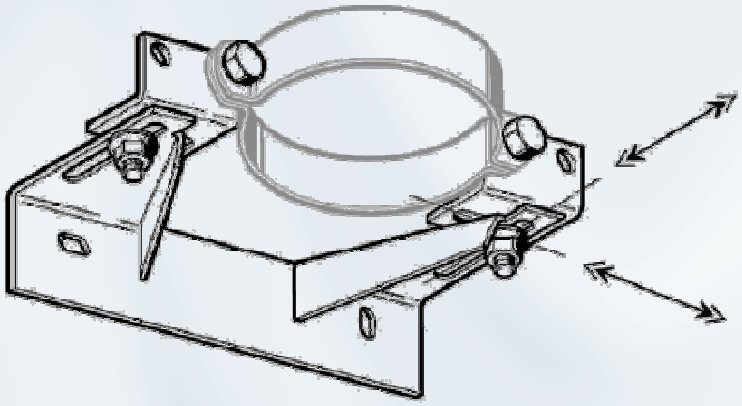
Diverse mijloace:
Console ptr tubulatura verticala
Console unghiulare,
Console ptr tubulatura orizontala,
Talpi WDB, Sina montaj....

Cu ajutorul

Console SFK pentru tevi verticale SML DN 100 - DN 150



Ajustarea distantei fata de perete cu ajutorul gaurii alungite din consola

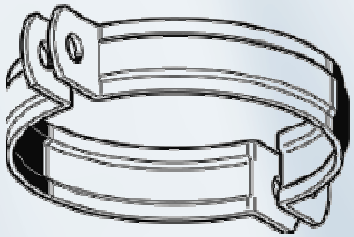
Potrivirea colierului ales cu ajutorul gaurii alungite din unghiul de ajustare

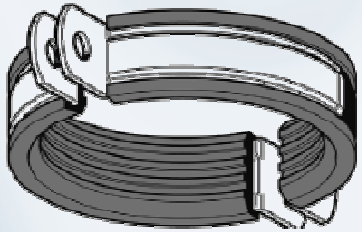
Indicatie:

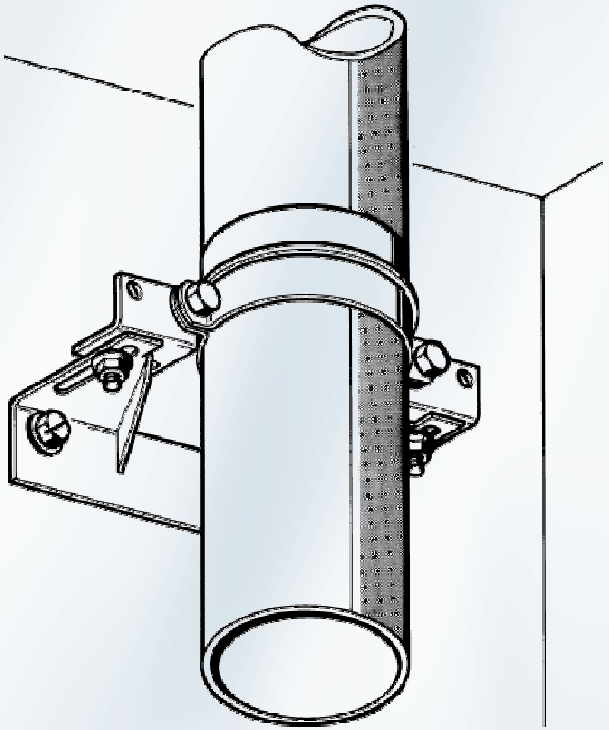
- ***Colierul*** *trebuie comandat special:*

  Stabil D sau Stabil c. G.

  pentru
  DN 100
  DN 125
  DN 150



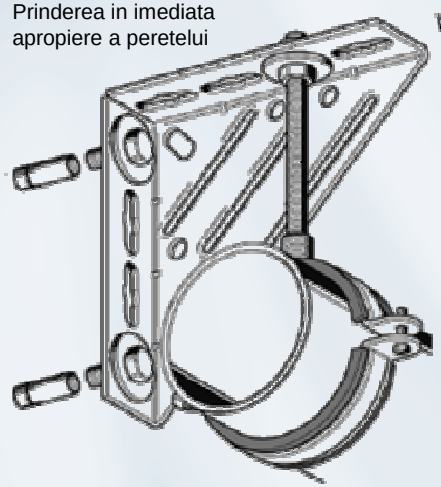


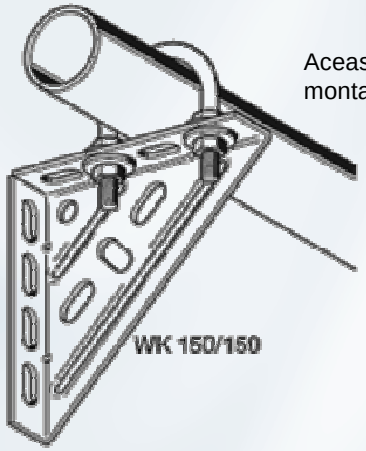


Cu ajutorul

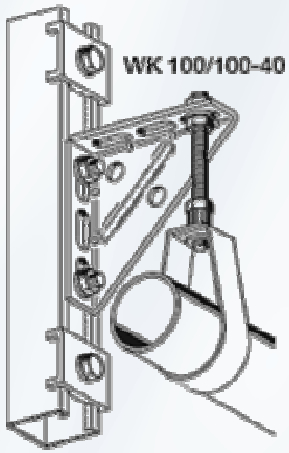
Coltar de sprijin WK 100/100, ... , WK 200/200 cu armare

Prinderea in imediata apropiere a peretelui

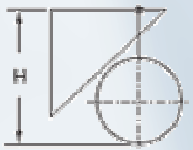


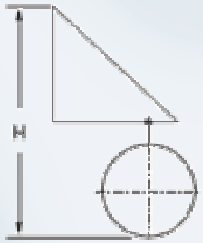


Aceasta aliniere se poate monta si rotita cu 180◦.

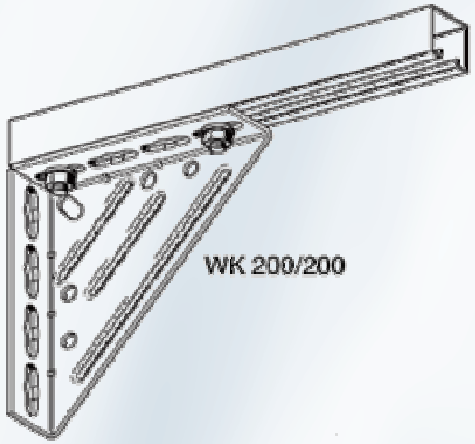


Aliniere economica pentru inaltime mica H





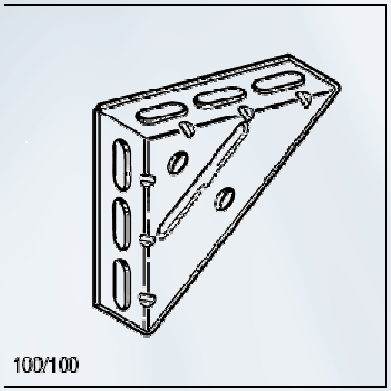
Marirea fixarii laterale cu ajutorul profilului de montaj.
Pentru deschidere mai mare este necesar un sprijin suplimentar cu ajutorul unei console de sprijin

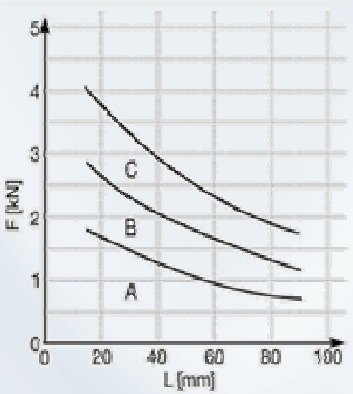


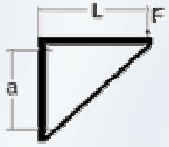
Insurubarea se realizeaza cu ajutorul unui surub ancora HZ41 M12 x 25 sau placa filetanta HZ 41 M12; alternativ montare cu placa filetan-ta CC 41 M12.

