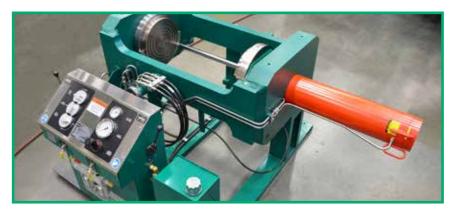
# HYDROPRO™ UNIVERSAL STRAIGHT VALVE TESTER | USV

## ROBUST. PRODUCTIVE. EASY TO USE.

The new HYDROPRO™ Universal Straight Valve Tester | USV can clamp a wide variety of straight-bodied valves and is designed to pair with the HYDROPRO™ Console for your valve testing needs.









## **ROBUST AND UNRIVALED QUALITY**

Every component in the USV pressure circuit is OEM-certified to the maximum specified testing pressure of the system for increased quality, durability and safety.

Heavy-duty console walls are built with 12-gage steel to protect internal components from damage, making this tester rugged and durable for long life and reliable operation in industrial environments.

CE certified and available world-wide! All CALDER products are available for sale world-wide, including in the European Union and other locations where CE certification is required.

Patent Pending Safety Interlock system with interlocking knobs and valve handles that will not release the clamp pressure until the test pressure valve is opened and internal test pressure is released.

ISO 9001:2015 certified manufacturing ensures all CALDER products are manufactured to the highest quality standards.

Standard 2-year warranty is the longest in the industry! We're confident in our quality, and we back it up! And – ask us how to extend your warranty out to 5 years . . .

# VERSATILE, EASY TO USE & INCREDIBLY PRODUCTIVE

Patented Easy-Out Seal Plates in the USV clamping fixture allows seal plates to be changed quickly and easily without the need to mess with special tools, bolts, etc.

Rapid advance and retract for quickly widening or narrowing the gap between the patented Easy-Out Seal Plates to rapidly transition from smaller valves to larger valves.

Quick-fill water circuit supports quick fill water capability included with HYDROPRO™ Console, allowing operators to fill valves up fast to reduce overall test time.

Single cylinder hydraulic clamping securely clamps both sides of valve in one motion.

Ability to test multiple valves concurrently when paired with the Calder HydroPro™ Console.

Use a USV clamping fixture to test on one port of the console while setting up the next test piece on the other port.

Unique valve tilting option makes it easy to find the best orientation for loading the valve, and hydraulically tilts the clamp fixture 90 degrees from horizontal to vertical, ensuring removal of all air prior to pressurizing the system.

Intuitive control panel layout makes performing a test procedure efficient and easy on the operator.

Extensive operating manual contains easy to follow tips and includes step-by-step set up instructions for various valve testing operations.

Only shop air needed for clamp and tilt functionality.

Upgradable and expandable. Our modular, common-platform design ensures that all equipment and accessories are plug-and-play compatible to meet your changing business needs.

Unique clamp box cut-outs are designed to accommodate valves with actuators.



## WHY CHOOSE CALDER



- The modular, highly configurable and field-upgradable design of the new CALDER tester platform is the most flexible and cost-effective way to manage all your valve testing requirements. It can grow and evolve your business
- The new CALDER test systems are designed to be more accurate and precise than other comparable products
- Unique to the valve testing industry, every CALDER component is OEM certified to the maximum pressure specification of the system, for enhanced safety, quality and durability
- CALDER offers users the ability to simultaneously test multiple valves with one system
- © Unmatched in the industry, all CALDER systems are backed by a 2 year warranty
- © CALDER has global reach and local support through CLIMAX's vast world-wide network
- © CALDER offers a complete line of Valve Repair Machines for lapping, grinding and specialized valve machining operations
- © CALDER offers a full portfolio of Test Barriers and Hydraulic Seal Clamps among other products
- CALDER offers SMARTEST™ intelligent data acquisition, analysis and control systems for use with our testers
- Custom turn-key system design services from the most experienced engineers and valve test experts in the business
- © Outrageously good customer service. We are available 24/7!



