

HYDRAcube - Capillary Ultrafiltration Rack

Performance¹	Filtrate Turbidity: Bacteria removal:	≤ 0.10 NTU ≥ 4 log
Type	Configuration: Membrane Polymer: Fiber Dimensions: Pore size:	Modular Capillary Ultrafiltration System TIPS PVDF ID 0.024" (0.6 mm), OD 0.047" (1.2 mm) 0.08 micron
Application Data²	Maximum Applied Feed Pressure: Maximum Transmembrane Pressure: Instantaneous Chlorine Tolerance: Maximum Chlorine Exposure: Maximum Feed Turbidity: Maximum Operating Temperature: pH Operating Range: Cleaning pH Range: Operating Mode:	73 psig (5.0 bar) ³ 30 psig (2.0 bar) 5000 ppm ⁴ 1,000,000 ppm-hrs 300 NTU ⁵ 104 °F (40 °C) 2.0 – 11.0 1.0 – 13.0 Outside to Inside Filtration Dead End or Cross flow mode

Typical Process Conditions

Air Scour Duration:	120 – 240 seconds
Air Scour Frequency:	Once every 20 – 60 minutes
Maintenance Clean Frequency:	1 – 3 times per day
Maintenance Clean Duration:	20 – 30 minutes
Disinfection Chemicals:	NaOCl, ClO ₂ or NH ₂ Cl
Cleaning Chemicals:	NaOH, HCl, H ₂ SO ₄ , or Citric Acid

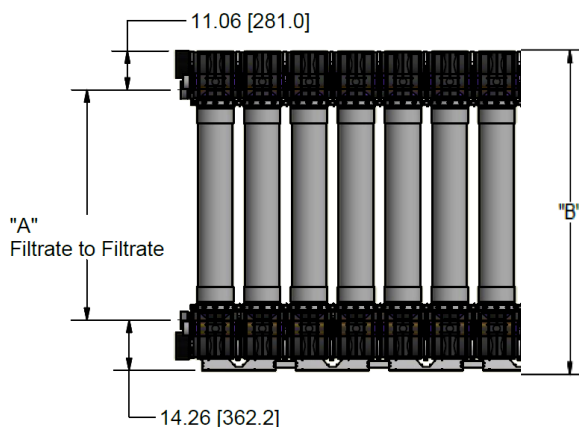
¹ Typical module performance for most feedwaters.

² The limitations shown here are for general use. The values may be more conservative for specific projects to ensure the best performance and longest life of the membrane.

³ At ≤20°C. 58psi (4 bar) between 21 - 30°C. 44 psi (3 bar) between 31 – 40°C

⁴ For 60 minutes or less.

⁵ Higher values can be treated. Consult Hydranautics' technical staff.



HYDRAcube Gen 2 Dimensions

HYDRAcube G2	HYDRAcapMAX	"A"	"B"
HYDRAcube40	HYDRAcap MAX 40	45.33 (1151.4)	70.9 (1800.9)
HYDRAcube60	HYDRAcap MAX 60	65.33 (1659.4)	90.0 (2308.9)
HYDRAcube80	HYDRAcap MAX 80	85.33 (2167.4)	110.9 (2816.9)

