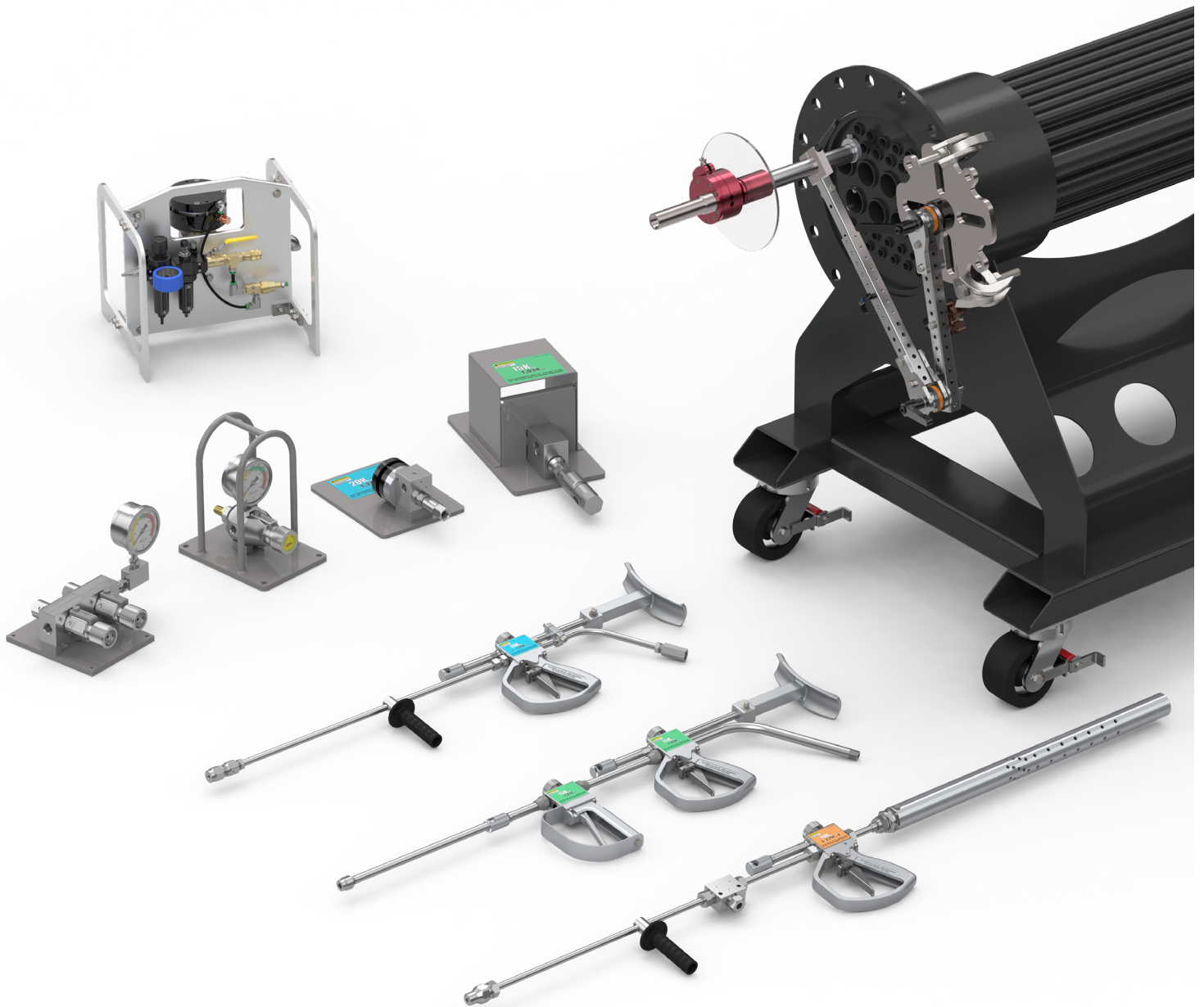


SPECIALTY PRODUCTS

Water Blasting Parts and Equipment

Tube Nozzles | Surface Nozzles | Lances & Related | Control Guns
Replacement Pump Parts | Accessories



