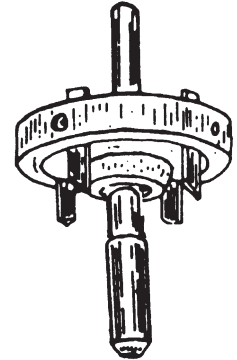




Teco Installation Tools

To cut groove or dap with either cutterhead:	Tools Needed to Groove for 2-1/2" Split Rings	Tools Needed to Groove for 4" Split Rings
Bolt holes are already drilled in the wood, insert a PILOT into the cutterhead: (A pilot is simply a guiding or centering device)	TECO-301 Cutterhead (containing 4 blades)	TECO-302 Cutterhead (containing 6 blades)
	TE12-MRC Cutters for TECO 301 PILOT 562 Pilot for 301	TE14-MRC Cutters for Teco 302 PILOT 813 13/16" Pilot for 302 PILOT 938 15/16" Pilot for 302 TE7-M 3/4" Pilot for 302
Replacement cutter blade sets are available for all cutterheads		
All pilots have 1/2" machine shank for use in power drill.	Pilot sizes given in above tables are for the standard bolt for the connectors and standard practice hole diameters for the bolts.	

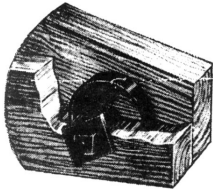


The cutterhead can be used in heavy duty 3/4" power drill with a torsion bar or in a drill press with minimum 1/2" chuck to cut grooves and daps for TECO split rings.

HOT-DIP GALVANIZED: Shear Plates and Timber Rings available in galvanized coating to ASTM A--153.

Timber Rings

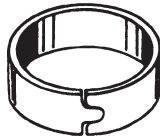
Cleveland timber rings are used in the assembly of clear span roof trusses. Rings are placed in pre-cut grooves to spread the load and avoid crushing the wood. Joint is completed with a bolt and square washer. The 2-1/2" ring is used in nominal 2" lumber and the 4" ring in nominal 3" and heavier lumber. Timber rings are used in residential, farm building and heavier construction. When 4" rings are used in 2" nominal lumber, with rings in both faces, the allowable load is reduced approximately 20%



TR2.5 (2-1/2")



TR4 (4")

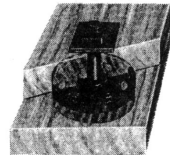


Inside Diameter	Steel Size	Bolt Size	Minimum Lumber Sizes	
			Ring 1 Side	Rings in Both Sides
2-1/2"	3/4" x 5/32"	1/2"	1" x 3-1/2"	1-1/2" x 3-1/2"
4"	1" x 3/16"	3/4"	1" x 5-1/2"	1-1/2" x 5-1/2"

Includes pilot and blades.

Shear Plates

Are set in pre-cut daps in wood timbers, flush with the face of the wood. The shear plate spreads the load and reduces the number of bolts required. Made of malleable Iron to ASTM Specification A-47, Grade 325.10. Shear plates may be secured with nails for security in handling and transit.



Shear plates are used in connections between wood and steel, such as steel tie plates, arch shoes and truss heel joints.

Also used in demountable joints in scaffolding, bleacher seats, and other knockdown wood structures.



Mfg. No.	Outside Diameter	Bolt Size
SP2-6	2-5/8"	3/4"
SP4	4"	3/4"
SP4S	4"	7/8"



Made in U.S.A.

Includes pilot and blades



CLEVELAND Grooving Tools

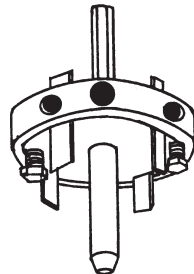
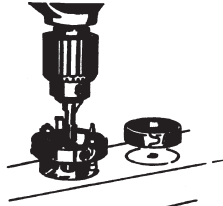
Used to cut grooves for Timber Rings, high speed steel blades, depth gage and pilot to fit in bolt hole. May be used in 3/4" portable drill or drill press. Blades may be resharpened per instructions packed with tool.