Diagrame de incarcare consola de sprijin

Consola de sprijin 100/100

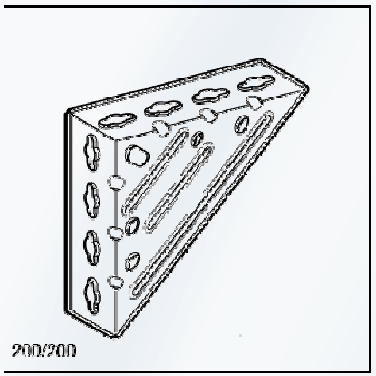


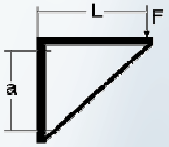




Clasa sarcinii de ancorare (sus/jos):
A = 1,5/1,5 kN
B = 2,5/1,5 kN
C = 3,5/1,5 kN
a = 70 mm
f ≤ 1 mm
σ adm ≤ 160 N/mm²

Consola de sprijin WK 200/200

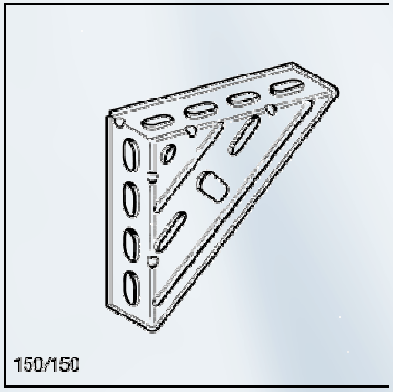


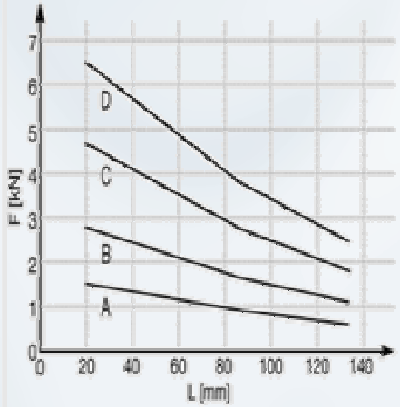


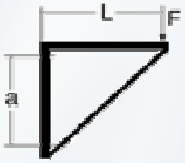
Clasa sarcinii de ancorare (sus/jos):
A = 1,5/1,5 kN
B = 3,5/2,5 kN
C = 6,0/6,0 kN
D = 9,0/9,0

a - 165 mm
f < 2 mm
σ adm ≤ 160 N/mm²

Consola de sprijin WK 150/150







Clasa sarcinii de ancorare (sus/jos):
A = 1,5/1,5 kN
B = 2,5/1,5 kN
C = 3,5/1,5 kN
D = 6,0/3,5
a - 115 mm
f ≤ 1,5 mm
σ adm ≤ 160 N/mm²

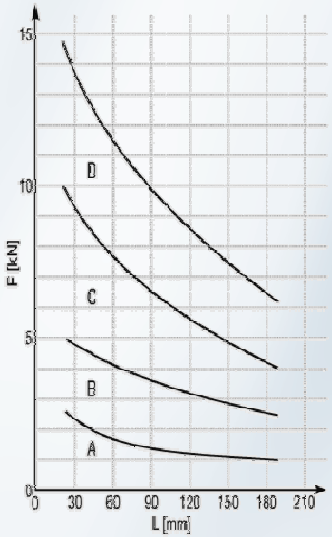
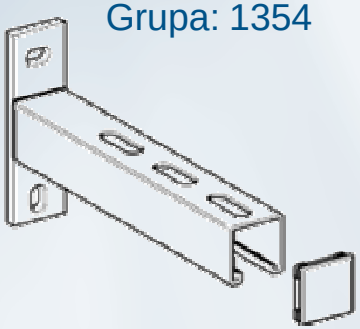


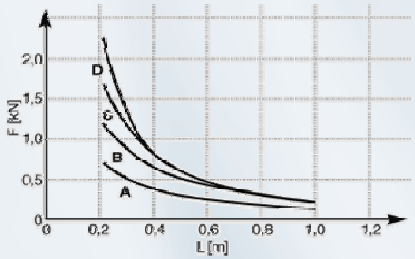
Diagrama de incarcare

Consola AK

Grupa: 1354



Date tehnice
Tip 41/41

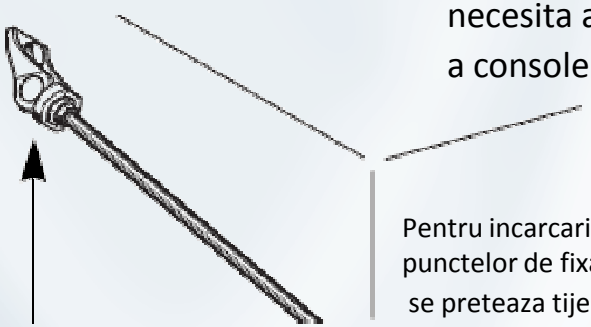


Clasa de incarcare la ancorare

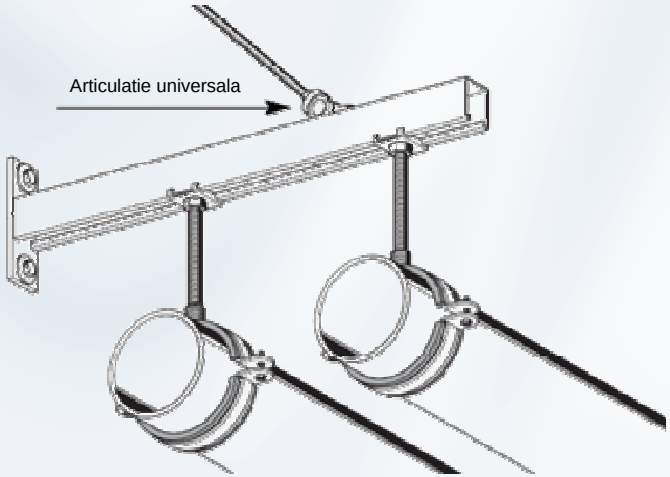
A= 1,5 kN
B= 2,5 kN
C = 3,5 kN
D = 6,0 kN

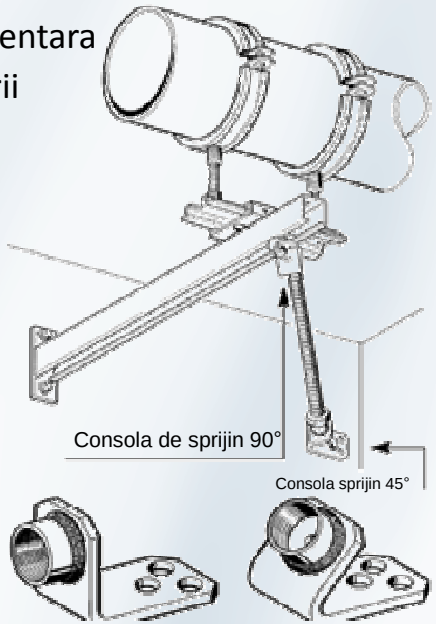
Consola de sprijin pentru consolidare antivantuire

Distante mari si/sau incarcari mari necesita asigurarea suplimentara a consolelor contra vantuirii



Pentru incarcari la tractiune a punctelor de fixare ,
se preteaza tije filetate impreuna cu articulatie universala





Indicatie

- Pentru preluarea fortelor transversale este neaparat necesara montarea unui sprijin orizontal

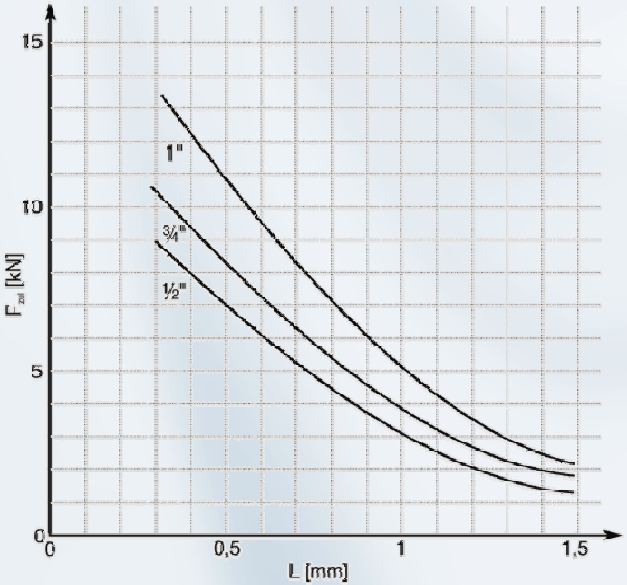
Cu ajutorul

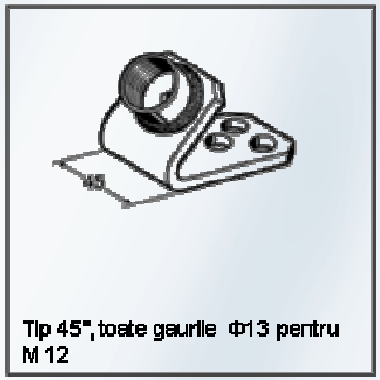
Consola de sprijin ST
Grupa: 1355
Folosire

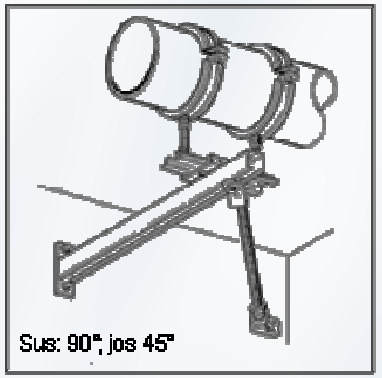
Consolele de sprijin sunt elemente de baza foarte importante cu ajutorul carora se economiseste timp la confectionarea pe santier a punctelor de sustinere verticale si orizontale.

