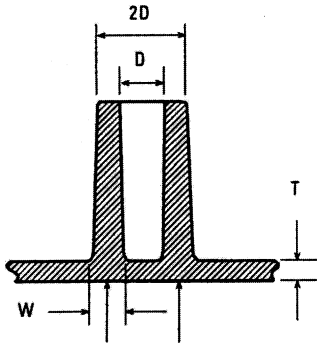


PLASTIC PART

DESIGN CONSIDERATIONS

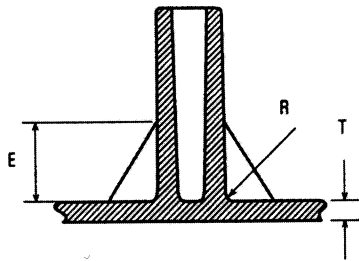
Strength & Appearance

Boss proportions that usually provide sufficient strength, though accompanied by sink marks and residual stress



Strong possibility of sink marks when $W > 0.6 T$

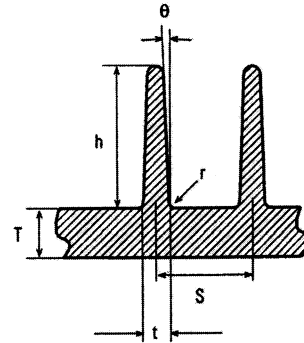
Reduced boss section with strengthening gussets and incorporating radius



$$R = 0.25 T$$

$$E \geq 4 T$$

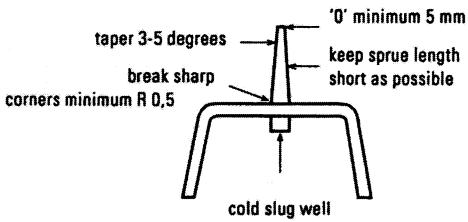
Guidelines for proportioning ribs



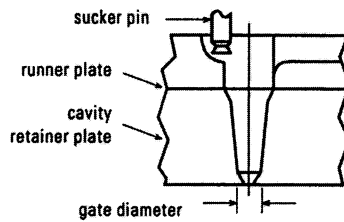
1. Base tickness $t \approx 0.5 T$
2. Height $h \approx 3 T$
3. Corner radius $r \approx 0.25 - 0.4 T$
4. Draft angle $\theta \approx 0.5^\circ$
5. Spacing $S \approx 2 T$

Gate Type

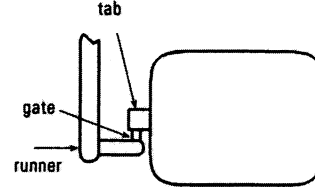
(a) Direct centre sprue



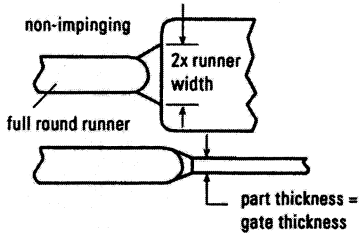
(b) Pin point gate



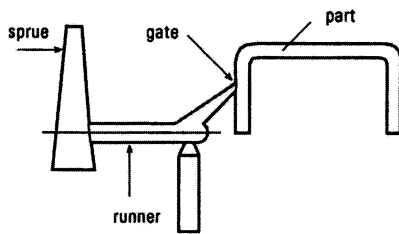
(c) Tab gate



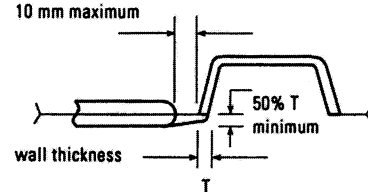
(d) Fan gate



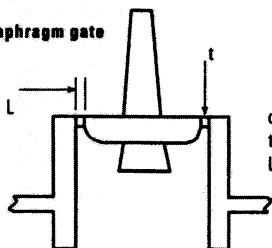
(e) Tunnel gate



(f) Jump gate



(g) Diaphragm gate



cross section
 $t = \text{minimum gate thickness} - 10 \text{ mm}$
 $L = \text{maximum gate land length} - 1 \text{ mm}$

(g) Ring gate