ADVANCED PRESSURE SYSTEMS

701 South Persimmon Street, Suite J, Tomball, TX 77375

Phone: (281) 290-9950 • Fax: (281) 290-9952

Email orders: sales-team@advancedpressuresystems.com

Website: <http://www.advancedpressuresystems.com>

Company Information

WHO WE ARE & HOW WE CAN HELP YOU



Peter Goldsmith
Managing Director



Fabian Villanueva
International Sales



David Mitchell
Director of Operations



Johnny Matsoukas
La Porte Office
Branch Manager



Kent Maddie
VP - Sales & Marketing



Sheree Paramore
VP - Production &
Inventory Control



Kenny Kujawa
VP - Manufacturing



Nick Ragan
Customer Service /
Sales Rep

Established in 2007, Advanced Pressure Systems (APS) manufactures a complete line of high pressure water blasting equipment and accessories for pressures up to 40,000 psi. APS provides equipment used for a wide variety of industrial and environmental cleaning applications, as well as consulting and engineering services. Available equipment includes, but is not limited to:

- Pump replacement parts
- Control guns
- Flow divider valves and pressure regulating valves
- Nozzles
- Fittings
- Hoses and flex lances from both Parker and Spir Star®
- Safety products
- StoneAge® tools

APS stocks a large inventory of parts suited for a variety of applications. In-house precision machining and thorough quality control allow APS to offer equipment at the most comparable price in the industry.

With two stocking locations, direct sales to customers within the United States, and a sales staff that can be reached on weekends, APS' availability is unmatched by other suppliers. We are also represented internationally by distributors in Canada, Europe, Asia, Africa, Australia and New Zealand. Working with qualified local distributors allows APS to maximize the number of customers we reach without compromising the quality of our products or services.

Industry knowledge and experience make APS the most reliable source of water blast equipment. Our customer service team is quick to respond and thorough, from selection of equipment to delivery. We are dedicated to ensuring our customers have the equipment they need, when they need it. APS stands for *Always Providing Service*.

**Accessories • Control Guns • Fittings • Rigid Lances
Flex Lances • Hoses • Nozzles • Pump Parts**

Advanced Pressure Systems (APS) places a high degree of emphasis on Quality Assurance for its products. Our inspection processes for our in-house manufactured components follow industry best practices for machine shops. First article, in process and final inspections are carried out using cutting edge technology as well as the traditional and time-tested equipment and methods.



Inspection Equipment includes:

- OPTIV 3 Classic Optical Coordinate Measuring Machine (CMM)
- Keyence IM-6020 Image Dimension Measuring System (IM)
- Thermo Scientific Niton XRF Analyzer
- Mitutoyo PH-A14 Optical Comparator
- Wilson Rockwell Tester
- Faro Arm
- Mitutoyo SJ0201 Profilometer
- Sunnen Precision Bore Gauges PG-810 and PG-700
- Mitutoyo Linear Height 600
- *And a full complement of precision micrometers, calipers, surface plates, digital height indicators, standard plug, ring & thread gauges*



Company Information

CONDITIONS OF SALE & WARRANTY

You are responsible for your own safety. Advanced Pressure Systems (APS) publishes guides for the safe use of water blasting equipment. Please read them.

We also strongly advise that all personnel are fully conversant with the "Recommended Practices for the Use of Manually Operated High Pressure Water Jetting Equipment", published by the Water Jet Technology Association. These may be obtained free of charge by contacting Advanced Pressure Systems, L.P. toll free: 1-877-290-4277

Conditions of Sale and Warranty

General: These terms, conditions and warranty provisions are applicable to all products contained in this catalog and may not be varied, except in writing by a partner of Advanced Pressure Systems, L.P.

Terms of Sale:

