

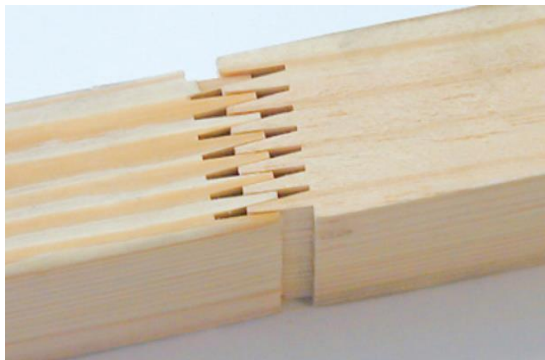
SPOJEVI U KONSTRUKCIJAMA PROIZVODA OD DRVETA

**SPAJANJE (NASTAVLJANJE)
ELEMENATA
PO DUŽINI**



SPAJANJE ELEMENATA RADI POVEĆANJA MERA

- **Spajanje po dužini**
- Spajanje po širini
- Spajanje po debljini

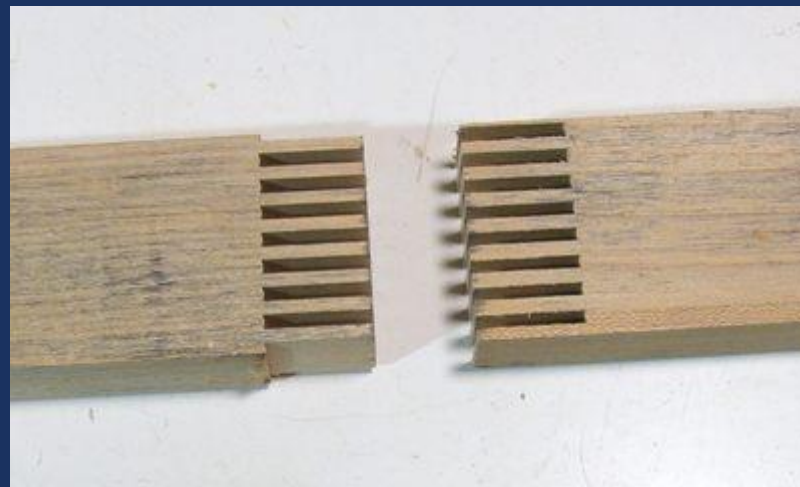


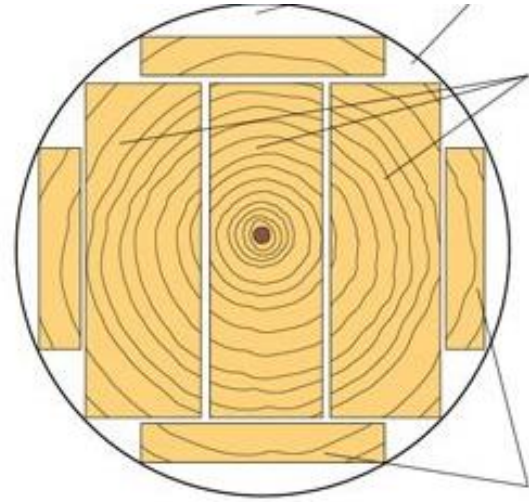
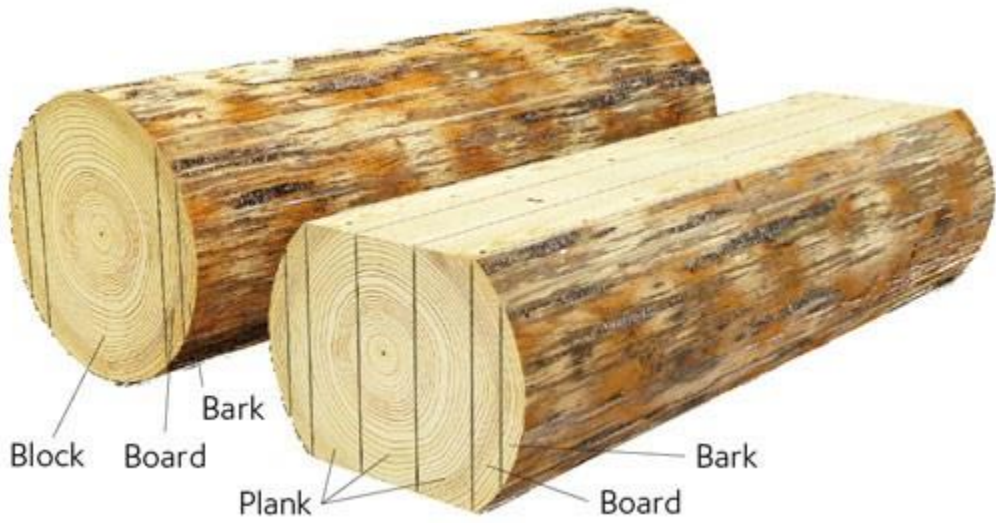
SPAJANJE ELEMENATA PO DUŽINI



