



the corrosion expert

HiPerFlon® Lined Columns

For more than 30 years CRP has been a world leader in the manufacture of paste extruded PTFE and PFA lined equipment including pipe, fittings, valves, bellows, sight glasses, sampling systems and other ancillary equipment.

CRP supplies into the chemical, pharmaceutical, petrochemical, biotechnology, pulp & paper, metals refining and food & beverage sectors.

CRP products are often installed in conjunction with corrosion resistant columns and modern chemical processes require a multi-purpose performance from such columns which is not delivered by traditional column materials.

CRP has introduced HiPerFlon® (paste extruded PTFE and PFA) lined columns for exactly this sort of duty whilst also being suitable for all acidic, caustic and fluorine applications up to 200°C. The seamless HiPerFlon® lining materials with wall thicknesses of up to 10mm offer the lowest permeation rates and longest lifetimes even in hot and demanding services. The unique PFA moulded nozzle sections are produced in one piece avoiding the need for plastics welding and the requirement for a multi-piece nozzle design.

CRP

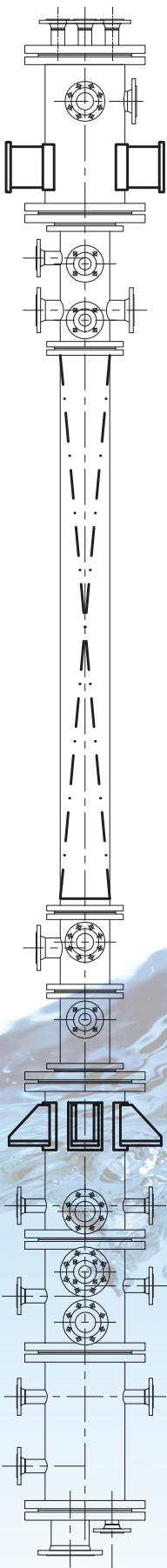
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Design Standards

PD 5500
ASME VIII Division 1 (including ASME U designator)
EN 13445
Where appropriate all columns will be CE marked under the PED. When none of the above applies columns will be manufactured to sound engineering practice.

Welding Standards

ASME IX
EN 15614-1

Construction Elements

Flat PFA lined cover with one or more PFA lined nozzles
PFA lined column sections with PFA lined nozzles
PTFE lined straight column sections without nozzles
Flat PFA lined bottom with one or more PFA lined nozzles

Materials of construction

Body	EN 10216/7-2 P235 GH TC1/2 EN 10216/7-2 P265 GH TC1/2 API 5L Grade B
Flanges	EN 10222-2 P245GH EN 10028-2 P235GH/P265GH EN 10273 P250GH ASTM A105
Lining	Virgin HiPerFlon® (Paste extruded PTFE and PFA)
PTFE	ASTM D4895 Minimum Tensile Requirements UTS 20,7MPa ElongaKon at Break 250 % in both direcKons. Specific Gravity in the range 2,14 - 2,17 ParKcle Size average dia. 500 ± 200 µm
PFA	ASTM D3307 type II Minimum Tensile Requirements UTS 26 MPa and 300% Elongation at Break Specific Gravity in the range 2,12 - 2,17 Melt Flow Rate 1 - 3 g/10 mins
Options	Stainless Steel, Low Temperature Carbon Steel Anti-static Lining

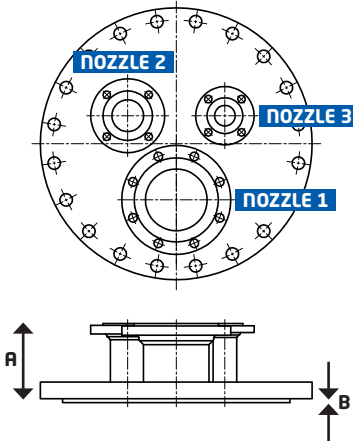
Painting

The standard paint finish is a two component low VOC, high solids fast curing epoxy primer/finish containing zinc phosphate anti-corrosive pigmentaKon. Colour RAL 5015 Blue Semi-Gloss. Typical thickness 60 microns.

CRP can also apply multi-coat wet paint systems in ISO 12944 compliant paint systems based on selecting the corrosive environment and durability requirement.

Optional column internals

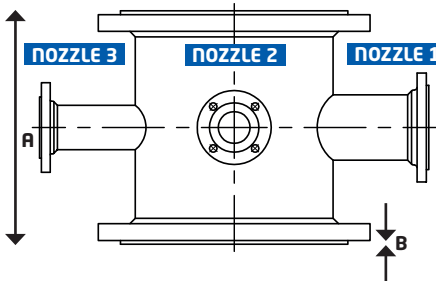
PTFE/PFA lined column ring for support grid mounting
PTFE/PFA lined support grid or plate
Liquid distributors
Liquid re-distributors
Column packing



