	14	13,8	1282	69	69,0	0,99	21,3
	107	300	72	1416	14	15,4	1098	68	77,0	0,88	23,7
	118	300	80	1267	14	17,0	951	68	85,0	0,80	26,1

NBC



Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht visina ležišta / *height of bearing*

W težina ležišta / *weight of bearing*

D prečnik ležišta / *bearing diameter*

hg visina gume / *height of rubber*

V vertikalno opterećenje / *vertical load*

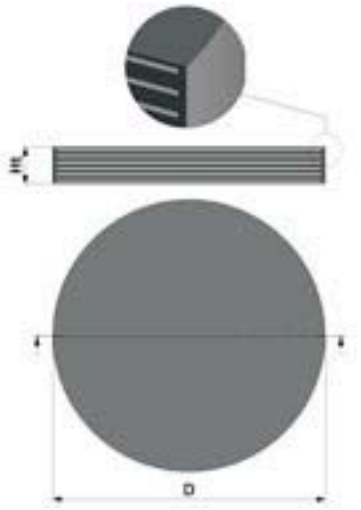
H horizontalno opterećenje / *horizontal load*

s* ekvivalent pomeranja / *equivalent displacement*

Kh horizontalna krutost / *horizontal stiffness*

DATA	Dimenzije		hg	Com o 1			Com o 2			Kh	W
	Ht	D		V	H	s*	V	H	s*		
	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm	kG
NBC 350xHt	39	350	22	1881	21	5,4	1821	106	27,0	3,94	12,4
	54	350	33	2206	20	7,6	2003	100	38,0	2,62	16,8
	69	350	44	2359	19	9,8	2004	96	49,0	1,97	21,2
	84	350	55	2443	19	12,0	1971	94	60,0	1,57	25,6
	99	350	66	2138	19	14,2	1765	93	71,0	1,31	30,0
	114	350	77	1820	18	16,4	1451	92	82,0	1,12	34,4
	129	350	88	1582	18	18,6	1215	92	93,0	0,98	38,8
	144	350	99	1396	18	20,8	1032	91	104,0	0,87	43,2
	159	350	110	1248	18	23,0	885	91	115,0	0,79	47,6
NBC 400xHt	54	400	33	3006	26	7,6	2913	130	38,0	3,43	22,0
	69	400	44	3321	25	9,8	2971	126	49,0	2,57	27,7
	84	400	55	3501	25	12,0	2962	123	60,0	2,06	33,5
	99	400	66	3612	24	14,2	2919	122	71,0	1,71	39,2
	114	400	77	3161	24	16,4	2605	120	82,0	1,47	45,0
	129	400	88	2749	24	18,6	2198	120	93,0	1,29	50,7
	144	400	99	2429	24	20,8	1881	119	104,0	1,14	56,4
	159	400	110	2173	24	23,0	1628	118	115,0	1,03	62,2
NBC 450xHt	54	450	33	3790	33	7,6	3779	165	38,0	4,34	27,8
	69	450	44	4379	32	9,8	3938	159	49,0	3,25	35,1
	84	450	55	4720	31	12,0	4190	156	60,0	2,60	42,4
	99	450	66	4936	31	14,2	4173	154	71,0	2,17	49,6
	114	450	77	5082	30	16,4	4121	152	82,0	1,86	56,9
	129	450	88	4467	30	18,6	3678	151	93,0	1,63	64,2
	144	450	99	3950	30	20,8	3166	150	104,0	1,45	71,4
	159	450	110	3536	30	23,0	2756	150	115,0	1,30	78,7
	174	450	121	3198	30	25,2	2420	149	126,0	1,18	86,0
NBC 500xHt	69	500	44	5443	39	9,8	5232	197	49,0	4,02	43,3
	84	500	55	6040	39	12,0	5650	193	60,0	3,21	52,3
	99	500	66	6425	38	14,2	5688	190	71,0	2,68	61,3
	114	500	77	6689	38	16,4	5665	188	82,0	2,29	70,3
	129	500	88	6877	37	18,6	5604	187	93,0	2,01	79,2
	144	500	99	6093	37	20,8	5012	186	104,0	1,78	88,2
	159	500	110	5458	37	23,0	4382	185	115,0	1,61	97,2
	174	500	121	4938	37	25,2	3867	184	126,0	1,46	106,1

NBC



Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht visina ležišta / *height of bearing*

W težina ležišta / *weight of bearing*

D prečnik ležišta / *bearing diameter*

hg visina ležišta / *height of rubber*

V vertikalno opterećenje / *vertical load*

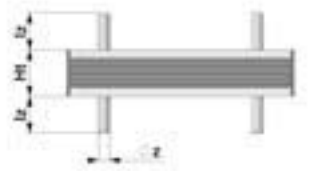
H horizontalno opterećenje / *horizontal load*

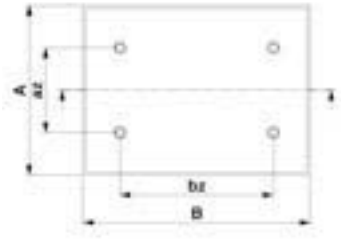
s* ekvivalent pomeranja / *equivalent displacement*

Kh horizontalna krutost / *horizontal stiffness*

DATA	Dimenzije		hg	Com o 1			Com o 2			Kh	W
	Ht	D		V	H	s*	V	H	s*		
	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm	kG
NBC 550xHt	69	550	44	6388	48	9,8	6668	238	49,0	4,86	52,4
	84	550	55	7373	47	12,0	7321	233	60,0	3,89	63,3
	99	550	66	8014	46	14,2	7453	230	71,0	3,24	74,1
	114	550	77	8458	46	16,4	7487	228	82,0	2,78	85,0
	129	550	88	8780	45	18,6	7460	226	93,0	2,43	95,9
	144	550	99	9007	45	20,8	7393	225	104,0	2,16	106,7
	159	550	110	8072	45	23,0	6635	224	115,0	1,94	117,6
	174	550	121	7307	45	25,2	5876	223	126,0	1,77	128,4
NBC 600xHt	70	600	45	6807	57	10,0	6719	283	50,0	5,65	62,8
	90	600	60	7806	55	13,0	7347	276	65,0	4,24	79,4
	110	600	75	8383	54	16,0	7411	271	80,0	3,39	96,0
	130	600	90	8749	54	19,0	7370	269	95,0	2,83	112,6
	150	600	105	8873	53	22,0	7270	267	110,0	2,42	129,2
	170	600	120	7722	53	25,0	6355	265	125,0	2,12	145,8
	190	600	135	6828	53	28,0	5467	264	140,0	1,88	162,4
	210	600	150	6112	53	31,0	4756	263	155,0	1,70	179,0
	230	600	165	5527	52	34,0	4175	262	170,0	1,54	195,7
NBC 650xHt	70	650	45	7752	66	10,0	7518	332	50,0	6,64	73,7
	90	650	60	9269	65	13,0	9135	324	65,0	4,98	93,2
	110	650	75	10152	64	16,0	9313	319	80,0	3,98	112,7
	130	650	90	10719	63	19,0	9333	315	95,0	3,32	132,2
	150	650	105	11105	63	22,0	9264	313	110,0	2,84	151,6
	170	650	120	10716	62	25,0	8973	311	125,0	2,49	171,1
	190	650	135	9478	62	28,0	7744	310	140,0	2,21	190,6
	210	650	150	8489	62	31,0	6760	309	155,0	1,99	210,1
	230	650	165	7679	62	34,0	5955	308	170,0	1,81	229,6
NBC 700xHt	90	700	60	10671	75	13,0	10535	375	65,0	5,77	108,0
	110	700	75	11976	74	16,0	11436	369	80,0	4,62	130,7
	130	700	90	12820	73	19,0	11553	366	95,0	3,85	153,3
	150	700	105	13401	73	22,0	11539	363	110,0	3,30	175,9
	170	700	120	13818	72	25,0	11443	361	125,0	2,89	198,5
	190	700	135	12834	72	28,0	10663	359	140,0	2,57	221,1
	210	700	150	11499	72	31,0	9335	358	155,0	2,31	243,7
	230	700	165	10406	71	34,0	8248	357	170,0	2,10	266,3

NB2
NB4
NB5





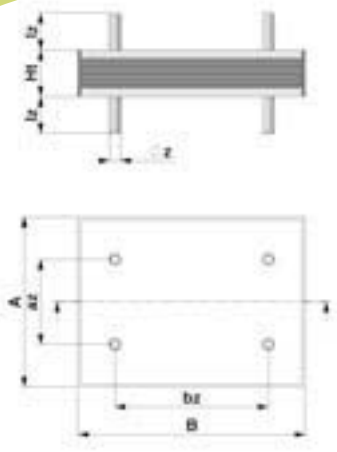
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontrapločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
A - B	dimenzije osnove ležišta *bearing dimension*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

DATA	NB5		NB2														hg	Com o 1			Com o 2			Kh
					NB4																			
	Ht	W	Ht	W	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	Kg	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm
NB2/4/5 100x100xHt	32	1,9	42	3,4	42	72	6,8	120	120	20	15	2	20	80	-	55	10	126	2	2,0	107	9	10,0	0,90
	39	2,1	49	3,7	49	79	7,0	120	120	20	15	2	20	80	-	55	15	125	2	3,0	102	9	15,0	0,60
	46	2,3	56	3,9	56	86	7,3	120	120	20	15	2	20	80	-	55	20	92	2	4,0	75	9	20,0	0,45
	53	2,5	63	4,1	63	93	7,5	120	120	20	15	2	20	80	-	55	25	72	2	5,0	55	9	25,0	0,36
	60	2,7	70	4,3	70	100	7,7	120	120	20	15	2	20	80	-	55	30	59	2	6,0	42	9	30,0	0,30
	67	3,0	77	4,5	77	107	7,9	120	120	20	15	2	20	80	-	55	35	50	2	7,0	32	9	35,0	0,26
NB2/4/5 100x150xHt	32	2,8	42	4,8	42	72	9,6	120	170	20	15	2	20	80	-	100	10	241	3	2,0	204	14	10,0	1,35
	39	3,1	49	5,1	49	79	9,9	120	170	20	15	2	20	80	-	100	15	238	3	3,0	196	14	15,0	0,90
	46	3,5	56	5,4	56	86	10,2	120	170	20	15	2	20	80	-	100	20	176	3	4,0	143	14	20,0	0,68
	53	3,8	63	5,8	63	93	10,6	120	170	20	15	2	20	80	-	100	25	139	3	5,0	106	14	25,0	0,54
	60	4,1	70	6,1	70	100	10,9	120	170	20	15	2	20	80	-	100	30	114	3	6,0	81	14	30,0	0,45
	67	4,5	77	6,4	77	107	11,2	120	170	20	15	2	20	80	-	100	35	96	3	7,0	63	14	35,0	0,39
	74	4,8	84	6,8	84	114	11,6	120	170	20	15	2	20	80	-	100	40	83	3	8,0	50	14	40,0	0,34
	81	5,1	91	7,1	91	121	11,9	120	170	20	15	2	20	80	-	100	45	73	3	9,0	39	14	45,0	0,30
NB2/4/5 100x200xHt	32	3,7	42	6,1	42	72	12,3	120	220	20	15	2	20	80	-	150	10	365	4	2,0	310	18	10,0	1,80
	39	4,2	49	6,5	49	79	12,7	120	220	20	15	2	20	80	-	150	15	361	4	3,0	297	18	15,0	1,20
	46	4,6	56	7,0	56	86	13,2	120	220	20	15	2	20	80	-	150	20	267	4	4,0	217	18	20,0	0,90
	53	5,0	63	7,4	63	93	13,6	120	220	20	15	2	20	80	-	150	25	211	4	5,0	161	18	25,0	0,72
	60	5,5	70	7,8	70	100	14,1	120	220	20	15	2	20	80	-	150	30	173	4	6,0	123	18	30,0	0,60
	67	5,9	77	8,3	77	107	14,5	120	220	20	15	2	20	80	-	150	35	147	4	7,0	96	18	35,0	0,51
	74	6,4	84	8,7	84	114	15,0	120	220	20	15	2	20	80	-	150	40	126	4	8,0	76	18	40,0	0,45
	81	6,8	91	9,2	91	121	15,4	120	220	20	15	2	20	80	-	150	45	111	4	9,0	61	18	45,0	0,40
	88	7,3	98	9,6	98	128	15,8	120	220	20	15	2	20	80	-	150	50	111	4	10,0	48	18	50,0	0,36
NB2/4/5 150x150xHt	32	4,2	42	6,7	42	72	13,5	170	170	20	15	2	20	80	-	100	10	391	4	2,0	382	20	10,0	2,03
	39	4,7	49	7,2	49	79	14,0	170	170	20	15	2	20	80	-	100	15	441	4	3,0	391	20	15,0	1,35
	46	5,2	56	7,7	56	86	14,5	170	170	20	15	2	20	80	-	100	20	463	4	4,0	387	20	20,0	1,01
	53	5,7	63	8,2	63	93	15,0	170	170	20	15	2	20	80	-	100	25	443	4	5,0	377	20	25,0	0,81
	60	6,2	70	8,7	70	100	15,5	170	170	20	15	2	20	80	-	100	30	366	4	6,0	300	20	30,0	0,68
	67	6,7	77	9,2	77	107	16,0	170	170	20	15	2	20	80	-	100	35	311	4	7,0	245	20	35,0	0,58
	74	7,2	84	9,7	84	114	16,5	170	170	20	15	2	20	80	-	100	40	270	4	8,0	204	20	40,0	0,51
	81	7,7	91	10,2	91	121	17,0	170	170	20	15	2	20	80	-	100	45	238	4	9,0	172	20	45,0	0,45
	88	8,2	98	10,7	98	128	17,5	170	170	20	15	2	20	80	-	100	50	238	4	10,0	146	20	50,0	0,41
	95	8,7	105	11,2	105	135	18,0	170	170	20	15	2	20	80	-	100	55	191	4	11,0	125	20	55,0	0,37

NB2
NB4
NB5



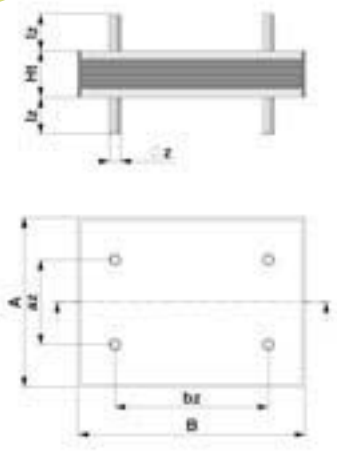
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontraločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
A - B	dimenzije osnove ležišta *bearing dimension*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

