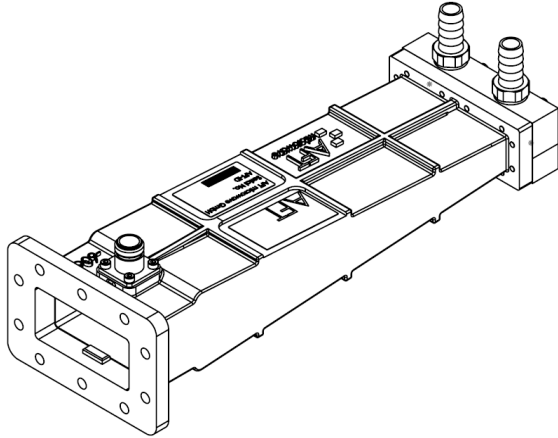


**Ferrite Load CPR284F**


- Solid-state ferrite absorber, water cooled
- Broadband & temp.-stable absorption
- Excellent peak & average power capability
- Cooling water separated from the RF avoiding water to enter the waveguide
- High reliability & long life-time
- Free of maintenance & wear parts
- RoHS compliant
- Designed for S-band LINACs operating at 2856 MHz and 2998 MHz

Parameter	Value			
Footprint Drawing No.	FP-10073548			
Product Type	RF Load			
Configuration	Ferrite load			
Center Frequency $f_0$	2856 MHz and 2998 MHz			
Bandwidth BW	$\pm 10$ MHz			
Input Power	Options:	Xp = 1	Xp = 2	Xp = 3
Input Peak Power		4 MW	6 MW	35 MW
Input Average Power		4 kW	6 kW	6 kW
Return Loss	$\geq 30$ dB			
VSWR	$< 1.065$			
RF Waveguide	WR284			
RF Flanges / Connectors	CPR284F, flat, 10 holes $\varnothing 6.5$ mm			
RF Coupling Probes	1x non-directional coupling probe at input			
	Coupling: $-60\text{dB} \pm 2\text{dB}$ , Connector type: N-female			
Cooling System	demineralized water			
Water Tube Materials	Stainless steel			
Water Connectors	2x $\frac{1}{2}$ " hose barb fittings, stainless steel			
Water Inlet Temperature (nominal)	selectable between $20^\circ\text{C}$ and $40^\circ\text{C}$			
Water Inlet Temperature Range	$\pm 5^\circ\text{C}$			
Water Flow Rate	$\geq 600$ l/h @ 6kW, $\geq 400$ l/h @ 4kW			
Water Pressure Drop	$< 2$ bar @ 600l/h			

**Ferrite Load CPR284F**

<b>Water Inlet Pressure</b>	≤ 10 bar	
<b>Water Leak Test Pressure</b>	15 bar for 10min	
<b>Waveguide Dielectric Filling Gas</b>	SF6	
<b>Gas Pressure</b>	nominal:	3 bar absolute
	maximum :	4 bar absolute
<b>Gas Leak Rate (Helium)</b>	< 5·10 <sup>-4</sup> mbar l/s	
	tested with Helium pressurization at 2.5 bar gauge	
<b>Ambient Temperature</b>	operating :	10°C to 40°C
	storage :	0°C to 60°C
<b>Relative Humidity</b>	< 80%, non-condensing	
<b>Magnetic Stray Field</b>	device must not be exposed to magnetic stray radiation of >5G	
<b>Body Material</b>	Aluminium	
<b>Surface Finish</b>	none	
<b>Dimensions</b>	see footprint drawing	
<b>Weight</b>	2.5 kg ± 10%	
<b>Mounting Orientation</b>	any	

**Ordering Code**

LF-WR284-01-2927 - Xp - Xw

Variable	Description	Value Options		
Xp	Input Power Option	1 : 4 MW / 4 kW	2 : 6 MW / 6 kW	3 : 35 MW / 6kW
Xw	Water Inlet Temp. [°C]	20 .. 40		

**Notes:**

- Water quality, temperature, flow, and input pressure need to be controlled carefully according to the specified values. Air bubbles in the cooling channel have to be avoided. The device does not include any sensorics and interlocks for water temperature, flow or pressure.
- Low-Power Acceptance Tests: The following tests will be performed at the AFT factory before shipment: (1) small-signal network analyzer measurements of input return loss vs. frequency at room temperature, (2) water leak test, and (3) He-gas leak rate testing.
- Documentation: An owner's manual is supplied for providing information on the installation, operation and maintenance of the device. The documentation will also include specification, footprint drawing, an inspection report and a test data plot (viewgraphs S-parameters vs. frequency).

Rev.	Remark	Date	Name
00	Initial	07.08.2015	C. Weil
01		17.09.2015	C. Weil
02	Flow rate, weight, documentation	03.04.2020	C. Weil