- © End-to-End Solutions; from products, consulting, engineering, custom design, training, start-up, after-sale service, spare parts, repair, and rentals, CALDER offers unmatched value in our industry
- All CALDER products are CE certified and manufactured in our ISO 9001:2015 certified factory
- All CALDER products are proudly made in the USA

# **SPECIFICATIONS**

			US\	/-2-25T				
(Se			ANSI Class					
-lang	Valve	150	300	600	900	1500	2500	
ace l	Size (nominal)		Maxir	num Test Pi	ressure PSI	(Bar)		
Valve Coverage (Flat / Raised Face Flanges)	Inch (mm)	450 PSI (31 Bar)	1125 PSI (76 Bar)	2250 PSI (155 Bar)	3375 PSI (233 Bar)	5625 PSI (388 Bar)	9375 PSI (646 Bar)	
lat / F	0.5 (12.7)	1	√	√	√	√	√	
ge (F	0.75 (19.1)	1	√	√	<b>V</b>	√	√	
overa	1 (25.4)	<b>V</b>	<b>V</b>	<b>V</b>	<b>V</b>	√	1	
We C	1.5 (38.1)	V	√	√	<b>V</b>	√		
Va	2 (50.8)	<b>V</b>	<b>V</b>	√	<b>V</b>	√		
	Hydraulic ra	m: 25 tons	(22.7 tonne	s)				
	Maximum o	pening betv	veen seal pl	ates: 18 inc	hes (457.2 ı	mm)		
Suc	Minimum o	pening betw	een seal pla	ates: 4 inche	es (101.6 mi	m)		
icatic	Maximum ir	nside width:	14 inches (	355.6 mm)				
Specifications	Approximate overall dimensions: 50 L x 56 W x 43 H inches (1270 L x 1422 W x 1092 H mm) - see dimensional drawing on page 4						1422 W	
	Approximat	e machine v	veight: 1,30	0 lbs (591 k	g)			
	Approximat	e shipped w	eight: 1500	lbs (682 kg	)			





# **SPECIFICATIONS**



			US\	/-6-80T			
	ANSI Class						
(sa	Valve	150	300	600	900	1500	2500
-lang	Size (nominal)		Maxir	num Test Pi	ressure PSI	(Bar)	
Valve Coverage (Flat / Raised Face Flanges)	Inch (mm)	450 PSI (31 Bar)	1125 PSI (76 Bar)	2250 PSI (155 Bar)	3375 PSI (233 Bar)	5625 PSI (388 Bar)	9375 PSI (646 Bar)
Raise	1 (25.4)		<b>V</b>	√	√	√	√
lat / F	2 (50.8)	√	<b>V</b>	√	√	√	√
ge (F	3 (76.2)	<b>V</b>	<b>V</b>	√	√	√	√
overa	4 (101.6)	<b>V</b>	<b>V</b>	√	√	√	
ve C	5 (127)	1	<b>V</b>	1	1		
Va	6 (152.4)	√	√	√			
	Hydraulic ra	am: 80 tons	(72.6 tonne	s)			
	Maximum c	pening betv	veen seal pl	ates: 24 inc	hes (609.6	mm)	
suc	Minimum o	pening betw	een seal pla	ates: 4 inche	es (101.6 m	m)	
icatic	Maximum ii	nside width:	18 inches (	457.2 mm)			
Specifications	Approximat W x 1117.6	e overall dir H mm) - se				es (1168.4 L	x 1828.8
	Approximat	e machine v	veight: 2,30	0 lbs (1043	kg)		
	Approximat	e shipped w	eight: 2,500	) lbs (1134 k	(g)		

			USV	-8-100T				
			ANSI Class					
(Se	Valve	150	300	600	900	1500	2500	
-lange	Size (nominal)		Maxir	num Test Pi	ressure PSI	(Bar)		
Valve Coverage (Flat / Raised Face Flanges)	Inch (mm)	450 PSI (31 Bar)	1125 PSI (76 Bar)	2250 PSI (155 Bar)	3375 PSI (233 Bar)	5625 PSI (388 Bar)	9375 PSI (646 Bar)	
Raisec	1 (25.4)			√	√	√	√	
at / F	2 (50.8)		√	√	√	√	√	
ge (F	3 (76.2)	√	<b>V</b>	√	√	√	√	
vera	4 (101.6)	<b>V</b>	<b>V</b>	√	1	√		
Ve C	5 (127)	√	<b>V</b>	√	1	√		
Val	6 (152.4)	√	√	√	√			
	8 (203.2)	√	√	√				
	Hydraulic ra	m: 100 ton:	s (90.7 tonn	es)				
	Maximum o	pening betv	veen seal pl	ates: 30 inc	hes (762 m	m)		
Suc	Minimum o	pening betw	een seal pla	ates: 6 inche	es (152.4 m	m)		
ficati	Maximum ir	nside width:	26-1/8 inch	es (663.6 m	ım)			
Specifications	Approximate overall dimensions: 69 L x 82 W x 39 H inches (1752.6 L x 2082.8 W x 990.6 H mm) - see dimensional drawing on page 4							
	Approximat	e machine v	veight: 3,50	0 lbs (1588	kg)			
	Approximat	e shipped w	eight: 3,700	) lbs (1678 l	(g)			