SPAJANJE (NASTAVLJANJE) ELEMENATA PO DUŽINI

SPAJANJE GREDICA OD MASIVA PO DUŽINI



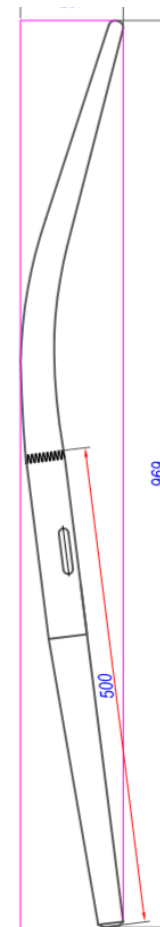


RAZLOZI DUŽINSKOG NASTAVLJANJA GREDICA

- Dobijanje dugačkih elemenata ujednačenih svojstava iz kraćih elemenata koji imaju ograničenu upotrebu
- Bolje iskorišćenje rezane građe



PRIMENA DUŽINSKI NASTAVLJENIH ELEMENATA



Cell: 158592-99979
Jacky 陈



TIPOVI SPOJEVA

Osnovni spojevi po dužini :

- Preklopni spojevi
- Spojevi sa čepom i prorezom
- Spojevi sa tiplovima
- Spojevi sa klinovima – rastavljivi spojevi
- Klinasto-zupčasti spojevi

A!



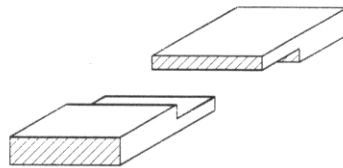
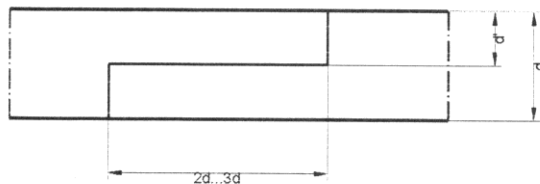
Preklopni spojevi

Spojevi sa čepom i prorezom

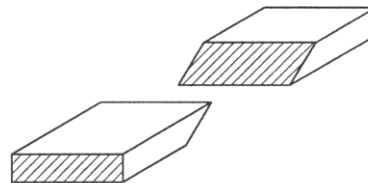
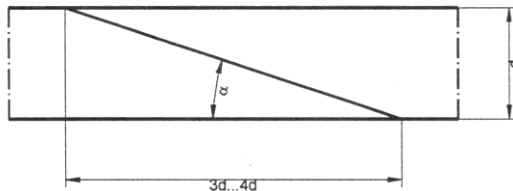
Spojevi sa tiplovima

Spojevi sa klinovima

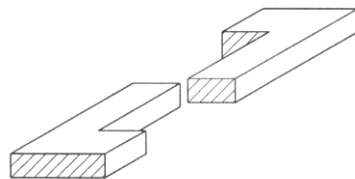
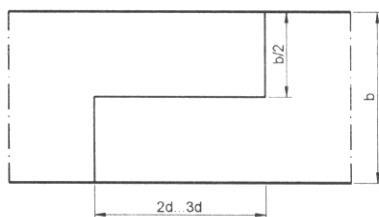
Klinasto-zupčasti spojevi



Bočni spoj na ravan sudar i ravan preklop



Bočni spoj na kosi preklop



Stranični spoj a ravan sudar i ravan preklop

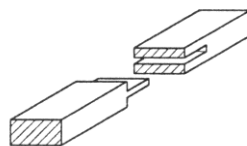
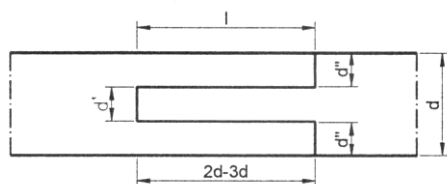
Preklopni spojevi

Spojevi sa čepom i prorezom

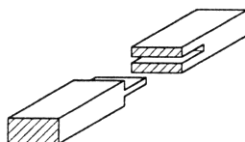
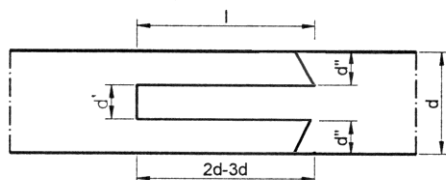
Spojevi sa tiplovima