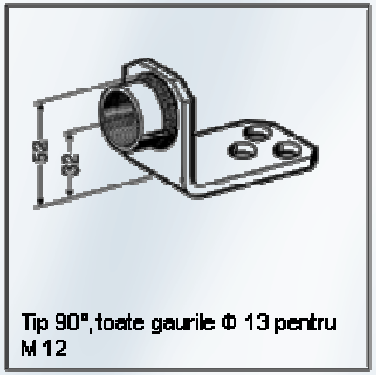
Date tehnice

Pentru determinarea sarcinii de incarcare admise a unei constructii cu consola, pe directia de incarcare se insumeaza fortele admise din consola si sarcinile de incarcare admise din diagrama “Consola de sprijin”.



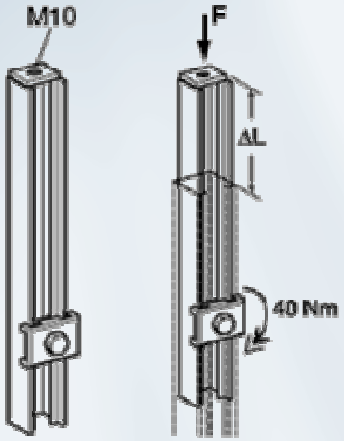






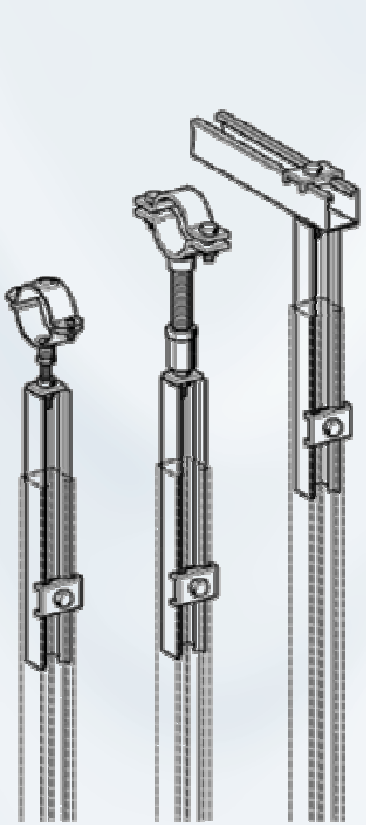
Cu ajutorul

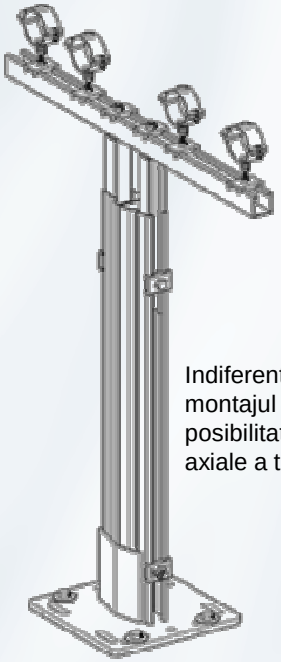
Profil telescopic ST 41

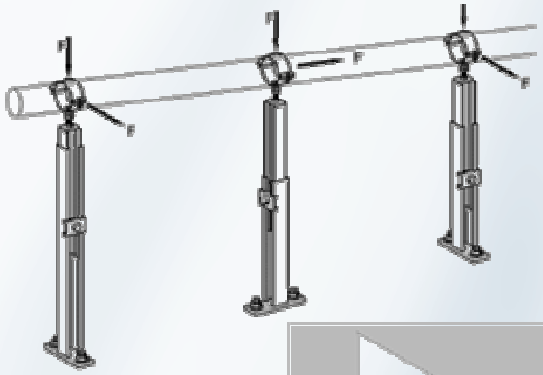


Complet preasamblata cu:
Saiba patrata 41 si
Surub cap hexagonal.

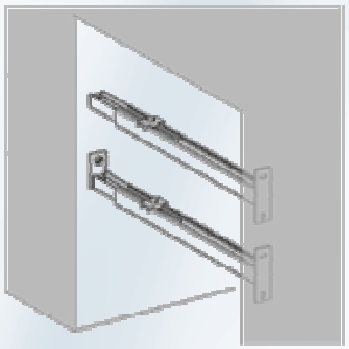
Ptr. Moment de stringere se poate incarca pana F=1,5 kN







Indiferent de inaltimea instalatiei, montajul flexibil al consolei 41 confera posibilitatea preluarii fortelor laterale si axiale a tevilor.



Fixarea frontala a profilelor de montaj cu saiba patrata 41 si surub cap hexagonal M 10

Conexiuni de corpul constructiei in coridoare si ghene de ex. deasupra Boltului ancora Z plus M10/30 montat in prealabil.

Prelungitor continuu pentru console si profile de montaj din sistemul 41 (Inaltimea profilului ≥ 41 mm)

- Domeniu de modificare pana la 200 mm pante si ajustare a tolerantei de constructie
- Montajul tevilor direct cu stift filetat M10 sau cu ajutorul unui adaptor

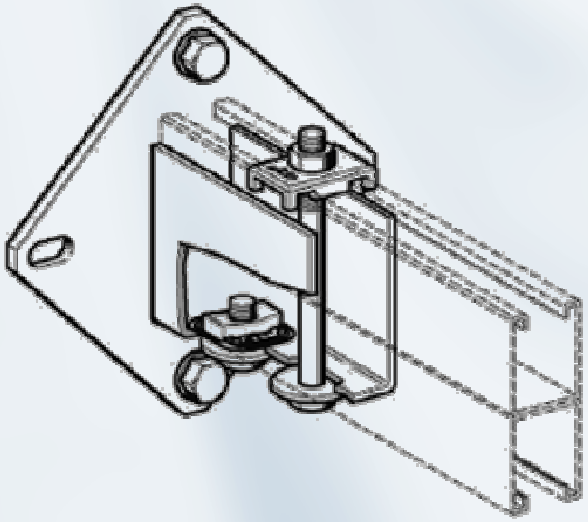
Metode Talpa WBD

Montarea sinei duble cu ajutorul Talpii WBD pe perete, tavan si podea

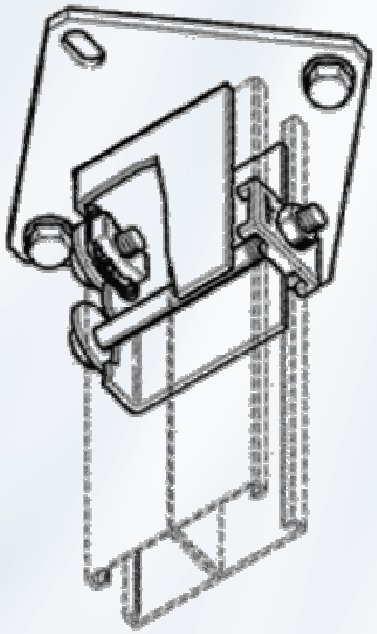
Exemple de montare a sinei duble
Tip. **41/21/1.5D……..41-75/75/3.0D**

Se livreaza toate elementele care sunt necesare la montare.

Montaj pe perete



Montaj pe tavan



Daca la capatul profilului dublu s-a montat un element de imbinare profil KL1, atunci conexiunea exterioara se va face cu ajutorul unei placi filetate CC 41 si surub cap hexagonal.

Valorile de incarcare admise a ancorei se vor lua din fisa tehnica. Valorile sunt valabile pentru doua directii a fluxului fortelor in alinierea ancorelor. (vezi exemplele de montaj pe perete).

Piesele de conexiune pentru fixarea Talpii WBD de corpul constructiei se vor comanda separate.

Pentru montajul pe tavan se va tine cont de natura, numarul ancorelor precum si de incarcarea totala:
•Greutatea tevilor

•Greutatea constructiei si respectiv

•Forta de impingere a tevilor.