			USV-	12-150T				
			ANSI Class					
	Valve	150	300	600	900	1500	2500	
	Size (nominal)		Maxir	num Test Pi	ressure PSI	(Bar)		
valve Coverage (Flat / Raised Face Flanges)	Inch (mm)	450 PSI (31 Bar)	1125 PSI (76 Bar)	2250 PSI (155 Bar)	3375 PSI (233 Bar)	5625 PSI (388 Bar)	9375 PSI (646 Bar)	
-ace	1 (25.4)				√	√	√	
ised I	2 (50.8)		√	√	√	<b>V</b>	√	
/ Ra	3 (76.2)		√	√	√	√	√	
(Flat	4 (101.6)	1	1	√	1	√	√	
erage	5 (127)	√	1	√	1	√		
Co	6 (152.4)	√	√	√	√	√		
Valve	8 (203.2)	√	√	√	√			
	10 (254)	√	√	√				
	12 (304.8)	1	√					
	Hydraulic ra	m: 150 ton:	s (136.1 ton	nes)				
	Maximum o	pening betv	veen seal pl	ates: 33 inc	hes (838.2	mm)		
suo				ates: 5 inche		)		
ficati	Maximum ir	Maximum inside width: 29-5/8 inches (752.5 mm)						
Specifications				3 L x 92 W x nal drawing		es (1854.2 L	. x 2336.8	
	Approximat	e machine v	veight: 4,80	0 lbs (2177	kg)			
	Approximat	e shipped w	eight: 5,000	) lbs (2268 l	(g)			

			USV-	16-200T			
				ANSI	Class		
	Valve	150	300	600	900	1500	2500
	Size (nominal)		Maxir	num Test Pi	ressure PSI	(Bar)	
Valve Coverage (Flat / Raised Face Flanges)	Inch (mm)	450 PSI (31 Bar)	1125 PSI (76 Bar)	2250 PSI (155 Bar)	3375 PSI (233 Bar)	5625 PSI (388 Bar)	9375 PSI (646 Bar)
ace F	2 (50.8)			√	√	<b>V</b>	√
sed F	3 (76.2)		√	√	√	<b>V</b>	√
/ Rai	4 (101.6)	<b>V</b>	√	√	√	√	√
(Flat	5 (127)	<b>V</b>	√	√	√	√	√
rage	6 (152.4)	<b>V</b>	√	√	√	√	
Cove	8 (203.2)	V	√	√	√		
Valve	10 (254)	<b>V</b>	√	√			
	12 (304.8)	<b>V</b>	√	√			
	14 (355.6)	V	√				
	16 (406.4)	√	√				
	Hydraulic ra	m: 200 ton:	s (181.4 ton	nes)			
	Maximum o	pening betv	veen seal pl	ates: 37 inc	hes (939.8 i	mm)	
ons	Minimum or	pening betw	een seal pla	ates: 5 inche	es (127 mm)	)	
icati	Maximum ir	side width:	29-1/2 inch	es (749.3 m	m)		
Specifications	Approximate 2692.4 W x					`	Lx
	Approximate	e machine v	veight: 6,80	0 lbs (3084	kg)		
	Approximat	e shipped w	eight: 7,000	) lbs (3175 l	(g)		

All dimensions should be considered reference. Contact your CALDER Representative for precision dimensions. Specifications are subject to change without notice. There are no systems or components on this machine that are capable of producing hazardous EMC, UV or other radiation hazards. The machine does not use lasers nor does it create hazardous materials such as gasses or dust.

