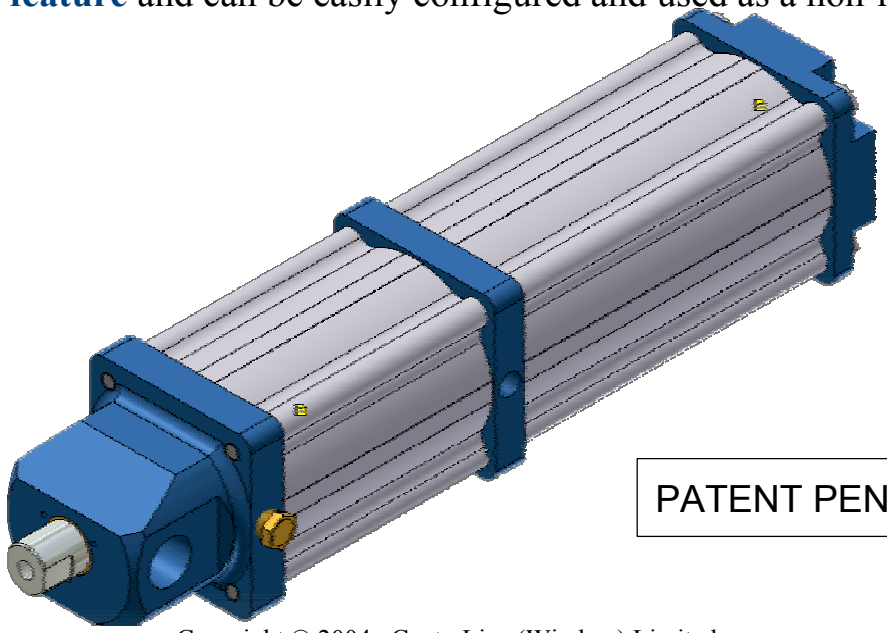
centerline®
STAAC CYLINDER

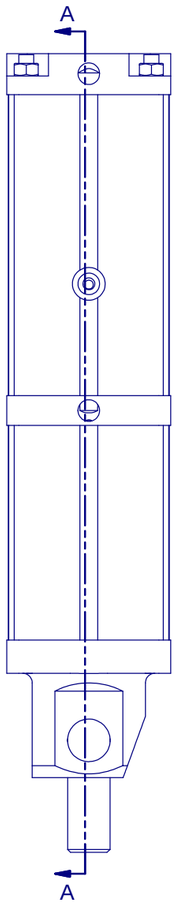
Second Generation STAAC™ Weld Cylinder

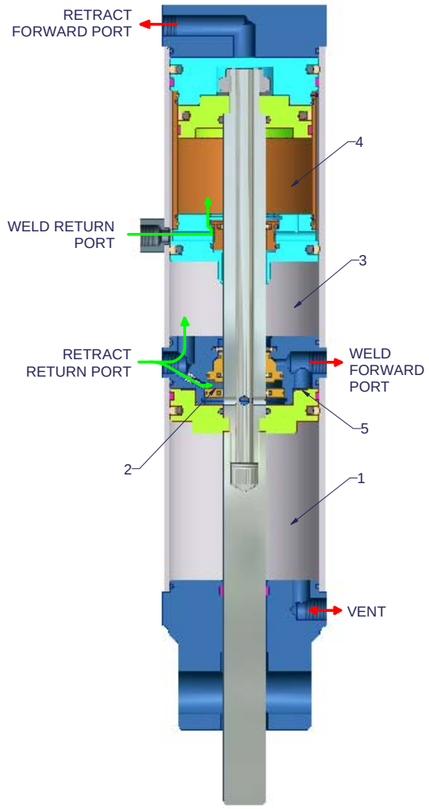
CenterLine's ongoing quest for discovering and developing product improvements has resulted in a second generation STAAC™ cylinder. The second generation architecture was specifically developed to **meet and surpass the benefits and performance of the original** STAAC™ pneumatic cylinder. The new STAAC™ cylinder is designed with a **decreased overall length**, while maintaining the **soft touch (low impact) operation**. The new cylinder will be almost equal in length to pneumatic cylinders without soft touch operation. The updated offering now encompasses a **cushion feature that is effective at all points of the welding stroke**. Additionally, the second generation is available in a **standard four port configuration**. A **push action version in single or dual flange variations** will also be available. The second generation will always include the **retract feature** and can be easily configured and used as a non-retractable cylinder.



