

APPLICATION DETAILS

The T4340 series frame jointing set consists of a pair of heavy duty cutters for producing tongue and groove type joints for panelled frame construction. The cutters need to be used in a 1/2" collet machine with a power output of at least 1000 watts. The cutters may be used up to a speed of 20,000 rpm, however better results will be obtained with a variable speed machine running at about 14,000 rpm, as this will reduce the problems of burning and vibration.

CUTTER SETUP

The cutters are supplied assembled ready for use as shown in the illustration on the right. The shims fitted to the tongue cutter will vary depending on the groove width of the set. The width of groove and thickness of tongue that the set cuts will vary depending on factors such as speed, routing machine, table etc. Different setups affect the level of vibration, which in turn vary the tongue/groove fit. The cutters will need to be checked before being used and adjusted to suit the setup and the fit of joint required. Make a cut with the groover and then check the fit of the tongue. The fit can be adjusted by altering the shims fitted, and a total of 12 shims are supplied with the cutters set. (This includes shims already fitted). Shims should be added to tighten the fit, and removed to loosen. Shims should be fitted either side of the bearing on the tongue assembly only. It is worth spending some time getting the setup correct, as this only needs to be done once and affects the quality of the joints produced if not correct.

PREPARATION OF TIMBER

This cutter can be used for frames with a thickness of 14–29mm (or 31mm when using the 8mm groover). Prepare all the stock to the required size in one batch. Ensure there is no twist in the timber. The tongue length is 12mm and therefore the rails need to be 24mm longer than the required inside width of the frame to allow for the scribed joint at each end.

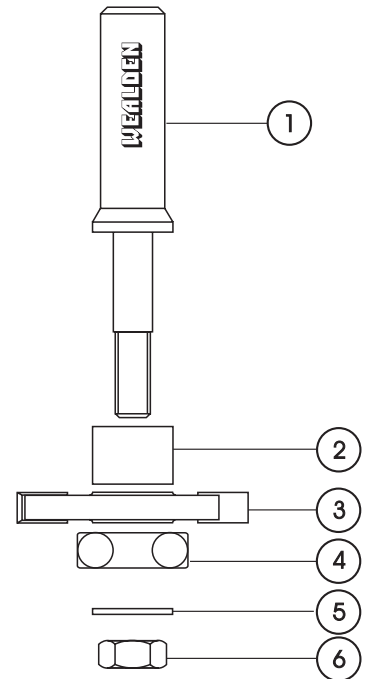
USE OF CUTTERS

It is not advisable to use cutters of this size and weight freehand. Best results will be obtained with the routing machine mounted in a table or similar. All frame parts should be machined with the grooving cutter first. If the timber being cut has a tendency to split and produce a splintered edge to the groove, then a very shallow depth first cut can be taken, followed by the full depth finishing cut. The use of a sliding mitre gauge on the router table will ensure accurate scribed tongues on the ends of the rails. This should be fitted with a false timber face longer than the rails being machined. The timber face should extend right up to the fence to provide support at the back of the timber being scribed. This will be machined along with the first piece cut and will subsequently help to prevent breakout on the rails. To ensure a tight fitting joint it is essential that both the groove and tongue are cut to the full depth. To ensure this, the front face of the fence should be accurately aligned with the bearing, using a straight edge. Good hold downs are essential and a back stop fitted to the timber face on the mitre slide will prevent the workpiece from being pushed away from the cutters during the tongue cutting operation.

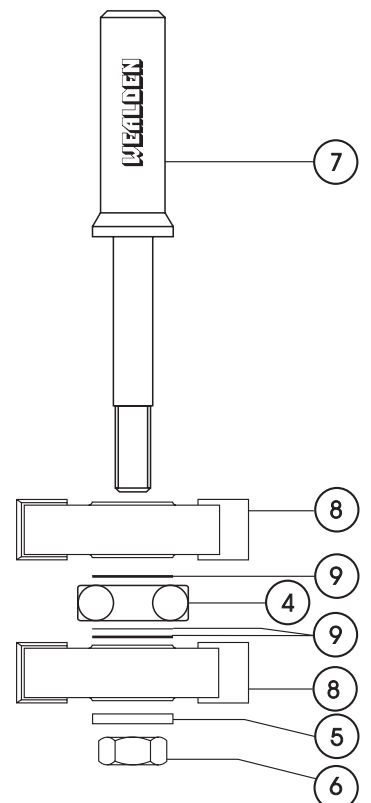
PARTS LIST

1	Arbor	T4205		
2	Spacer	TS4351		
3	Groover	T4352 (6mm)	T4353 (7mm)	T4354 (8mm)
4	Bearing	TB910		
5	Washer	M8		
6	Nut	M8		
7	Arbor	T4358		
8	Tongue cutter	T4356		
9	Shims	TS80 (set of 12)		