System Design

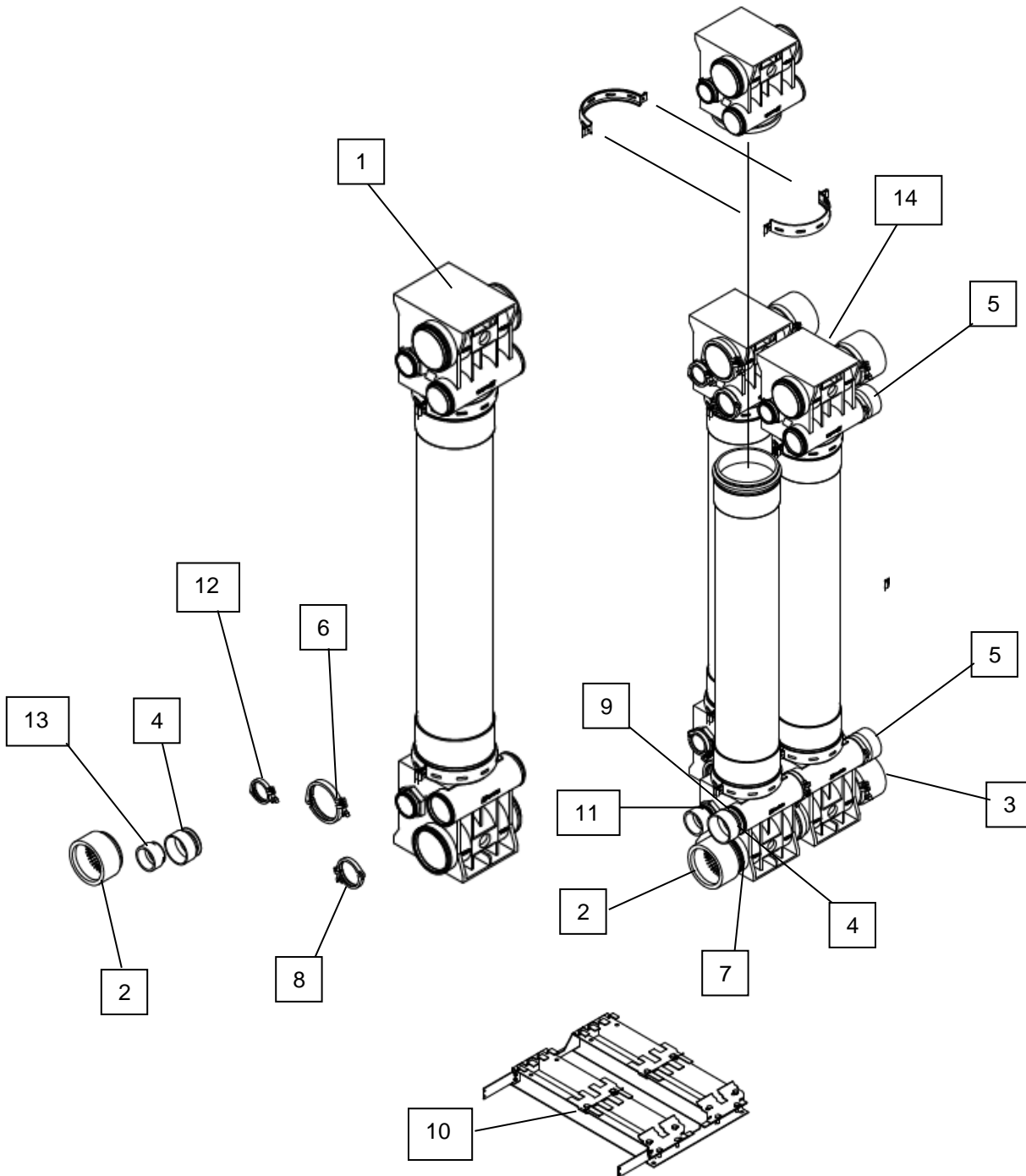


Figure 1: Image shows an exploded view of our 2 x 2 HYDRAcube.

ITEM	PART NUMBER	DESCRIPTION	MATERIAL	SOCKET¹	BPE-CONNECTION²
1	13000.2000	CUBE HEADER 3,4,6 INCH PORT	Polypropylene		
2	13001.0000	FEED/DRAIN ROW END ADAPTOR	PVC	160mm	6" BPE
3	13003.0000	FEED/DRAIN ROW END PLUG 6"	PVC		6" BPE
4	13004.0000	FILTRATE ADAPTOR	PVC	110mm	4" BPE
5	13005.0000	FILTRATE ROW END PLUG 4"	PVC		4" BPE
6	13008.0000	FEED SANITARY CLAMP-6"	304SS		6" BPE
7	13009.0000	FEED SANITARY FLANGED GASKET	EPDM		6" BPE
8	13010.0000	FILTRATE SANITARY CLAMP-4	304SS		4" BPE
9	13011.0000	FILTRATE SANITARY FLANGED GASKET	EPDM		4" BPE
10	13025.2000	2 X 2 MODULE FRAME-SS304	304SS	20.8"L x 32.40"W	
11	13029.0001	3" SANITARY GASKET	EPDM		3" BPE
12	13029.0002	Air Std Clamp - 3 in	304SS		3" BPE
13	13030.0000	3" AIR FLOW END ADAPTOR	PVC	90mm	3" BPE
14	13031.0000	3" AIR FLOW END PLUG	PVC		3" BPE

