

HYDRAcube™ Technology

Get the most out of your UF system

HYDRAcube™ is a simple, compact and robust integrated rack solution. HYDRAcube™ is designed to exploit the major advantages of HYDRAcap™ MAX technology, the innovative solution in pressurized ultrafiltration by Memstar. By combining feed, filtrate and air supply in a single piece, HYDRAcube™ provides a complete UF rack solution which drastically reduces footprint, saves engineering costs and makes assembly and maintenance works of the UF system much easier.

HYDRAcube™ Technology Offers:

- **Simplicity:** One piece (HYDRAcube™ header) combining all the streams entering in and flowing out of the UF rack. Feed, Filtrate & Air lines integrated into single piece on top and bottom of each module.
- **Pre-Engineered System:** Minimum amount of pieces. Fast and easy to install. Quality control simplified.
- **Modularly Expandable System:** All HYDRAcap™ MAX modules can be easily connected, added or removed. A single HYDRAcube™ rack can contain from 2 to 40+ HYDRAcap™ MAX modules.
- **Reliable construction:** Reinforced PP material pieces connected through BPE (Sanitary Flange) to ensure a reliable seal. Self-supported structure. Pressure-rated to directly feed RO membranes.
- **Compact footprint:** Huge footprint savings compared to a conventional rack design.
- **Fully integrated system:** Capacity to fit 24 HYDRAcap™ MAX 60 UF modules in a single 20-feet HC container and 64 HYDRAcap™ MAX 60 UF modules in a single 40-feet HC container, using HYDRAcube™ technology, for a containerized system solution. This is a complete working system which includes pumps, strainers, valves, blowers, PLC, HMI, etc.

Footprint Comparison

HYDRAcube™ kit	No. of modules	HYDRAcube™, m ² (ft ²)	Conventional rack, m ² (ft ²)	% decrease
2x2	4	0.73 (7.83)	1.40 (15.1)	48%
2x4	8	1.28 (13.8)	2.27 (24.4)	44%
2x6	12	1.83 (19.7)	3.19 (34.4)	43%
2x8	16	2.38 (25.65)	4.01 (43.2)	41%
2x10	20	2.96 (31.86)	4.96 (53.4)	41%
2x12	24	3.51 (37.8)	5.93 (63.8)	41%
2x14	28*	4.07 (43.74)	6.61 (71.1)	39%
2x16*	32*	4.62 (49.68)	7.32 (78.8)	37%

*With HYDRAcube™ Gen.2



HYDRAcube™ builds on proven HYDRAcap™ MAX Technology:

- Highest Membrane Area: Modules available with membrane area up to 105 m² per module
- TIPS PVDF fiber: Leading to higher mechanical strength and chemical tolerance
- Air Scour: Allows for backwash-free operation – our standard method of cleaning
- Dual End Filtration: Filtrate is taken from top and bottom of the modules to provide even flow distribution along the length of the fiber



The following table illustrates examples of HYDRAcube™ racks which can be provided.

HYDRAcube® Rack Offerings	HYDRAcube™ rack	HYDRAcap™ MAX module	Membrane area per module m ² (ft ²)	No. of rows	No. of modules per row	Total no. of modules per rack	Total membrane area per rack m ² (ft ²)
	HYDRAcube40–2x2	HYDRAcap™ MAX 40	52 (559.72)	2	2	4	208 (2,239)
	HYDRAcube40–2x4	HYDRAcap™ MAX 40	52 (559.72)	2	4	8	416 (4,478)
	HYDRAcube40–2x8	HYDRAcap™ MAX 40	52 (559.72)	2	8	16	832 (8,956)
	HYDRAcube40–2x12	HYDRAcap™ MAX 40	52 (559.72)	2	12	24	1,248 (13,433)
	HYDRAcube60–2x2	HYDRAcap™ MAX 60	78 (839.58)	2	2	4	312 (3,358)
	HYDRAcube60–2x4	HYDRAcap™ MAX 60	78 (839.58)	2	4	8	624 (6,717)
	HYDRAcube60–2x8	HYDRAcap™ MAX 60	78 (839.58)	2	8	16	1,248 (13,433)
	HYDRAcube60–2x12	HYDRAcap™ MAX 60	78 (839.58)	2	12	24	1,872 (20,150)
	HYDRAcube60–2x17*	HYDRAcap™ MAX 60	78 (839.58)	2	17	34*	2,652 (28,546)
	HYDRAcube80–2x2	HYDRAcap™ MAX 80	105 (1,130.21)	2	2	4	420 (4,521)
	HYDRAcube80–2x4	HYDRAcap™ MAX 80	105 (1,130.21)	2	4	8	840 (9,042)
	HYDRAcube80–2x8	HYDRAcap™ MAX 80	105 (1,130.21)	2	8	16	1,680 (18,083)
	HYDRAcube80–2x12	HYDRAcap™ MAX 80	105 (1,130.21)	2	12	24	2,520 (27,125)
	HYDRAcube80–2x17*	HYDRAcap™ MAX 80	105 (1,130.21)	2	17	34*	3,570 (38,427)

Solutions You Need.

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