Spojevi sa klinovima

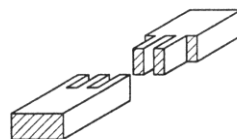
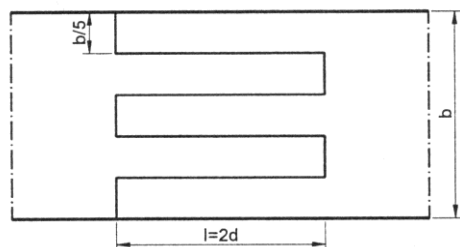
Klinasto-zupčasti spojevi



Bočni spoj sa čepom i prorezom na ravni sudar



Bočni spoj sa čepom i prorezom na kosi sudar



Stranični spoj sa čepom i prorezom na ravni sudar

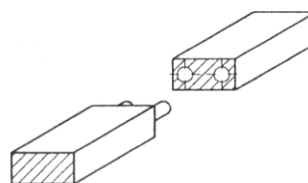
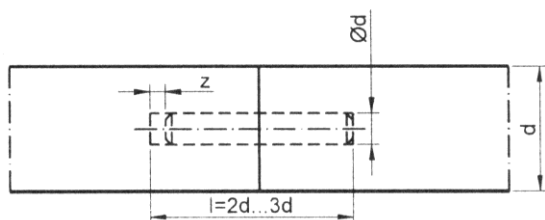
Preklopni spojevi

Spojevi sa čepom i prorezom

Spojevi sa tiplovima

Spojevi sa klinovima

Klinasto-zupčasti spojevi



Spoj sa
tiplovima

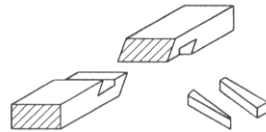
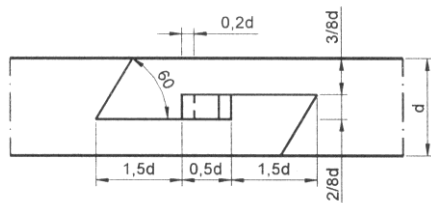
Preklopni spojevi

Spojevi sa čepom i prorezom

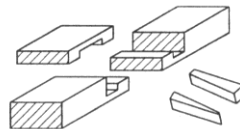
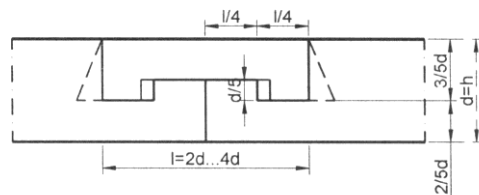
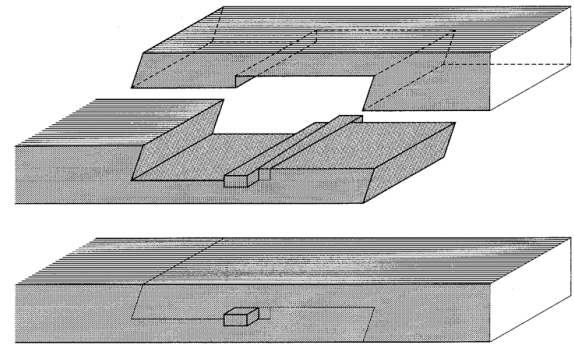
Spojevi sa tiplovima

Spojevi sa klinovima – rastavljivi spojevi

Klinasto-zupčasti spojevi



Spoj sa klinovima (francuski klin)



Spoj sa klinovima (nemački klin)