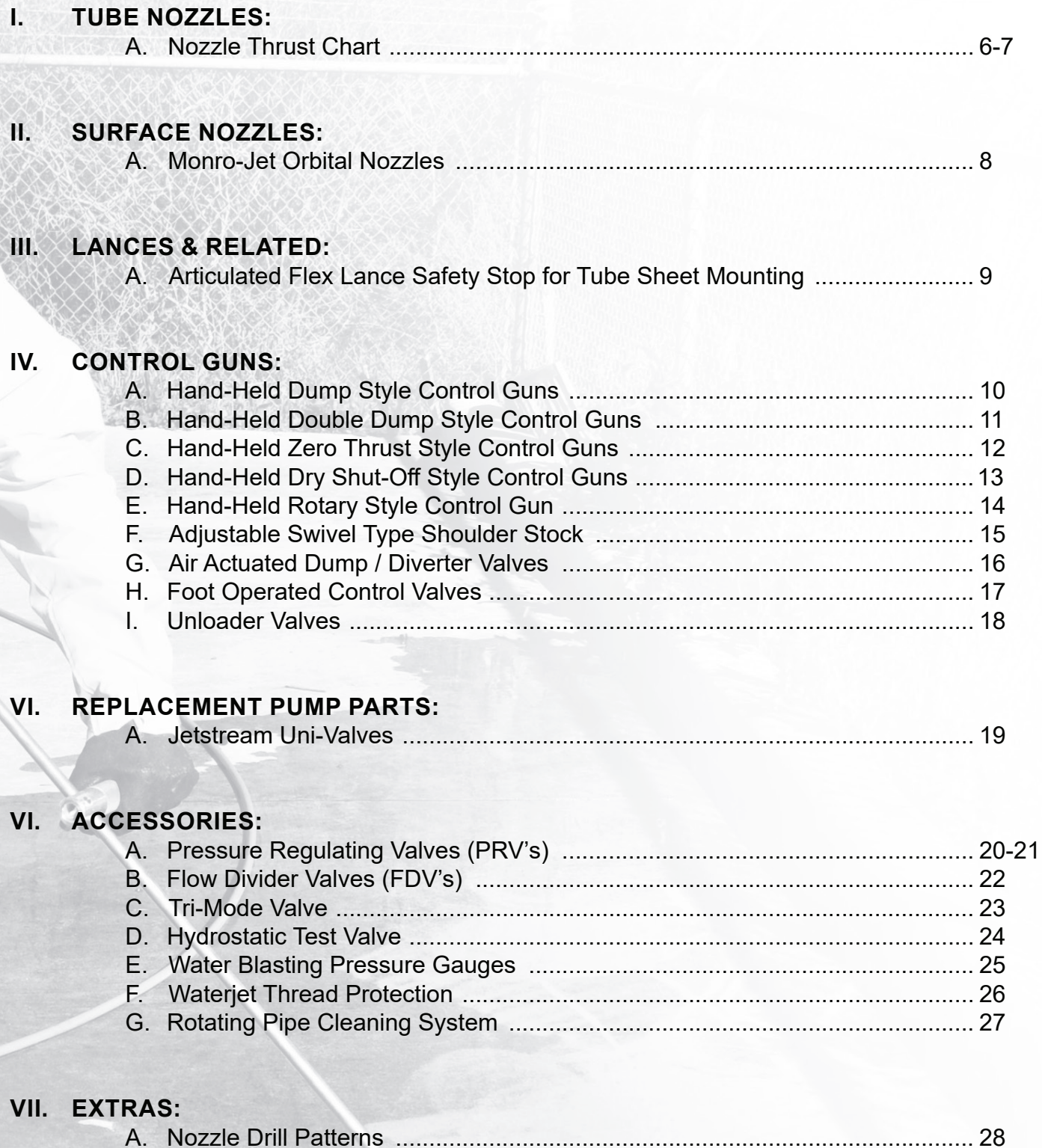
1. All sales are FOB manufacturers plant, Houston, Texas, and are priced and must be paid for in US dollars.
2. The purchaser agrees to hold Advanced Pressure Systems, L.P. (dba Advanced Pressure Systems) harmless for any and all claims arising from the misuse or misapplication of any product manufactured or supplied by Advanced Pressure Systems.
3. Products returned for credit will be subject to a 15% restocking charge. Only standard products will be accepted for restocking. All sales of non-standard items are final.
4. Payment may be made by credit cards issued by VISA or MASTERCARD. Payment by credit cards issued by AMERICAN EXPRESS will be subject to a 3% service charge.

Warranty: The following classes of products carry the warranty indicated. Any component included in an assembled product which is subject to wear is not warranted. Products which have been subject to abuse including misapplication, corrosion, excessive pressure, over-tightening and galling of screw threads will not be accepted for replacement under warranty. Products not manufactured by Advanced Pressure Systems will carry the warranty of the respective manufacturer.

1. **Hose** - Not warranted. Coupling may be warranted by manufacturer.
2. **Rigid Lances** - Ninety (90) days from date of shipment.
3. **Plungers & Pump Packing** - Not warranted.
4. **Control Guns, Flow Divider Valves & Flow Control Valves** - Ninety (90) days from date of shipment.
5. **Relief Valves** - One-hundred eighty (180) days from date of shipment.
6. **Nozzles and Nozzle Inserts / Orifices** - Not warranted.
7. **Fittings, Connectors & Couplings** - One-hundred eighty (180) days from date of shipment.