1 DIN 8062 Standard

2 ASME BPE-2016 Standard



System Dimensions

HYDRAcap MAX 40 with HYDRAcube KIT*

Item Number	Rows	Modules per Row	Total # Modules	Total Membrane Area ft ² (m ²)	Dry Weight lbs (kg)	Wet Weight lbs (kg)	Length ft (m)	Width ft (m)	Footprint ft ² (m ²)
HYDRAcube-2x1 KIT	2	1	2	1120 (104)	395 (180)	611 (278)	2.90 (.88)	2.70 (.82)	7.83 (.73)
HYDRAcube-2x2 KIT	2	2	4	2240 (208)	683 (310)	1115 (507)	2.90 (.88)	2.70 (.82)	7.83 (.73)
HYDRAcube-2x3 KIT	2	3	6	3360 (312)	1019 (463)	1667 (758)	5.10 (1.55)	2.70 (.82)	13.77 (1.28)
HYDRAcube-2x4 KIT	2	4	8	4480 (416)	1307 (594)	2171 (987)	5.10 (1.55)	2.70 (.82)	13.77 (1.28)
HYDRAcube-2x5 KIT	2	5	10	5600 (520)	1643 (747)	2723 (1238)	7.30 (2.22)	2.70 (.82)	19.71 (1.83)
HYDRAcube-2x6 KIT	2	6	12	6720 (624)	1931 (878)	3227 (1467)	7.30 (2.22)	2.70 (.82)	19.71 (1.83)
HYDRAcube-2x7 KIT	2	7	14	7840 (728)	2267 (1030)	3779 (1718)	9.50 (2.90)	2.70 (.82)	25.65 (2.38)
HYDRAcube-2x8 KIT	2	8	16	8960 (832)	2555 (1161)	4283 (1947)	9.50 (2.90)	2.70 (.82)	25.65 (2.38)
HYDRAcube-2x9 KIT	2	9	18	10080 (936)	2891 (1314)	4835 (2198)	11.80 (3.60)	2.70 (.82)	31.86 (2.96)
HYDRAcube-2x10 KIT	2	10	20	11200 (1040)	3179 (1445)	5339 (2427)	11.80 (3.60)	2.70 (.82)	31.86 (2.96)
HYDRAcube-2x11 KIT	2	11	22	12320 (1144)	3515 (1598)	5891 (2678)	14.00 (4.27)	2.70 (.82)	37.80 (3.51)
HYDRAcube-2x12 KIT	2	12	24	13440 (1248)	3803 (1729)	6395 (2907)	14.00 (4.27)	2.70 (.82)	37.80 (3.51)
HYDRAcube-2x13 KIT	2	13	26	14560 (1352)	4139 (1881)	6947 (3158)	16.20 (4.94)	2.70 (.82)	43.74 (4.07)
HYDRAcube-2x14 KIT	2	14	28	15680 (1456)	4427 (2012)	7451 (3387)	16.20 (4.94)	2.70 (.82)	43.74 (4.07)
HYDRAcube-2x15 KIT	2	15	30	16800 (1560)	4763 (2165)	8003 (3638)	18.40 (5.61)	2.70 (.82)	49.68 (4.62)
HYDRAcube-2x16 KIT	2	16	32	17920 (1664)	5051 (2296)	10395 (4725)	18.40 (5.61)	2.70 (.82)	49.68 (4.62)
HYDRAcube-2x17 KIT	2	17	34	19040 (1768)	5387 (2449)	11065 (5030)	20.60 (6.28)	2.70 (.82)	55.62 (5.17)
HYDRAcube-2x18 KIT	2	18	36	20160 (1872)	5675 (2580)	11687 (5312)	20.60 (6.28)	2.70 (.82)	55.62 (5.17)
HYDRAcube-2x19 KIT	2	19	38	21280 (1976)	5983 (2720)	12329 (5604)	22.80 (6.95)	2.70 (.82)	61.56 (5.72)
HYDRAcube-2x20 KIT	2	20	40	22400 (2080)	6243 (2838)	12923 (5874)	22.80 (6.95)	2.70 (.82)	61.56 (5.72)

*Note: All dimensions and weights are approximations. Please contact a Hydranautics representative for more detailed dimensions. Height for all HYDRAcap MAX 40 modules with a HYDRAcube Kit installed is 5.4 ft (1.6 m).



