

*FULLY AUTOMATIC
HYDROCYCLONE
UNITS*

*with and without
pre-filter system for clarification
of water mixed soluble oils
or similar liquids and alkaline liquids*



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MODE OF SEPARATION:

The separation of solids within the Hydrocyclone depends upon the following criteria:

- Size and shape of suspended particles.
- Specific gravity of solid materials and viscosity of liquid.
- Relative pressure differences inside cyclone body.
- Physical size of cyclone.
- Separation efficiency. The bottom limit for the size of particle which can be removed is given by the density of the solid and the density of the liquid; for example, it is possible to achieve filtration/separation of steel particles in water of approximately 5 micron.

OPERATION:

In our BA type cyclones the liquid is fed into the cyclone through an opening which leads directly to the vortex. As the vortex approaches the low nozzle, which is part of the underflow orifice, the result is a throttling effect in the nozzle creating a secondary vortex inside the primary vortex. Both vortices rotate in the same direction but the secondary vortex moves upwards towards the vortex finder, allowing the clarified liquid to pass through the outlet pipe in the head moulding.

The high centrifugal force created within the primary vortex causes the solid particles to deposit it on the outside walls of the cone where they slip down and exit through the nozzle.

The attention to detail in the special design of the BA cyclone and in particular the jet angles, contribute towards a trouble free and continuous operation, guaranteeing optimum separation efficiency.

STANDARD UNITS:

A range of standard units are available which include dredge tanks, auxiliary tanks, with flow rates ranging 100 litres per minute to 500 litres per minute.

OPTIONAL EXTRAS:

Pre-filters may be added to any unit. Refrigeration equipment. Electrical control panels to meet customers' requirements. Clean return pumps.

TYPE OF EQUIPMENT AVAILABLE:

- Single Cone Units
- Multi Cone Units
- Central Systems
- Special Purpose Equipment

BEDA the sign of quality & technical excellence

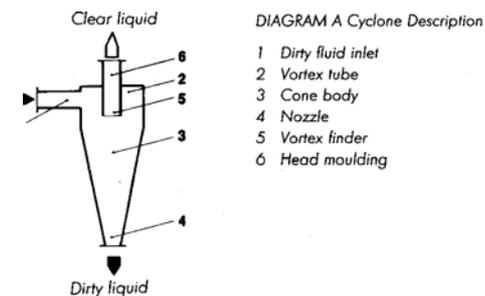


DIAGRAM A Cyclone Description

- Dirty fluid inlet
- Vortex tube
- Cone body
- Nozzle
- Vortex finder
- Head moulding

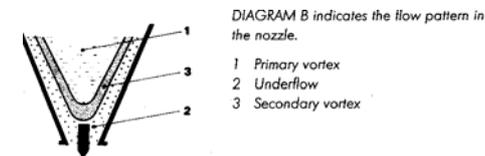


DIAGRAM B indicates the flow pattern in the nozzle.

- Primary vortex
- Underflow
- Secondary vortex

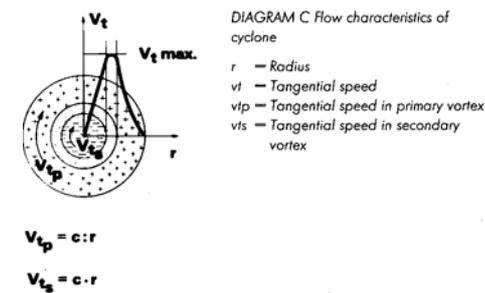


DIAGRAM C Flow characteristics of cyclone

- r - Radius
- v_t - Tangential speed
- v_{tp} - Tangential speed in primary vortex
- v_{ts} - Tangential speed in secondary vortex

CYCLONE TYPES

Type BA 150 - optimum flowrate 500 litres per minute
Type BA 65 - optimum flowrate 130 litres per minute
Particles can be separated down to 5 μ at 98%.

Note: within the pump curve, slight variation in flow and pressure can be tolerated.