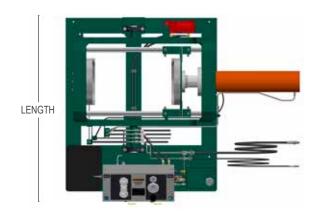
# **SPECIFICATIONS**

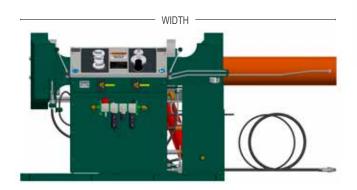


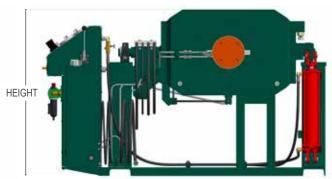
	I		USV-	24-300T				
			ANSI Class					
	Valve	150	300	600	900	1500	2500	
nges,	Size (nominal)		Maxir	num Test Pi	ressure PSI	(Bar)		
/alve Coverage (Flat / Raised Face Flanges)	Inch (mm)	450 PSI (31 Bar)	1125 PSI (76 Bar)	2250 PSI (155 Bar)	3375 PSI (233 Bar)	5625 PSI (388 Bar)	9375 PSI (646 Bar)	
sed F	8 (203.2)	√	√	<b>V</b>	√	√		
/ Rai	10 (254)	√	√	√	√			
(Flat	12 (304.8)	√	√	√	√			
ərage	14 (355.6)	√	√	√				
Cove	16 (406.4)	√	√	<b>V</b>				
Valve	18 (457.2)	√	√					
	20 (508)	√	√					
	24 (609.6)	√						
	Hydraulic ra	am: 300 ton:	s (272 tonne	es)				
	Maximum o	pening betv	veen seal pl	ates: 45 inc	hes (1143 n	nm)		
Suc	Minimum o	pening betw	een seal pla	ates: 10 inch	nes (254 mn	n)		
icati	Maximum inside width: 38 inches (965.2 mm)							
Specifications	Approximat 3327.4 W x		nensions: 9 nm) - see di			`	Lx	
	Approximat	e machine v	veight: 20,0	00 lbs (9072	2 kg)			
	Approximat	e shipped w	eight: 20,50	00 lbs (9299	kg)			

			USV-	24-400T					
			ANSI Class						
	Valve	150	300	600	900	1500	2500		
nges,	Size (nominal)		Maxir	mum Test Pi	ressure PSI	(Bar)			
valve Coverage (Flat / Raised Face Flanges)	Inch (mm)	450 PSI (31 Bar)	1125 PSI (76 Bar)	2250 PSI (155 Bar)	3375 PSI (233 Bar)	5625 PSI (388 Bar)	9375 PSI (646 Bar)		
sed F	8 (203.2)	√	√	√	√	√	√		
/ Rai	10 (254)	√	√	√	√	√			
(Flat	12 (304.8)	√	√	√	√				
erage	14 (355.6)	1	√	√	√				
Cov	16 (406.4)	1	√	√					
Valve	18 (457.2)	√	√						
	20 (508)	√	√						
	24 (609.6)	√	√						
	Hydraulic ra	am: 400 ton:	s (362.9 ton	nes)					
	Maximum o	pening betv	veen seal pl	ates: 46 inc	hes (1168.4	mm)			
Suc	Minimum o	pening betw	een seal pla	ates: 10 inch	nes (254 mn	n)			
icati	Maximum inside width: 38 inches (965.2 mm)								
Specifications		Approximate overall dimensions: 91 L x 131 W x 74 H inches (2311.4 L x 3327.4 W x 1879.6 H mm)- see dimensional drawing below							
	Approximat	e machine v	veight: 20,0	00 lbs (9072	2 kg)				
	Approximat	e shipped w	eight: 20,50	00 lbs (9299	kg)				

## Dimensional Drawing (see specifications for model specific dimensions)







All dimensions should be considered reference. Contact your CALDER Representative for precision dimensions. Specifications are subject to change without notice. There are no systems or components on this machine that are capable of producing hazardous EMC, UV or other radiation hazards. The machine does not use lasers nor does it create hazardous materials such as gasses or dust.

# **USV CONFIGURATIONS**



To configure your HYDROPRO™ USV simply select from the options you need then contact your CALDER representative.

Easy-out seal plate holder (optional)———Clamp box

The HydroPro™ USV comes standard with 10,000 PSI (679 bar) rated hydraulic clamping components and plumbing, air-operated hydraulic pump rated to 10,700 PSI (738 bar) preset to 9850 PSI (679 bar), safety interlock systems, clamp pressure gauge, hydraulic reservoir, air regulator kit, quick water fill inlet line, hydraulic clamping chart and operators manual.

