

The template to be used on this machine is recommended to be made from sheet iron or steel not less than 3mm thick.

For efficient drive of magnetic tracing roller, the working edge of the template should have file finish (not too smooth).

The edge must be square with the surface of the template. The machine is provided with mounting for fitting external template as well as internal template.

An external template is one which lies inside the path described by tracing roller, whereas an internal template lies outside the path described by the tracing roller. Straight cuts can be produced by using a flat bar.

For 10mm dia tracing roller no inside radius should be less than 5.6mm and for 12.7mm dia tracing roller no inside radius should be less than 8mm.

The size of the template is always different from the actual size of the article to be produced because of the tracing roller diameter and the width of the cut made by the oxygen jet i.e. "kerf" width. To ensure correct dimensions in the finished work, templates should be made considering the template allowances as given in the table(1).

The allowance is arrived at by taking half diameter of the tracing roller and adding or subtracting, whichever is applicable, half the width of the kerf

In the template allowance table, allowances are shown under sub-headings "For Solid" and "For Hole" The explanations are follows:

Where the outside dimensions are important, e.g. the outside diameter of a flange, the allowance should be for solid and where the inner dimensions are important, the allowance should be for hole.

A test cut should be made before attempting regular production with a new template. Discrepancies caused by expansion, warping etc. should be corrected in the template as much as possible for this reason templates may be left slightly over size until cut, the surplus being trimmed off where required afterwards.

TEMPLATE PREPARATION

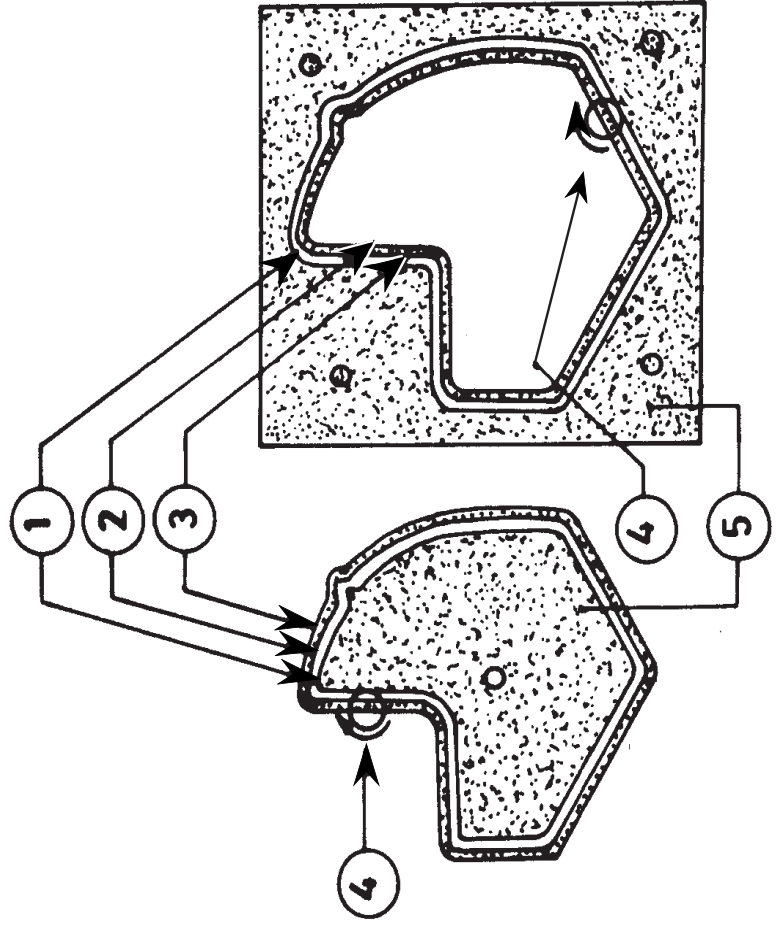
TABLE 1
TEMPLATE ALLOWANCE

Tracer dia	Material thickness	External Template		Internal Template	
		for solid	for hole	for solid	for hole
12.7mm	3mm to 50mm	5.6mm	8mm	8mm	5.6mm
	over 50mm to 150mm	5mm	8mm	8mm	5mm
10mm	3mm to 50mm	4mm	6.3mm	6.3mm	4mm
	over 50mm	3.15mm	6.3mm	6.3mm	3.15mm
		Minus Allowance Template Smaller than job		Plus Allowance Template Larger than job	



TEMPLATE

1. Outline of Template
2. Outline of Job
3. Outline of Kerf
4. Tracing Roller
5. Template



EXTERNAL TEMPLATE

INTERNAL TEMPLATE