

DENSIDISC®

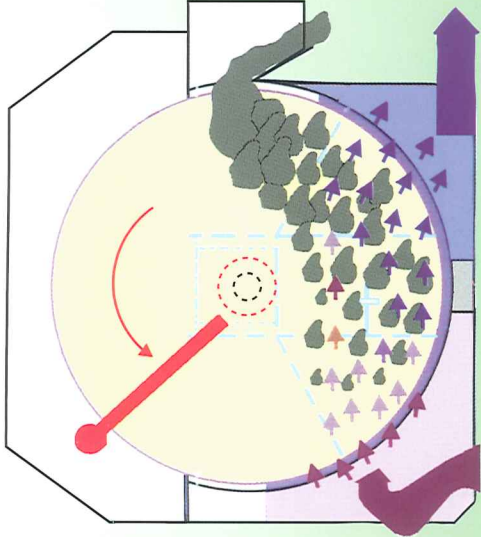
FILTER, THICKENER, WASHER

The **DENSIDISC®** is a compact, simple and sturdy machine that can be used for various applications;

filtrations: solids separation from effluent and process waters

thickening: thickening of stock, sludge and other suspensions

washer: separation of fillers and fines from suspensions containing coarse solids



OPERATING PRINCIPLE

The **DENSIDISC®** work as a gravity filter and for this reason it does not require particular installation sites. The level difference between feeding and filtrate chambers provides the necessary hydraulic pressure difference for a water/solids separation. The rotation of the discs creates a frictioning action on the solids, which consequently, has a double benefit; from one side, it makes easier the solids discharge into the hopper and, from the other, it causes a "rolling effect" of the solids lump on the discs surface, producing a cleaning action and avoiding the clogging of the cloth. The spray nozzles pipes allow a final washing of the filtering wire.

The characteristics of the water to be treated and its solids content allow to dimension the proper model of **DENSIDISC®**. The size of the filtering wire to be installed and the adjustment of the discs speed, done by inverter, enable to influence the dryness of the thickened solids and the quality of the filtered water. The **DENSIDISC®** represents a flexible machine able to accept variations in the inlet flow and solids content without having unwanted effects on the thickened and filtered fractions.



The **DENSIDISC®** is made up by a tank that can be thought as divided into three parts; a feeding area, the main zone where the discs are located and the filtered discharge chamber.

The liquid-solids mixture is conveyed into the feeding area from where it moves to the main zone equipped with one or more pairs of discs coated of a metallic filtering cloth.

A gear motor is directly mounted on a shaft and allows the rotation of the discs; while the liquids drain trough the disc cloth, the solids are kept inside, consequently becoming thickened.

The washing of the filtering wires is done by means of blade spray nozzles, placed on stainless steel pipes mounted among the pair of discs. The thickened solids are discharged through an hopper located on the opposite side of the feeding area.

The filtered water drain is located on the bottom of the filtration chamber.

FILTERING WIRES

They are manufactured in stainless steel and made up of a fine filter layer which is coupled, on the back side, with a supporting and reinforcing frame.

The filtering wires are bolted on the rays frame of the discs.

Two sectors of filtering wires are mounted in each disc in a way to make easier and quicker the operation of inatallation and replacement.

Mesh size in the range between 50 and 1000 microns are aviable, depending on the application.



SEALING SYSTEM

The sealing system of the discs has been expressly developed for the **DENSIDISC®** in a way to reduce at minimum the time necessary for installation and replacement of the gaskets.

It foresees the use of a special rubber, high wear resistant, that guarantees the best sealing, low wear consumption and long service life time. The heart of the system lies on the gaskets installation; they are fitted up in a plastic material support that run inside a metallic track; the big advantage is that the mounting and replacement operations can be done without discs removal.

The system has been patented by **O.M.C. Collareda Srl - Divisione Acqua Engineering.**