HYDRAcap MAX 60 with HYDRAcube KIT*

Item Number	Rows	Modules per Row	Total # Modules	Total Membrane Area ft ² (m ²)	Dry Weight lbs (kg)	Wet Weight lbs (kg)	Length ft (m)	Width ft (m)	Footprint ft ² (m ²)
HYDRAcube-2x1 KIT	2	1	2	1680 (156)	445 (202)	729 (331)	2.90 (.88)	2.70 (.82)	7.83 (.73)
HYDRAcube-2x2 KIT	2	2	4	3360 (312)	783 (356)	1351 (614)	2.90 (.88)	2.70 (.82)	7.83 (.73)
HYDRAcube-2x3 KIT	2	3	6	5040 (468)	1169 (531)	2021 (919)	5.10 (1.55)	2.70 (.82)	13.77 (1.28)
HYDRAcube-2x4 KIT	2	4	8	6720 (624)	1507 (685)	2643 (1201)	5.10 (1.55)	2.70 (.82)	13.77 (1.28)
HYDRAcube-2x5 KIT	2	5	10	8400 (780)	1893 (860)	3313 (1506)	7.30 (2.23)	2.70 (.82)	19.71 (1.83)
HYDRAcube-2x6 KIT	2	6	12	10080 (936)	2231 (1014)	3935 (1789)	7.30 (2.23)	2.70 (.82)	19.71 (1.83)
HYDRAcube-2x7 KIT	2	7	14	11760 (1092)	2617 (1190)	4605 (2093)	9.50 (2.90)	2.70 (.82)	25.65 (2.38)
HYDRAcube-2x8 KIT	2	8	16	13440 (1248)	2955 (1343)	5227 (2376)	9.50 (2.90)	2.70 (.82)	25.65 (2.38)
HYDRAcube-2x9 KIT	2	9	18	15120 (1404)	3341 (1519)	5897 (2680)	11.80 (3.60)	2.70 (.82)	31.86 (2.96)
HYDRAcube-2x10 KIT	2	10	20	16800 (1560)	3679 (1672)	6519 (2963)	11.80 (3.60)	2.70 (.82)	31.86 (2.96)
HYDRAcube-2x11 KIT	2	11	22	18480 (1716)	4065 (1848)	7189 (3268)	14.00 (4.27)	2.70 (.82)	37.80 (3.51)
HYDRAcube-2x12 KIT	2	12	24	20160 (1872)	4403 (2001)	7811 (3550)	14.00 (4.27)	2.70 (.82)	37.8 (3.51)
HYDRAcube-2x13 KIT	2	13	26	21840 (2029)	4789 (2177)	8481 (3855)	16.20 (4.94)	2.70 (.82)	43.74 (4.07)
HYDRAcube-2x14 KIT	2	14	28	22680 (2107)	5127 (2330)	9103 (4138)	16.20 (4.94)	2.70 (.82)	43.74 (4.07)
HYDRAcube-2x15 KIT	2	15	30	23520 (2185)	5513 (2506)	9773 (4442)	18.40 (5.61)	2.70 (.82)	49.68 (4.62)
HYDRAcube-2x16 KIT	2	16	32	24360 (2263)	5851 (2660)	10395 (4725)	18.40 (5.61)	2.70 (.82)	49.68 (4.62)
HYDRAcube-2x17 KIT	2	17	34	25200 (2341)	6237 (2835)	11065 (5030)	20.60 (6.28)	2.70 (.82)	55.62 (5.17)
HYDRAcube-2x18 KIT	2	18	36	26880 (2497)	6575 (2989)	11687 (5312)	20.60 (6.28)	2.70 (.82)	55.62 (5.17)
HYDRAcube-2x19 KIT	2	19	38	28560 (2653)	6933 (3151)	12329 (5604)	22.80 (6.95)	2.70 (.82)	61.56 (5.72)
HYDRAcube-2x20 KIT	2	20	40	30240 (2809)	7243 (3292)	12923 (5874)	22.80 (6.95)	2.70 (.82)	61.56 (5.72)

*Note: All dimensions and weights are approximations. Please contact a Hydranautics representative for more detailed dimensions. Height for all HYDRAcap MAX 60 modules with a HYDRAcube Kit installed is 7.0 ft (2.1 m).



