

**DESCRIPTION**

VACCO Industries' family of pneumatic couplings provides the precision operations required for space applications under extreme high pressure conditions



FEATURES	APPLICATIONS	HERITAGE
<ul style="list-style-type: none"> <li>⊕ Size: 1/4" to 8"</li> <li>⊕ Fluids: LN<sub>2</sub>, LO<sub>2</sub>, and LH<sub>2</sub></li> <li>⊕ Actuation: Manual, Pneumatic, Automatic (carrier plate mounted)</li> <li>⊕ Leakage: Down to 10E-03 sccs GHe</li> <li>⊕ Alignment: &gt; ± 1/8" Parallel Offset</li> <li>⊕ Temperature: -423° F to +350° F</li> <li>⊕ Life Cycle: &gt;4000 cycles</li> </ul>	<ul style="list-style-type: none"> <li>⊕ Fuel Cell Fill and Drain System</li> <li>⊕ Propulsion Fill and Drain System</li> <li>⊕ Cryogenic Venting System</li> <li>⊕ Power Reactant Storage Distribution System</li> </ul>	<ul style="list-style-type: none"> <li>⊕ Apollo</li> <li>⊕ Optical Aircraft Experiment</li> <li>⊕ Shuttle-Centaur</li> </ul>

**PERFORMANCE CHARACTERISTICS**

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	PRSD	Shuttle/Centaur	OAMP	MPS	Apollo
<b>Vehicle</b>	Space Shuttle	Centaur	Optical Aircraft	Space Shuttle	Apollo Spacecraft
<b>Application</b>	Ground Servicing	Interstage	Interstage	Interstage	Ground Servicing
<b>Tube Size</b>	1/2"	2-1/2", 5-1/2"	3/8"	1-1/2"	1/4", 3/8", 3/4"
<b>Type</b>	Breakaway or Manual Latching	Breakaway	Breakaway	Breakaway	Manual Latching
<b>Weight, Flight</b>	1.02 lbs 5-1/2" 30 lbs total	2-1/2" 18 lbs total	2.0 lbs total	1.19 lbs total	1.3 lbs
<b>Operating Fluid</b>	GHe, GN <sub>2</sub> , GO <sub>2</sub> GH <sub>2</sub> , LO <sub>2</sub> , LH <sub>2</sub>	GO <sub>2</sub> , GH <sub>2</sub> , LO <sub>2</sub> , LH <sub>2</sub>	GN <sub>2</sub> , LN <sub>2</sub>	GHe, GN <sub>2</sub> , LOX, GOX	LOX, LH <sub>2</sub>
<b>Operating Temperature</b>	-423° to +150°F	-423° to +150°F	-320° to +125°F	-297° to +350°F	-423° to +160°F
<b>Operating Pressure</b>	0 to 1035 psig	0 to 85 psig	0 to 100 psig	0 to 100 psig	Vacuum to 1275 psig
<b>Leakage Mated Flight Capped</b>	2 sccs GHe 2 sccs GHe 5X10 <sup>-3</sup> sccs GHe	30/60 scim GHe 140/280 scim GHe —	10 sccm GHe 10 sccm GHe —	40 sccm GHe 40 sccm GHe N/A	1.5x10 <sup>-3</sup> sccs GHe 2.5 sccs GHe 5X10 <sup>-4</sup> sccs GHe
<b>Self-Alignment</b>	.06" Offset 1° Conical	.23" Offset 1.6° Conical	.05" Offset .5° Conical	>.062" Offset .5° Conical	N/A
<b>Life Cycles</b>	4000	1500	1000	2000	200
<b>Flow Characteristics</b>	K=4.0	.6 psid @ 10.5 ppm GHe 4.1 psid @ 8700 ppm H <sub>2</sub> O	CvX0.8	K=0.5	K=4.9
<b>Features</b>	X Pneumatic X X X	X Carrier Plate Mounted X X —	X Carrier Plate Mounted X — —	X Carrier Plate Mounted X — —	X Pneumatic X X X