

## GripTight MAX<sup>®</sup> Test Plugs vs. Welded End Caps

### Welding End Caps to Perform Pressure Testing of Piping Systems is a Costly Endeavor

GripTight MAX High Pressure Test Plugs cut down time and man-hours needed to perform pressure testing by eliminating the need to weld on/cut off end caps, allowing operators to self-perform pressure tests significantly faster.

- **Save Time & Money** – complete tests in 85-95% less time vs. welded end cap procedures, no hot work permitting required
- **Reduce Labor Costs** – No welding required, frees up welders to work on profitable projects
- **Increase Productivity** – complete six times more test packages weekly
- **Efficient** – GripTight MAX plugs are reusable, further extending return on investment

#### Equipment Required to Install Test Plugs

Scaffolding

1 - Crane (8" plugs and up)

1 - Forklift/Bobcat

1 - Fitter

#### Equipment Required to Install Welded Test Caps

Scaffolding (hoarding and heat may be required based on ambient temp)

Pre-heat and PWHT equipment

Cold cut equipment

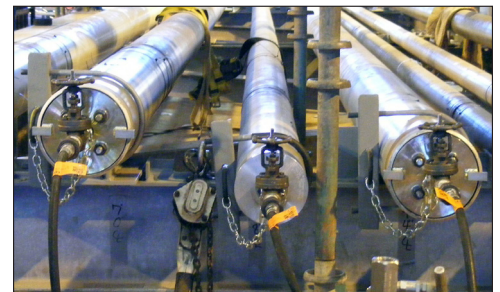
1 - Crane (8" caps c/w 2' pipe and up)

1 - Forklift/bobcat

1 - Clamshell (1 required for each pipe size)

1 - Welder (2 required on larger pipe sizes & wall thicknesses - 12" and up)

1 - Fitter/helper



### Typical Installation & Removal Times

NPS (DN)	Schedule	GripTight Test Plugs				Welded Caps				Labor Hours Saved per Pipe End
		Personnel Required	Installation Labor Hours	Removal Labor Hours	Total Labor Hours	Personnel Required (Welders & Fitters)	Installation Welding & Prep Time	Removal Cut Time	Total Labor Hours	
10" (DN250)	Std	1 fitter	0.4	0.4	0.8	1-2	5.6	1.2	6.8	6.0
	Sch 120	1 fitter	0.4	0.4	0.8	1-2	16.6	2.4	19.0	18.2
20" (DN500)	Std	1 fitter	0.7	0.7	1.4	2-3	11.8	3.2	15.0	13.6
	Sch 120	1 fitter	0.7	0.7	1.4	2-3	44.6	6.2	50.8	49.4
36" (DN900)	Std	1 fitter	1	1	2	2-3	26.6	12.9	39.4	37.4
	Sch 40	1 fitter	1	1	2	2-3	30.7	16.5	47.2	45.2