Shipping Costs: Orders may be shipped prepaid by any regular available means, and the cost will be paid by the customer. Other shipping costs, including but not limited to, insurance for the full retail value of the products, packaging, crating, and any other handling costs will be billed to the customer. If the customer collects the products from the Houston plant there will not be any shipping charges.

Payment: All invoices are due net thirty (30) days from date of shipment. Any invoices which are more than thirty (30) days past due will result in the account of the customer concerned to be placed on hold.



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Tube Nozzles

NOZZLE THRUST CHART

PSI	1 gpm	2 gpm	3 gpm	4 gpm	5 gpm	6 gpm	7 gpm	8 gpm	9 gpm	10 gpm	11 gpm	12 gpm	13 gpm	14 gpm	15 gpm	16 gpm	17 gpm	18 gpm	19 gpm	20 gpm	21 gpm	22 gpm	23 gpm
1,000	1.7	3.3	5.0	6.7	8.3	10.0	11.7	13.3	15.0	16.7	18.3	20.0	21.7	23.3	25.8	26.7	28.3	30.0	31.7	33.3	35.0	36.7	38.3
2,000	2.4	4.7	7.1	9.4	11.8	14.1	16.5	18.9	21.2	23.6	25.9	28.3	30.6	33.0	35.4	37.7	40.1	42.4	44.8	47.1	49.5	51.8	54.2
3,000	2.9	5.8	8.7	11.5	14.4	17.3	20.2	23.1	26.0	28.9	31.8	34.6	37.5	40.4	40.3	46.2	49.1	52.0	54.8	57.7	60.6	63.5	66.4
4,000	3.3	6.7	10.0	13.3	16.7	20.0	23.3	26.7	30.0	33.3	36.7	40.0	43.3	46.7	50.0	53.3	56.7	60.0	63.3	66.7	70.0	73.3	76.7
5,000	3.7	7.5	11.2	14.9	18.6	22.4	26.1	29.8	33.5	37.3	41.0	44.7	48.4	52.2	55.9	59.6	63.3	67.1	70.8	74.5	78.3	82.0	85.7
6,000	4.1	8.2	12.2	16.3	20.4	24.5	28.6	32.7	36.7	40.8	44.9	49.0	53.1	57.1	61.2	65.3	69.4	73.5	77.6	81.6	85.7	89.8	93.9
7,000	4.4	8.8	13.2	17.6	22.0	26.5	30.9	35.3	39.7	44.1	48.5	52.9	57.3	61.7	66.1	70.5	75.0	79.4	83.8	88.2	92.6	97.0	101.4
8,000	4.7	9.4	14.1	18.9	23.6	28.3	33.0	37.7	42.4	47.1	51.8	56.6	61.3	66.0	70.7	75.4	80.1	84.8	89.6	94.3	99.0	103.7	108.4
9,000	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0	90.0	95.0	100.0	105.0	110.0	115.0
10,000	5.3	10.5	15.8	21.1	26.3	31.6	36.9	42.2	47.4	52.7	58.0	63.2	68.5	73.8	79.0	84.3	89.6	94.9	100.1	105.4	110.7	115.9	121.2
11,000	5.5	11.1	16.6	22.1	27.6	33.2	38.7	44.2	49.7	55.3	60.8	66.3	71.9	77.4	82.9	88.4	94.0	99.5	105.0	110.5	116.1	121.6	127.1
12,000	5.8	11.5	17.3	23.1	28.9	34.6	40.4	46.2	52.0	57.7	63.5	69.3	75.0	80.8	86.6	92.4	98.1	103.9	109.7	115.5	121.2	127.0	132.8
13,000	6.0	12.0	18.0	24.0	30.0	36.1	42.1	48.1	54.1	60.1	66.1	72.1	78.1	84.1	90.1	96.1	102.1	108.2	114.2	120.2	126.2	132.2	138.2
14,000	6.2	12.5	18.7	24.9	31.2	37.4	43.6	49.9	56.1	62.4	68.6	74.8	81.1	87.3	93.5	99.8	106.0	112.2	118.5	124.7	130.9	137.2	143.4
15,000	6.5	12.9	19.4	25.8	32.3	38.7	45.2	51.6	58.1	64.5	71.0	77.5	83.9	90.4	96.8	103.0	109.7	116.2	122.6	129.1	135.5	142.0	148.4
16,000	6.7	13.3	20.0	26.7	33.3	40.0	46.7	53.3	60.0	66.7	73.3	80.0	86.7	93.3	100.0	106.0	113.3	120.0	126.7	133.3	140.0	146.6	153.3
17,000	6.9	13.7	20.6	27.5	34.4	41.2	48.1	55.0	61.8	68.7	75.6	82.5	89.3	96.2	103.1	109.0	116.8	123.7	130.5	137.4	144.3	151.2	158.0
18,000	7.1	14.1	21.2	28.3	35.4	42.4	49.5	56.6	63.6	70.7	77.8	84.8	91.9	99.0	106.1	113.0	120.0	127.3	134.3	141.4	148.5	155.5	162.6
19,000	7.3	14.5	21.8	29.1	36.3	43.6	50.8	58.1	65.4	72.6	79.9	87.2	94.4	101.0	109.0	116.2	123.5	130.8	138.0	145.3	152.5	159.8	167.1
20,000	7.5	14.9	22.4	29.8	37.3	44.7	52.2	59.6	67.1	74.5	82.0	89.4	96.0	104.3	111.8	119.2	126.7	134.1	141.6	149.1	156.5	164.0	171.4
36,000	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	210.0	220.0	230.0
40,000	10.5	21.1	31.6	42.2	52.7	63.2	73.8	84.3	94.9	105.4	115.9	126.5	137.0	147.6	158.1	168.6	179.2	189.7	200.3	210.8	221.3	231.9	242.4