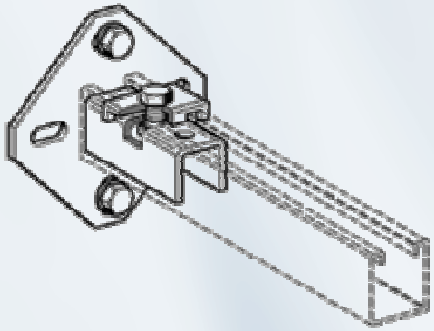
Atentie!

- **Din motive de siguranta la montajul pe tavan se va folosi cel putin un surub petrecut sau asemanator.**

Posibilitati de utilizare, Suporti WBD

Exemplu de montaj pentru sine simple 41/21/1,5.....41-75/75/3.0

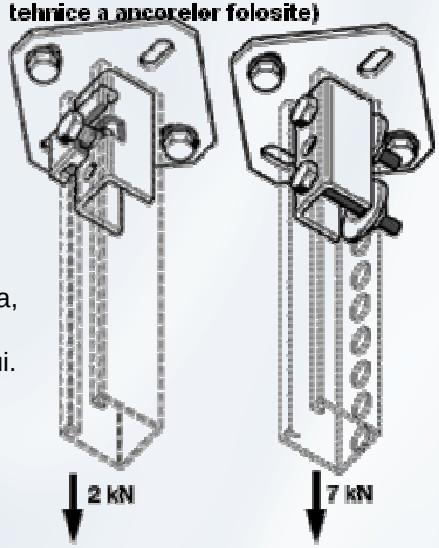
Montaj de perete



Pentru montajul cu Saiba patrata, livrarea contine toate piesele necesare pentru fixarea profilului.

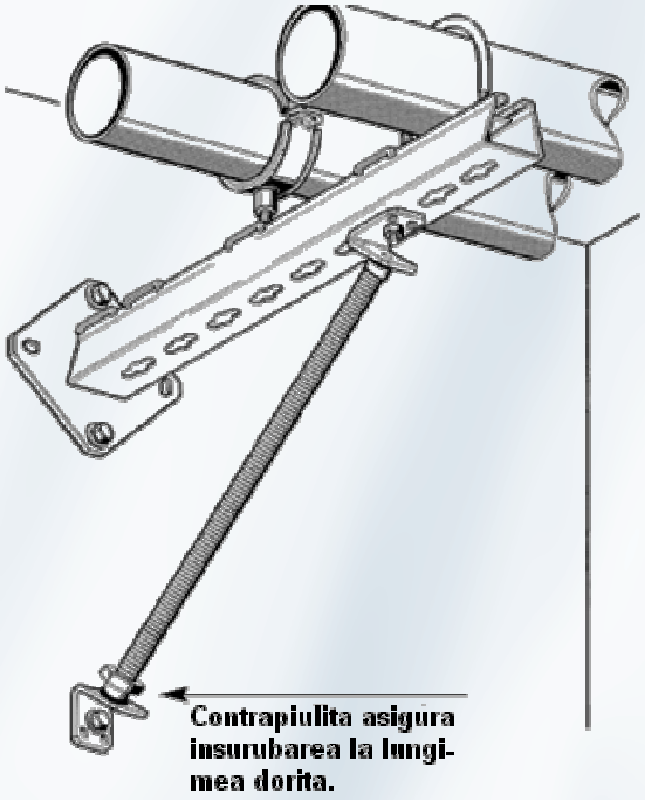
Montaj de podea

Montaj de tavan (atentie la datele tehnice a ancorelor folosite)



La montajul conform normativului Saiba patrata 41 are voie a fi incarcata cu max. 2 kN.

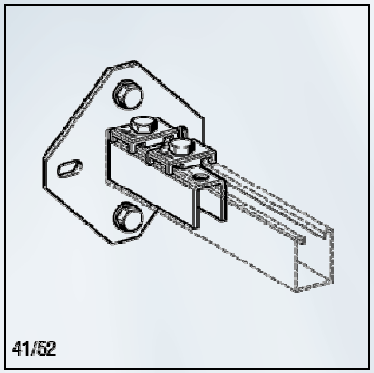
Daca se foloseste minimum un surub petrecut incarcarea poate atinge 7 kN.
Elementele de conexiune se vor comanda separate



Contrapiulita asigura insurubarea la lungimea dorita.

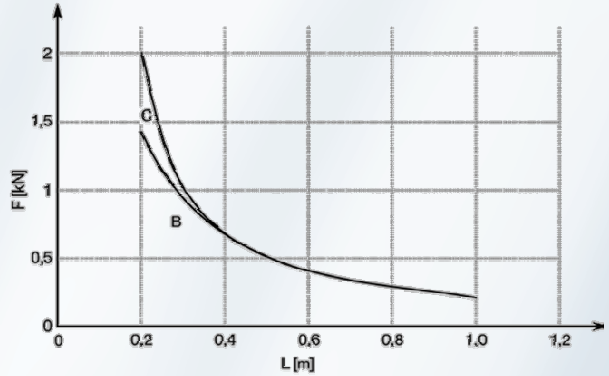
Diagrama de incarcare suport WBD

Talpa profil WBD 41/52

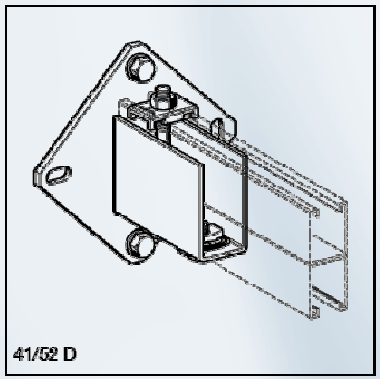


Restrictii:
σadm ≤ 160 N/mm²
Fadm≤ L/100 ptr. L □ 300 mm
Fadm≤ 3/100 ptr. L = 200… 300 mm

Diagrama de incarcare pentru combinatie cu profil 41/52/2,5



Talpa profil WBD 41/52 D



Incarcare ancore

A=1,5 kN
B=2,5 kN
C=3,5 kN
D=6,0 kN
E=9,0 kN

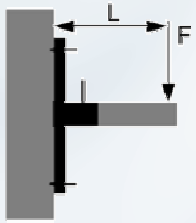
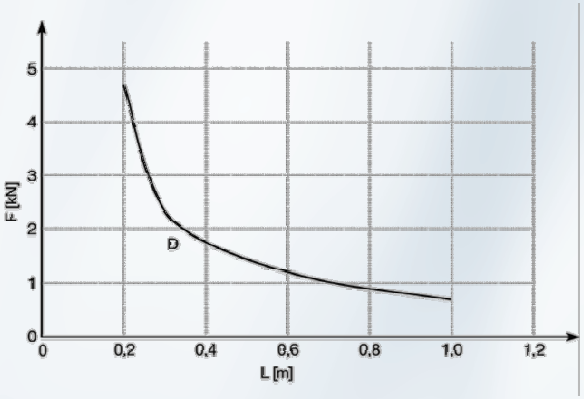
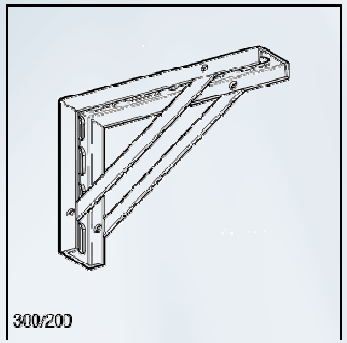


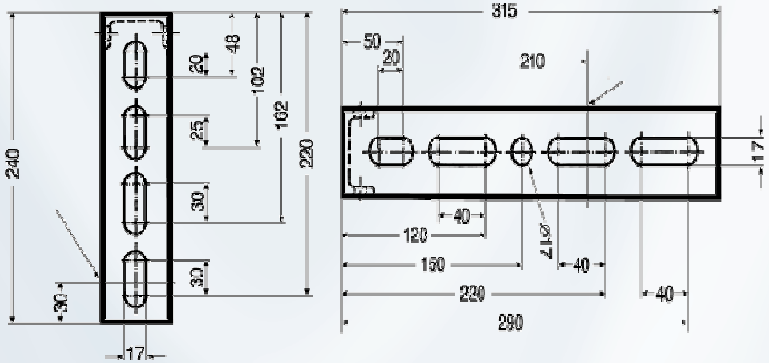
Diagrama de incarcare pentru combinatie cu profilul 41/52/2,5 D