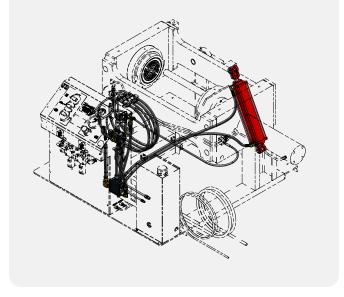
## Clamp box Easy-out seal plate holder (optional)-Seal plate (top) Clamp cylinder/ram Tilt cylinder (optional) Clamp control panel Seal plate Tilt control (optional) (bottom) Inlet to bottom plate 1/2 inch NPT Inlet to top plate 1/4 inch NPT Ram rapid control Inlet air prep (shutoff, filter, Base frame lubricator)

## HYDROPRO™ USV

Model	Part Number	Fixed seal plates	Easy- out holder	Non- tilt	Tilt
	90206	V		√	
USV-2-25T	90650	$\checkmark$			$\checkmark$
037-2-231	90652		√	√	
	90651		√		V
	88581	V		√	
USV-6-80T	88576	<b>√</b>			<b>√</b>
037-0-001	88591		√	√	
	88572		√		1
	88273	V		√	
USV-8-100T	88271	V			1
037-0-1001	88272		√	√	
	89021		√		1
	87991	<b>V</b>		√	
USV-12-150T	87989	V			1
037-12-1301	87990		√	√	
	87988		√		√
	88583	V		√	
USV-16-200T	88577	V			<b>V</b>
007-10-2001	88592		√	√	
	88573		√		<b>V</b>
	88586	V		√	
USV-24-300T	88578	V			V
U3V-24-3UUT	88593		√	√	
	88574		√		<b>V</b>

Model	Part Number	Fixed seal plates	Easy- out holder	Non- tilt	Tilt
	88590	$\sqrt{}$		$\sqrt{}$	
USV-24-400T	88579	V			√
USV-24-4001	88594		<b>V</b>	<b>V</b>	
	88575		V		√

Tilt – rotates clamped valve 90 degrees from the horizontal to vertical position



# **USV ACCESSORIES**

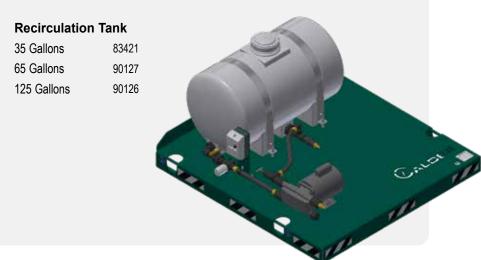


Our patented Easy-Out Seal Plate Holders allow quick change-out of seal plates from flanged to other valve end type connections without the use of special tools, bolts, nuts or gaskets.

Easy-out seal plates for FF/RF flanges, includes set of two plates (requires easy-out holder option)

Model	Part Number	
USV-6-80T	88666	
USV-8-100T	88357	
USV-12-150T	87996	
USV-16-200T	88473	
USV-24-300T	88671	
USV-24-400T	88671	

The **CALDER Recirculation Tank** offers a solution for supplying and storing fluid used for testing valves. The onboard pump supplies 3.3 gpm at 70 psi to the console. The return port on the tank allows connection to the drain line, to reclaim the fluid for the next test. The Recirculation Tank is compatible with the CALDER Universal Straight Valve Tester | USV and the Universal Flanged Valve Tester | UFV.



# **APPLICATIONS**

### Industries:

Oil & Gas (Upstream, Pipeline, Downstream) Power generation (Nuclear, Geothermal, Fossil) Military (Nuclear) Chemical processing Valve service industry Valve manufacturing

## **Typical Applications:**

Gate Valve Testing Globe Valve Testing Check Valve Testing Ball Valve Testing Butterfly Valve Testing Blind Flanges Hydraulic Flange Seals Safety Relief Valve Testing

# CAUDER AVAILUE IN STIT AND CARRED CRARE THROUGH AND CARRED











## The Right Training by the Right People!

Our engineers and valve test experts have been teaching the fundamentals and fine points of valve testing operation for as long as we've been inventing and building advanced valve testing systems.

## **Professional, Experienced Instructors**

All training programs are taught by our professional and experienced OEM CALDER trainers. Your instructor will provide valuable information on operator safety, valve test system set-up, operation, and how to keep your valve tester in top operating condition.



## CALDER CARE™ Program

- ✓ Parts Replacement Guarantee All parts replaced for the term of the package
- ✓ Technical Assistance by Phone A CALDER CARE<sup>TM</sup> Hotline for 24/7 US-based expert advice from repair professionals
- On-Site Preventive Maintenance Yearly PM visit by a Certified CALDER Service Technician
- Extended Warranty Coverage CALDER is the only company in our industry with a standard 2 year warranty and offering extended warranty programs out to 5 years!

Sign up today for training at one of our **seven** Global CLIMAX | CALDER training centers.

- Portland, Oregon
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- · Baton Rouge, Louisiana
- · Cleveland, Ohio
- Manchester, United Kingdom
- Düren, Germany
- · Dubai, United Arab Emirates



# **GLOBAL LOCATIONS**



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