DATA	NB5		NB2														hg	Com 1			Com 2			Kh
					NB4																			
	Ht	W	Ht	W	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	Kg	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NB2/4/5 150x200xHt	32	5,6	42	8,7	42	72	17,5	170	220	20	15	2	20	80	-	150	10	612	5	2,0	598	27	10,0	2,70
	39	6,2	49	9,4	49	79	18,2	170	220	20	15	2	20	80	-	150	15	690	5	3,0	612	27	15,0	1,80
	46	6,9	56	10,0	56	86	18,9	170	220	20	15	2	20	80	-	150	20	725	5	4,0	606	27	20,0	1,35
	53	7,6	63	10,7	63	93	19,5	170	220	20	15	2	20	80	-	150	25	693	5	5,0	591	27	25,0	1,08
	60	8,2	70	11,4	70	100	20,2	170	220	20	15	2	20	80	-	150	30	573	5	6,0	470	27	30,0	0,90
	67	8,9	77	12,0	77	107	20,9	170	220	20	15	2	20	80	-	150	35	487	5	7,0	384	27	35,0	0,77
	74	9,6	84	12,7	84	114	21,5	170	220	20	15	2	20	80	-	150	40	423	5	8,0	320	27	40,0	0,68
	81	10,2	91	13,4	91	121	22,2	170	220	20	15	2	20	80	-	150	45	373	5	9,0	270	27	45,0	0,60
	88	10,9	98	14,0	98	128	22,9	170	220	20	15	2	20	80	-	150	50	373	5	10,0	230	27	50,0	0,54
	95	11,6	105	14,7	105	135	23,5	170	220	20	15	2	20	80	-	150	55	300	5	11,0	197	27	55,0	0,49
NB2/4/5 150x300xHt	32	8,4	42	12,7	42	72	25,5	170	320	20	15	2	20	80	-	250	10	1095	8	2,0	1070	41	10,0	4,05
	39	9,4	49	13,7	49	79	26,5	170	320	20	15	2	20	80	-	250	15	1234	8	3,0	1096	41	15,0	2,70
	46	10,4	56	14,7	56	86	27,5	170	320	20	15	2	20	80	-	250	20	1298	8	4,0	1084	41	20,0	2,03
	53	11,4	63	15,7	63	93	28,5	170	320	20	15	2	20	80	-	250	25	1240	8	5,0	1058	41	25,0	1,62
	60	12,4	70	16,7	70	100	29,5	170	320	20	15	2	20	80	-	250	30	1025	8	6,0	841	41	30,0	1,35
	67	13,4	77	17,7	77	107	30,5	170	320	20	15	2	20	80	-	250	35	872	8	7,0	688	41	35,0	1,16
	74	14,4	84	18,7	84	114	31,5	170	320	20	15	2	20	80	-	250	40	757	8	8,0	573	41	40,0	1,01
	81	15,3	91	19,7	91	121	32,5	170	320	20	15	2	20	80	-	250	45	668	8	9,0	484	41	45,0	0,90
	88	16,3	98	20,7	98	128	33,5	170	320	20	15	2	20	80	-	250	50	668	8	10,0	412	41	50,0	0,81
	95	17,3	105	21,7	105	135	34,5	170	320	20	15	2	20	80	-	250	55	537	8	11,0	353	41	55,0	0,74
NB2/4/5 200x250xHt	39	10,1	49	14,8	49	79	28,8	220	270	20	15	2	20	80	-	200	16	959	9	3,2	877	45	16,0	2,81
	50	11,8	60	16,5	60	90	30,5	220	270	20	15	2	20	80	-	200	24	1034	9	4,8	874	45	24,0	1,88
	61	13,5	71	18,2	71	101	32,2	220	270	20	15	2	20	80	-	200	32	1038	9	6,4	850	45	32,0	1,41
	72	15,2	82	19,9	82	112	33,9	220	270	20	15	2	20	80	-	200	40	823	9	8,0	678	45	40,0	1,13
	83	16,9	93	21,6	93	123	35,6	220	270	20	15	2	20	80	-	200	48	680	9	9,6	534	45	48,0	0,94
	94	18,6	104	23,3	104	134	37,3	220	270	20	15	2	20	80	-	200	56	577	9	11,2	432	45	56,0	0,80
	105	20,3	115	25,0	115	145	39,0	220	270	20	15	2	20	80	-	200	64	500	9	12,8	355	45	64,0	0,70
	116	22,0	126	26,7	126	156	40,7	220	270	20	15	2	20	80	-	200	72	440	9	14,4	295	45	72,0	0,63
	127	23,6	137	28,4	137	167	42,4	220	270	20	15	2	20	80	-	200	80	440	9	16,0	247	45	80,0	0,56
	138	25,3	148	30,1	148	178	44,0	220	270	20	15	2	20	80	-	200	88	353	9	17,6	208	45	88,0	0,51
NB2/4/5 200x300xHt	39	12,1	49	17,6	49	79	34,2	220	320	25	15	2	20	80	-	250	16	1255	11	3,2	1148	54	16,0	3,38
	50	14,1	60	19,6	60	90	36,2	220	320	25	15	2	20	80	-	250	24	1353	11	4,8	1144	54	24,0	2,25
	61	16,2	71	21,7	71	101	38,2	220	320	25	15	2	20	80	-	250	32	1359	11	6,4	1112	54	32,0	1,69
	72	18,2	82	23,7	82	112	40,3	220	320	25	15	2	20	80	-	250	40	1077	11	8,0	887	54	40,0	1,35
	83	20,2	93	25,7	93	123	42,3	220	320	25	15	2	20	80	-	250	48	889	11	9,6	700	54	48,0	1,13
	94	22,3	104	27,8	104	134	44,3	220	320	25	15	2	20	80	-	250	56	755	11	11,2	566	54	56,0	0,96
	105	24,3	115	29,8	115	145	46,4	220	320	25	15	2	20	80	-	250	64	655	11	12,8	465	54	64,0	0,84
	116	26,3	126	31,8	126	156	48,4	220	320	25	15	2	20	80	-	250	72	576	11	14,4	387	54	72,0	0,75
	127	28,4	137	33,9	137	167	50,5	220	320	25	15	2	20	80	-	250	80	576	11	16,0	324	54	80,0	0,68
	138	30,4	148	35,9	148	178	52,5	220	320	25	15	2	20	80	-	250	88	463	11	17,6	273	54	88,0	0,61

NB2
NB4
NB5



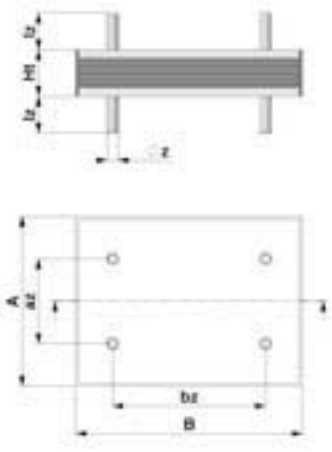
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta sa kontraločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
A - B	dimenzije osnove ležišta *bearing dimension*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

DATA	NB5		NB2														hg	Com o 1			Com o 2			Kh
					NB4																			
	Ht	W	Ht	W	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	Kg	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm
NB2/4/5 200x400xHt	39	16,1	49	23,2	49	79	44,9	220	420	30	15	2	20	80	-	350	16	1879	14	3,2	1719	72	16,0	4,50
	50	18,8	60	25,9	60	90	47,7	220	420	30	15	2	20	80	-	350	24	2026	14	4,8	1713	72	24,0	3,00
	61	21,5	71	28,6	71	101	50,4	220	420	30	15	2	20	80	-	350	32	2035	14	6,4	1665	72	32,0	2,25
	72	24,3	82	31,3	82	112	53,1	220	420	30	15	2	20	80	-	350	40	1613	14	8,0	1329	72	40,0	1,80
	83	27,0	93	34,0	93	123	55,8	220	420	30	15	2	20	80	-	350	48	1332	14	9,6	1048	72	48,0	1,50
	94	29,7	104	36,8	104	134	58,5	220	420	30	15	2	20	80	-	350	56	1131	14	11,2	847	72	56,0	1,29
	105	32,4	115	39,5	115	145	61,2	220	420	30	15	2	20	80	-	350	64	981	14	12,8	697	72	64,0	1,13
	116	35,1	126	42,2	126	156	63,9	220	420	30	15	2	20	80	-	350	72	864	14	14,4	580	72	72,0	1,00
	127	37,8	137	44,9	137	167	66,7	220	420	30	15	2	20	80	-	350	80	864	14	16,0	486	72	80,0	0,90
	138	40,6	148	47,6	148	178	69,4	220	420	30	15	2	20	80	-	350	88	693	14	17,6	409	72	88,0	0,82
NB2/4/5 250x300xHt	39	15,1	49	21,8	49	79	42,1	270	320	30	15	2	20	80	-	250	16	1537	14	3,2	1526	68	16,0	4,22
	50	17,6	60	24,3	60	90	44,7	270	320	30	15	2	20	80	-	250	24	1778	14	4,8	1617	68	24,0	2,81
	61	20,2	71	26,9	71	101	47,2	270	320	30	15	2	20	80	-	250	32	1891	14	6,4	1613	68	32,0	2,11
	72	22,7	82	29,4	82	112	49,8	270	320	30	15	2	20	80	-	250	40	1953	14	8,0	1583	68	40,0	1,69
	83	25,3	93	32,0	93	123	52,3	270	320	30	15	2	20	80	-	250	48	1643	14	9,6	1369	68	48,0	1,41
	94	27,8	104	34,5	104	134	54,9	270	320	30	15	2	20	80	-	250	56	1398	14	11,2	1124	68	56,0	1,21
	105	30,4	115	37,1	115	145	57,4	270	320	30	15	2	20	80	-	250	64	1215	14	12,8	941	68	64,0	1,05
	116	32,9	126	39,6	126	156	59,9	270	320	30	15	2	20	80	-	250	72	1072	14	14,4	798	68	72,0	0,94
	127	35,5	137	42,1	137	167	62,5	270	320	30	15	2	20	80	-	250	80	1072	14	16,0	683	68	80,0	0,84
	138	38,0	148	44,7	148	178	65,0	270	320	30	15	2	20	80	-	250	88	864	14	17,6	590	68	88,0	0,77
NB2/4/5 250x400xHt	39	20,1	49	28,8	49	79	55,5	270	420	35	15	2	20	80	-	350	16	2339	18	3,2	2323	90	16,0	5,63
	50	23,5	60	32,2	60	90	58,9	270	420	35	15	2	20	80	-	350	24	2707	18	4,8	2462	90	24,0	3,75
	61	26,9	71	35,6	71	101	62,3	270	420	35	15	2	20	80	-	350	32	2879	18	6,4	2456	90	32,0	2,81
	72	30,3	82	39,0	82	112	65,7	270	420	35	15	2	20	80	-	350	40	2972	18	8,0	2410	90	40,0	2,25
	83	33,7	93	42,4	93	123	69,1	270	420	35	15	2	20	80	-	350	48	2501	18	9,6	2084	90	48,0	1,88
	94	37,1	104	45,7	104	134	72,5	270	420	35	15	2	20	80	-	350	56	2129	18	11,2	1711	90	56,0	1,61
	105	40,5	115	49,1	115	145	75,8	270	420	35	15	2	20	80	-	350	64	1849	18	12,8	1432	90	64,0	1,41
	116	43,9	126	52,5	126	156	79,2	270	420	35	15	2	20	80	-	350	72	1632	18	14,4	1215	90	72,0	1,25
	127	47,3	137	55,9	137	167	82,6	270	420	35	15	2	20	80	-	350	80	1632	18	16,0	1041	90	80,0	1,13
	138	50,7	148	59,3	148	178	86,0	270	420	35	15	2	20	80	-	350	88	1316	18	17,6	899	90	88,0	1,02
NB2/4/5 250x500xHt	39	25,2	49	35,8	49	79	68,8	270	520	45	15	2	20	80	-	450	16	3187	23	3,2	3166	113	16,0	7,03
	50	29,4	60	40,0	60	90	73,1	270	520	45	15	2	20	80	-	450	24	3688	23	4,8	3355	113	24,0	4,69
	61	33,7	71	44,3	71	101	77,3	270	520	45	15	2	20	80	-	450	32	3922	23	6,4	3346	113	32,0	3,52
	72	37,9	82	48,5	82	112	81,6	270	520	45	15	2	20	80	-	450	40	4050	23	8,0	3284	113	40,0	2,81
	83	42,1	93	52,7	93	123	85,8	270	520	45	15	2	20	80	-	450	48	3408	23	9,6	2840	113	48,0	2,34
	94	46,4	104	57,0	104	134	90,1	270	520	45	15	2	20	80	-	450	56	2901	23	11,2	2332	113	56,0	2,01
	105	50,6	115	61,2	115	145	94,3	270	520	45	15	2	20	80	-	450	64	2520	23	12,8	1952	113	64,0	1,76
	116	54,9	126	65,5	126	156	98,5	270	520	45	15	2	20	80	-	450	72	2224	23	14,4	1656	113	72,0	1,56
	127	59,1	137	69,7	137	167	102,8	270	520	45	15	2	20	80	-	450	80	2224	23	16,0	1419	113	80,0	1,41
	138	63,4	148	74,0	148	178	107,0	270	520	45	15	2	20	80	-	450	88	1793	23	17,6	1225	113	88,0	1,28

NB2
NB4
NB5



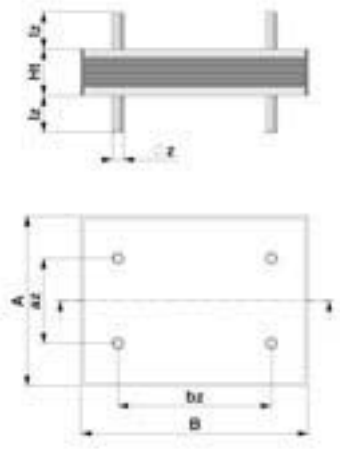
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotazion* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*		lz	dužina ankera *lenght of anchors*	
He	visina ležišta s kontrapločama *height of bearing with counterplates*		az- z	razmak ankera *interaxis of anchors*	
W	težina ležišta *weight of bearing*		hg	visina gume *height of rubber*	
A - B	dimenzije osnove ležišta *bearing dimension*		V	vertikalno opterećenje *vertical load*	
Φp	prečnik moždanika *pin diameter*		H	horizontalno opterećenje *horizontal load*	
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*		s*	ekvivalent pomeranja *equivalent displacement*	
nz	broj ankera *N° anchors*		Kh	horizontalna krutost *horizontal stiffness*	
Φz	prečnik ankera *diameter of anchors*				