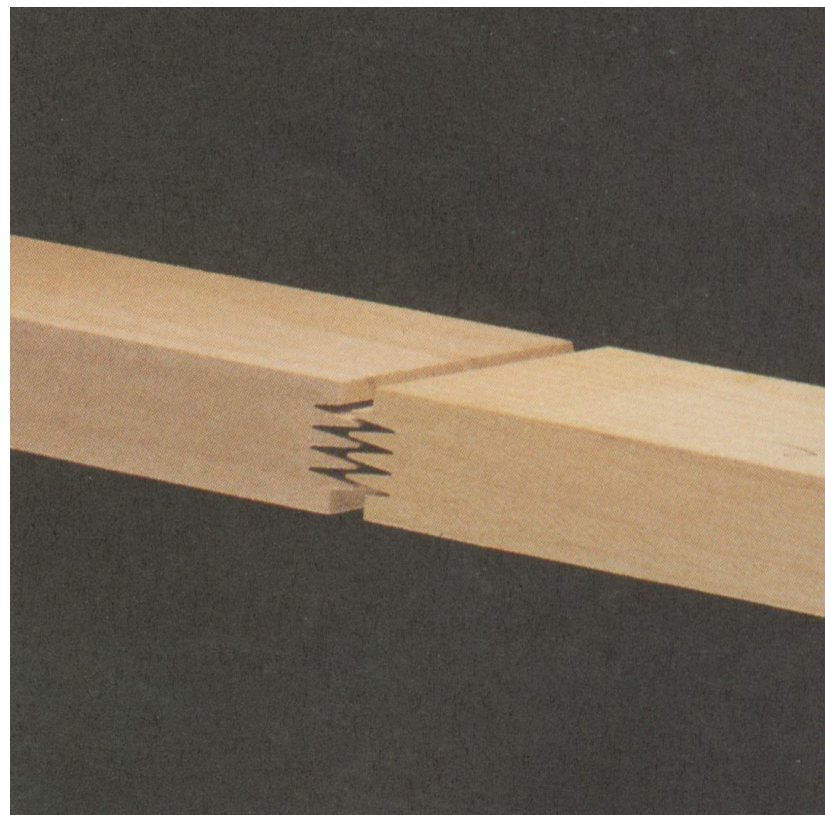
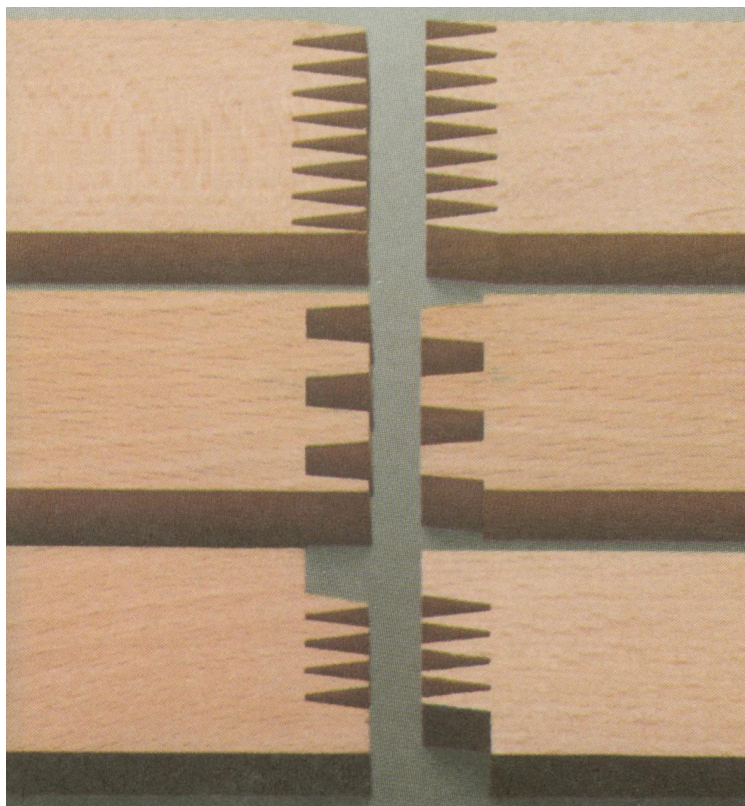
Preklopni spojevi

Spojevi sa čepom i prorezom

Spojevi sa tiplovima

Spojevi sa klinovima – rastavljivi spojevi

Klinasto-zupčasti spojevi



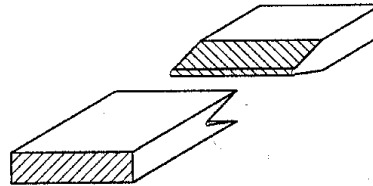
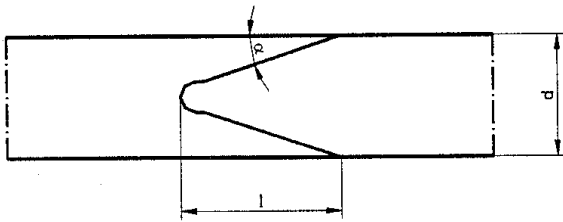
Preklopni spojevi

Spojevi sa čepom i prorezom

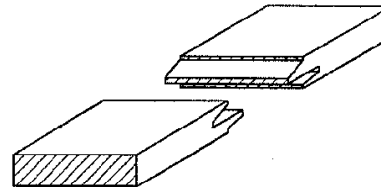
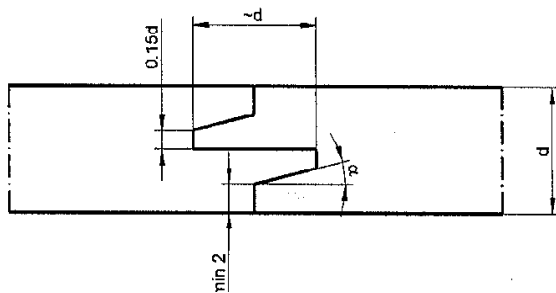
Spojevi sa tiplovima

