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.
HiPerFlon® Lined Column Design

### 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 15611-1

### 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
  - RPR 5L Grade B
- **Flanges**
  - EN 10222-2 P245GH
  - EN 10028-2 P235GH/P265GH
  - EN 10273 P250GH
  - ASTM AI105
- **Lining**
  - Virgin HiPerFlon® (Post extruded PTFE and PFR)
- **PTFE**
  - ASTM D4905
  - Minimum Tensile Requirements
  - UTS 20.7 MPa Elongation at Break 250 % in both direKons.
  - Specific Gravity in the range 2.14 - 2.17
  - Particles Size average dia. 500 ± 200 μm
- **PFR**
  - 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 with containing zinc phosphate or silicon organic pigment. 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 corrosion environment and durability requirement.

### Optional column internals
- PTFE/PFR lined column ring for support grid mounting
- PTFE/PFR lined support grid or plate
- Liquid distributors
- Liquid redistribution
- Column packing

### Column Cover and Bottom

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### Column Inlet and Sump Section

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### Column Packing Sections

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NB: Not all length, nozzle diameter combinations are possible