DATA	NB5		NB2														hg	Com o 1			Com o 2			Kh
					NB4																			
	Ht	W	Ht	W	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	Kg	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NB2/4/5 300x400xHt	50	28,2	60	38,4	60	90	70,1	320	420	45	15	2	20	80	-	350	24	3196	22	4,8	3172	108	24,0	4,50
	61	32,3	71	42,5	71	101	74,2	320	420	45	15	2	20	80	-	350	32	3556	22	6,4	3248	108	32,0	3,38
	72	36,4	82	46,6	82	112	78,2	320	420	45	15	2	20	80	-	350	40	3761	22	8,0	3247	108	40,0	2,70
	83	40,5	93	50,7	93	123	82,3	320	420	45	15	2	20	80	-	350	48	3889	22	9,6	3208	108	48,0	2,25
	94	44,5	104	54,7	104	134	86,4	320	420	45	15	2	20	80	-	350	56	3510	22	11,2	2946	108	56,0	1,93
	105	48,6	115	58,8	115	145	90,5	320	420	45	15	2	20	80	-	350	64	3053	22	12,8	2489	108	64,0	1,69
	116	52,7	126	62,9	126	156	94,5	320	420	45	15	2	20	80	-	350	72	2698	22	14,4	2134	108	72,0	1,50
	127	56,8	137	67,0	137	167	98,6	320	420	45	15	2	20	80	-	350	80	2698	22	16,0	1850	108	80,0	1,35
	138	60,8	148	71,0	148	178	102,7	320	420	45	15	2	20	80	-	350	88	2182	22	17,6	1617	108	88,0	1,23
NB2/4/5 300x500xHt	50	35,3	60	48,6	60	90	87,8	320	520	55	15	2	25	100	-	440	24	4399	27	4,8	4366	135	24,0	5,63
	61	40,4	71	53,7	71	101	92,9	320	520	55	15	2	25	100	-	440	32	4894	27	6,4	4471	135	32,0	4,22
	72	45,5	82	58,8	82	112	98,0	320	520	55	15	2	25	100	-	440	40	5177	27	8,0	4469	135	40,0	3,38
	83	50,6	93	63,9	93	123	103,1	320	520	55	15	2	25	100	-	440	48	5353	27	9,6	4415	135	48,0	2,81
	94	55,7	104	69,0	104	134	108,2	320	520	55	15	2	25	100	-	440	56	4831	27	11,2	4055	135	56,0	2,41
	105	60,8	115	74,1	115	145	113,3	320	520	55	15	2	25	100	-	440	64	4203	27	12,8	3426	135	64,0	2,11
	116	65,9	126	79,2	126	156	118,4	320	520	55	15	2	25	100	-	440	72	3714	27	14,4	2937	135	72,0	1,88
	127	70,9	137	84,3	137	167	123,4	320	520	55	15	2	25	100	-	440	80	3714	27	16,0	2546	135	80,0	1,69
	138	76,0	148	89,4	148	178	128,5	320	520	55	15	2	25	100	-	440	88	3003	27	17,6	2226	135	88,0	1,53
NB2/4/5 300x600xHt	50	42,4	60	58,0	60	90	104,7	320	620	65	15	2	25	100	-	540	24	5654	32	4,8	5611	162	24,0	6,75
	61	48,5	71	64,1	71	101	110,9	320	620	65	15	2	25	100	-	540	32	6290	32	6,4	5746	162	32,0	5,06
	72	54,6	82	70,2	82	112	117,0	320	620	65	15	2	25	100	-	540	40	6653	32	8,0	5744	162	40,0	4,05
	83	60,7	93	76,4	93	123	123,1	320	620	65	15	2	25	100	-	540	48	6879	32	9,6	5674	162	48,0	3,38
	94	66,8	104	82,5	104	134	129,2	320	620	65	15	2	25	100	-	540	56	6209	32	11,2	5211	162	56,0	2,89
	105	72,9	115	88,6	115	145	135,3	320	620	65	15	2	25	100	-	540	64	5401	32	12,8	4403	162	64,0	2,53
	116	79,0	126	94,7	126	156	141,4	320	620	65	15	2	25	100	-	540	72	4773	32	14,4	3775	162	72,0	2,25
	127	85,1	137	100,8	137	167	147,5	320	620	65	15	2	25	100	-	540	80	4773	32	16,0	3273	162	80,0	2,03
	138	91,2	148	106,9	148	178	153,6	320	620	65	15	2	25	100	-	540	88	3860	32	17,6	2862	162	88,0	1,84
NB2/4/5 400x600xHt	61	63,0	81	102,3	81	121	184,1	420	620	60	20	4	20	80	340	550	33	6813	43	6,6	6678	216	33,0	6,55
	76	74,0	96	113,3	96	136	195,0	420	620	60	20	4	20	80	340	550	44	7528	43	8,8	6814	216	44,0	4,91
	91	85,0	111	124,2	111	151	206,0	420	620	60	20	4	20	80	340	550	55	7935	43	11,0	6796	216	55,0	3,93
	106	96,0	126	135,2	126	166	217,0	420	620	60	20	4	20	80	340	550	66	8187	43	13,2	6701	216	66,0	3,27
	121	106,9	141	146,2	141	181	227,9	420	620	60	20	4	20	80	340	550	77	7166	43	15,4	5987	216	77,0	2,81
	136	117,9	156	157,1	156	196	238,9	420	620	60	20	4	20	80	340	550	88	6233	43	17,6	5055	216	88,0	2,45
	151	128,9	171	168,1	171	211	249,9	420	620	60	20	4	20	80	340	550	99	5508	43	19,8	4329	216	99,0	2,18
	166	139,8	186	179,1	186	226	260,8	420	620	60	20	4	20	80	340	550	110	5508	43	22,0	3749	216	110,0	1,96
	181	150,8	201	190,1	201	241	271,8	420	620	60	20	4	20	80	340	550	121	4452	43	24,2	3274	216	121,0	1,79

NB2
NB4
NB5



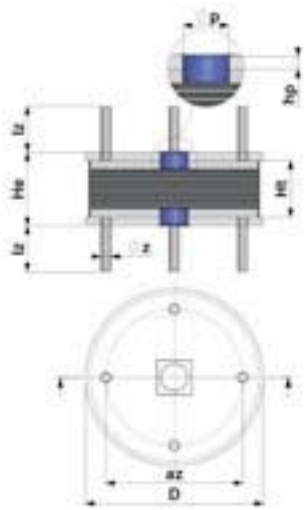
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*		lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontraločama *height of bearing with counterplates*		az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*		hg	visina gume *height of rubber*
A - B	dimenzije osnove ležišta *bearing dimension*		V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*		H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*		s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*		Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*			

DATA	NB5		NB2														hg	Com o 1			Com o 2			Kh
					NB4																			
	Ht	W	Ht	W	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	Kg	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm
NB2/4/5 400x700xHt	61	73,6	81	120,6	81	121	215,6	420	720	75	20	4	25	100	330	640	33	8456	50	6,6	8288	252	33,0	7,64
	76	86,4	96	133,4	96	136	228,3	420	720	75	20	4	25	100	330	640	44	9344	50	8,8	8457	252	44,0	5,73
	91	99,1	111	146,2	111	151	241,1	420	720	75	20	4	25	100	330	640	55	9848	50	11,0	8435	252	55,0	4,58
	106	111,9	126	159,0	126	166	253,9	420	720	75	20	4	25	100	330	640	66	10161	50	13,2	8317	252	66,0	3,82
	121	124,7	141	171,8	141	181	266,7	420	720	75	20	4	25	100	330	640	77	8894	50	15,4	7431	252	77,0	3,27
	136	137,5	156	184,6	156	196	279,5	420	720	75	20	4	25	100	330	640	88	7737	50	17,6	6274	252	88,0	2,86
	151	150,3	171	197,4	171	211	292,3	420	720	75	20	4	25	100	330	640	99	6836	50	19,8	5373	252	99,0	2,55
	166	163,1	186	210,2	186	226	305,1	420	720	75	20	4	25	100	330	640	110	6836	50	22,0	4653	252	110,0	2,29
	181	175,9	201	223,0	201	241	317,9	420	720	75	20	4	25	100	330	640	121	5526	50	24,2	4063	252	121,0	2,08
NB2/4/5 400x800xHt	61	84,1	81	137,4	81	121	245,5	420	820	85	20	4	25	100	330	740	33	10146	58	6,6	9944	288	33,0	8,73
	76	98,7	96	152,0	96	136	260,2	420	820	85	20	4	25	100	330	740	44	11211	58	8,8	10147	288	44,0	6,55
	91	113,3	111	166,6	111	151	274,8	420	820	85	20	4	25	100	330	740	55	11816	58	11,0	10121	288	55,0	5,24
	106	127,9	126	181,3	126	166	289,4	420	820	85	20	4	25	100	330	740	66	12192	58	13,2	9979	288	66,0	4,36
	121	142,6	141	195,9	141	181	304,0	420	820	85	20	4	25	100	330	740	77	10672	58	15,4	8916	288	77,0	3,74
	136	157,2	156	210,5	156	196	318,6	420	820	85	20	4	25	100	330	740	88	9282	58	17,6	7527	288	88,0	3,27
	151	171,8	171	225,1	171	211	333,3	420	820	85	20	4	25	100	330	740	99	8202	58	19,8	6447	288	99,0	2,91
	166	186,4	186	239,8	186	226	347,9	420	820	85	20	4	25	100	330	740	110	8202	58	22,0	5583	288	110,0	2,62
	181	201,1	201	254,4	201	241	362,5	420	820	85	20	4	25	100	330	740	121	6631	58	24,2	4875	288	121,0	2,38
NB2/4/5 500x600xHt	61	78,8	81	129,0	81	121	230,2	520	620	80	20	4	25	100	430	540	33	7271	54	6,6	8126	270	33,0	8,18
	76	92,5	96	142,7	96	136	243,9	520	620	80	20	4	25	100	430	540	44	8951	54	8,8	8685	270	44,0	6,14
	91	106,2	111	156,4	111	151	257,6	520	620	80	20	4	25	100	430	540	55	9934	54	11,0	9381	270	55,0	4,91
	106	119,9	126	170,1	126	166	271,4	520	620	80	20	4	25	100	430	540	66	10567	54	13,2	9446	270	66,0	4,09
	121	133,7	141	183,8	141	181	285,1	520	620	80	20	4	25	100	430	540	77	11001	54	15,4	9411	270	77,0	3,51
	136	147,4	156	197,5	156	196	298,8	520	620	80	20	4	25	100	430	540	88	11311	54	17,6	9313	270	88,0	3,07
	151	161,1	171	211,3	171	211	312,5	520	620	80	20	4	25	100	430	540	99	10022	54	19,8	8334	270	99,0	2,73
	166	174,8	186	225,0	186	226	326,2	520	620	80	20	4	25	100	430	540	110	10022	54	22,0	7289	270	110,0	2,45
	181	188,5	201	238,7	201	241	339,9	520	620	80	20	4	25	100	430	540	121	8123	54	24,2	6434	270	121,0	2,23
NB2/4/5 500x700xHt	76	107,9	96	166,0	96	136	283,5	520	720	95	20	4	25	100	430	640	44	11206	63	8,8	10872	315	44,0	7,16
	91	123,9	111	182,0	111	151	299,5	520	720	95	20	4	25	100	430	640	55	12436	63	11,0	11744	315	55,0	5,73
	106	139,9	126	198,0	126	166	315,5	520	720	95	20	4	25	100	430	640	66	13229	63	13,2	11825	315	66,0	4,77
	121	155,9	141	214,0	141	181	331,5	520	720	95	20	4	25	100	430	640	77	13772	63	15,4	11781	315	77,0	4,09
	136	171,9	156	230,0	156	196	347,5	520	720	95	20	4	25	100	430	640	88	14160	63	17,6	11659	315	88,0	3,58
	151	187,9	171	245,9	171	211	363,5	520	720	95	20	4	25	100	430	640	99	12546	63	19,8	10433	315	99,0	3,18
	166	203,9	186	261,9	186	226	379,5	520	720	95	20	4	25	100	430	640	110	12546	63	22,0	9125	315	110,0	2,86
	181	219,9	201	277,9	201	241	395,5	520	720	95	20	4	25	100	430	640	121	10169	63	24,2	8055	315	121,0	2,60

NBC2
NBC4
NBC5



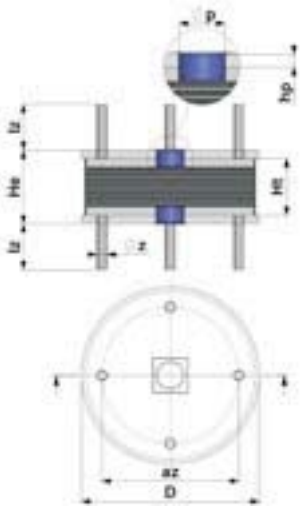
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontraločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
D	prečnik ležišta *bearing diameter*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

DATA	NBC5		NBC2													hg	Com o 1			Com o 2			Kh
					NBC4																		
	Ht	W	Ht	W	Ht	He	W	L	D	Φp	hp	nz	Φz	lz	az - z		V	H	s*	V	H	s*	
	mm	kG	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm
NBC2/4/5 150xHt	32	3,3	42	5,5	42	72	12,3	170	150	20	15	2	20	80	90	10	330	3	2,0	323	16	10,0	1,59
	39	3,7	49	5,9	49	79	12,7	170	150	20	15	2	20	80	90	15	372	3	3,0	331	16	15,0	1,06
	46	4,1	56	6,2	56	86	13,0	170	150	20	15	2	20	80	90	20	392	3	4,0	327	16	20,0	0,80
	53	4,5	63	6,6	63	93	13,4	170	150	20	15	2	20	80	90	25	373	3	5,0	318	16	25,0	0,64
	60	4,9	70	7,0	70	100	13,8	170	150	20	15	2	20	80	90	30	308	3	6,0	253	16	30,0	0,53
	67	5,2	77	7,4	77	107	14,2	170	150	20	15	2	20	80	90	35	262	3	7,0	207	16	35,0	0,45
	74	5,6	84	7,8	84	114	14,6	170	150	20	15	2	20	80	90	40	228	3	8,0	172	16	40,0	0,40
	81	6,0	91	8,2	91	121	15,0	170	150	20	15	2	20	80	90	45	201	3	9,0	145	16	45,0	0,35
	88	6,4	98	8,6	98	128	15,4	170	150	20	15	2	20	80	90	50	201	3	10,0	124	16	50,0	0,32
	95	6,8	105	9,0	105	135	15,8	170	150	20	15	2	20	80	90	55	161	3	11,0	106	16	55,0	0,29
NBC2/4/5 200xHt	39	6,3	49	9,6	49	79	21,0	220	200	20	15	2	20	80	140	16	563	6	3,2	516	28	16,0	1,77
	50	7,4	60	10,6	60	90	22,0	220	200	20	15	2	20	80	140	24	607	6	4,8	514	28	24,0	1,18
	61	8,5	71	11,7	71	101	23,1	220	200	20	15	2	20	80	140	32	609	6	6,4	499	28	32,0	0,88
	72	9,5	82	12,8	82	112	24,2	220	200	20	15	2	20	80	140	40	483	6	8,0	398	28	40,0	0,71
	83	10,6	93	13,8	93	123	25,2	220	200	20	15	2	20	80	140	48	399	6	9,6	314	28	48,0	0,59
	94	11,7	104	14,9	104	134	26,3	220	200	20	15	2	20	80	140	56	338	6	11,2	253	28	56,0	0,50
	105	12,7	115	16,0	115	145	27,4	220	200	20	15	2	20	80	140	64	293	6	12,8	208	28	64,0	0,44
	116	13,8	126	17,0	126	156	28,4	220	200	20	15	2	20	80	140	72	258	6	14,4	173	28	72,0	0,39
	127	14,9	137	18,1	137	167	29,5	220	200	20	15	2	20	80	140	80	258	6	16,0	145	28	80,0	0,35
	138	15,9	148	19,2	148	178	30,6	220	200	20	15	2	20	80	140	88	207	6	17,6	122	28	88,0	0,32
NBC2/4/5 250xHt	39	9,9	49	14,5	49	79	31,7	270	250	20	15	2	20	80	190	16	952	9	3,2	946	44	16,0	2,76
	50	11,6	60	16,2	60	90	33,4	270	250	20	15	2	20	80	190	24	1101	9	4,8	1002	44	24,0	1,84
	61	13,2	71	17,9	71	101	35,0	270	250	20	15	2	20	80	190	32	1171	9	6,4	999	44	32,0	1,38
	72	14,9	82	19,5	82	112	36,7	270	250	20	15	2	20	80	190	40	1209	9	8,0	981	44	40,0	1,10
	83	16,5	93	21,2	93	123	38,4	270	250	20	15	2	20	80	190	48	1017	9	9,6	847	44	48,0	0,92
	94	18,2	104	22,9	104	134	40,0	270	250	20	15	2	20	80	190	56	865	9	11,2	696	44	56,0	0,79
	105	19,9	115	24,5	115	145	41,7	270	250	20	15	2	20	80	190	64	752	9	12,8	582	44	64,0	0,69
	116	21,5	126	26,2	126	156	43,4	270	250	20	15	2	20	80	190	72	663	9	14,4	494	44	72,0	0,61
	127	23,2	137	27,9	137	167	45,0	270	250	20	15	2	20	80	190	80	663	9	16,0	423	44	80,0	0,55
	138	24,9	148	29,5	148	178	46,7	270	250	20	15	2	20	80	190	88	535	9	17,6	365	44	88,0	0,50