Spojevi sa klinovima – rastavljivi spojevi

Klinasto-zupčasti spojevi



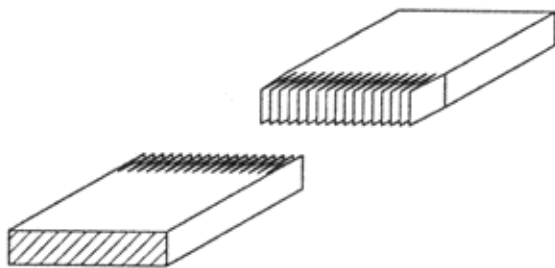
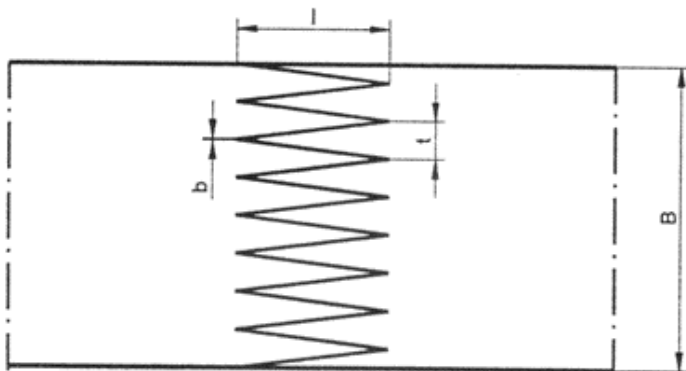
Bočni spoj na zubac



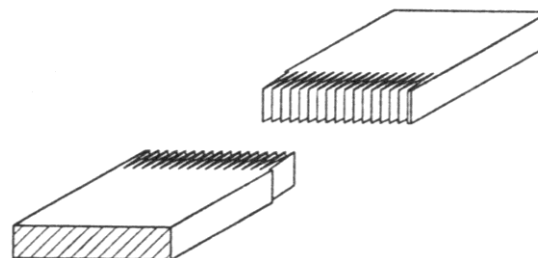
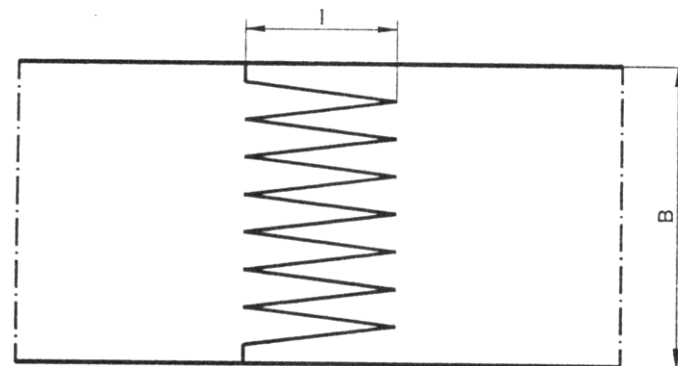
Bočni spoj na profil-kontra-profil

TIPOVI K-Z SPOJEVA

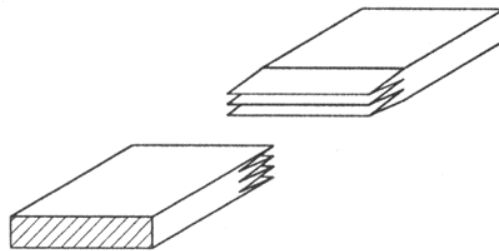
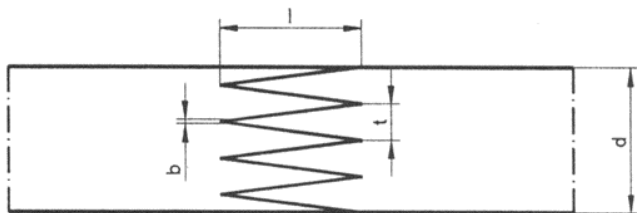
Tip A



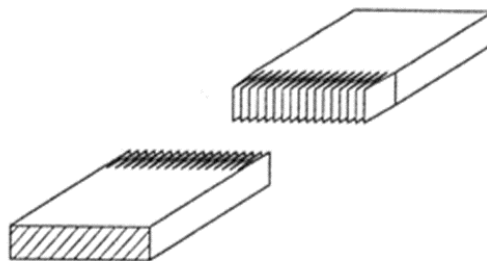
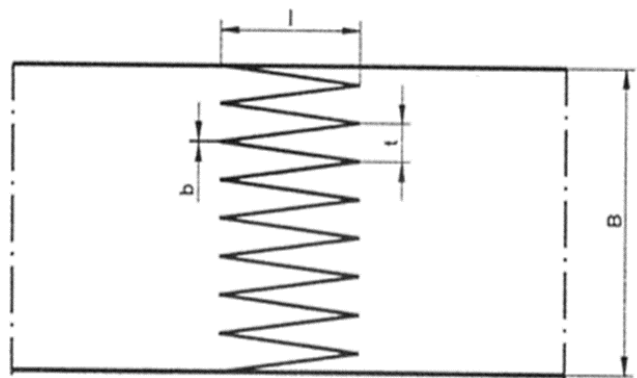
Tip B



