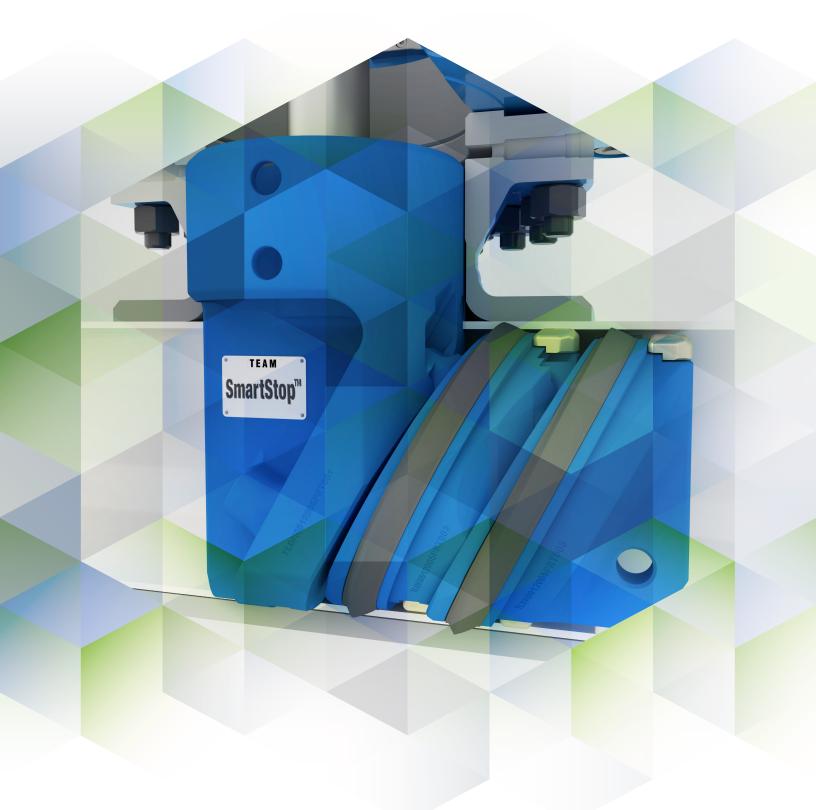
## TEAM®



SmartStop™ Double Block and Bleed Line Intervention Technology

# Double the Isolation. Double the Reliability.

### Innovative Design Enables Insertion Under Flow Conditions

#### **Monitors & Proves Isolation Integrity Throughout Project**

At TEAM, innovation never ends. Our patent pending SmartStop™ double block and bleed technology allows proven, high-integrity isolations to be made on critical assets safely and reliably.

Unlike conventional single barrier line stop systems, TEAM's SmartStop™ system features a dual seal system allowing isolation integrity to be physically confirmed ahead of breaking any down-stream containment. An integral bleed port allows the interspace between the primary and secondary seals to be vented, proving seal integrity on setting the tool and demonstrate zero energy throughout the duration of the isolation. The use of self-energized seals eliminates the need for seal activation using complex hydraulics.

#### **Reduced Fitting Requirement**

Double block and bleed isolations traditionally require at least two complete welded fittings and associated equipment to set independent line stops. TEAM's SmartStop™ technology enables zero energy to be proven using a single fitting, reduces the amount equipment utilized and allows proven isolations to be made more efficiently.

#### **Reliability Through Simplicity**

Innovative solutions don't have to be complex. TEAM's engineers focused relentlessly on reliability when designing the SmartStop™ technology, utilizing a patent pending self-energizing seal system. The innovative rail system utilizes fewer moving parts and minimal degrees of freedom resulting in more reliable insertion and retrieval.

#### **Enhanced Flow Capability**

Go with the flow. One of the major limitations of conventional pivoting isolation tools is the inability to tolerate flow during insertion. TEAM's SmartStop<sup>TM</sup> isolation tool features a unique, rigid rail system that is tolerant of significant flow during setting.

Flow Setting Capabilities	
Single line stop or double line stop with no bypass	9 ft/s gas, 4.5 ft/s liquid*
Double line stop with bypass through housing	12 ft/s gas, 6 ft/s liquid*
Double line stop with separate bypass	16 ft/s gas, 8 ft/s liquid*

<sup>\*</sup>Engineering assessment required above the listed values

#### **System Highlights**

- + Patent Pending
- + 4" 16" diameters available, 18" - 48" in production
- + Deployed through a single standard line stop fitting
- + No secondary reinforcement sleeve or hot tap required
- + Compact design with minimal degrees of freedom
- Innovative primary and secondary selfenergizing seals
- + Ability to internally monitor and vent the interspace between the seals
- + Designed to ANSI 900# @ 2220 psi and NACE MR0175 compliant



#### **System Specifications**

Specifications	Parameters
Size Range	4" – 16" diameters available, 18" – 48" in production
MAOP (Standard Equipment Package)	1480 psi @ 100°F (102 bar @ 38°C)*
MAOP (Line Stop Head)	2220 PSI @ 100°F (153 bar @ 38°C)
Temperature Range	32°F (min) to 180°F (max) (0°C to 82°C)*
Design	Designed to 900# class fully rated
Bypass Piping	Full size on size bypass housings
NACE Compliance	Configurable to suit client's requirements

<sup>\*</sup>Engineering assessment required above the listed values

#### **Largest and Most Diverse Inventory of Line Isolation Equipment**

TEAM's line stop fittings are the best in the industry. Our patent pending manufacturing cell produces the worlds most advanced fitting in terms of quality, repeatability and speed. TEAM's SmartStop™ system was developed to leverage these same standards. Being a global service provider, TEAM recognizes that clients need to re-enter existing fittings to provide repeat isolations. To facilitate this requirement and give end-users access to the latest technology, TEAM engineered its SmartStop™ system to be compatible with clients' previously installed line stop fittings.

#### **Seamless Service Solutions Backed by Decades of Experience**

TEAM is the global leader in hot tapping and line stopping technology, servicing clients for over 70+ years. Solutions include line stops for low, medium and high-pressure piping systems as well as vacuum systems. TEAM's line-stopping services assist during tie-ins, relocations, repairs, retrofits and routine maintenance.

Our in-service welding capabilities compliment the onstream work by providing an integrated solution that includes in-house engineers that support welding procedure development, welder qualification and field-welding crews.

TEAM's technicians are put through a rigorous method specific, multilevel certification and training process. The training process is comprised of both classroom and hands-on experience resulting in knowledgeable and skilled technicians.

Dedicated application engineering teams back field technicians and clients with advanced engineering software, machining and fabrication facilities.

From engineering assessment to implementation, TEAM can quickly deliver a complete engineering package, fabrication and service solution anytime, anywhere. Critical support is readily available globally, 24/7 to assist with scheduled or emergency projects.

#### Why TEAM?

- + Safety first, quality always
- + Single supplier for asset integrity and reliability solutions worldwide
- + Best-in-class training program and large team of expert certified technicians
- + Complete range of maintenance and repair services
- + Global engineering, manufacturing and technical support capabilities

TEAM experts are available 24 hours a day, 7 days a week, 365 days a year.

For more information, contact smartstop@teaminc.com.