NBC2
NBC4
NBC5



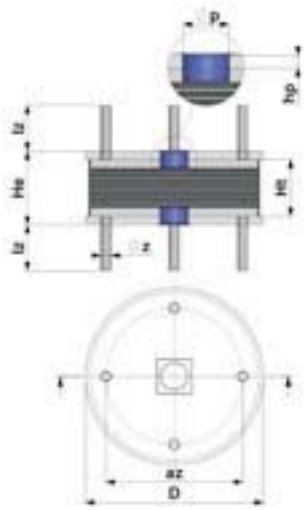
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
ratacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontraločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
D	prečnik ležišta *bearing diameter*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

DATA	NBC5		NBC2													hg	Com o 1			Com o 2			Kh
					NBC4																		
	Ht	W	Ht	W	Ht	He	W	L	D	Φp	hp	nz	Φz	lz	az - z		V	H	s*	V	H	s*	
	mm	kG	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm
NBC2/4/5 300xHt	50	16,6	60	23,0	60	90	47,1	320	300	25	15	2	20	80	240	24	1684	13	4,8	1672	64	24,0	2,65
	61	19,0	71	25,4	71	101	49,5	320	300	25	15	2	20	80	240	32	1874	13	6,4	1712	64	32,0	1,99
	72	21,4	82	27,8	82	112	51,9	320	300	25	15	2	20	80	240	40	1982	13	8,0	1711	64	40,0	1,59
	83	23,8	93	30,2	93	123	54,3	320	300	25	15	2	20	80	240	48	2049	13	9,6	1691	64	48,0	1,33
	94	26,2	104	32,6	104	134	56,7	320	300	25	15	2	20	80	240	56	1849	13	11,2	1552	64	56,0	1,14
	105	28,6	115	35,0	115	145	59,1	320	300	25	15	2	20	80	240	64	1608	13	12,8	1311	64	64,0	0,99
	116	31,0	126	37,4	126	156	61,5	320	300	25	15	2	20	80	240	72	1421	13	14,4	1124	64	72,0	0,88
	127	33,4	137	39,8	137	167	63,9	320	300	25	15	2	20	80	240	80	1421	13	16,0	974	64	80,0	0,80
	138	35,8	148	42,2	148	178	66,3	320	300	25	15	2	20	80	240	88	1149	13	17,6	852	64	88,0	0,72
NBC2/4/5 350xHt	59	23,8	79	39,7	79	119	82,6	370	350	25	20	2	20	80	290	33	2213	17	6,6	2036	87	33,0	2,62
	73	27,4	93	43,3	93	133	86,3	370	350	25	20	2	20	80	290	44	2366	17	8,8	2038	87	44,0	1,97
	87	31,0	107	46,9	107	147	89,9	370	350	25	20	2	20	80	290	55	2451	17	11,0	2006	87	55,0	1,57
	101	34,7	121	50,6	121	161	93,6	370	350	25	20	2	20	80	290	66	2145	17	13,2	1798	87	66,0	1,31
	115	38,3	135	54,2	135	175	97,2	370	350	25	20	2	20	80	290	77	1826	17	15,4	1479	87	77,0	1,12
	129	42,0	149	57,9	149	189	100,9	370	350	25	20	2	20	80	290	88	1587	17	17,6	1240	87	88,0	0,98
	143	45,6	163	61,5	163	203	104,5	370	350	25	20	2	20	80	290	99	1401	17	19,8	1054	87	99,0	0,87
	157	49,3	177	65,1	177	217	108,1	370	350	25	20	2	20	80	290	110	1401	17	22,0	905	87	110,0	0,79
	171	52,9	191	68,8	191	231	111,8	370	350	25	20	2	20	80	290	121	1130	17	24,2	783	87	121,0	0,72
NBC2/4/5 400xHt	61	33,0	81	53,5	81	121	108,9	420	400	35	20	2	20	80	340	33	3014	23	6,6	2954	113	33,0	3,43
	76	38,8	96	59,3	96	136	114,7	420	400	35	20	2	20	80	340	44	3330	23	8,8	3014	113	44,0	2,57
	91	44,5	111	65,0	111	151	120,4	420	400	35	20	2	20	80	340	55	3510	23	11,0	3006	113	55,0	2,06
	106	50,2	126	70,8	126	166	126,1	420	400	35	20	2	20	80	340	66	3621	23	13,2	2964	113	66,0	1,71
	121	56,0	141	76,5	141	181	131,9	420	400	35	20	2	20	80	340	77	3169	23	15,4	2648	113	77,0	1,47
	136	61,7	156	82,2	156	196	137,6	420	400	35	20	2	20	80	340	88	2756	23	17,6	2235	113	88,0	1,29
	151	67,5	171	88,0	171	211	143,4	420	400	35	20	2	20	80	340	99	2436	23	19,8	1914	113	99,0	1,14
	166	73,2	186	93,7	186	226	149,1	420	400	35	20	2	20	80	340	110	2436	23	22,0	1658	113	110,0	1,03
	181	79,0	201	99,5	201	241	154,9	420	400	35	20	2	20	80	340	121	1969	23	24,2	1448	113	121,0	0,93
NBC2/4/5 450xHt	76	49,0	96	75,6	96	136	145,0	470	450	40	20	4	20	80	390	44	4389	29	8,8	4199	143	44,0	3,25
	91	56,3	111	82,9	111	151	152,2	470	450	40	20	4	20	80	390	55	4731	29	11,0	4245	143	55,0	2,60
	106	63,6	126	90,1	126	166	159,5	470	450	40	20	4	20	80	390	66	4948	29	13,2	4230	143	66,0	2,17
	121	70,9	141	97,4	141	181	166,8	470	450	40	20	4	20	80	390	77	5094	29	15,4	4179	143	77,0	1,86
	136	78,1	156	104,7	156	196	174,0	470	450	40	20	4	20	80	390	88	4478	29	17,6	3731	143	88,0	1,63
	151	85,4	171	111,9	171	211	181,3	470	450	40	20	4	20	80	390	99	3959	29	19,8	3213	143	99,0	1,45
	166	92,7	186	119,2	186	226	188,6	470	450	40	20	4	20	80	390	110	3959	29	22,0	2798	143	110,0	1,30
	181	99,9	201	126,5	201	241	195,8	470	450	40	20	4	20	80	390	121	3205	29	24,2	2459	143	121,0	1,18

NBC2
NBC4
NBC5



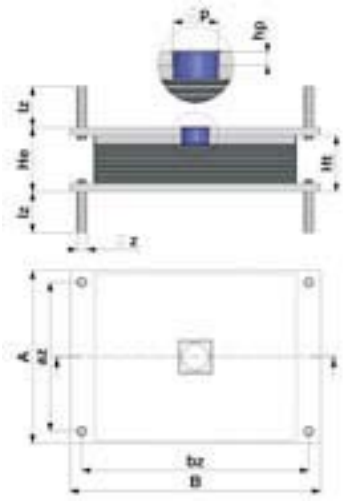
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacije / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*		lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontrapločama *height of bearing with counterplates*		az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*		hg	visina gume *height of rubber*
D	prečnik ležišta *bearing diameter*		V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*		H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*		s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*		Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*			

DATA	NBC5		NBC2													hg	Com o 1			Com o 2			Kh
					NBC4																		
	Ht	W	Ht	W	Ht	He	W	L	D	Φp	hp	nz	Φz	lz	az - z		V	H	s*	V	H	s*	
	mm	kG	mm	kG	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/mm
NBC2/4/5 500xHt	76	60,6	96	93,0	96	136	177,9	520	500	50	20	4	20	80	440	44	5454	35	8,8	5347	177	44,0	4,02
	91	69,5	111	101,9	111	151	186,8	520	500	50	20	4	20	80	440	55	6053	35	11,0	5716	177	55,0	3,21
	106	78,5	126	110,9	126	166	195,8	520	500	50	20	4	20	80	440	66	6439	35	13,2	5755	177	66,0	2,68
	121	87,5	141	119,9	141	181	204,8	520	500	50	20	4	20	80	440	77	6703	35	15,4	5734	177	77,0	2,29
	136	96,4	156	128,9	156	196	213,8	520	500	50	20	4	20	80	440	88	6892	35	17,6	5675	177	88,0	2,01
	151	105,4	171	137,8	171	211	222,7	520	500	50	20	4	20	80	440	99	6106	35	19,8	5077	177	99,0	1,78
	166	114,4	186	146,8	186	226	231,7	520	500	50	20	4	20	80	440	110	6106	35	22,0	4441	177	110,0	1,61
	181	123,4	201	155,8	201	241	240,7	520	500	50	20	4	20	80	440	121	4949	35	24,2	3920	177	121,0	1,46
NBC2/4/5 550xHt	91	84,1	111	123,0	111	151	225,0	570	550	60	20	4	20	80	490	55	7387	43	11,0	7102	214	55,0	3,89
	106	95,0	126	133,9	126	166	235,9	570	550	60	20	4	20	80	490	66	8029	43	13,2	7532	214	66,0	3,24
	121	105,8	141	144,7	141	181	246,7	570	550	60	20	4	20	80	490	77	8475	43	15,4	7569	214	77,0	2,78
	136	116,7	156	155,6	156	196	257,6	570	550	60	20	4	20	80	490	88	8797	43	17,6	7544	214	88,0	2,43
	151	127,6	171	166,4	171	211	268,5	570	550	60	20	4	20	80	490	99	9025	43	19,8	7478	214	99,0	2,16
	166	138,4	186	177,3	186	226	279,3	570	550	60	20	4	20	80	490	110	9025	43	22,0	6714	214	110,0	1,94
	181	149,3	201	188,2	201	241	290,2	570	550	60	20	4	20	80	490	121	7321	43	24,2	5947	214	121,0	1,77
NBC2/4/5 600xHt	95	99,7	115	147,2	115	155	267,9	620	600	75	20	4	25	100	530	60	7820	51	12,0	7417	254	60,0	4,24
	115	116,3	135	163,8	135	175	284,5	620	600	75	20	4	25	100	530	75	8398	51	15,0	7484	254	75,0	3,39
	135	133,0	155	180,4	155	195	301,1	620	600	75	20	4	25	100	530	90	8764	51	18,0	7445	254	90,0	2,83
	155	149,6	175	197,0	175	215	317,7	620	600	75	20	4	25	100	530	105	8888	51	21,0	7346	254	105,0	2,42
	175	166,2	195	213,7	195	235	334,4	620	600	75	20	4	25	100	530	120	7736	51	24,0	6424	254	120,0	2,12
	195	182,8	215	230,3	215	255	351,0	620	600	75	20	4	25	100	530	135	6840	51	27,0	5528	254	135,0	1,88
	215	199,4	235	246,9	235	275	367,6	620	600	75	20	4	25	100	530	150	6840	51	30,0	4811	254	150,0	1,70
	235	216,0	255	263,5	255	295	384,2	620	600	75	20	4	25	100	530	165	5537	51	33,0	4224	254	165,0	1,54
NBC2/4/5 650xHt	95	117,1	115	172,2	115	155	313,2	670	650	90	20	4	25	100	580	60	9283	60	12,0	9214	299	60,0	4,98
	115	136,5	135	191,7	135	175	332,7	670	650	90	20	4	25	100	580	75	10168	60	15,0	9396	299	75,0	3,98
	135	156,0	155	211,2	155	195	352,2	670	650	90	20	4	25	100	580	90	10736	60	18,0	9419	299	90,0	3,32
	155	175,5	175	230,7	175	215	371,7	670	650	90	20	4	25	100	580	105	11123	60	21,0	9351	299	105,0	2,84
	175	195,0	195	250,2	195	235	391,2	670	650	90	20	4	25	100	580	120	10733	60	24,0	9060	299	120,0	2,49
	195	214,5	215	269,7	215	255	410,7	670	650	90	20	4	25	100	580	135	9494	60	27,0	7821	299	135,0	2,21
	215	234,0	235	289,2	235	275	430,2	670	650	90	20	4	25	100	580	150	9494	60	30,0	6830	299	150,0	1,99
	235	253,5	255	308,7	255	295	449,7	670	650	90	20	4	25	100	580	165	7692	60	33,0	6019	299	165,0	1,81
NBC2/4/5 700xHt	115	158,4	135	221,9	135	175	384,6	720	700	110	20	4	25	100	630	75	11994	69	15,0	11530	346	75,0	4,62
	135	181,0	155	244,5	155	195	407,3	720	700	110	20	4	25	100	630	90	12840	69	18,0	11650	346	90,0	3,85
	155	203,6	175	267,1	175	215	429,9	720	700	110	20	4	25	100	630	105	13422	69	21,0	11638	346	105,0	3,30
	175	226,2	195	289,7	195	235	452,5	720	700	110	20	4	25	100	630	120	13839	69	24,0	11544	346	120,0	2,89
	195	248,8	215	312,3	215	255	475,1	720	700	110	20	4	25	100	630	135	12854	69	27,0	10760	346	135,0	2,57
	215	271,4	235	334,9	235	275	497,7	720	700	110	20	4	25	100	630	150	12854	69	30,0	9422	346	150,0	2,31
	235	294,0	255	357,5	255	295	520,3	720	700	110	20	4	25	100	630	165	10421	69	33,0	8327	346	165,0	2,10

NB6



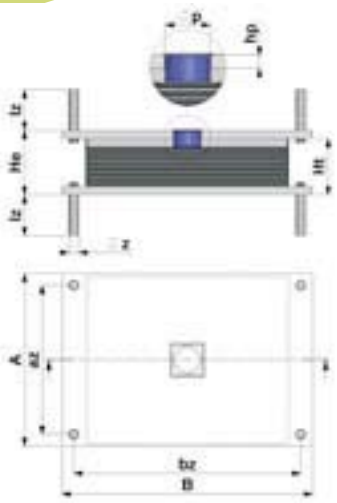
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontraločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
A - B	dimenzije osnove ležišta *bearing dimension*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