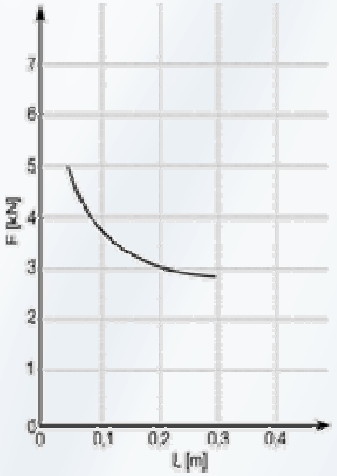


Coltar de sprijin WK 300/200, …,Coltar de sprijin 880/550 din fier de profil

WK 300/200

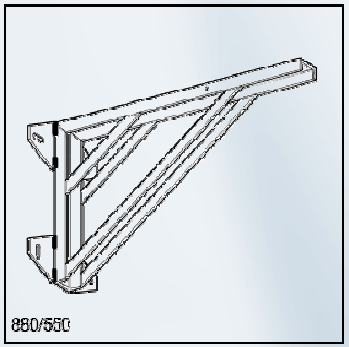


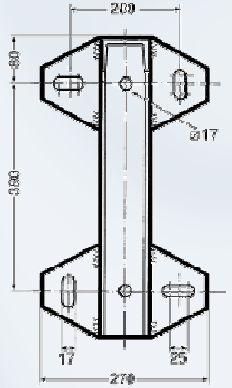




Clasa de incarcare ancore (sus/jos): 6,0/2,5 kN
a = 180 mm
f <L/400
σzul ≤ 160 N/mm²

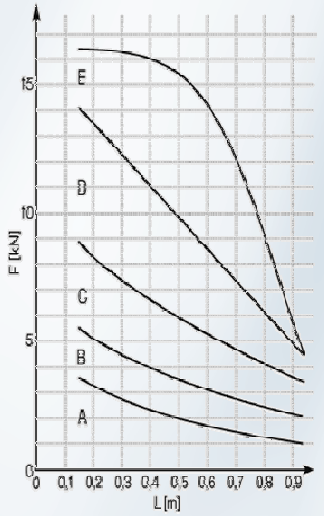
WK 880/550

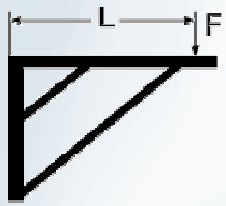




Clasa de incarcare a ancorelor (kN)

Curba	Alinierе 1	Alinierе2	f max
A	1 x 3,5 1 x 1,5	2 x 2,5 1 x 1,5	L/1000
B	1 x 6,0 1 x 2,5	2 x 3,5 1 x 2,5	L/600
C	1 x 9,0 1 x 3,5	2 x 6,0 1 x 3,5	L/400
D	1 x 13,0 1 x 6,0	2 x 9,0 1 x 6,0	L/300
E	- -	2 x 13,0 1 x 9,0	L/300

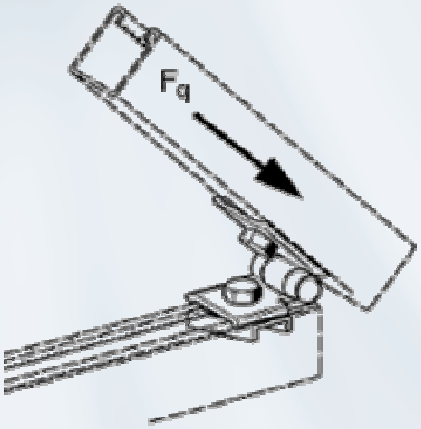




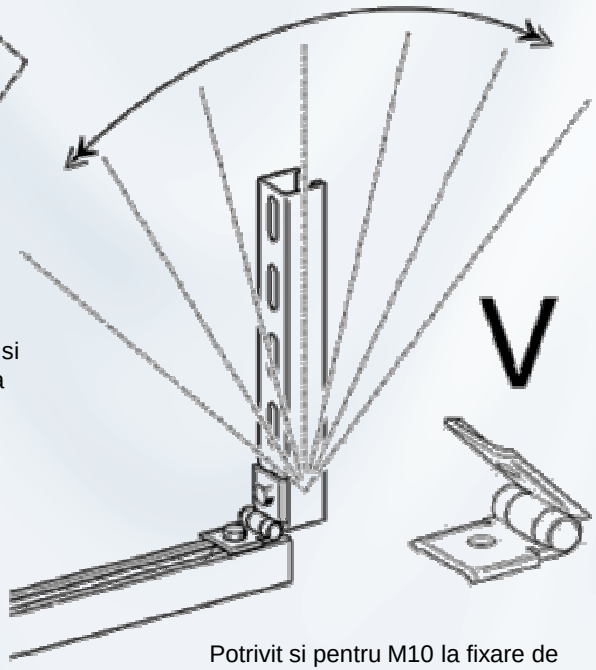
$\sigma_{zul} \leq 160\ N/mm^2$

Cu articulatie de profil

Articulatie JOI 41 V HCP



Conexiune cu placa filetata CC 41 M10 si surub cap hexagonal M10x20, in santul profilului, incarcabil cu Fq pana la 2 kN pentru fiecare conexiune. Moment de strigere 50 Nm.



Potrivit si pentru M10 la fixare de corpul constructiei

Se poate combina cu alte produse HCP si confera protectie anticoroziva optimala a sistemului

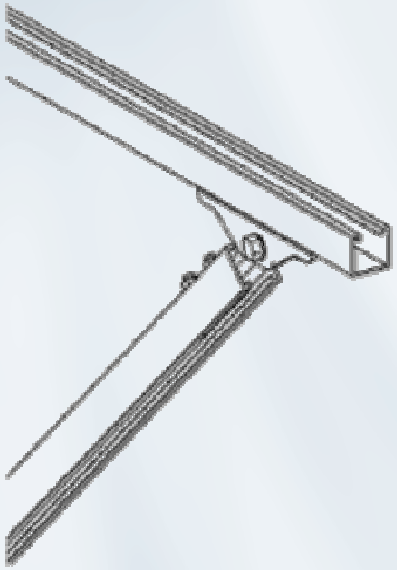
Avantaj:

- Potrivit ptr. Conexiune articulara a unui profil de corpul constructiei sau de un alt profil
- Pentru conexiunea profilelor 41 la diferite unghiuri 0 …..180°, de ex. Sprijinul oblic al consolelor
- Ca si conexiune la structuri oblice laterale (acoperis, tunel etc.) se pot compensa diferite inclinatii unghiulare
- HCP sunt produse cu protectie anticoroziva maxima

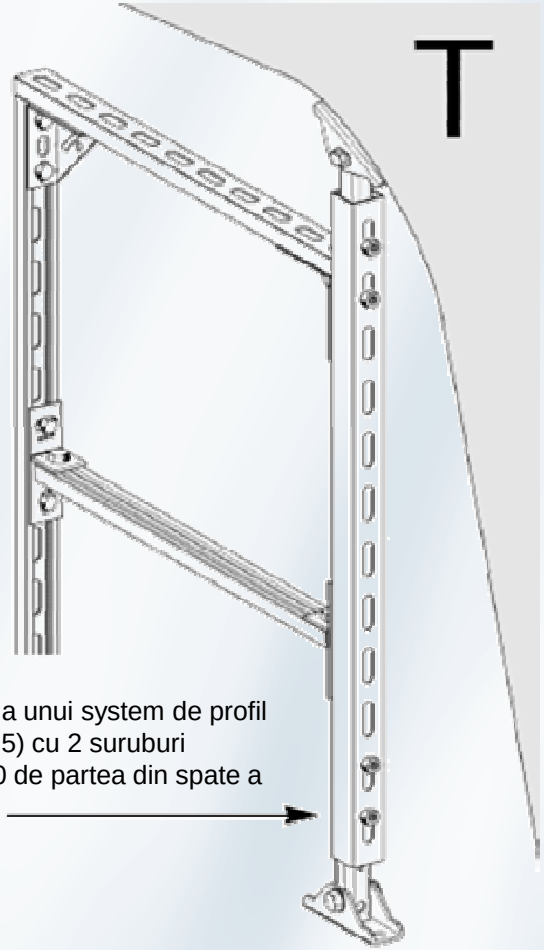
HCP (High Corrosion Protection) - inseamna rezistenta de minim 468 h la improscare cu vapori de apa sarata conform DIN 50021 si astfel protectia anticoroziva este cel putin la nivelul de zincare in baie sau chiar mai mare.