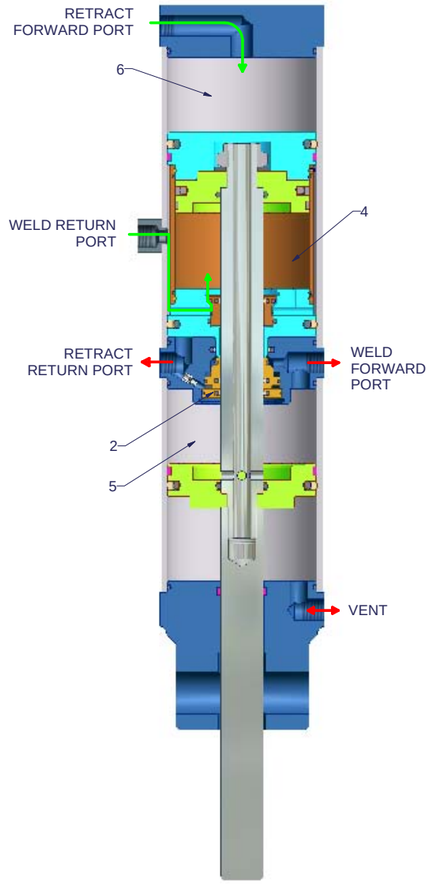
PATENT PENDING

Sequence of Operation

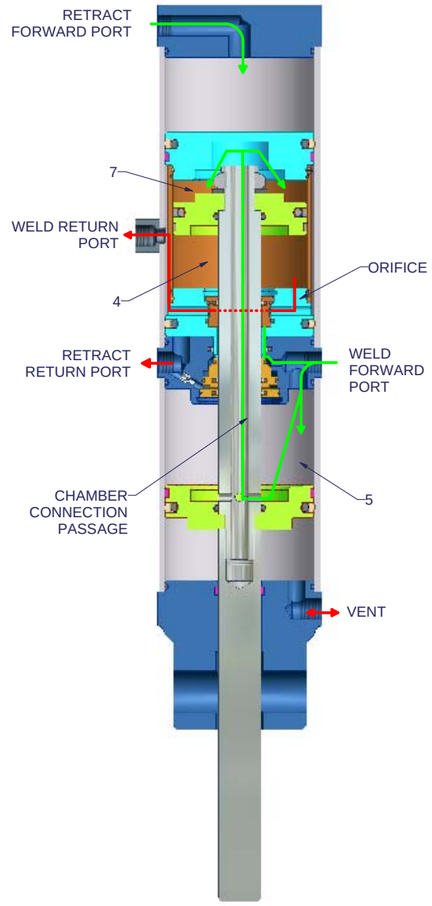




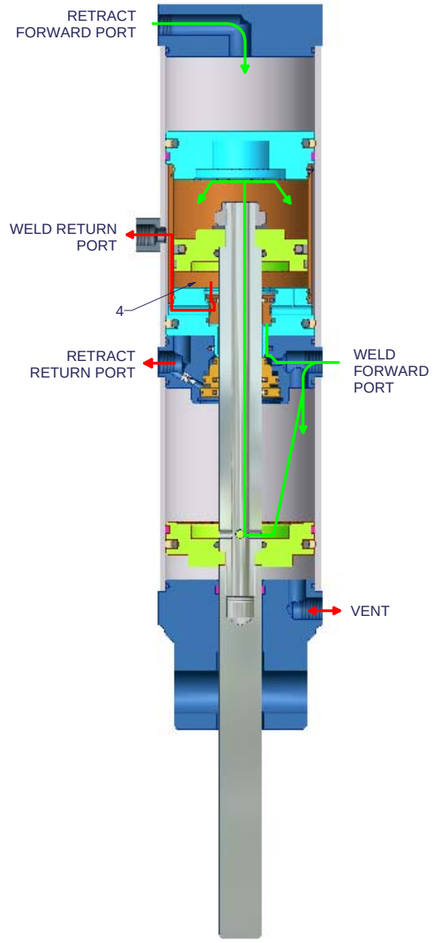
RETURNED



RETRACT
FORWARD



WELD FORWARD
(INTERMEDIATE)



WELD FORWARD
(CONTACT WORKPIECE)

PATENT PENDING

Exhaust (atmosphere)

Pressurized Air

Designed by	Checked by	Material	Date
dan.v			2/14/2003

TOLERANCES NOT OTHERWISE SPECIFIED

METRIC		IMPERIAL	
0.0 ± 0.5	FRACTION ± .03	0.000 ± 0.002	
0.00 ± 0.25	0.0 ± 0.02	0.0000 ± 0.0005	
0.000 ± 0.005	0.00 ± 0.01	ANGULAR ± 1°	

CENTERLINE
(WINDSOR) LTD.