DATA	NB6												hg	Com 1			Com 2			Kh
	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NB6 100x100xHt	42	57	8,8	110	180	20	15	2	30	120	-	140	10	126	2	2	107	9	10	0,90
	49	64	9,0	110	180	20	15	2	30	120	-	140	15	125	2	3	102	9	15	0,60
	56	71	9,2	110	180	20	15	2	30	120	-	140	20	92	2	4	75	9	20	0,45
	63	78	9,5	110	180	20	15	2	30	120	-	140	25	72	2	5	55	9	25	0,36
	70	85	9,7	110	180	20	15	2	30	120	-	140	30	59	2	6	42	9	30	0,30
	77	92	9,9	110	180	20	15	2	30	120	-	140	35	50	2	7	32	9	35	0,26
NB6 100x150xHt	42	57	10,8	110	230	20	15	2	30	120	-	190	10	241	3	2	204	14	10	1,35
	49	64	11,2	110	230	20	15	2	30	120	-	190	15	238	3	3	196	14	15	0,90
	56	71	11,5	110	230	20	15	2	30	120	-	190	20	176	3	4	143	14	20	0,68
	63	78	11,8	110	230	20	15	2	30	120	-	190	25	139	3	5	106	14	25	0,54
	70	85	12,2	110	230	20	15	2	30	120	-	190	30	114	3	6	81	14	30	0,45
	77	92	12,5	110	230	20	15	2	30	120	-	190	35	96	3	7	63	14	35	0,39
	84	99	12,8	110	230	20	15	2	30	120	-	190	40	83	3	8	50	14	40	0,34
	91	106	13,1	110	230	20	15	2	30	120	-	190	45	73	3	9	39	14	45	0,30
NB6 100x200xHt	42	57	12,8	110	280	20	15	2	30	120	-	240	10	365	4	2	310	18	10	1,80
	49	64	13,3	110	280	20	15	2	30	120	-	240	15	361	4	3	297	18	15	1,20
	56	71	13,7	110	280	20	15	2	30	120	-	240	20	267	4	4	217	18	20	0,90
	63	78	14,2	110	280	20	15	2	30	120	-	240	25	211	4	5	161	18	25	0,72
	70	85	14,6	110	280	20	15	2	30	120	-	240	30	173	4	6	123	18	30	0,60
	77	92	15,1	110	280	20	15	2	30	120	-	240	35	147	4	7	96	18	35	0,51
	84	99	15,5	110	280	20	15	2	30	120	-	240	40	126	4	8	76	18	40	0,45
	91	106	16,0	110	280	20	15	2	30	120	-	240	45	111	4	9	61	18	45	0,40
	98	113	16,4	110	280	20	15	2	30	120	-	240	50	111	4	10	48	18	50	0,36
NB6 150x150xHt	42	57	14,6	160	230	20	15	2	30	120	-	190	10	391	4	2	382	20	10	2,03
	49	64	15,1	160	230	20	15	2	30	120	-	190	15	441	4	3	391	20	15	1,35
	56	71	15,6	160	230	20	15	2	30	120	-	190	20	463	4	4	387	20	20	1,01
	63	78	16,1	160	230	20	15	2	30	120	-	190	25	443	4	5	377	20	25	0,81
	70	85	16,6	160	230	20	15	2	30	120	-	190	30	366	4	6	300	20	30	0,68
	77	92	17,1	160	230	20	15	2	30	120	-	190	35	311	4	7	245	20	35	0,58
	84	99	17,6	160	230	20	15	2	30	120	-	190	40	270	4	8	204	20	40	0,51
	91	106	18,1	160	230	20	15	2	30	120	-	190	45	238	4	9	172	20	45	0,45
	98	113	18,6	160	230	20	15	2	30	120	-	190	50	238	4	10	146	20	50	0,41
	105	120	19,1	160	230	20	15	2	30	120	-	190	55	191	4	11	125	20	55	0,37

NB6



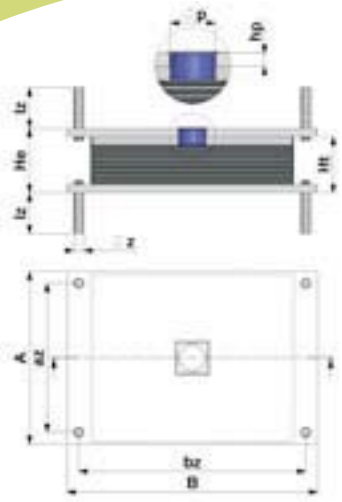
Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontraločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
A - B	dimenzije osnove ležišta *bearing dimension*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

DATA	NB6												hg	Com 1			Com 2			Kh
	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NB6 150x200xHt	42	57	17,6	160	280	20	15	2	30	120	-	240	10	612	5	2	598	27	10	2,70
	49	64	18,3	160	280	20	15	2	30	120	-	240	15	690	5	3	612	27	15	1,80
	56	71	18,9	160	280	20	15	2	30	120	-	240	20	725	5	4	606	27	20	1,35
	63	78	19,6	160	280	20	15	2	30	120	-	240	25	693	5	5	591	27	25	1,08
	70	85	20,3	160	280	20	15	2	30	120	-	240	30	573	5	6	470	27	30	0,90
	77	92	20,9	160	280	20	15	2	30	120	-	240	35	487	5	7	384	27	35	0,77
	84	99	21,6	160	280	20	15	2	30	120	-	240	40	423	5	8	320	27	40	0,68
	91	106	22,3	160	280	20	15	2	30	120	-	240	45	373	5	9	270	27	45	0,60
	98	113	22,9	160	280	20	15	2	30	120	-	240	50	373	5	10	230	27	50	0,54
	105	120	23,6	160	280	20	15	2	30	120	-	240	55	300	5	11	197	27	55	0,49
NB6 150x300xHt	42	57	23,6	160	380	20	15	2	30	120	-	340	10	1095	8	2	1070	41	10	4,05
	49	64	24,6	160	380	20	15	2	30	120	-	340	15	1234	8	3	1096	41	15	2,70
	56	71	25,6	160	380	20	15	2	30	120	-	340	20	1298	8	4	1084	41	20	2,03
	63	78	26,6	160	380	20	15	2	30	120	-	340	25	1240	8	5	1058	41	25	1,62
	70	85	27,6	160	380	20	15	2	30	120	-	340	30	1025	8	6	841	41	30	1,35
	77	92	28,6	160	380	20	15	2	30	120	-	340	35	872	8	7	688	41	35	1,16
	84	99	29,6	160	380	20	15	2	30	120	-	340	40	757	8	8	573	41	40	1,01
	91	106	30,6	160	380	20	15	2	30	120	-	340	45	668	8	9	484	41	45	0,90
	98	113	31,6	160	380	20	15	2	30	120	-	340	50	668	8	10	412	41	50	0,81
	105	120	32,6	160	380	20	15	2	30	120	-	340	55	537	8	11	353	41	55	0,74
NB6 200x250xHt	59	79	34,5	210	330	20	20	2	30	120	-	290	16	959	9	3	877	45	16	2,81
	70	90	36,2	210	330	20	20	2	30	120	-	290	24	1034	9	5	874	45	24	1,88
	81	101	37,9	210	330	20	20	2	30	120	-	290	32	1038	9	6	850	45	32	1,41
	92	112	39,6	210	330	20	20	2	30	120	-	290	40	823	9	8	678	45	40	1,13
	103	123	41,3	210	330	20	20	2	30	120	-	290	48	680	9	10	534	45	48	0,94
	114	134	43,0	210	330	20	20	2	30	120	-	290	56	577	9	11	432	45	56	0,80
	125	145	44,7	210	330	20	20	2	30	120	-	290	64	500	9	13	355	45	64	0,70
	136	156	46,4	210	330	20	20	2	30	120	-	290	72	440	9	14	295	45	72	0,63
	147	167	48,1	210	330	20	20	2	30	120	-	290	80	440	9	16	247	45	80	0,56
	158	178	49,8	210	330	20	20	2	30	120	-	290	88	353	9	18	208	45	88	0,51
NB6 200x300xHt	59	79	39,8	210	380	20	20	2	30	120	-	340	16	1255	11	3	1148	54	16	3,38
	70	90	41,8	210	380	20	20	2	30	120	-	340	24	1353	11	5	1144	54	24	2,25
	81	101	43,9	210	380	20	20	2	30	120	-	340	32	1359	11	6	1112	54	32	1,69
	92	112	45,9	210	380	20	20	2	30	120	-	340	40	1077	11	8	887	54	40	1,35
	103	123	47,9	210	380	20	20	2	30	120	-	340	48	889	11	10	700	54	48	1,13
	114	134	50,0	210	380	20	20	2	30	120	-	340	56	755	11	11	566	54	56	0,96
	125	145	52,0	210	380	20	20	2	30	120	-	340	64	655	11	13	465	54	64	0,84
	136	156	54,1	210	380	20	20	2	30	120	-	340	72	576	11	14	387	54	72	0,75
	147	167	56,1	210	380	20	20	2	30	120	-	340	80	576	11	16	324	54	80	0,68
	158	178	58,1	210	380	20	20	2	30	120	-	340	88	463	11	18	273	54	88	0,61

NB6



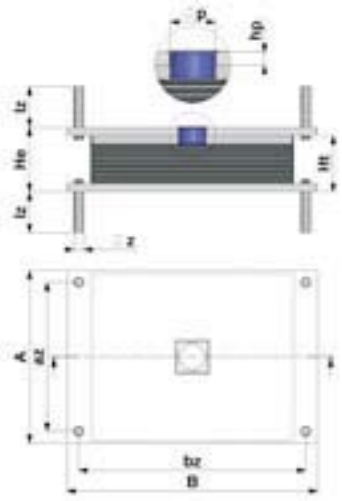
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontraločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
A - B	dimenzije osnove ležišta *bearing dimension*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

DATA	NB6												hg	Com 1			Com 2			Kh
	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NB6 200x400xHt	59	79	51,7	210	500	20	20	2	30	120	-	450	16	1879	14	3	1719	72	16	4,50
	70	90	54,5	210	500	20	20	2	30	120	-	450	24	2026	14	5	1713	72	24	3,00
	81	101	57,2	210	500	20	20	2	30	120	-	450	32	2035	14	6	1665	72	32	2,25
	92	112	59,9	210	500	20	20	2	30	120	-	450	40	1613	14	8	1329	72	40	1,80
	103	123	62,6	210	500	20	20	2	30	120	-	450	48	1332	14	10	1048	72	48	1,50
	114	134	65,3	210	500	20	20	2	30	120	-	450	56	1131	14	11	847	72	56	1,29
	125	145	68,0	210	500	20	20	2	30	120	-	450	64	981	14	13	697	72	64	1,13
	136	156	70,8	210	500	20	20	2	30	120	-	450	72	864	14	14	580	72	72	1,00
	147	167	73,5	210	500	20	20	2	30	120	-	450	80	864	14	16	486	72	80	0,90
	158	178	76,2	210	500	20	20	2	30	120	-	450	88	693	14	18	409	72	88	0,82
NB6 250x300xHt	59	79	50,4	260	400	20	20	2	30	120	-	350	16	1537	14	3	1526	68	16	4,22
	70	90	53,0	260	400	20	20	2	30	120	-	350	24	1778	14	5	1617	68	24	2,81
	81	101	55,5	260	400	20	20	2	30	120	-	350	32	1891	14	6	1613	68	32	2,11
	92	112	58,1	260	400	20	20	2	30	120	-	350	40	1953	14	8	1583	68	40	1,69
	103	123	60,6	260	400	20	20	2	30	120	-	350	48	1643	14	10	1369	68	48	1,41
	114	134	63,2	260	400	20	20	2	30	120	-	350	56	1398	14	11	1124	68	56	1,21
	125	145	65,7	260	400	20	20	2	30	120	-	350	64	1215	14	13	941	68	64	1,05
	136	156	68,2	260	400	20	20	2	30	120	-	350	72	1072	14	14	798	68	72	0,94
	147	167	70,8	260	400	20	20	2	30	120	-	350	80	1072	14	16	683	68	80	0,84
	158	178	73,3	260	400	20	20	2	30	120	-	350	88	864	14	18	590	68	88	0,77
NB6 250x400xHt	59	79	63,6	260	500	25	20	2	30	120	-	450	16	2339	18	3	2323	90	16	5,63
	70	90	67,0	260	500	25	20	2	30	120	-	450	24	2707	18	5	2462	90	24	3,75
	81	101	70,4	260	500	25	20	2	30	120	-	450	32	2879	18	6	2456	90	32	2,81
	92	112	73,8	260	500	25	20	2	30	120	-	450	40	2972	18	8	2410	90	40	2,25
	103	123	77,2	260	500	25	20	2	30	120	-	450	48	2501	18	10	2084	90	48	1,88
	114	134	80,6	260	500	25	20	2	30	120	-	450	56	2129	18	11	1711	90	56	1,61
	125	145	84,0	260	500	25	20	2	30	120	-	450	64	1849	18	13	1432	90	64	1,41
	136	156	87,4	260	500	25	20	2	30	120	-	450	72	1632	18	14	1215	90	72	1,25
	147	167	90,8	260	500	25	20	2	30	120	-	450	80	1632	18	16	1041	90	80	1,13
	158	178	94,2	260	500	25	20	2	30	120	-	450	88	1316	18	18	899	90	88	1,02
NB6 250x500xHt	59	79	76,8	260	600	35	20	2	30	120	-	550	16	3187	23	3	3166	113	16	7,03
	70	90	81,1	260	600	35	20	2	30	120	-	550	24	3688	23	5	3355	113	24	4,69
	81	101	85,3	260	600	35	20	2	30	120	-	550	32	3922	23	6	3346	113	32	3,52
	92	112	89,5	260	600	35	20	2	30	120	-	550	40	4050	23	8	3284	113	40	2,81
	103	123	93,8	260	600	35	20	2	30	120	-	550	48	3408	23	10	2840	113	48	2,34
	114	134	98,0	260	600	35	20	2	30	120	-	550	56	2901	23	11	2332	113	56	2,01
	125	145	102,3	260	600	35	20	2	30	120	-	550	64	2520	23	13	1952	113	64	1,76
	136	156	106,5	260	600	35	20	2	30	120	-	550	72	2224	23	14	1656	113	72	1,56
	147	167	110,8	260	600	35	20	2	30	120	-	550	80	2224	23	16	1419	113	80	1,41
	158	178	115,0	260	600	35	20	2	30	120	-	550	88	1793	23	18	1225	113	88	1,28

NB6



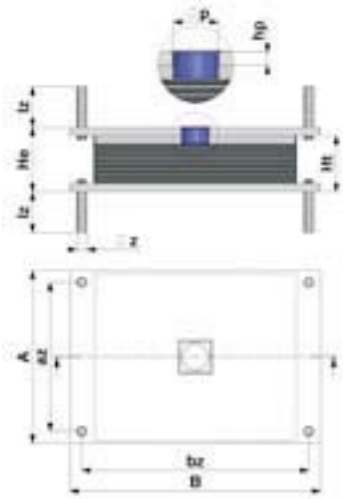
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*
He	visina ležišta s kontraločama *height of bearing with counterplates*
W	težina ležišta *weight of bearing*
A - B	dimenzije osnove ležišta *bearing dimension*
Φp	prečnik moždanika *pin diameter*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*
nz	broj ankera *N° anchors*
Φz	prečnik ankera *diameter of anchors*
lz	dužina ankera *lenght of anchors*
az- z	razmak ankera *interaxis of anchors*
hg	visina gume *height of rubber*
V	vertikalno opterećenje *vertical load*
H	horizontalno opterećenje *horizontal load*
s*	ekvivalent pomeranja *equivalent displacement*
Kh	horizontalna krutost *horizontal stiffness*