Articulatie JOI 41 T HCP pentru MS 41

Articulatie JOI T HCP

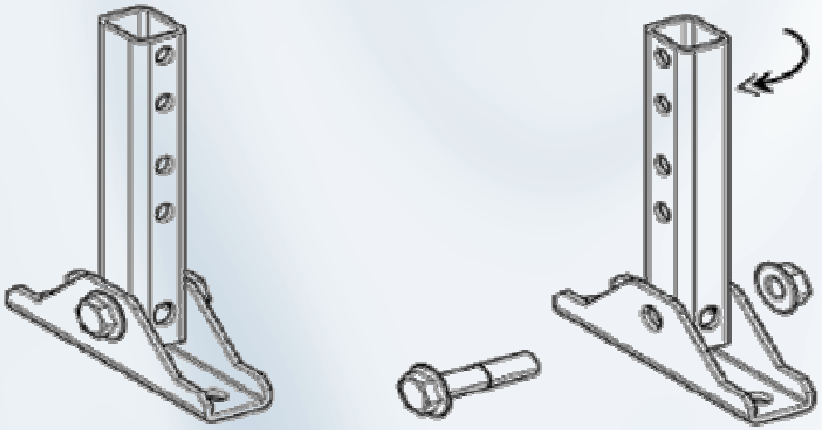


Ideal pentru conectarea altor componente ale sistemului de profile Pressix CC 41



1

Directia de orientare a deschiderii profilului este posibila in toate directiile. Dupa eliberarea boltului filetat profilul patrat se roteste la 90° si se insurubeaza din nou piulita de siguranta.



2

Montaj rapid si sigur a unui system de profil (preferential 41/41/2.5) cu 2 suruburi autoforante FLS F 80 de partea din spate a profilului.

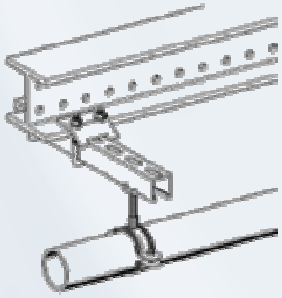
3

Montaj lateral de structura de baza a constructiei de ex. cu 2 ancore M10 (distant gaurilor 100 mm).

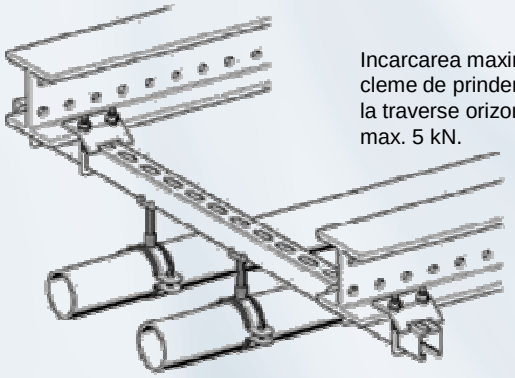
Metode

Clema Profil 41

Aliniere deasupra sau sub profil



La toate alinierile se va tine cont de incarcarea admisa a profilului, iar la alinierea laterala se va tine cont in mod deosebit de rezistenta la torsiune.



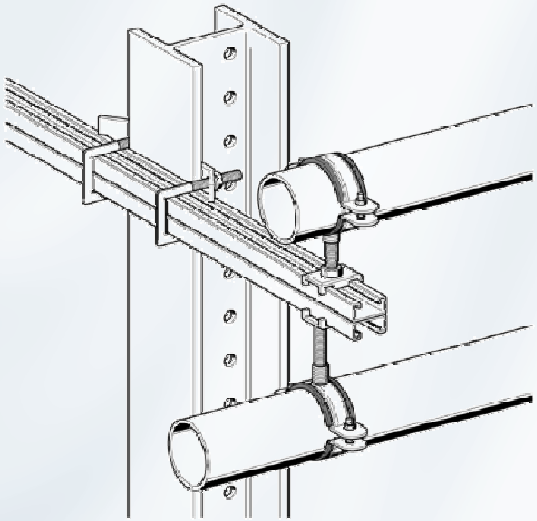
Incarcarea maxima a fiecarei cleme de prindere 41 M10 la traverse orizontale este de max. 5 kN.

Determinarea distribuirii fortelor pentru traverse orizontale se poate realize cu soful SIPlan de statica Sikla.

Distanta sigura maxima de la capatul profilului pina la traversa este de 50 mm.

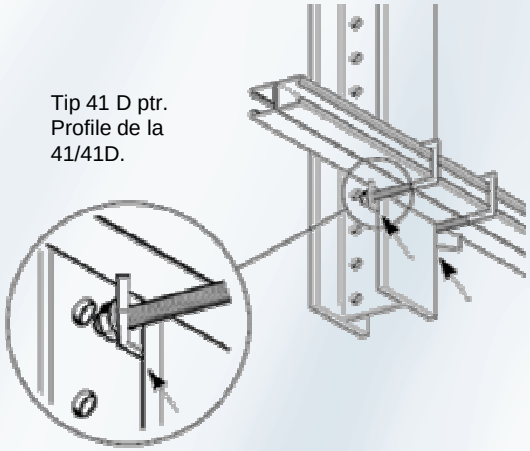
Aliniere laterala de portanta

Datorita geometriei clemelor de prindere , sinele de montaj profilul 41/41 si respectiv 41/21 D, pot fi montate si daca sunt rotite cu 90°.



Montajul direct al tuturor profilelor simple sau duble ale sistemului 41 de portante de otel cu o inaltime a flanselor de max. 16 mm

Tip 41 D ptr. Profile de la 41/41D.



Atentie:

La alinierea laterala Spannbuegeln se vor asigura impotriva alunecarii (de ex. Cu ajutorul a 2 TCS).

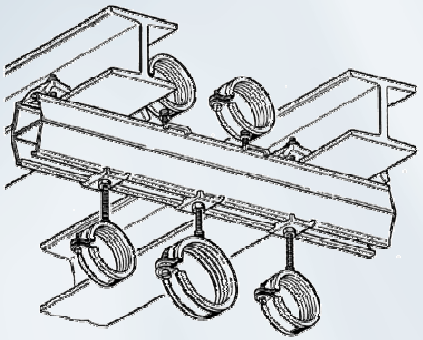
Indicatie:

Clemele Profil 41 se vor folosi numai perechi.

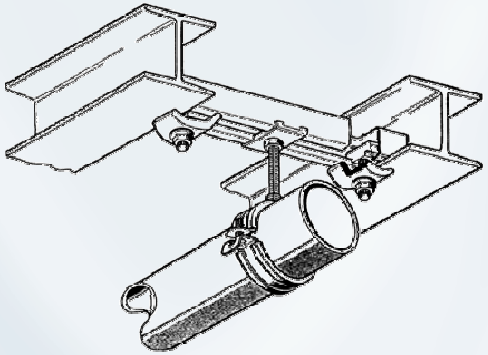
Metode

Ghiara de prindere pentru sustinerea traverselor

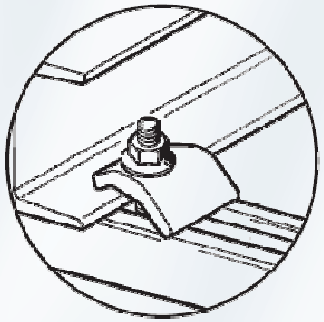
Traverse duble cu profil de montaj Tip 41-75/65/3.0 D



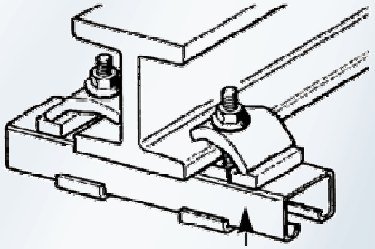
Traverse cu prinderea pe partea interioara a flansei



Pentu flanse mari se vor monta dedesupt ghiare de prindere. Partea de support incepind de la o inaltime de 10 mm se vor fixa cu puncte de sudura.



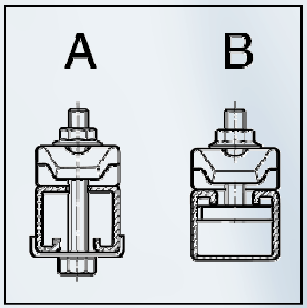
Pentru flanse puternice



Indicatie :

La montajul cu ghiare de prindere, se va avea in vedere ca intotdeauna partea lata a profilului si partea ingusta a flansei portante sa fie suprapuse.