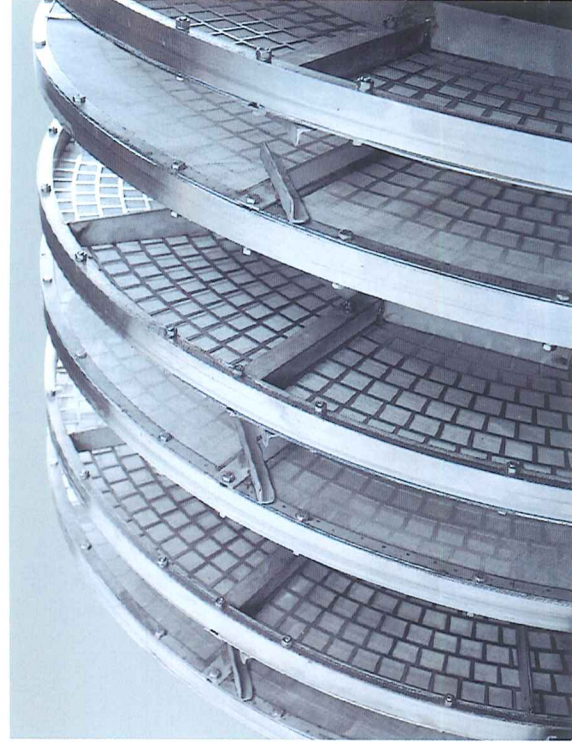


PILOT PLANT

A pilot plant is available for trials at Customer's site; its design, working and performance correspond exactly to the industrial size plant that will be installed. A team of engineers and technicians is able to give the Customer the assistance already during this first approach, giving then the necessary help during the trials, the installation and the start-up, thanks to their experience.



MANUFACTURING AND OPERATING CHARACTERISTICS

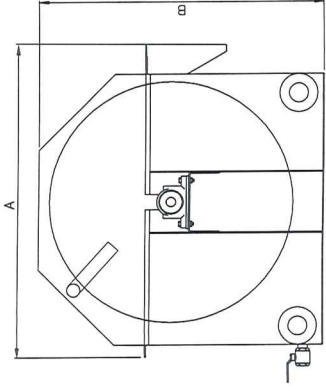
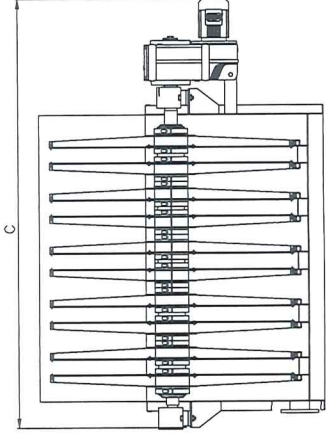


MAIN CHARACTERISTICS

- Stainless steel sturdy construction
- Wide range of applications thanks to the possibility to use wires with different meshes
- Innovative mounting and replacing system for discs sealing (patented system)
- Operation reliability and low maintenance
- Low power consumption
- Easy installation

APPLICATIONS

- Solids separation from liquids
- Fibres separation from fines
- Fibres recovery
- Raw materials recovery in existing overloaded plants
- Sludge thickening
- Suspensions thickening
- Effluents treatment



MODEL	DISCS PAIRS	DISC DIAMETER Ø	WIDTH A mm	HEIGHT B mm	LENGTH C mm	POWER Kw	FLOW* m ³ /h		OPERATIONAL WEIGHT T
							min	max	
DD 2.1	1	1600	2200	1875	1310	1,1	4,8	6	1,7
DD 2.2	2	1600	2200	1875	1660	1,5	9,6	96	2,6
DD 2.3	3	1600	2200	1875	2015	1,5	15	150	3,6
DD 2.4	4	1600	2200	1875	2400	2,2	19	190	4,7
DD 2.5	5	1600	2400	1875	2755	2,2	24	240	6,0
DD 2.6	6	1600	2400	1875	3110	3	29	290	7,0
DD 2.7	7	1600	2400	1875	3460	3	34	340	8,1
DD 2.8	8	1600	2400	1875	3935	4	39	390	9,3
DD 2.9	9	1600	2600	1875	4390	4	44	440	10,7
DD 2.10	10	1600	2600	1875	4740	4	48	480	11,8
DD 2.11	11	1600	2750	1875	5140	5,5	53	530	13,4
DD 2.12	12	1600	2750	1875	5495	5,5	58	580	14,6
DD 3.5	5	2000	3200	2350	3340	5,5	36	360	7,7
DD 3.6	6	2000	3200	2350	3710	5,5	44	440	8,9
DD 3.7	7	2000	3200	2350	4100	7,5	50	500	10,0
DD 3.8	8	2000	3200	2350	4470	7,5	58	580	11,1
DD 3.9	9	2000	3200	2350	4880	9,2	65	650	12,3
DD 3.10	10	2000	3200	2350	5260	9,2	72	720	13,4
DD 3.11	11	2000	3200	2350	5630	11	79	790	14,6
DD 3.12	12	2000	3200	2350	6010	11	86	860	15,7

* The inlet flow can change depending on the water characteristics, the wire size and the application. The table data are merely indicative. The Company reserves the right to introduce changes without notice.

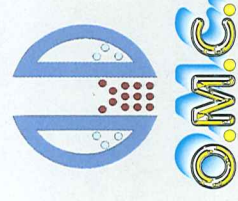
DENSIDISC® IS A PRODUCT BY O.M.C. AQUA ENGINEERING DIVISION

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COLLAREDA

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FILTER - DISCS THICKENER