DATA	NB6												hg	Com 1			Com 2			Kh
	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NB6 300x400xHt	70	90	79,6	310	500	30	20	2	30	120	-	450	24	3196	22	5	3172	108	24	4,50
	81	101	83,6	310	500	30	20	2	30	120	-	450	32	3556	22	6	3248	108	32	3,38
	92	112	87,7	310	500	30	20	2	30	120	-	450	40	3761	22	8	3247	108	40	2,70
	103	123	91,8	310	500	30	20	2	30	120	-	450	48	3889	22	10	3208	108	48	2,25
	114	134	95,9	310	500	30	20	2	30	120	-	450	56	3510	22	11	2946	108	56	1,93
	125	145	99,9	310	500	30	20	2	30	120	-	450	64	3053	22	13	2489	108	64	1,69
	136	156	104,0	310	500	30	20	2	30	120	-	450	72	2698	22	14	2134	108	72	1,50
	147	167	108,1	310	500	30	20	2	30	120	-	450	80	2698	22	16	1850	108	80	1,35
	158	178	112,2	310	500	30	20	2	30	120	-	450	88	2182	22	18	1617	108	88	1,23
NB6 300x500xHt	70	90	100,3	310	640	40	20	2	30	120	-	570	24	4399	27	5	4366	135	24	5,63
	81	101	105,3	310	640	40	20	2	30	120	-	570	32	4894	27	6	4471	135	32	4,22
	92	112	110,4	310	640	40	20	2	30	120	-	570	40	5177	27	8	4469	135	40	3,38
	103	123	115,5	310	640	40	20	2	30	120	-	570	48	5353	27	10	4415	135	48	2,81
	114	134	120,6	310	640	40	20	2	30	120	-	570	56	4831	27	11	4055	135	56	2,41
	125	145	125,7	310	640	40	20	2	30	120	-	570	64	4203	27	13	3426	135	64	2,11
	136	156	130,8	310	640	40	20	2	30	120	-	570	72	3714	27	14	2937	135	72	1,88
	147	167	135,9	310	640	40	20	2	30	120	-	570	80	3714	27	16	2546	135	80	1,69
	158	178	141,0	310	640	40	20	2	30	120	-	570	88	3003	27	18	2226	135	88	1,53
NB6 300x600xHt	70	90	117,0	310	740	45	20	2	30	120	-	670	24	5654	32	5	5611	162	24	6,75
	81	101	123,2	310	740	45	20	2	30	120	-	670	32	6290	32	6	5746	162	32	5,06
	92	112	129,3	310	740	45	20	2	30	120	-	670	40	6653	32	8	5744	162	40	4,05
	103	123	135,4	310	740	45	20	2	30	120	-	670	48	6879	32	10	5674	162	48	3,38
	114	134	141,5	310	740	45	20	2	30	120	-	670	56	6209	32	11	5211	162	56	2,89
	125	145	147,6	310	740	45	20	2	30	120	-	670	64	5401	32	13	4403	162	64	2,53
	136	156	153,7	310	740	45	20	2	30	120	-	670	72	4773	32	14	3775	162	72	2,25
	147	167	159,8	310	740	45	20	2	30	120	-	670	80	4773	32	16	3273	162	80	2,03
	158	178	165,9	310	740	45	20	2	30	120	-	670	88	3860	32	18	2862	162	88	1,84
NB6 400x600xHt	81	101	158,5	410	700	60	20	4	30	120	360	650	33	6813	43	7	6678	216	33	6,55
	96	116	169,5	410	700	60	20	4	30	120	360	650	44	7528	43	9	6814	216	44	4,91
	111	131	180,4	410	700	60	20	4	30	120	360	650	55	7935	43	11	6796	216	55	3,93
	126	146	191,4	410	700	60	20	4	30	120	360	650	66	8187	43	13	6701	216	66	3,27
	141	161	202,4	410	700	60	20	4	30	120	360	650	77	7166	43	15	5987	216	77	2,81
	156	176	213,3	410	700	60	20	4	30	120	360	650	88	6233	43	18	5055	216	88	2,45
	171	191	224,3	410	700	60	20	4	30	120	360	650	99	5508	43	20	4329	216	99	2,18
	186	206	235,3	410	700	60	20	4	30	120	360	650	110	5508	43	22	3749	216	110	1,96
	201	221	246,2	410	700	60	20	4	30	120	360	650	121	4452	43	24	3274	216	121	1,79

NB6



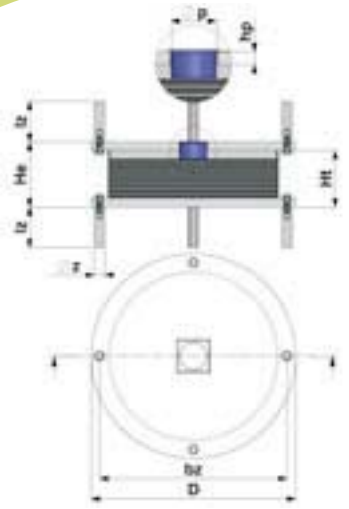
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*
He	visina ležišta s kontraločama *height of bearing with counterplates*
W	težina ležišta *weight of bearing*
A - B	dimenzije osnove ležišta *bearing dimension*
Φp	prečnik moždanika *pin diameter*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*
nz	broj ankera *N° anchors*
Φz	prečnik ankera *diameter of anchors*
lz	dužina ankera *lenght of anchors*
az- z	razmak ankera *interaxis of anchors*
hg	visina gume *height of rubber*
V	vertikalno opterećenje *vertical load*
H	horizontalno opterećenje *horizontal load*
s*	ekvivalent pomeranja *equivalent displacement*
Kh	horizontalna krutost *horizontal stiffness*

DATA	NB6												hg	Com 1			Com 2			Kh
	Ht	He	W	A	B	Fp	hp	nz	Fz	lz	az	z		V	H	s*	V	H	s*	
	mm	mm	kG	mm	mm	mm	mm		mm	mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NB6 400x700xHt	81	101	187,0	410	840	75	20	4	30	120	340	770	33	8456	50	7	8288	252	33	7,64
	96	116	199,8	410	840	75	20	4	30	120	340	770	44	9344	50	9	8457	252	44	5,73
	111	131	212,6	410	840	75	20	4	30	120	340	770	55	9848	50	11	8435	252	55	4,58
	126	146	225,4	410	840	75	20	4	30	120	340	770	66	10161	50	13	8317	252	66	3,82
	141	161	238,2	410	840	75	20	4	30	120	340	770	77	8894	50	15	7431	252	77	3,27
	156	176	251,0	410	840	75	20	4	30	120	340	770	88	7737	50	18	6274	252	88	2,86
	171	191	263,8	410	840	75	20	4	30	120	340	770	99	6836	50	20	5373	252	99	2,55
	186	206	276,6	410	840	75	20	4	30	120	340	770	110	6836	50	22	4653	252	110	2,29
	201	221	289,4	410	840	75	20	4	30	120	340	770	121	5526	50	24	4063	252	121	2,08
NB6 400x800xHt	81	101	210,4	410	940	85	20	4	30	120	340	870	33	10146	58	7	9944	288	33	8,73
	96	116	225,0	410	940	85	20	4	30	120	340	870	44	11211	58	9	10147	288	44	6,55
	111	131	239,7	410	940	85	20	4	30	120	340	870	55	11816	58	11	10121	288	55	5,24
	126	146	254,3	410	940	85	20	4	30	120	340	870	66	12192	58	13	9979	288	66	4,36
	141	161	268,9	410	940	85	20	4	30	120	340	870	77	10672	58	15	8916	288	77	3,74
	156	176	283,5	410	940	85	20	4	30	120	340	870	88	9282	58	18	7527	288	88	3,27
	171	191	298,2	410	940	85	20	4	30	120	340	870	99	8202	58	20	6447	288	99	2,91
	186	206	312,8	410	940	85	20	4	30	120	340	870	110	8202	58	22	5583	288	110	2,62
	201	221	327,4	410	940	85	20	4	30	120	340	870	121	6631	58	24	4875	288	121	2,38
NB6 500x600xHt	81	101	202,6	510	740	80	20	4	30	120	440	670	33	7271	54	7	8126	270	33	8,18
	96	116	216,4	510	740	80	20	4	30	120	440	670	44	8951	54	9	8685	270	44	6,14
	111	131	230,1	510	740	80	20	4	30	120	440	670	55	9934	54	11	9381	270	55	4,91
	126	146	243,8	510	740	80	20	4	30	120	440	670	66	10567	54	13	9446	270	66	4,09
	141	161	257,5	510	740	80	20	4	30	120	440	670	77	11001	54	15	9411	270	77	3,51
	156	176	271,2	510	740	80	20	4	30	120	440	670	88	11311	54	18	9313	270	88	3,07
	171	191	284,9	510	740	80	20	4	30	120	440	670	99	10022	54	20	8334	270	99	2,73
	186	206	298,6	510	740	80	20	4	30	120	440	670	110	10022	54	22	7289	270	110	2,45
	201	221	312,3	510	740	80	20	4	30	120	440	670	121	8123	54	24	6434	270	121	2,23
NB6 500x700xHt	96	116	247,8	510	840	95	20	4	30	120	440	770	44	11206	63	9	10872	315	44	7,16
	111	131	263,8	510	840	95	20	4	30	120	440	770	55	12436	63	11	11744	315	55	5,73
	126	146	279,8	510	840	95	20	4	30	120	440	770	66	13229	63	13	11825	315	66	4,77
	141	161	295,8	510	840	95	20	4	30	120	440	770	77	13772	63	15	11781	315	77	4,09
	156	176	311,8	510	840	95	20	4	30	120	440	770	88	14160	63	18	11659	315	88	3,58
	171	191	327,8	510	840	95	20	4	30	120	440	770	99	12546	63	20	10433	315	99	3,18
	186	206	343,8	510	840	95	20	4	30	120	440	770	110	12546	63	22	9125	315	110	2,86
	201	221	359,7	510	840	95	20	4	30	120	440	770	121	10169	63	24	8055	315	121	2,60

NBC6



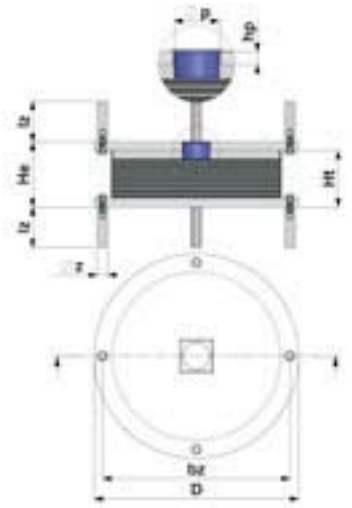
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontraločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
D	prečnik ležišta *bearing diameter*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploča *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

DATA	NBC6										hg	Com o 1			Com o 2			Kh
	Ht	He	L	W	Fp	hp	nz	Fz	lz	az - z		V	H	s*	V	H	s*	
	mm	mm	mm	kG	mm	mm		mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NBC6 150xHt	42	57	175	17,2	20	15	4	30	120	135	10	330	3	2,0	323	16	10	1,59
	49	64	175	17,6	20	15	4	30	120	135	15	372	3	3,0	331	16	15	1,06
	56	71	175	18,0	20	15	4	30	120	135	20	392	3	4,0	327	16	20	0,80
	63	78	175	18,4	20	15	4	30	120	135	25	373	3	5,0	318	16	25	0,64
	70	85	175	18,8	20	15	4	30	120	135	30	308	3	6,0	253	16	30	0,53
	77	92	175	19,2	20	15	4	30	120	135	35	262	3	7,0	207	16	35	0,45
	84	99	175	19,6	20	15	4	30	120	135	40	228	3	8,0	172	16	40	0,40
	91	106	175	20,0	20	15	4	30	120	135	45	201	3	9,0	145	16	45	0,35
	98	113	175	20,3	20	15	4	30	120	135	50	201	3	10,0	124	16	50	0,32
	105	120	175	20,7	20	15	4	30	120	135	55	161	3	11,0	106	16	55	0,29
NBC6 200xHt	49	64	210	24,5	20	15	4	30	120	170	16	563	6	3,2	516	28	16	1,77
	60	75	210	25,6	20	15	4	30	120	170	24	607	6	4,8	514	28	24	1,18
	71	86	210	26,6	20	15	4	30	120	170	32	609	6	6,4	499	28	32	0,88
	82	97	210	27,7	20	15	4	30	120	170	40	483	6	8,0	398	28	40	0,71
	93	108	210	28,8	20	15	4	30	120	170	48	399	6	9,6	314	28	48	0,59
	104	119	210	29,8	20	15	4	30	120	170	56	338	6	11,2	253	28	56	0,50
	115	130	210	30,9	20	15	4	30	120	170	64	293	6	12,8	208	28	64	0,44
	126	141	210	32,0	20	15	4	30	120	170	72	258	6	14,4	173	28	72	0,39
	137	152	210	33,0	20	15	4	30	120	170	80	258	6	16,0	145	28	80	0,35
	148	163	210	34,1	20	15	4	30	120	170	88	207	6	17,6	122	28	88	0,32
NBC6 250xHt	49	64	260	35,0	20	15	4	30	120	220	16	952	9	3,2	946	44	16	2,76
	60	75	260	36,7	20	15	4	30	120	220	24	1101	9	4,8	1002	44	24	1,84
	71	86	260	38,3	20	15	4	30	120	220	32	1171	9	6,4	999	44	32	1,38
	82	97	260	40,0	20	15	4	30	120	220	40	1209	9	8,0	981	44	40	1,10
	93	108	260	41,6	20	15	4	30	120	220	48	1017	9	9,6	847	44	48	0,92
	104	119	260	43,3	20	15	4	30	120	220	56	865	9	11,2	696	44	56	0,79
	115	130	260	45,0	20	15	4	30	120	220	64	752	9	12,8	582	44	64	0,69
	126	141	260	46,6	20	15	4	30	120	220	72	663	9	14,4	494	44	72	0,61
	137	152	260	48,3	20	15	4	30	120	220	80	663	9	16,0	423	44	80	0,55
	148	163	260	50,0	20	15	4	30	120	220	88	535	9	17,6	365	44	88	0,50
NBC6 300xHt	60	75	310	50,1	25	15	4	30	120	270	24	1684	13	4,8	1672	64	24	2,65
	71	86	310	52,5	25	15	4	30	120	270	32	1874	13	6,4	1712	64	32	1,99
	82	97	310	54,9	25	15	4	30	120	270	40	1982	13	8,0	1711	64	40	1,59
	93	108	310	57,3	25	15	4	30	120	270	48	2049	13	9,6	1691	64	48	1,33
	104	119	310	59,7	25	15	4	30	120	270	56	1849	13	11,2	1552	64	56	1,14
	115	130	310	62,1	25	15	4	30	120	270	64	1608	13	12,8	1311	64	64	0,99
	126	141	310	64,5	25	15	4	30	120	270	72	1421	13	14,4	1124	64	72	0,88
	137	152	310	66,9	25	15	4	30	120	270	80	1421	13	16,0	974	64	80	0,80
	148	163	310	69,3	25	15	4	30	120	270	88	1149	13	17,6	852	64	88	0,72

NBC6



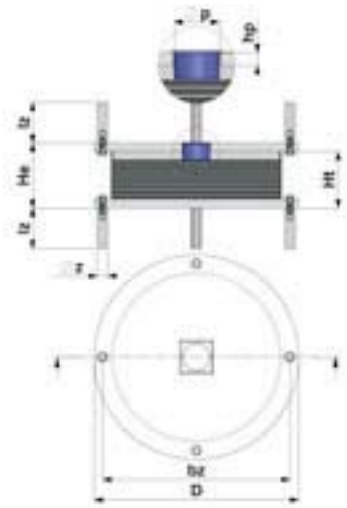
Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontrapločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
D	prečnik ležišta *bearing diameter*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera *diameter of anchors*		