TIPOVI K-Z SPOJEVA - TIP A

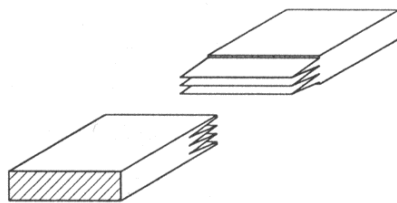
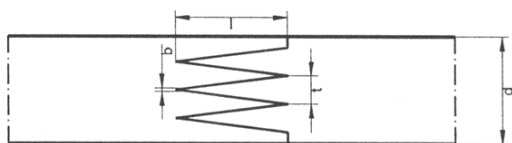


Boční klinasto
zupčasti spoj –tip A

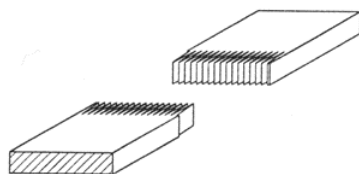
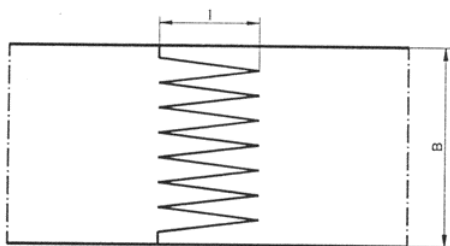


Straniční klinasto
zupčasti spoj –tip A

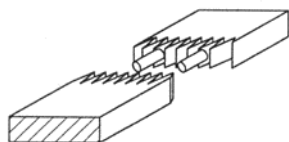
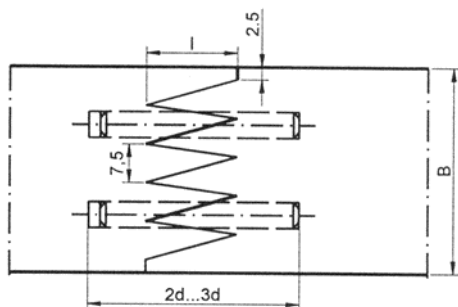
TIPOVI K-Z SPOJEVA - TIP B



Bočni klinasto
zupčasti spoj –tip B

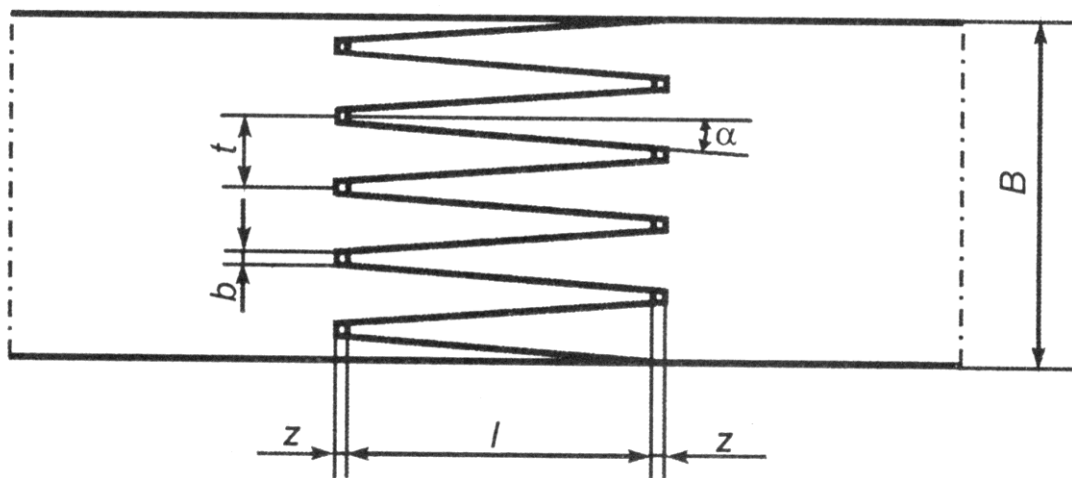


Stranični klinasto
zupčasti spoj –tip B



Stranični klinasto
zupčasti spoj –tip B,
ojačan tiplovima

GEOMETRIJA K-Z SPOJA

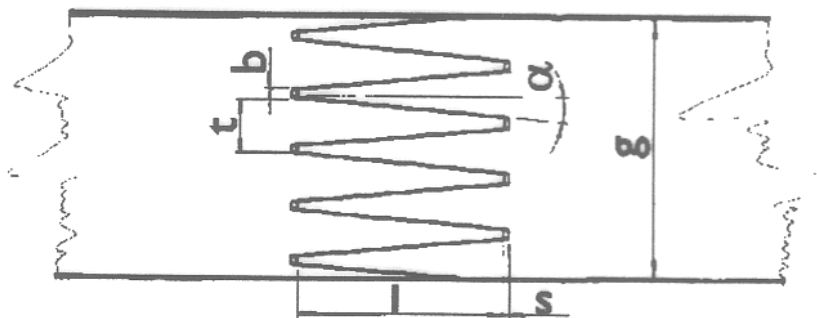


B – širina spoja,
 l – dužina zupca,
 t – korak zupca, b –
zatupljenje zupca,
 z – zazor u pazuhu zupca,
 α – nagib zupca

Kako bираmo spojeve?

