



**PRECISION TOOL  
TECHNOLOGIES, INC.**



***GAS INFLATION SYSTEMS***

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# ***PROVIDING RELIABLE INFLATION CONTROL***

Our gas inflation control components get the job done on land, sea and in the air when rapid deployment is not only expected—but necessary.

Our gas inflation products incorporate durable materials that boost component reliability, successfully resist corrosion and achieve long service life in challenging saltwater environments. Building on our 25 years of machining expertise, all our inflation control components are precision machined to the highest quality standards. They also meet ISO 15738:2019 standards for maritime safety, with many components independently tested—guaranteeing they'll get the job done in life-saving situations.

In addition to providing standards units, we can customize our valves and flanges to fit your unique needs in the following applications:

- Life rafts
- Slides
- Boats
- Floats
- Inflatable shelters
- Inflatable jackets
- Venting systems
- Helicopter floats
- Marine evacuation systems
- And many more



# OUR PRODUCTS



**OUR GAS INFLATION PRODUCTS ARE CUSTOMIZABLE. WHEN YOU SEE THIS LOGO, ASK US ABOUT YOUR OPTIONS!**

# FLANGES

Our cementable flange design provides simple and efficient installation or removal of integral inflation system components. **The threaded o-ring seal port boss design allows “hard surface to hard surface” contact between the flange core and the integral valve or fitting when installed.** Flanges are constructed of durable materials supporting an extended service life in a wide variety of demanding environmental conditions.

## FEATURES

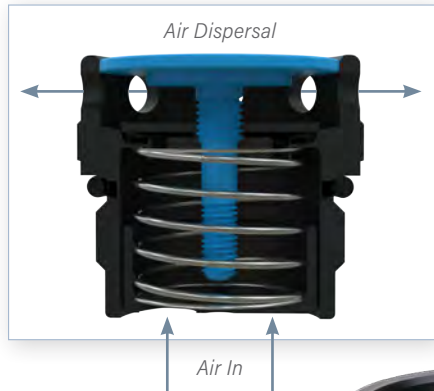
- Flush and recessed options
- Precision machined core
- Consistent and controlled rubber to metal bonding process
- Engraved production lot identification
- Ink stamped production timeline
- Controlled product packaging to prevent deformation of rubber
- Customizable



ORDERING CODE	DESCRIPTION	THREAD	MATERIAL	WEIGHT	ORIGIN
PTT-V-002	Recessed Flange	1-5/16"	Neoprene/Brass	0.45 lbs	USA
PTT-V-003	Flush Flange	1-5/16"	Neoprene/Brass	0.34 lbs	USA

# RELIEF VALVES (RVAP)

Our pressure relief valves are engineered to maintain the working pressure of the inflatable structure and provide protection against over-pressurization with very efficient venting of the excess inflation gas. We offer a variety of standard valves and we can produce valves to meet specific pressure setting requirements. Our pressure relief valves are constructed of durable high-quality materials supporting an extended service life in a wide variety of demanding environmental conditions.



## FEATURES

- Precision machined components
- Lightweight
- Meets current ISO 15738 performance requirements
- Color-coded product identification label with serial number
- Individual packaging with product identification label with serial number
- Customizable open/close pressure settings



ORDERING CODE	DESCRIPTION	THREAD	MATERIAL	WEIGHT	ORIGIN
RVAP-XX	Pressure Relief Valve Assembly	1-5/16"	Acetal Homopolymer, Ethylene Propylene, Stainless Steel	0.07 lbs	USA

# TOP OFF VALVES (TOAP)

Our top off valve design incorporates an aggressive pitched threaded inlet which allows for easy attachment of integral hand pumps even in cold temperature environmental conditions. The threaded inlet interface also ensures the hand pump does not become detached from the top off valve during use. Our "springless" valve design eliminates the need to overcome spring forces when attaching a hand pump. Our valve design also incorporates a very quick acting back pressure check seal which functions independently, not relying on hand pump attachment to open. Air pressure input from the hand pump easily opens the check seal. The integral caplug provides protection from contamination and serves as a secondary seal when installed. **Our top off valve is constructed of durable high-quality materials supporting an extended service life in a wide variety of demanding environmental conditions.**