DATA	NBC6										hg	Com o 1			Com o 2			Kh
	Ht	He	L	W	Fp	hp	nz	Fz	lz	az - z		V	H	s*	V	H	s*	
	mm	mm	mm	kG	mm	mm		mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NBC6 350xHt	79	99	360	84,9	25	20	4	30	120	320	33	2213	17	6,6	2036	87	33	2,62
	93	113	360	88,5	25	20	4	30	120	320	44	2366	17	8,8	2038	87	44	1,97
	107	127	360	92,2	25	20	4	30	120	320	55	2451	17	11,0	2006	87	55	1,57
	121	141	360	95,8	25	20	4	30	120	320	66	2145	17	13,2	1798	87	66	1,31
	135	155	360	99,5	25	20	4	30	120	320	77	1826	17	15,4	1479	87	77	1,12
	149	169	360	103,1	25	20	4	30	120	320	88	1587	17	17,6	1240	87	88	0,98
	163	183	360	106,7	25	20	4	30	120	320	99	1401	17	19,8	1054	87	99	0,87
	177	197	360	110,4	25	20	4	30	120	320	110	1401	17	22,0	905	87	110	0,79
	191	211	360	114,0	25	20	4	30	120	320	121	1130	17	24,2	783	87	121	0,72
NBC6 400xHt	81	101	410	110,9	35	20	4	30	120	370	33	3014	23	6,6	2954	113	33	3,43
	96	116	410	116,6	35	20	4	30	120	370	44	3330	23	8,8	3014	113	44	2,57
	111	131	410	122,3	35	20	4	30	120	370	55	3510	23	11,0	3006	113	55	2,06
	126	146	410	128,1	35	20	4	30	120	370	66	3621	23	13,2	2964	113	66	1,71
	141	161	410	133,8	35	20	4	30	120	370	77	3169	23	15,4	2648	113	77	1,47
	156	176	410	139,6	35	20	4	30	120	370	88	2756	23	17,6	2235	113	88	1,29
	171	191	410	145,3	35	20	4	30	120	370	99	2436	23	19,8	1914	113	99	1,14
	186	206	410	151,1	35	20	4	30	120	370	110	2436	23	22,0	1658	113	110	1,03
	201	221	410	156,8	35	20	4	30	120	370	121	1969	23	24,2	1448	113	121	0,93
NBC6 450xHt	96	116	460	145,8	40	20	4	30	120	410	44	4389	29	8,8	4199	143	44	3,25
	111	131	460	153,1	40	20	4	30	120	410	55	4731	29	11,0	4245	143	55	2,60
	126	146	460	160,3	40	20	4	30	120	410	66	4948	29	13,2	4230	143	66	2,17
	141	161	460	167,6	40	20	4	30	120	410	77	5094	29	15,4	4179	143	77	1,86
	156	176	460	174,9	40	20	4	30	120	410	88	4478	29	17,6	3731	143	88	1,63
	171	191	460	182,1	40	20	4	30	120	410	99	3959	29	19,8	3213	143	99	1,45
	186	206	460	189,4	40	20	4	30	120	410	110	3959	29	22,0	2798	143	110	1,30
	201	221	460	196,7	40	20	4	30	120	410	121	3205	29	24,2	2459	143	121	1,18
NBC6 500xHt	96	116	510	178,4	50	20	4	30	120	460	44	5454	35	8,8	5347	177	44	4,02
	111	131	510	187,4	50	20	4	30	120	460	55	6053	35	11,0	5716	177	55	3,21
	126	146	510	196,3	50	20	4	30	120	460	66	6439	35	13,2	5755	177	66	2,68
	141	161	510	205,3	50	20	4	30	120	460	77	6703	35	15,4	5734	177	77	2,29
	156	176	510	214,3	50	20	4	30	120	460	88	6892	35	17,6	5675	177	88	2,01
	171	191	510	223,2	50	20	4	30	120	460	99	6106	35	19,8	5077	177	99	1,78
	186	206	510	232,2	50	20	4	30	120	460	110	6106	35	22,0	4441	177	110	1,61
	201	221	510	241,2	50	20	4	30	120	460	121	4949	35	24,2	3920	177	121	1,46

NBC6



Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*	lz	dužina ankera *lenght of anchors*
He	visina ležišta s kontraločama *height of bearing with counterplates*	az- z	razmak ankera *interaxis of anchors*
W	težina ležišta *weight of bearing*	hg	visina gume *height of rubber*
D	prečnik ležišta *bearing diameter*	V	vertikalno opterećenje *vertical load*
Φp	prečnik moždanika *pin diameter*	H	horizontalno opterećenje *horizontal load*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*	s*	ekvivalent pomeranja *equivalent displacement*
nz	broj ankera *N° anchors*	Kh	horizontalna krutost *horizontal stiffness*
Φz	prečnik ankera diameter of anchors		

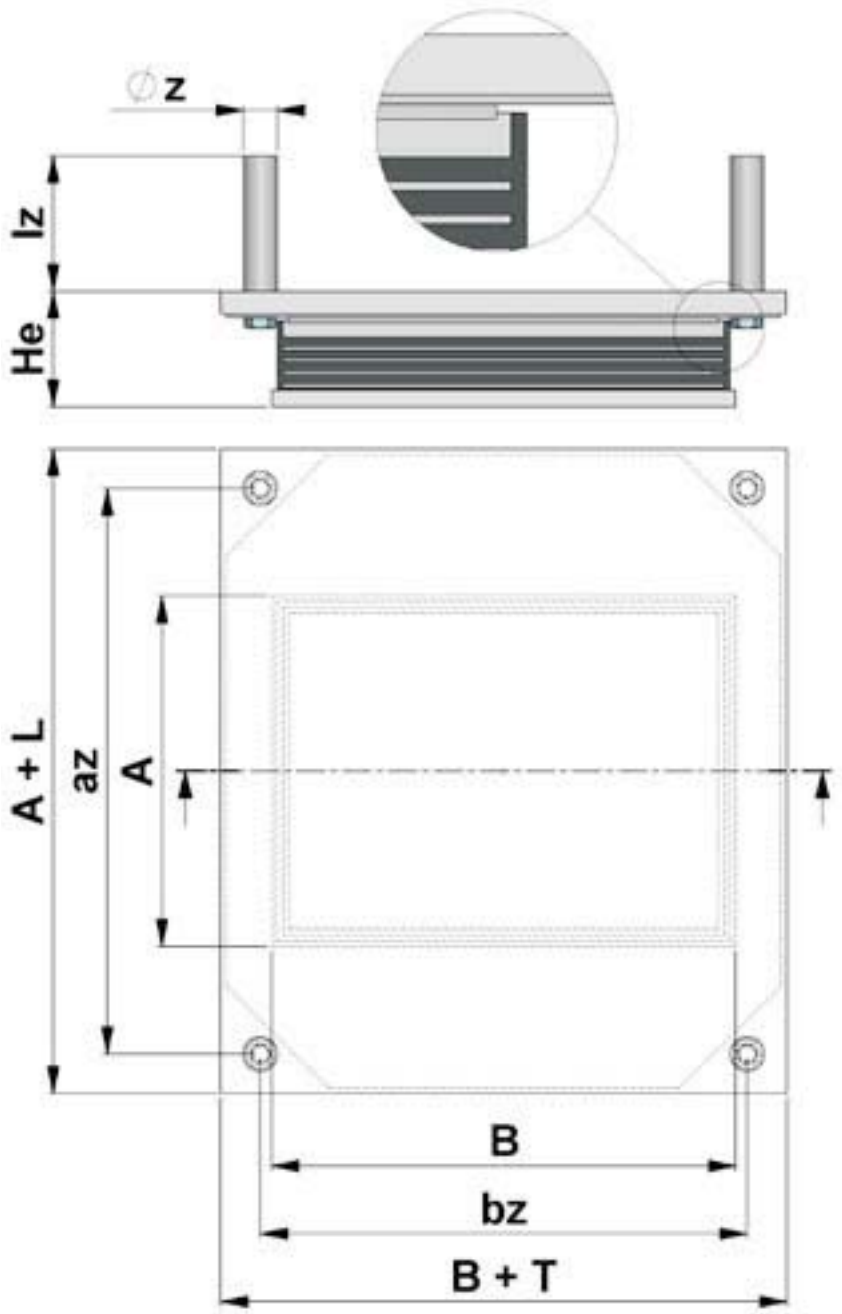
DATA	NBC6										hg	Com o 1			Com o 2			Kh
	Ht	He	L	W	Fp	hp	nz	Fz	lz	az - z		V	H	s*	V	H	s*	
	mm	mm	mm	kG	mm	mm		mm	mm	mm	mm	kN	kN	mm	kN	kN	mm	kN/ mm
NBC6 550xHt	111	131	560	225,2	60	20	4	30	120	510	55	7387	43	11,0	7102	214	55	3,89
	126	146	560	236,1	60	20	4	30	120	510	66	8029	43	13,2	7532	214	66	3,24
	141	161	560	246,9	60	20	4	30	120	510	77	8475	43	15,4	7569	214	77	2,78
	156	176	560	257,8	60	20	4	30	120	510	88	8797	43	17,6	7544	214	88	2,43
	171	191	560	268,7	60	20	4	30	120	510	99	9025	43	19,8	7478	214	99	2,16
	186	206	560	279,5	60	20	4	30	120	510	110	9025	43	22,0	6714	214	110	1,94
	201	221	560	290,4	60	20	4	30	120	510	121	7321	43	24,2	5947	214	121	1,77
NBC6 600xHt	115	135	610	266,3	75	20	4	30	120	540	60	7820	51	12,0	7417	254	60	4,24
	135	155	610	282,9	75	20	4	30	120	540	75	8398	51	15,0	7484	254	75	3,39
	155	175	610	299,5	75	20	4	30	120	540	90	8764	51	18,0	7445	254	90	2,83
	175	195	610	316,1	75	20	4	30	120	540	105	8888	51	21,0	7346	254	105	2,42
	195	215	610	332,7	75	20	4	30	120	540	120	7736	51	24,0	6424	254	120	2,12
	215	235	610	349,4	75	20	4	30	120	540	135	6840	51	27,0	5528	254	135	1,88
	235	255	610	366,0	75	20	4	30	120	540	150	6840	51	30,0	4811	254	150	1,70
	255	275	610	382,6	75	20	4	30	120	540	165	5537	51	33,0	4224	254	165	1,54
NBC6 650xHt	115	135	660	311,3	90	20	4	30	120	590	60	9283	60	12,0	9214	299	60	4,98
	135	155	660	330,8	90	20	4	30	120	590	75	10168	60	15,0	9396	299	75	3,98
	155	175	660	350,2	90	20	4	30	120	590	90	10736	60	18,0	9419	299	90	3,32
	175	195	660	369,7	90	20	4	30	120	590	105	11123	60	21,0	9351	299	105	2,84
	195	215	660	389,2	90	20	4	30	120	590	120	10733	60	24,0	9060	299	120	2,49
	215	235	660	408,7	90	20	4	30	120	590	135	9494	60	27,0	7821	299	135	2,21
	235	255	660	428,2	90	20	4	30	120	590	150	9494	60	30,0	6830	299	150	1,99
	255	275	660	447,7	90	20	4	30	120	590	165	7692	60	33,0	6019	299	165	1,81
NBC6 700xHt	135	155	710	382,4	110	20	4	30	120	640	75	11994	69	15,0	11530	346	75	4,62
	155	175	710	405,0	110	20	4	30	120	640	90	12840	69	18,0	11650	346	90	3,85
	175	195	710	427,6	110	20	4	30	120	640	105	13422	69	21,0	11638	346	105	3,30
	195	215	710	450,2	110	20	4	30	120	640	120	13839	69	24,0	11544	346	120	2,89
	215	235	710	472,8	110	20	4	30	120	640	135	12854	69	27,0	10760	346	135	2,57
	235	255	710	495,4	110	20	4	30	120	640	150	12854	69	30,0	9422	346	150	2,31
	255	275	710	518,1	110	20	4	30	120	640	165	10421	69	33,0	8327	346	165	2,10

NTM

Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*
He	visina ležišta s kontraločama *height of bearing with counterplates*
W	težina ležišta *weight of bearing*
A-B	dimenzije osnove ležišta *bearing dimension*
Φp	prečnik moždanika *pin diameter*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*
nz	broj ankera *N° anchors*
Φz	prečnik ankera diameter of anchors
lz	dužina ankera *lenght of anchors*
az-z	razmak ankera *interaxis of anchors*
hg	visina gume *height of rubber*
V	vertikalno opterećenje *vertical load*
H	horizontalno opterećenje *horizontal load*
s*	ekvivalent pomeranja *equivalent displacement*
Kh	horizontalna krutost *horizontal stiffness*