Column Cover and Bottom

Column Diameter		Nozzle 1 Diameter		Nozzle 2 & 3 Diameter		Length Dim. A [mm]	PFA Thickness (Column Flare) Dim. B [mm]
ASME 150	EN (DIN) PN10	Minimum	Maximum	Minimum	Maximum		
8" NB	DN200	1" NB/DN25	6" NB/DN150	1" NB/DN25	2" NB/DN50	150	7
10" NB	DN250		8" NB/DN200		2" NB/DN50		8
12" NB	DN300		10" NB/DN250		3" NB/DN80		10
14" NB	DN350		12" NB/DN300		3" NB/DN80		
16" NB	DN400		14" NB/DN350		4" NB/DN100		
18" NB	DN450		16" NB/DN400		4" NB/DN100		
20" NB	DN500		18" NB/DN450				

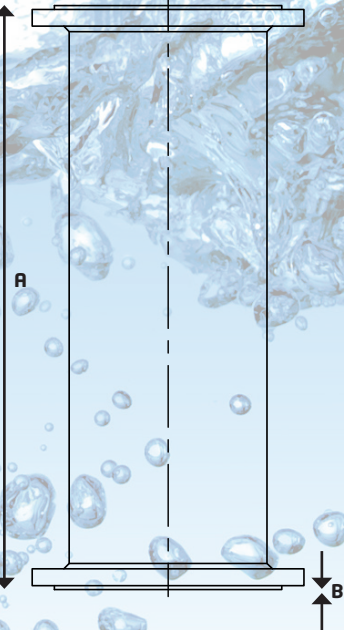
NB: Not all length, nozzle diameter combinations are possible



Column Inlet and Sump Section

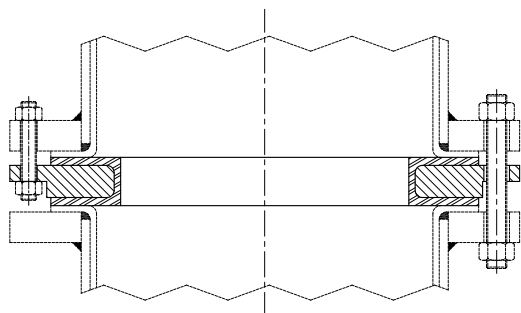
Column Diameter		Nozzle 1 Diameter		Nozzle 2 & 3 Diameter		Length Dim. A [mm] Max.	PFA Thickness (body) Dim. B [mm]
ASME 150	EN (DIN) PN10	Minimum	Maximum	Minimum	Maximum		
8" NB	DN200	1" NB/DN25	6" NB/DN150	1" NB/DN25	4" NB/DN100	460	9.5
10" NB	DN250		8" NB/DN200		6" NB/DN150	560	10
12" NB	DN300		10" NB/DN250		8" NB/DN200	610	
14" NB	DN350		12" NB/DN300		6" NB/DN150	710	
16" NB	DN400		14" NB/DN350		8" NB/DN200	700	8
18" NB	DN450		14" NB/DN350		10" NB/DN250	700	
20" NB	DN500		12" NB/DN300			600	

NB: Not all length, nozzle diameter combinations are possible

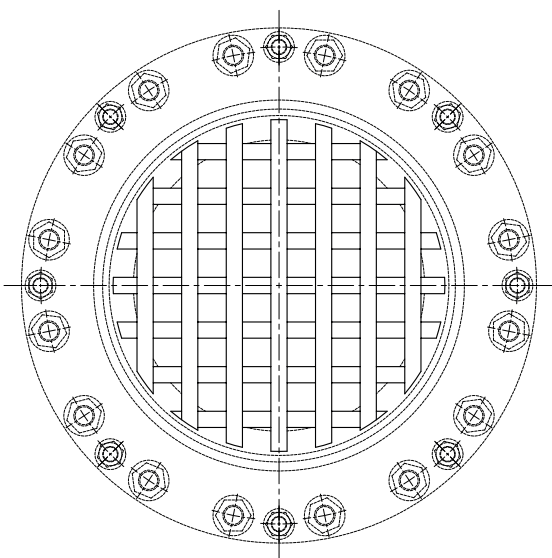


Column Packing Sections

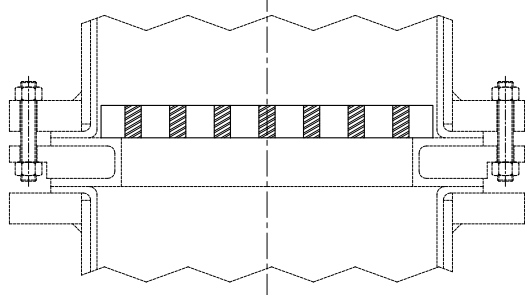
Column Diameter		Length Dim. A [mm]		PTFE Thickness Dim. B [mm]	
ASME 150	EN (DIN) PN10	Minimum	Maximum	Heavy Duty	Standard Duty
8" NB	DN200	200	3000	8	4.6
10" NB	DN250			9.1	5.2
12" NB	DN300			10.4	5.3
14" NB	DN350		2500	8	5.5
16" NB	DN400				
18" NB	DN450				
20" NB	DN500				



LINED SUPPORT RING



SUPPORT TRAY



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