Podela klinasto zupčastih spojeva prema opterećenju - prema DIN-u 68140

Grupa naprezanja	v	l (mm)	α°
Visoko naprezanje	$\leq 0,18$	≤ 10	$\leq l: 7,6 (7,5^\circ)$
		> 10	$\leq l: 8 (7,1^\circ)$
Srednje naprezanje	$\leq 0,25$	≤ 10	$\leq l: 7,6 (7,5^\circ)$
		> 10	$\leq l: 8 (7,1^\circ)$



Veličine geometrijskih karakteristika kod spojeva izloženih visokom i srednjem naprezanju

Grupna naprezanja	l	t	b	v
	mm			
Visoko i srednje mehaničko naprezanje	7,5	2,5	0,2	0,08
	10	3,7	0,6	0,16
	20	6,2	1	0,16
	50	12	2	0,17
	60	15	2,7	0,18
Srednje mehaničko naprezanje	4	1,6	0,4	0,25
	15	7	1,7	0,24
	30	10	2	0,2

SPAJANJE (NASTAVLJANJE) ELEMENATA PO DUŽINI

SPAJANJE PLOČA NA BAZI DRVETA PO DUŽINI



SPAJANJE ELEMENATA PO DUŽINI



TIPOVI SPOJEVA

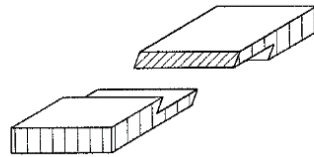
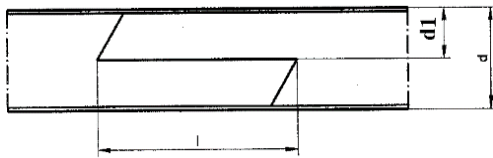
Osnovni spojevi po dužini :

- Preklopni spojevi
- Spojevi sa čepom i prorezom
- Spojevi sa okovom – rastavljivi spojevi

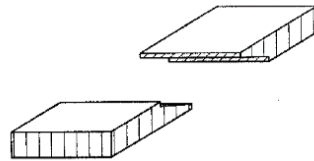
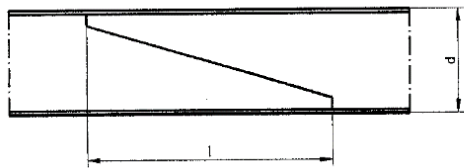
Preklopni spojevi

Spojevi sa čepom i prorezom

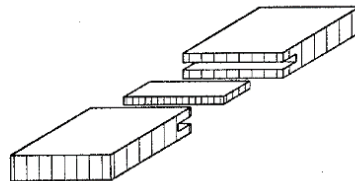
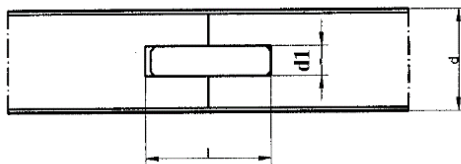
Spojevi sa okovom – rastavljivi spojevi



Spoj na ravni bočni
preklop i kosi sudar



Spoj na kosi bočni
preklop i kosi sudar



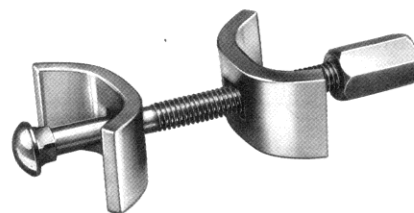
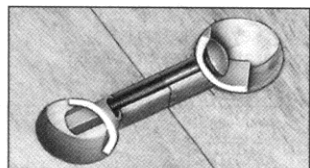
Spoj na ravni bočni
preklop sa umetnutim
perom



Preklopni spojevi

Spojevi sa čepom i prorezom

Spojevi sa okovom – rastavljivi spojevi

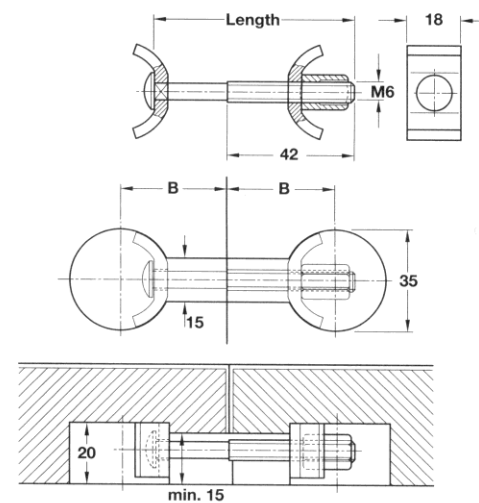


Recessed worktop connectors

Finish: steel, galvanized

Length	Drilling distance dim. B	Cat. No.
65 mm	32 to 41 mm	262.96.211
150 mm	75 to 84 mm	262.96.220

Packing: 50 and 150 pcs.