Tube Nozzles

NOZZLE THRUST CHART (CONTINUED)

PSI	24 gpm	25 gpm	26 gpm	27 gpm	28 gpm	29 gpm	30 gpm	31 gpm	32 gpm	33 gpm	34 gpm	35 gpm	36 gpm	37 gpm	38 gpm	39 gpm	40 gpm	41 gpm	42 gpm	43 gpm	44 gpm	45 gpm
1,000	40.0	41.7	43.3	45.0	46.7	48.3	50.0	51.7	53.3	55.0	56.7	58.3	60.0	61.7	63.3	65.0	66.7	68.3	70.0	71.7	73.3	75.0
2,000	56.6	58.9	61.3	63.6	66.0	68.3	70.7	73.1	75.4	77.8	80.1	82.5	84.8	87.2	89.6	91.9	94.3	96.6	99.0	101.3	103.7	106.1
3,000	69.3	72.2	75.0	77.9	80.8	83.7	86.6	89.5	92.4	95.3	98.1	101.0	103.9	106.8	109.7	112.6	115.5	118.3	121.2	124.1	127.0	129.9
4,000	80.0	83.3	86.7	90.0	93.3	96.7	100.0	103.3	106.7	110.0	113.3	116.7	120.0	123.3	126.7	130.0	133.3	136.6	140.0	143.3	146.6	150.0
5,000	89.4	93.2	96.9	100.6	104.3	108.1	111.8	115.5	119.2	123.0	126.7	130.4	134.1	137.9	141.6	145.3	149.1	152.8	156.5	160.2	164.0	167.7
6,000	98.0	102.0	106.1	110.2	114.3	118.4	122.5	126.5	130.6	134.7	138.8	142.9	147.0	151.0	155.1	159.2	163.3	167.4	171.4	175.5	179.6	183.7
7,000	105.8	110.2	114.6	119.0	123.5	127.9	132.3	136.7	141.1	145.5	149.9	154.3	158.7	163.1	167.5	172.0	176.4	180.8	185.2	189.6	194.0	198.4
8,000	113.1	117.8	122.5	127.3	132.0	136.7	141.4	146.1	150.8	155.5	160.3	165.0	169.7	174.4	179.1	183.8	188.5	193.3	198.0	202.7	207.4	212.1
9,000	120.0	125.0	130.0	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0	180.0	185.0	190.0	195.0	200.0	205.0	210.0	215.0	220.0	225.0
10,000	126.5	131.7	137.0	142.3	147.6	152.8	158.1	163.4	168.6	173.9	179.2	184.4	189.7	195.0	200.3	205.5	210.8	216.1	221.3	226.6	231.9	237.1
11,000	132.6	138.2	143.7	149.2	154.8	160.3	165.8	171.3	176.9	182.4	187.9	193.4	199.0	204.5	210.0	215.6	221.1	226.6	232.1	237.7	243.2	248.7
12,000	138.5	144.3	150.1	155.9	161.6	167.4	173.2	179.0	184.7	190.5	196.3	202.0	207.8	213.6	219.4	225.1	230.9	236.7	242.5	248.2	254.0	259.8
13,000	144.2	150.2	156.2	162.2	168.2	174.2	180.3	186.3	192.3	198.3	204.3	210.3	216.3	222.3	228.3	234.3	240.3	246.3	252.4	258.4	264.4	270.4
14,000	149.6	155.9	162.1	168.4	174.6	180.8	187.1	193.3	199.5	205.8	212.0	218.2	224.5	230.7	236.9	243.2	249.4	255.6	261.9	268.1	274.4	280.6
15,000	154.9	161.4	167.8	174.3	180.7	187.2	193.6	200.1	206.5	213.0	219.4	225.9	232.4	238.8	245.3	251.7	258.2	264.6	271.1	277.5	284.0	290.4