HYDRAcap MAX 80 with HYDRAcube KIT*

Item Number	Rows	Modules per Row	Total # Modules	Total Membrane Area ft ² (m ²)	Dry Weight lbs (kg)	Wet Weight lbs (kg)	Length ft (m)	Width ft (m)	Footprint ft ² (m ²)
HYDRAcube-2x1 KIT	2	1	2	2260 (210)	485 (221)	809 (368)	2.90 (.88)	2.70 (.82)	7.83 (.73)
HYDRAcube-2x2 KIT	2	2	4	4520 (420)	863 (392)	1511 (687)	2.90 (.88)	2.70 (.82)	7.83 (.73)
HYDRAcube-2x3 KIT	2	3	6	6780 (630)	1289 (586)	2261 (1028)	5.10 (1.55)	2.70 (.82)	13.77 (1.28)
HYDRAcube-2x4 KIT	2	4	8	9040 (840)	1667 (758)	2963 (1347)	5.10 (1.55)	2.70 (.82)	13.77 (1.28)
HYDRAcube-2x5 KIT	2	5	10	11300 (1050)	2093 (951)	3713 (1688)	7.30 (2.23)	2.70 (.82)	19.71 (1.83)
HYDRAcube-2x6 KIT	2	6	12	13560 (1260)	2471 (1123)	4415 (2007)	7.30 (2.23)	2.70 (.82)	19.71 (1.83)
HYDRAcube-2x7 KIT	2	7	14	15820 (1470)	2897 (1317)	5165 (2348)	9.50 (2.90)	2.70 (.82)	25.65 (2.38)
HYDRAcube-2x8 KIT	2	8	16	18080 (1680)	3275 (1489)	5867 (2667)	9.50 (2.90)	2.70 (.82)	25.65 (2.38)
HYDRAcube-2x9 KIT	2	9	18	20340 (1890)	3701 (1682)	6617 (3008)	11.80 (3.60)	2.70 (.82)	31.86 (2.96)
HYDRAcube-2x10 KIT	2	10	20	22600 (2100)	4079 (1854)	7319 (3327)	11.80 (3.60)	2.70 (.82)	31.86 (2.96)
HYDRAcube-2x11 KIT	2	11	22	24860 (2310)	4505 (2048)	8069 (3668)	14.00 (4.27)	2.70 (.82)	37.80 (3.51)
HYDRAcube-2x12 KIT	2	12	24	27120 (2520)	4883 (2220)	8771 (3987)	14.00 (4.27)	2.70 (.82)	37.80 (3.51)
HYDRAcube-2x13 KIT	2	13	26	29380 (2760)	5309 (2413)	9521 (4328)	16.20 (4.94)	2.70 (.82)	43.74 (4.07)
HYDRAcube-2x14 KIT	2	14	28	31640 (2980)	5687 (2585)	10223 (4647)	16.20 (4.94)	2.70 (.82)	43.74 (4.07)
HYDRAcube-2x15 KIT	2	15	30	33900 (3180)	6113 (2779)	10973 (4988)	18.40 (5.61)	2.70 (.82)	49.68 (4.62)
HYDRAcube-2x16 KIT	2	16	32	36160 (3390)	6491 (2950)	11675 (5307)	18.40 (5.61)	2.70 (.82)	49.68 (4.62)
HYDRAcube-2x17 KIT	2	17	34	38420 (3610)	6917 (3144)	12425 (5648)	20.60 (6.28)	2.70 (.82)	55.62 (5.17)
HYDRAcube-2x18 KIT	2	18	36	40680 (3820)	7295 (3316)	13127 (5967)	20.60 (6.28)	2.70 (.82)	55.62 (5.17)
HYDRAcube-2x19 KIT	2	19	38	42940 (4030)	7693 (3497)	13849 (6295)	22.80 (6.95)	2.70 (.82)	61.56 (5.72)
HYDRAcube-2x20 KIT	2	20	40	45200 (4240)	8043 (3656)	14523 (6601)	22.80 (6.95)	2.70 (.82)	61.56 (5.72)

*Note: All dimensions and weights are approximations. Please contact a Hydranautics representative for more detailed dimensions. Height for all HYDRAcap MAX 60 modules with a HYDRAcube Kit installed is 8.7 ft (2.7 m).