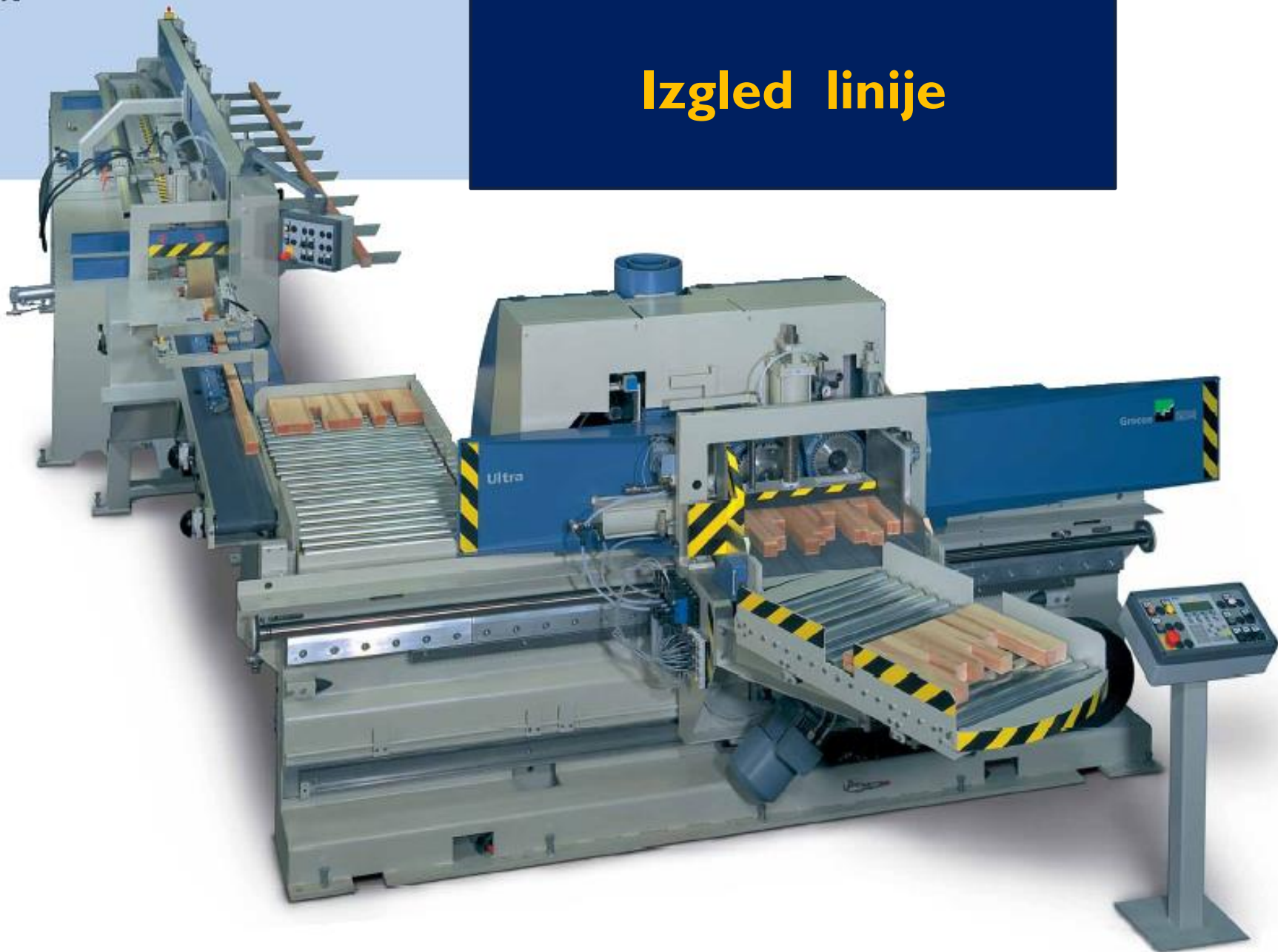


KLINASTO-ZUPČASTI SPOJEVI

IZRADA



Izgled linije



3 TEHNOLOŠKE CELINE

- I.T.C. – deo za izradu el.veze
- 2.T.C. – prebacivač
- 3.T.C. - presa