FRAME JOINTING SETS



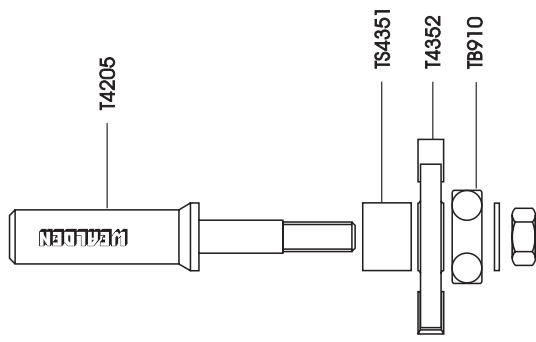
GROOVER ASSEMBLY



TONGUE ASSEMBLY

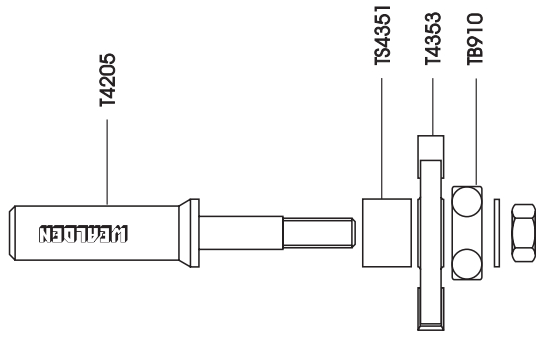
FRAME JOINTING SETS - assembly details

T4344 1/2



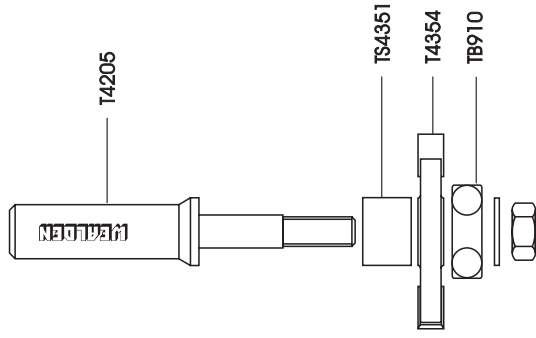
Shims
1 x 0.8
1 x 0.5

T4346 1/2

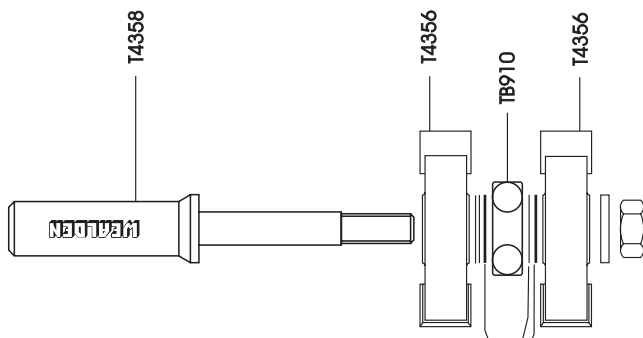
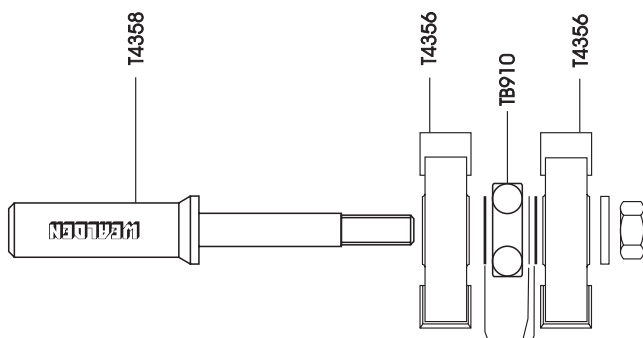
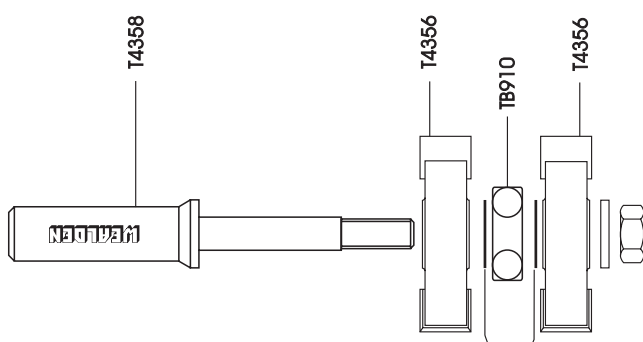


Shims
1 x 1.0
1 x 0.8
1 x 0.5

T4348 1/2



Shims
2 x 1.0
1 x 0.8
1 x 0.5
1 x 0.1



Shims
2 x 1.0
1 x 0.8
1 x 0.5
1 x 0.1