



*PB20 working with C2010 manipulator mounted with CC112 degating hammer*



*PB150 Powerbreaker*



*PB20 complete with protective cover*



*PB80 Powerbreaker*

# Powerbreakers



Clansman Powerbreakers solve the problem of cutting and handling gatings in the foundry. Shorter gatings are easier to transport and to remelt. The gating is fed into the Powerbreaker which instantly grips, bends and breaks the gating. Powerbreakers have been in operation since 1995.

The Clansman Powerbreaker is an immensely strong tool to reduce casting gatings to a manageable length. Powerbreakers have a breaking capacity of up to 120 mm diameter sections of all grades of ductile iron.

The head of the Powerbreaker is either mounted in a fixed position over a conveyor or scrap box or for maximum productivity on a manipulator as a part of the tooling. The broken pieces are directed safely downwards by the action of the Powerbreaker.

Clansman Powerbreakers can be deployed on Clansman manipulators for maximum manoeuvrability, and integrated with Clansman grippers and hammers for flexible use

## Maintenance

Clansman Dynamics have adopted the same careful design approach to our range of Powerbreakers as we have to manipulators. Maintenance is minimal because the machines are specifically designed to withstand the very severe axial and radial bearing loads that are applied as the machine operates.

- When maintenance is required the modular construction allows the working parts to be easily removed. High alloy castings are used for the 2 working parts of the structure so there is no question of weld problems.
- The 2 cutting fingers are cast from high steel alloy, heat treated, hardfaced with special weld and then heat treated again. The hardfacing on the fingers has been done on the basis of experience of hot shear blades where it is vital to maintain an edge on the blade.
- There is a unique bearing arrangement to withstand the very large side forces that can occur during the cutting action of the Powerbreaker. The wear faces typically last 5000 hours before being refacing is required

## Continuous Improvement

We continually improve our designs based on customer feedback. The latest development after suggestions from a number of customers is to mount the Powerbreakers on springs so that 2 objectives are achieved:

- The shock on breaking the gating is absorbed so that it is easier for the operator to make a second cut.
- The shocks transmitted back to the feeding manipulator are much reduced.

POWERBREAKERS				
	PB20	PB60	PB80	PB150
Break Force	35 t	58 t	120 t	220 t
Opening	125 mm	130 mm	170 mm	175 mm
Runner Section	50/45 x 50	60/50 x 60	80/80 x 80	102/102 x 102
Trumpet Body	47 mm	60 mm	90 mm	150 mm
Pressure	210 bar	210 bar	210 bar	210 bar
Power	10 kW	15 kW	37 kW	45 kW
Flow	50 l/min	100 l/min	200 l/min	350 l/min



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