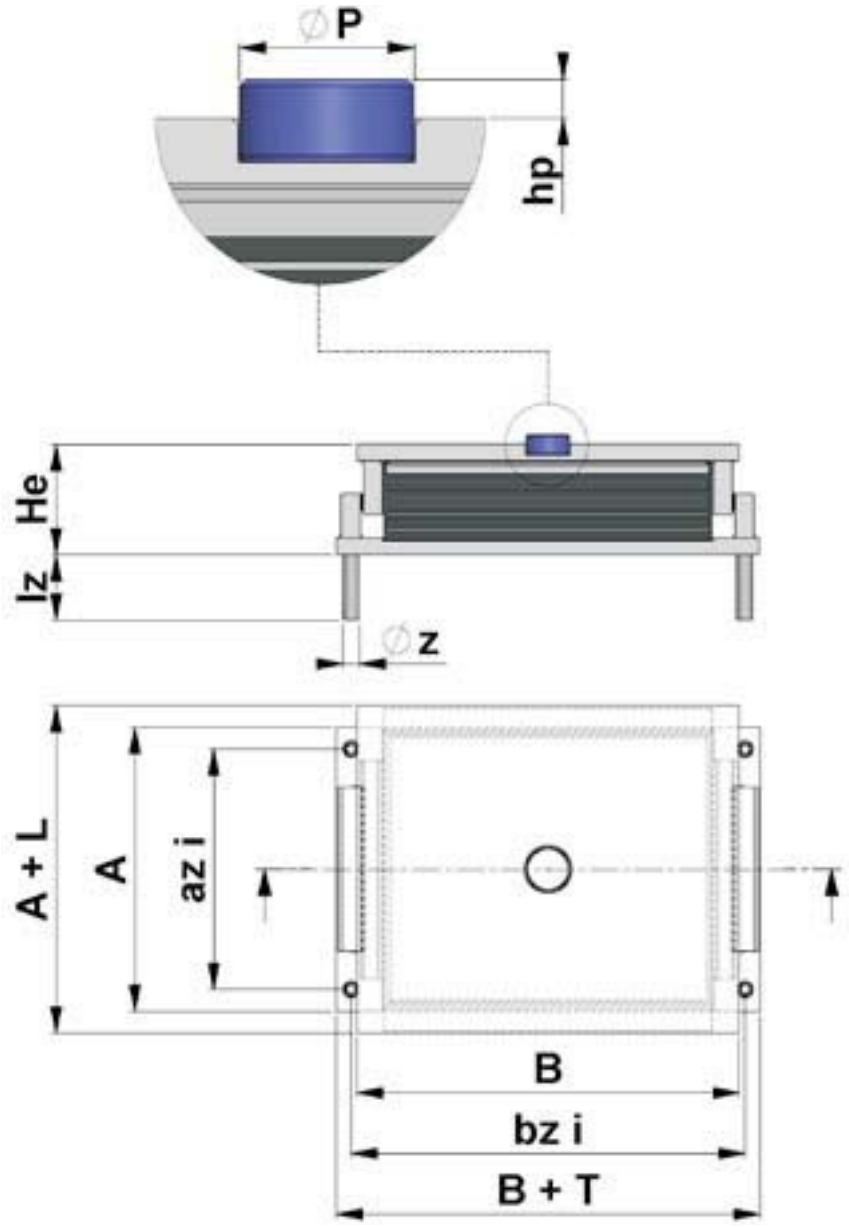
DATA	V	s L	s T	donja ploča		gornja ploča		He	rastojanje ankera		Φz	lz
				A	B	A+L	B+T		az	z		
	kN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
NTM 150x200x50	500	± 50	± 20	170	220	260	330	79	220	290	30	120
NTM 200x300x59	1000	± 50	± 20	220	320	310	430	93	270	390	30	120
NTM 200x400x59	1500	± 50	± 20	220	420	310	530	98	270	490	30	120
NTM 250x400x59	2000	± 50	± 20	270	420	360	530	98	320	490	30	120
NTM 300x400x59	2500	± 50	± 20	320	420	410	530	98	370	490	30	120
NTM 300x500x59	3000	± 50	± 20	320	520	410	650	103	360	600	30	120
NTM 300x600x59	3500	± 50	± 20	320	620	410	750	106	360	700	30	120
NTM 300x600x70	4000	± 50	± 20	320	620	410	750	119	360	700	30	120
NTM 400x700x75	4500	± 50	± 20	420	720	510	850	129	460	800	30	120
NTM 400x700x90	5000	± 50	± 20	420	720	510	850	144	460	800	30	120
NTM 400x700x90	6000	± 50	± 20	420	720	510	890	149	440	820	40	160
NTM 400x800x90	7000	± 50	± 20	420	820	510	990	154	440	920	40	160
NTM 500x700x90	8000	± 50	± 20	520	720	610	890	154	540	820	40	160
NTM 600x700x115	9000	± 50	± 20	620	720	710	890	179	640	820	40	160
NTM 700x800x110	10000	± 50	± 20	720	820	810	990	179	740	920	40	160

NTU

Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*
He	visina ležišta s kontraločama *height of bearing with counterplates*
W	težina ležišta *weight of bearing*
A-B	dimenzije osnove ležišta *bearing dimension*
Φp	prečnik moždanika *pin diameter*
hp	visina moždanika i kontraploče *height of pin and height of masonry plates*
nz	broj ankera *N° anchors*
Φz	prečnik ankera *diameter of anchors*
lz	dužina ankera *lenght of anchors*
az-z	razmak ankera *interaxis of anchors*
hg	visina gume *height of rubber*
V	vertikalno opterećenje *vertical load*
H	horizontalno opterećenje *horizontal load*
s*	ekvivalent pomeranja *equivalent displacement*
Kh	horizontalna krutost *horizontal stiffness*



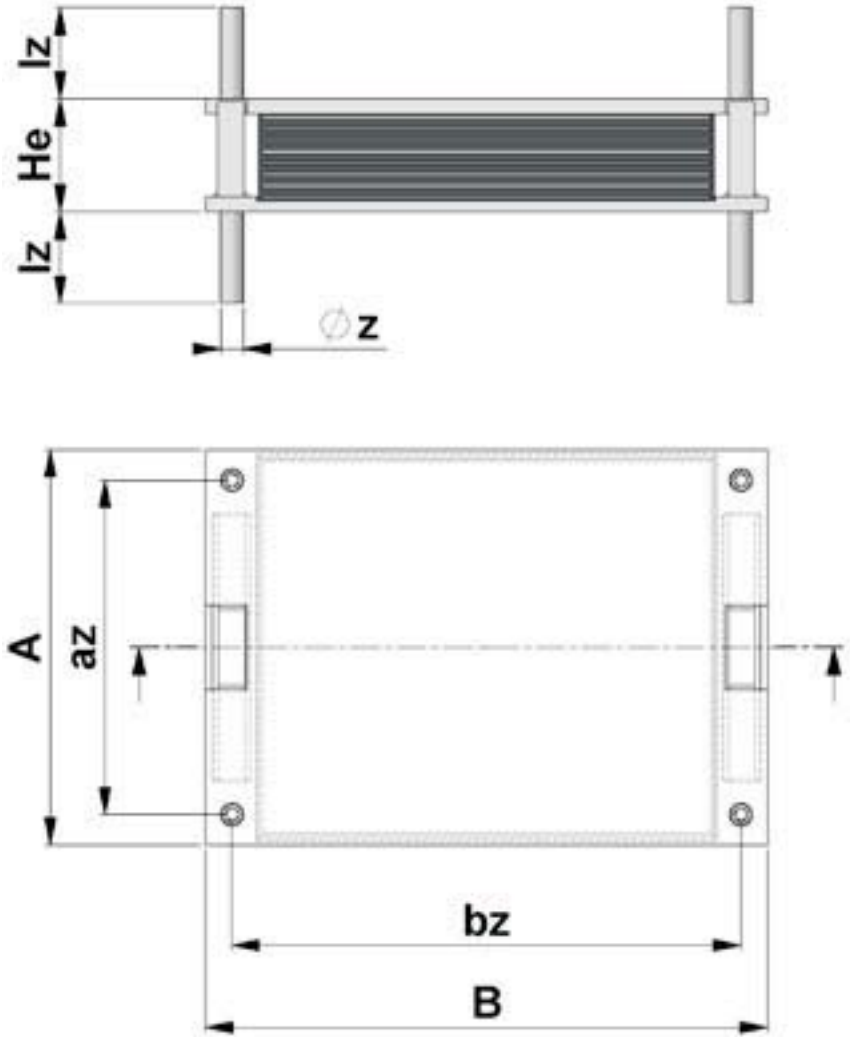
DATA	V	H	s	piastra inferiore		piastra superiore		He	rastojanje ankera		rastojanje ankera		Φz	lz
				A	B+T	A+L	B		az i	z i	az s	z s		
	kN	kN	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
NTU 150x200x50	500	50	± 50	170	340	280	285	78	130	300	240	245	30	120
NTU 200x300x59	1000	100	± 50	220	450	330	385	92	180	410	290	345	30	120
NTU 200x400x59	1500	150	± 50	220	590	330	510	98	170	540	280	460	30	120
NTU 250x400x59	2000	200	± 50	270	605	380	520	103	220	555	330	470	30	120
NTU 300x400x59	2500	250	± 50	320	615	430	530	104	250	545	360	460	40	160
NTU 300x500x59	3000	300	± 50	320	725	430	630	108	250	655	360	560	40	160
NTU 300x600x59	3500	350	± 50	320	845	430	745	113	250	775	360	675	40	160
NTU 300x600x70	4000	400	± 50	320	855	430	750	124	240	775	350	670	50	200
NTU 400x700x75	4500	450	± 50	420	965	530	855	134	340	885	450	775	50	200
NTU 400x700x90	5000	500	± 50	420	990	530	870	149	340	910	450	790	50	200
NTU 400x700x90	6000	600	± 50	420	1000	530	875	154	330	910	440	785	50	200
NTU 400x800x90	7000	700	± 50	420	1105	530	980	159	330	1015	440	890	50	200
NTU 500x700x90	8000	800	± 50	520	1015	630	885	159	420	915	530	785	60	240
NTU 600x700x115	9000	900	± 50	620	1025	730	900	184	520	925	630	800	60	240
NTU 700x800x110	10000	1000	± 50	720	1140	830	1000	190	610	1030	720	890	60	240

NBF

Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*
He	visina ležišta s kontraločama *height of bearing with counterplates*
W	težina ležišta *weight of bearing*
A-B	dimenzije osnove ležišta *bearing dimension*
Φp	prečnik moždanika *pin diameter*
hp	visina moždanika i kontraploča *height of pin and height of masonry plates*
nz	broj ankera *N° anchors*
Φz	prečnik ankera *diameter of anchors*
lz	dužina ankera *lenght of anchors*
az-z	razmak ankera *interaxis of anchors*
hg	visina gume *height of rubber*
V	vertikalno opterećenje *vertical load*
H	horizontalno opterećenje *horizontal load*
s*	ekvivalent pomeranja orizzontale / *equivalent displacement*
Kh	horizontalna krutost *horizontal stiffness*



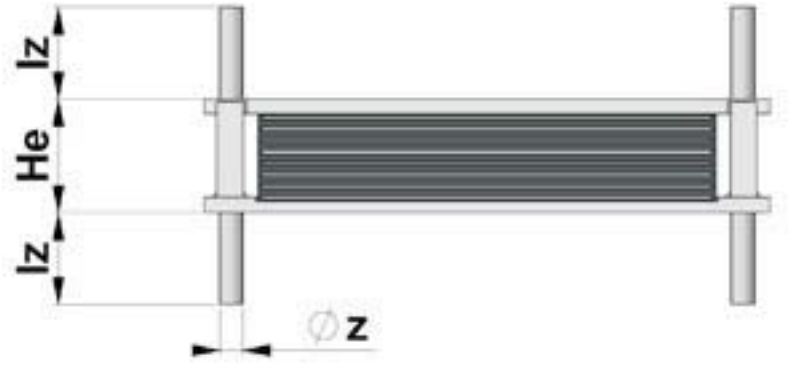
DATA	V	Hy	Hx	A	B	He	az	z	Φz	lz
	kN	kN	mm	mm	mm	mm	mm	mm	mm	mm
NBF 150x200x28	500	50	50	175	280	53	135	240	30	120
NBF 200x300x41	1000	100	100	225	405	66	175	355	30	120
NBF 200x400x41	1500	150	150	225	525	71	175	475	30	120
NBF 250x400x52	2000	200	200	305	530	82	235	460	40	160
NBF 300x400x52	2500	250	250	325	550	82	255	480	40	160
NBF 300x500x52	3000	300	300	345	660	87	265	580	50	200
NBF 300x600x63	3500	350	350	355	780	98	275	700	50	200
NBF 300x600x63	4000	400	400	360	795	98	280	715	50	200
NBF 400x700x69	4500	450	450	435	890	109	345	800	50	200
NBF 400x700x69	5000	500	500	465	895	109	375	805	50	200
NBF 400x700x69	6000	600	600	495	900	109	395	800	60	240
NBF 400x800x84	7000	700	700	525	1030	129	425	930	60	240
NBF 500x700x84	8000	800	800	595	940	134	485	830	60	240
NBF 600x700x78	9000	900	900	625	950	128	515	840	60	240
NBF 700x800x104	10000	1000	1000	725	1060	159	595	930	70	280

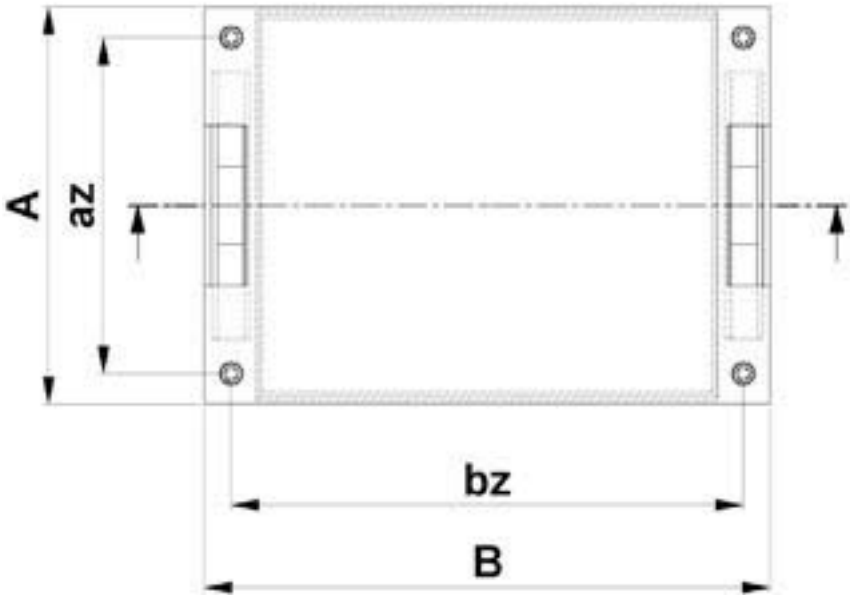
NBU

Com o 1
deformacija gume / *rubber shear strain*
γ = 0,2
rotacija / *rotation* 0.01 rad | V=Vmax

Com o 2
deformacija gume / *rubber shear strain*
γ = 1,0
rotacija / *rotation* 0.005 rad | H=Hmax

Ht	visina ležišta *height of bearing*
He	visina ležišta s kontraločama *height of bearing with counterplates*
W	težina ležišta *weight of bearing*
A-B	dimenzije osnove ležišta *bearing dimension*
Φp	prečnik moždanika *pin diameter*
hp	visina moždanika i kontraploča *height of pin and height of masonry plates*
nz	broj ankera *N° anchors*
Φz	prečnik ankera diameter of anchors
lz	dužina ankera *lenght of anchors*
az-z	razmak ankera *interaxis of anchors*
hg	visina gume *height of rubber*
V	vertikalno opterećenje *vertical load*
H	horizontalno opterećenje *horizontal load*
s*	ekvivalent pomeranja *equivalent displacement*
Kh	horizontalna krutost *horizontal stiffness*





DATA	V	TRASVERSALE	SPOSTAMENTO EQUIVALENTE LONGITUDINALE	LONGITUDINALE	PLOČA		He	ANKERI		Φz	lz
		Hy	s*	Hx	A	B		az	z		
	kN	kN	mm	kN	mm	mm	mm	mm	mm	mm	mm
NBU 150x200x32	500	50	± 12,0	22	170	300	62	130	260	30	120
NBU 200x300x41	1000	100	± 19,2	44	220	410	76	180	370	30	120
NBU 200x400x41	1500	150	± 19,2	58	250	520	81	200	470	30	120
NBU 250x400x41	2000	200	± 19,2	72	270	530	81	220	480	30	120
NBU 300x400x52	2500	250	± 25,6	87	320	550	97	250	480	40	160
NBU 300x500x52	3000	300	± 25,6	108	320	670	102	250	600	40	160
NBU 300x600x52	3500	350	± 25,6	130	330	780	102	260	710	40	160
NBU 300x600x52	4000	400	± 25,6	130	360	790	103	280	710	50	200
NBU 400x700x69	4500	450	± 35,2	202	420	900	124	340	820	50	200
NBU 400x700x69	5000	500	± 35,2	202	440	900	124	360	820	50	200
NBU 400x700x69	6000	600	± 35,2	202	470	920	134	380	830	50	200
NBU 400x800x69	7000	700	± 35,2	231	490	1030	134	400	940	50	200
NBU 500x700x69	8000	800	± 35,2	252	570	930	134	470	830	60	240
NBU 600x700x85	9000	900	± 48,0	303	620	940	150	520	840	60	240
NBU 700x800x104	10000	1000	± 60,0	404	720	1060	169	610	950	60	240

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