Mfg. No.	Drilled Ring Size	Hole Size
TOOL 301	TR2.5	9/16" dia.
TOOL 302	TR4	13/16" dia.

Includes pilot and blades.

Extra Blades - Pilots

Blade 301, set of 4 for Tool 301
 Blade 302, set of 6 for Tool 302
 PILOT 562 9/16" Pilot for 1/2" bolt
 PILOT 813 13/16" Pilot for 3/4" bolt
 PILOT 938 15/16" Pilot for 7/8" bolt

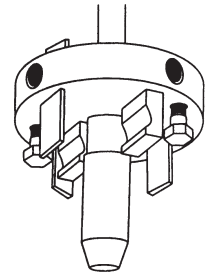


Tool 301

Dapping Tools

Tools are designed with several blades and cutters to produce a dap of the same shape as the shear plate. Insert the pilot in a predrilled hole or a drill bit may be used to drill and dap.

Mfg. No.	Shear Plate	Drilled Hole Size
TOOL 303	SP2.6	13/16" dia.
TOOL 304	SP4	13/16" dia.
TOOL 304S	SP4S	15/16" dia.



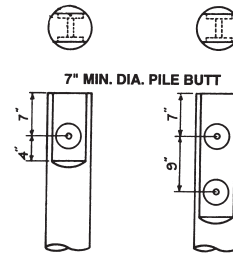
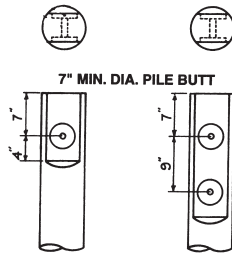
Tool 303

Includes pilot and blades.

Extra Blades - Pilots

PILOT 813 13/16" Pilot for 3/4" bolt
 PILOT 938 15/16" Pilot for 7/8" bolt
 Blade 303, set of 4 for Tool 303
 Blade 304, set of 5 for Tool 304

Shear Plate Design Suggestions



Uplift

Shear Plate Design Loads (7/8" Bolt)

2 Shear Plates	4 Shear Plates (Vertical)	4 Shear Plates (Transverse)	8 Shear Plates
Group "B" Wet Use 7,716 lbs.	Group "B" Wet Use 15,432 lbs.	Group "B" Wet Use 15,432 lbs.	Group "B" Wet Use 30,864 lbs.
Group "C" Wet Use 6,430 lbs.	Group "C" Wet Use 12,860 lbs.	Group "C" Wet Use 12,860 lbs.	Group "C" Wet Use 25,720 lbs.
Group "B" Dry Use 9,214 lbs.	Group "B" Dry Use 18,428 lbs.	Group "B" Dry Use 18,428 lbs.	Group "B" Dry Use 36,856 lbs.
Group "C" Dry Use 7,678 lbs.	Group "C" Dry Use 15,356 lbs.	Group "C" Dry Use 15,356 lbs.	Group "C" Dry Use 30,712 lbs.

DESIGN NOTES:

1. Tabular values are intended as a guide, and should be checked by the design engineer for conformance with current edition of N.D.S.*
2. A 33-1/3% Duration of Load increase is included.
3. Typical Group "B" species include Douglas Fir-Larch and Southern Yellow Pine.
4. Typical Group "C" species include Hem-Fir and Spruce-Pine-Fir.
5. Applicable load adjustment factors are : Load Duration, Wet Service, Temperature, Group Action, Geometry, Penetration and Metal Side Plates.
6. Shear plates are 4" diameter, SP4S.
7. Slab cuts should be parallel, plumb, and a minimum of 5-1/2" in width.
8. Shear plate daps to be made with tool 304S.

*National Design Specification for Wood Construction published by American Forest & Paper Association, Washington, D.C.