

Hydrocyclone

I. Usage and Principle of Operation:

Usage: Hydrocyclones are a normal separating and classifying device, broadly used in industries of nonferrous metals and ferrous metals for minerals processing through a closed-circuit with grinding mills, where ore slurry is classified into classes of certain particle sizes. They can also be used for desliming, thickening and dewatering operations.

II. Structure of Hydrocyclone Products



Structure of a Single Cyclone



Structure of Cyclone Cluster

III. Features of Hydrocyclones

1. A cyclone is of composite structure, of which the shell is made of steel, and the liner of wear-resistant rubber, with separable internal and external components, resulting in not only easy replacement and installation and longer service life, but also cost saving.
2. An involute feed inlet is applied, and the cross section of slurry transits from a circular pipe shape to a rectangular shape, resulting in a directionality and preliminary separation of solids in the slurry during the involute linear motion of the slurry; a good classification result is obtained owing to a formed laminar flow and a reduced turbulent flow when the slurry enters the inner wall of the cyclone cylinder; a high throughput is achievable under a lower feed pressure.
3. The rubber liner prepared with Naipu's special formulations presents performance of good abrasion resistance, and acid and alkali resistance.
4. Customers can be provided with the selection of design and model based on their needs and site conditions.
5. A variety of apices and vortex finders in different sizes are available to facilitate customers to optimize process on site.
6. Cyclones have components of inner liners made of abrasion resistant rubber, which can be replaced individually.

IV. Naipu Made Cyclone Clusters Available:

Specification (mm)	Φ150	Φ250	Φ350	Φ380	Φ500	Φ660	Φ838
Quantity of Cyclones in Each Cluster (piece)	4-20	4-20	4-20	4-20	4-20	4-20	4-20

V. Physical Properties of Abrasion Resistant Rubber for Cyclone

Type of Polymer	Hardness	Tensile Strength	Elongation at Break %	Permanent Deformation	Tear Strength	Resilience	S.G	Temperature Range	Color
NR	38	27MPa	=800%	8%	44N/mm	80%	1.15	-20%~+75%	Black



Cyclone Inner Rubber Liner Made of Rubber From Naipu



Cyclone Inner Rubber Liners Made of Mixed Rubber From Overseas



VI. Sketches of Combination of Hydrocyclones



6-cyclone cluster



4-cyclone cluster



12-cyclone cluster

VII. Technical Parameters

Model	Cylinder ID (mm)	Cone Angle (°)	Vortex Finder ID (mm)	U/F Pipe Outlet ID (mm)	Maximum Particle Size Allowed in Feed (mm)	Feed Pressure (MPa)	Throughput (m³/h)	Grain Size of Classification (µm)	Outside Dimension (mm)			Unit Weight (kg)
									L	W	H	
Φ838	838	30 15 10	350-450	120-180	22	0.03-0.2	600-850	120-350	1580	1310	4060	1200
φ660	660	20	180-240	80-150	16	0.03-0.25	250-350	74-220	1140	1110	2635	990
φ610	610	20	170-220	75-120	13	0.03-0.25	200-300	74-220	1075	1030	2250	830
φ500	500	20	130-200	35-100	10	0.03-0.3	140-220	74-200	895	830	2050	495
		15						74-150	895	830	2380	540
φ350	350	20	80-120	30-70	6	0.03-0.3	60-100	50-150	775	605	1765	220
		15						50-120	775	605	2115	235
φ300	300	20	65-115	20-50	5	0.04-0.3	45-85	50-150	550	480	1415	108
		15						40-100	550	480	1670	169
φ250	250	20	60-100	16-45	3	0.06-0.35	40-60	40-100	490	415	1215	79
		15						40-100	490	415	1430	84
		10						30-100	490	415	1850	92




Global Cooperation Jointly Shared Future

Hydrocyclone and Rubber Spares



Product Introduction

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