Montaj :



Determinare lungimii necesare a surubului Lmin

Aliniere A
(cu surub cap hexagonal)

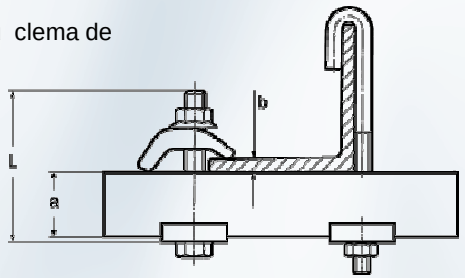
P1: Lmin = a + b + 37 [mm]
P2: Lmin = a + b + 43 [mm]
P3: Lmin = a + b + 48 [mm]
P4: Lmin = a + b + 55 [mm]

Aliniere B
(cu surub cu cap de agatare)

P1: Lmin = b + 40 [mm]
P2: Lmin = b + 45 [mm]
P3: Lmin = b + 50 [mm]
P4: Lmin = b + 60 [mm]

Marimea suruburilor pentru clema de profil

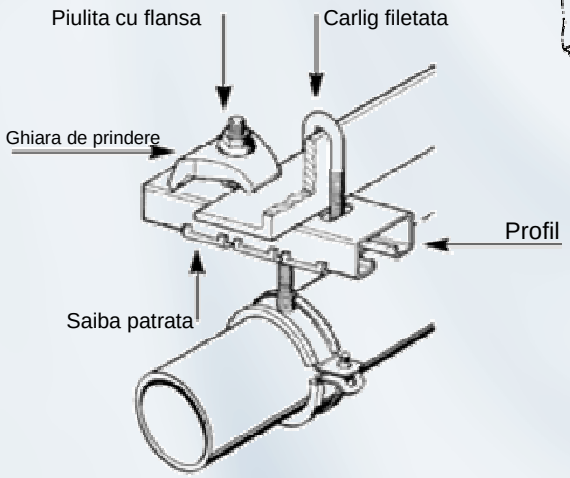
P1: M 8 oder M 10
P2: M 12
P3: M 16
P4: M 16



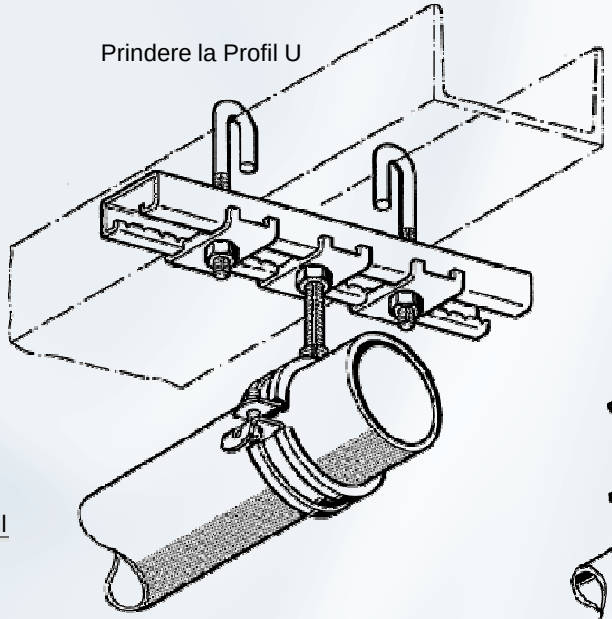
Metode

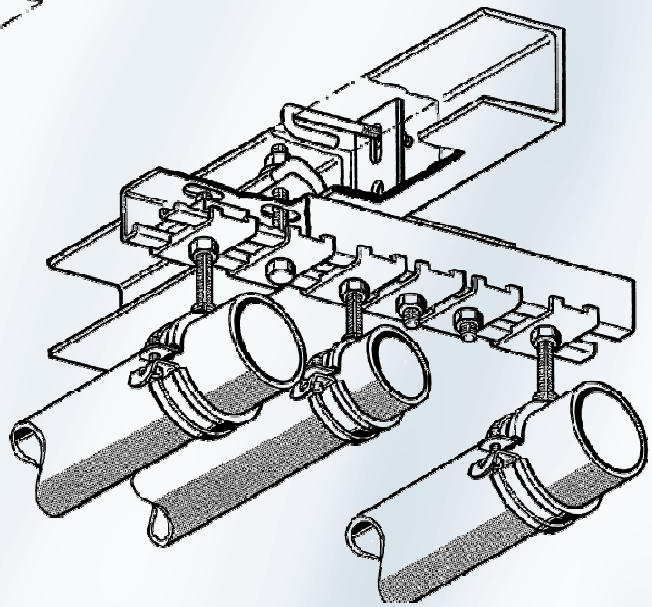
Carligul filetat ca si produs combinat pentru traverse

….la profil unghiular



Prindere la Profil U





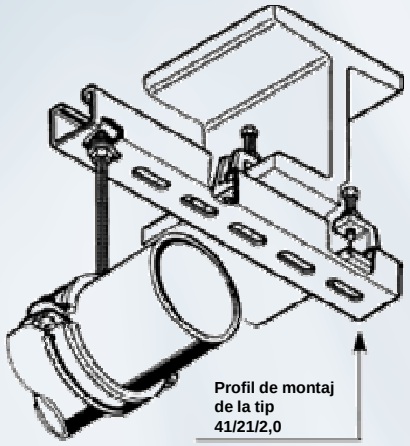
Cu Ghiara de prindere

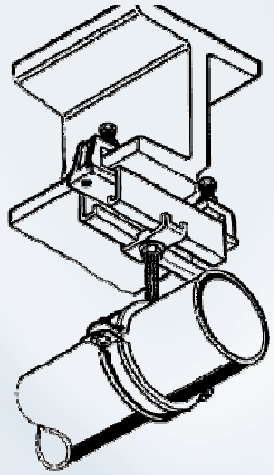
Cu Carlig filetat

Cu Coltar de sprijin

Clema suport pentru sprijinul traverselor

Aliniere lateral cu clema suport TCS 1

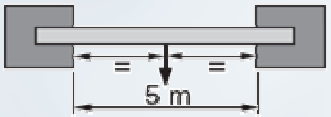


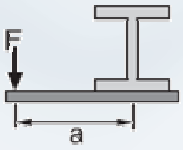


Indicatie:

Pentru alinieri laterale nu este permisa depasirea momentului de incovoiere admis

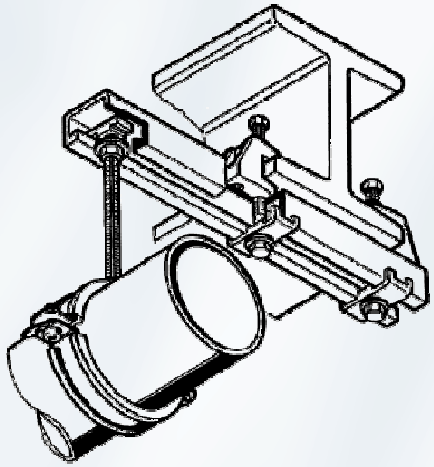
Portanta	Moment de incovoiere admis Mb (Nm)
IPB 100	50
IPB 140	115
IPB 160	180
IPB 200	310
IPB 240	540
IPB 300	970
IPB 340	1350





$$F_{zul} = \frac{M_b}{a}$$

Aliniere lateral



$\sigma_{zul} \leq 160\ N/mm^2$

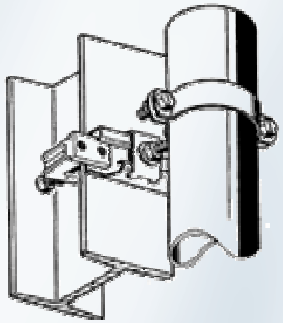
$f_{zul} \leq 2\ mm$

Exemplu:

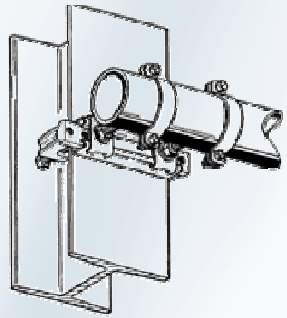
Portanta PB 160 si
Distanta a = 50 cm

$$F_{zul} = \frac{180\,Nm}{0{,}5\,m} = 360\,N$$

Tevi montate pe vertical pe portanta verticala –fixare intr-un punct

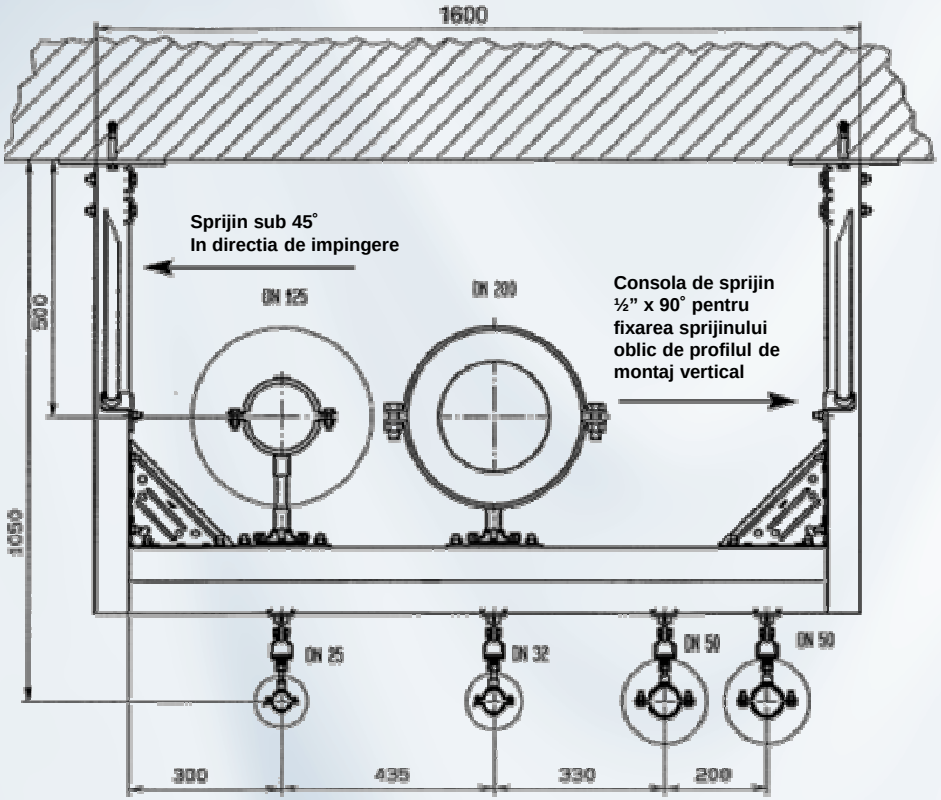


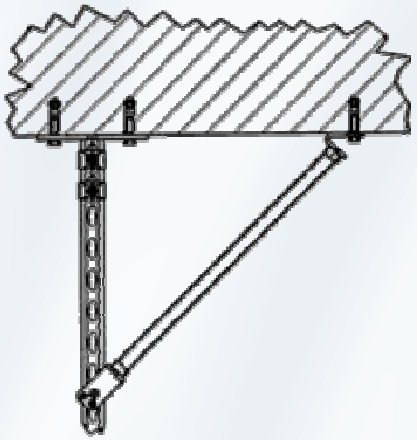
Tevi montate pe orizontala
Fixare in 2 puncte



Atentie!
Surub ancora si Saiba patrata sunt obligatorii!
La aceasta aliniere se va folosi minimum un profil de montaj de tipul 41/21/2,0
Luati in considerare momentele de incarcare conform catalogului!

Constructie in rama pentru suporti glisanti





Pentru constructii se preteaza consolele de sprijin pentru contra vantuire

Glisiera pentru trasee de tevi orizontale de preferat a se monta pe tavan sau pardoseala.

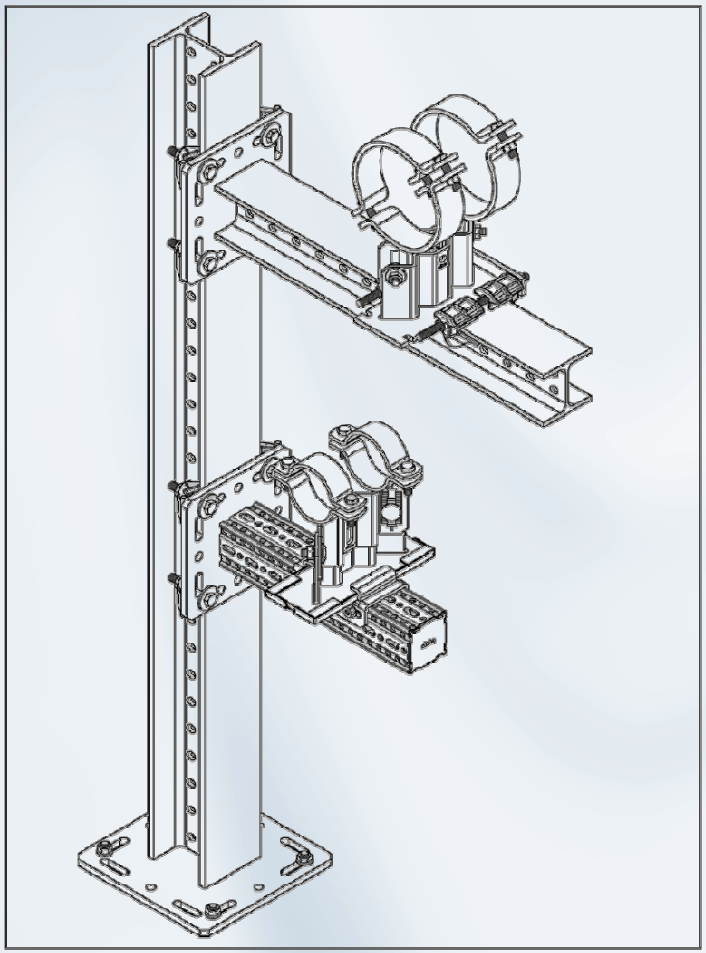
Glisiera trebuie sa directioneze forta de frecare in directia axiala a tevii. Astfel montajul glisierelor necesita sprijini laterali la fiecare punct de fixare.

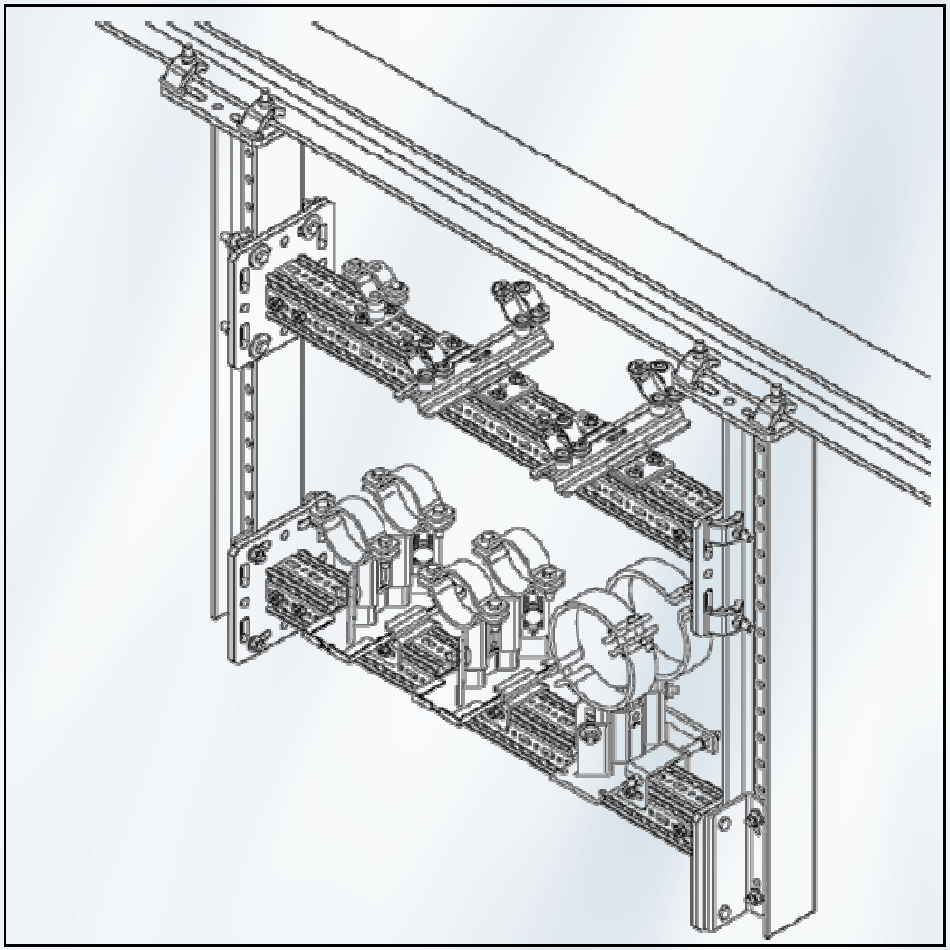
Intre glisiera si colier trebuie dimensionate elementele de legatura, astfel incat sa reziste impotriva fortelor de incovoiere oscilante. Piulitele de la sanie se vor asigura cu contrapiulite.

In stare de functionare glisiera trebuie sa culiseze numai central. La montaj se va avea in vedere directia de dilatare.

Glisierele trebuie sa se alinieze.

Metode: Framo 80 si Simotec





Constructie portanta