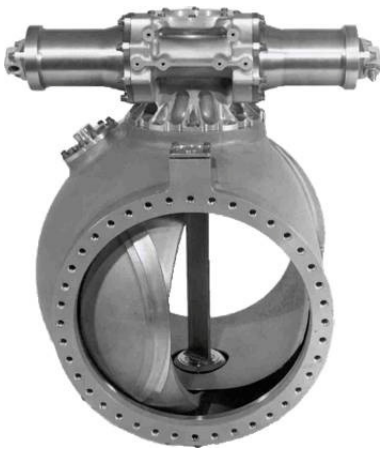


12” Cryogenic Prevalve

VACCO’s 12” Cryogenic Prevalve is a pneumatically actuated and segmented visor element. This valve element rotates completely out of the flow stream when open, eliminating the possibility of cavitation and provides for an extremely low pressure drop at the full flow condition.

The prevalve visor supports a propellant system chill down and controls propellant flow. It keeps the Main Propulsion System safe by preventing inadvertent bypass of propellant. The prevalve visor also facilitates the propellant system drain in the event of a scrub. VACCO’s robust visor design has a 25-year service record and is Space Shuttle qualified.



SPACE

Features

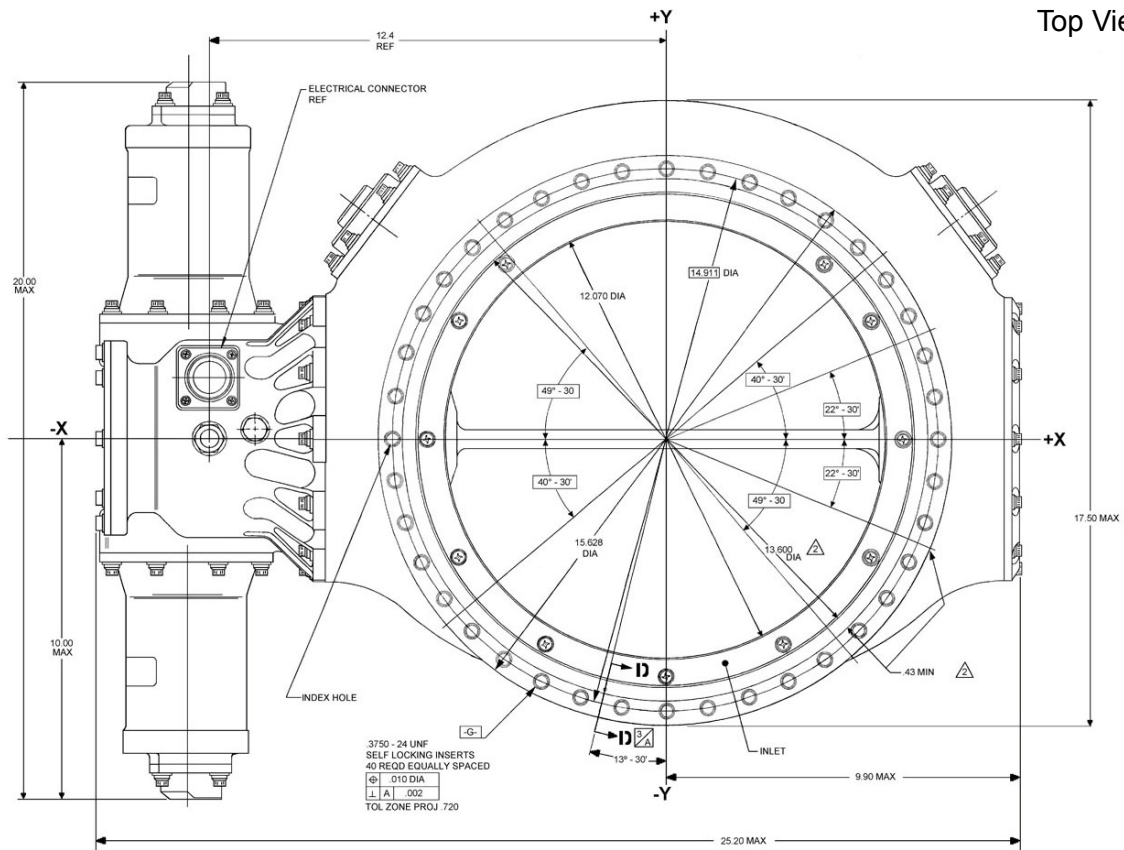
- Available in LO₂ (Type I) or LH₂ (Type II) configurations
- Dual motion mechanism
 - Maximizes seal life
 - Improves leakage
- Pneumatic actuator
 - Closes valve
 - Removable from valve housing
 - Holds neutral position without applying pneumatic actuation pressures
- Robust rack and pinion mechanism rotates visor
- Electrical position indicator device signifies open or closed positions (removable)
- Two relief valves prevent excessive pressure on the downstream (outlet) side when valve is closed
- Visor support roller bearings capable of high loads