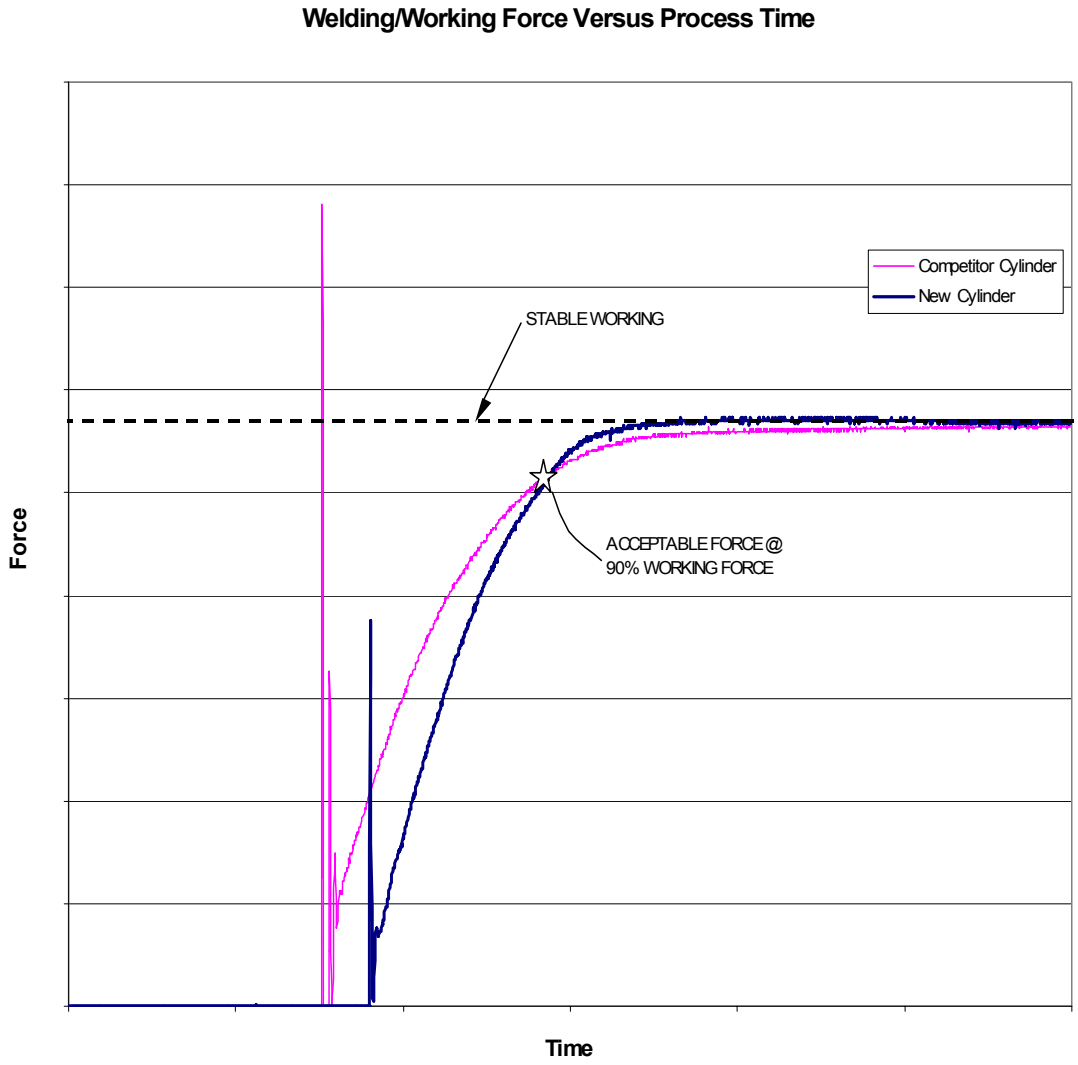
Prototype Version 1

Revision

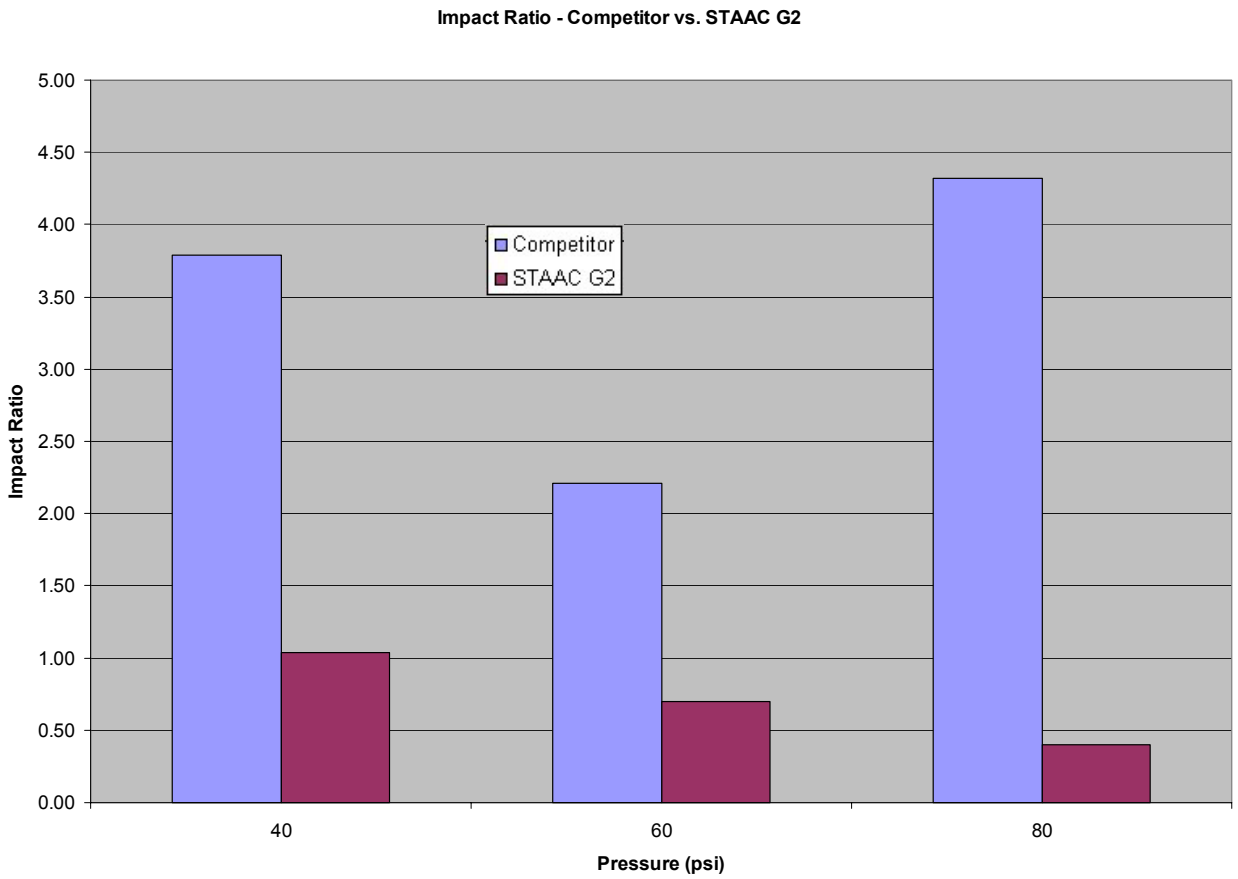
centerline®

STAAC CYLINDER

This chart represents a competitive cylinder versus a standard second generation STAAC™ cylinder. The STAAC™ cylinder **takes longer to close**, yet with a **dramatically lower impact**, still **reaches an acceptable weld force at the exact same time** as the competitor and actually **reaches a stabalized true weld force at a faster rate**.



STAAC CYLINDER



This chart demonstrates the STAAC™ cylinder's exceptional advantage in regards to impact. The soft touch low impact feature enables a **significantly lower impact** compared to the competition. It also illustrates that **as the pressure increases the impact actually decreases**, confirming that the STAAC™ cylinder is better **suited for high pressure applications**.