## FEATURES

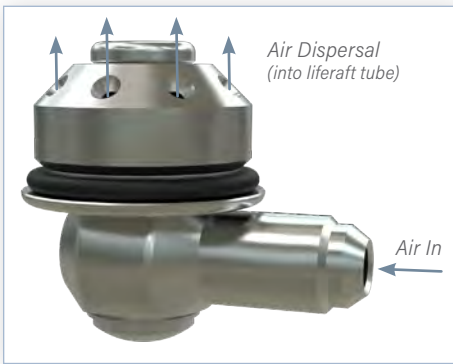
- Precision machined body
- Engraved product identification and manufacture date markings
- Very lightweight
- Individual packaging
- Customizable



ORDERING CODE	DESCRIPTION	THREAD	MATERIAL	WEIGHT	ORIGIN
TOAP-AAAA	Top Off Valve Assembly	1-5/16"	Delrin	0.05 lbs	USA

# INLET CHECK VALVES (CVAB)

Our inlet check valves are engineered to disperse high pressure/high velocity gases into the inflatable structure and to prevent backflow pressure loss from the inflatable structure following inflation. **The multiple valve outlet orifices are engineered to disperse inflation gases rapidly in a flow pattern which prevents ice build-up and/or damage to the inflatable structure due to frozen fabric.** The low profile 90-degree valve inlet swivel fitting is pressure balanced which allows the fitting to pivot during high pressure inflation of the inflatable structure preventing hose assembly kinking. Our inlet check valves are constructed of durable high-quality materials supporting an extended service life in a wide variety of demanding environmental conditions.



## FEATURES

- Precision machined components
- Engraved product marking
- Meets current ISO 15738 performance requirements
- Individual packaging
- Customizable



*\*Ships with protective cap*

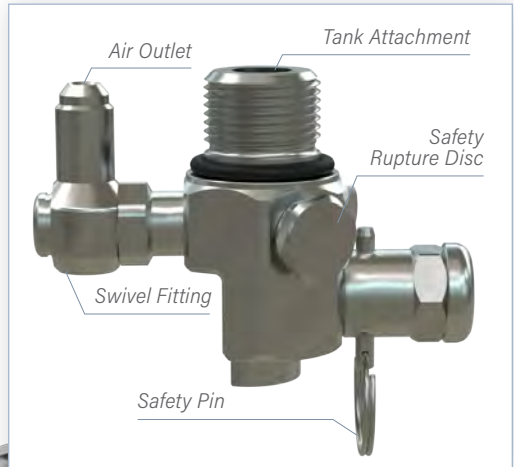
ORDERING CODE	DESCRIPTION	THREAD	MATERIAL	WEIGHT	ORIGIN
CVAB-XX	Inlet Check Valve Assembly	1-5/16"	Brass/Nickel, Stainless Steel, Ethylene Propylene, Nitrile	0.36 lbs	USA

# INFLATION VALVES (IVAB)

As one of the most important components in gas inflation systems, our inflation valves incorporate durable, plated and coated components that boost their performance and corrosion resistance in demanding environments. Units are lightweight compared to brass valves, and feature multiple actuation methods and safety burst pressures. All valves meet ISO 15738:2019 standards for maritime safety.

## FEATURES

- Compact
- Short flow path to prevent icing
- Springless (*inflates submerged*)
- Integrated relief (*safe discharge*)
- Charge port (*integrated check valve*)
- Floating Banjo (*no hose kinking even with high pressure*)



\*Ships with protective cap

ORDERING CODE	DESCRIPTION	THREAD	MATERIAL	WEIGHT	ORIGIN
IVAB-AAAA	Inflation Valve Assembly with Pull Cable	1-5/16"	Brass/Plated	1.54 lbs	USA



# ABOUT PRECISION TOOL TECHNOLOGIES

At Precision Tool Technologies, we combine our in-house, state-of-the-art technology with over 25 years of CNC machining expertise to deliver complex, high-quality parts quickly without breaking the bank. Based in Brainerd, Minnesota, we offer contract, quick-turn and 168 manufacturing capabilities for the optical, medical, electronics and industrial sectors.

Working out of our state-of-the-art, climate controlled manufacturing facilities, we routinely accommodate challenging surface finishes, tight tolerances and complex contours—turning around even your most complex parts quickly and cost-effectively.

**Our Mission:** “To be a solution provider and add value to our customers with first-rate quality and service while maintaining integrity, fair pricing and profitability.” — Jim Goerges, President

**Our Vision:** To stand out as an industry innovator by dedicating ourselves to quality, maintaining scheduled deliveries and keeping pace with technological developments in advanced manufacturing.

**Our Commitment:** No matter your engineering challenges, we're committed to providing on-time, high-quality products with unparalleled accuracy—helping you meet your unique production needs and minimize costs.



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