Operating Parameters

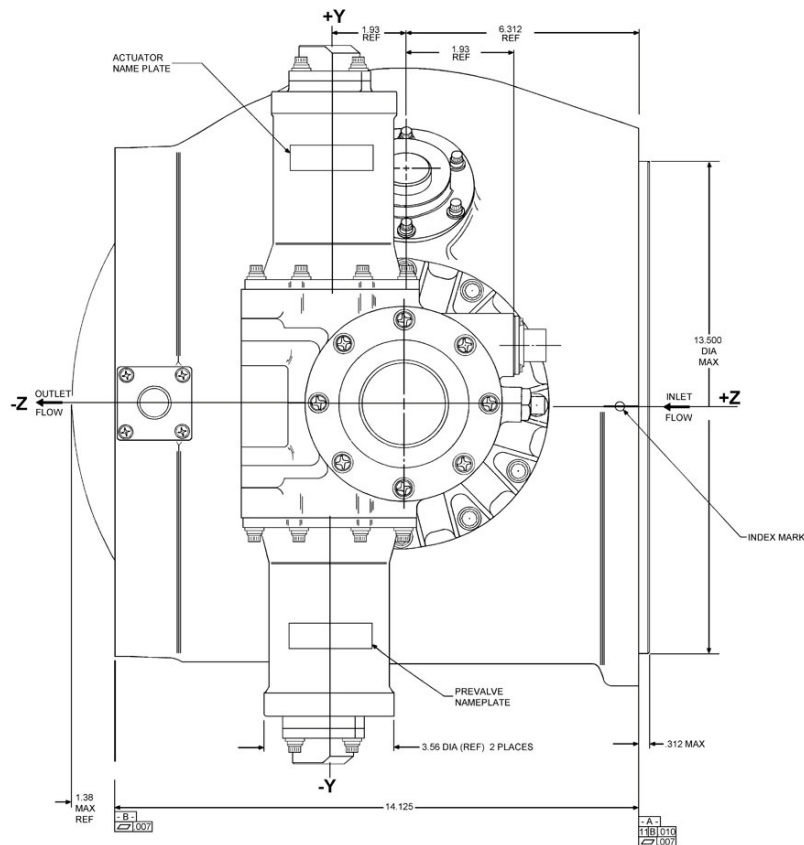
Main Valve Pressures		Leakage at Operating Pressure, Ambient	
Operating.....	275 psig	GHe.....	300 SCIM
Proof.....	357 psig	GH ₂	2,000 SCIM
Burst.....	413 psig	Flow Rate	
Actuator Pressures		LO ₂	6,100 gal/min
Operating.....	400 to 740 psig	LH ₂	16,500 gal/min
Proof.....	1,275 psig	Pressure Drop	
Burst.....	1,700 psig	LO ₂	0.5 psid (at 45 psig inlet)
Response Time		LH ₂	0.25 psid (at 15 psig inlet)
Opening.....	1.5 sec max	Weight.....	
Closing.....	0.75 sec max		

Performance characteristics are based on customer requirements. As such, they are not representative of component capabilities or limitations.

Top View



Side View



Electrical Schematic