16,000	160.0	166.6	173.3	180.0	186.6	193.3	200.0	206.6	213.3	220.0	226.6	233.3	240.0	246.6	253.3	260.0	266.6	273.3	280.0	286.6	293.3	300.0
17,000	164.9	171.8	178.6	185.5	192.4	199.3	206.1	213.0	219.9	226.7	233.6	240.5	247.4	254.2	261.1	268.0	274.8	281.7	288.6	295.5	302.3	309.2
18,000	169.7	176.8	183.8	190.9	198.0	205.0	212.1	219.2	226.2	233.3	240.4	247.5	254.5	261.6	268.7	275.7	282.8	289.9	296.9	304.0	311.1	318.2
19,000	174.3	181.6	188.9	196.1	203.4	210.7	217.9	225.2	232.4	239.7	247.0	254.2	261.5	268.8	276.0	283.3	290.6	297.8	305.1	312.3	319.6	326.9
20,000	178.9	186.0	193.8	201.2	208.7	216.1	223.6	231.0	238.5	245.9	253.4	260.8	268.3	275.7	283.2	290.7	298.1	305.6	313.0	320.5	327.9	335.4
36,000	240.0	250.0	260.0	270.0	280.0	290.0	300.0	310.0	320.0	330.0	340.0	350.0	360.0	370.0	380.0	390.0	400.0	410.0	420.0	430.0	440.0	450.0
40,000	253.0	263.5	274.0	284.6	295.1	305.7	316.2	326.7	337.3	347.8	358.4	368.9	379.4	389.9	400.5	411.1	421.6	432.1	442.7	453.2	463.8	474.3

Surface Nozzles

MONRO-JET ORBITAL NOZZLES

Advanced Pressure Systems (APS) proudly offers the Monro-Jet Orbital Nozzles in a wide variety of flows and pressure ratings (from 2.4K to 36K psi) to suit your application. 3/8" NPT inlet threads are available upon request. Please specify orifice size and flow when ordering.

High Performance:

- High performance, high production
- Lightweight, simple to operate and maintain
- Combines the power of a solid pencil jet with the large area coverage of a fan jet
- Rugged and dependable
- Rotor and insert assemblies are specific to your exact flow and pressure requirement
- Hardened steel protection cover available for concrete demolition

Applications:

- Concrete cleaning and hydro-demolition
- Casting cleaning
- Scale removal
- Surface preparation
- Offshore cleaning
- Root cutting

MONRO-JET® F1 / F3 / F4 / F6 / F25



Durchflussmenge in gal/min / Flowrate in gpm

Rotor Rotor	Driving Tube	No. Bore	Druck in psi / bar / Pressure in psi / bar									
			psi 2494	psi 7250	psi 10875	psi 14500	psi 18125	psi 21750	psi 25375	psi 29000	psi 32625	psi 36250
			bar 172	bar 500	bar 750	bar 1000	bar 1250	bar 1500	bar 1750	bar 2000	bar 2250	bar 2500
0	0	Anz./ No.	Dichte Wasser bei 20°C (kg/m³) / Density of water at 20°C (kg/m3)									
			1009.1	1021.3	1030.8	1040.5	1050.3	1060.3	1070.5	1080.8	1091.3	1101.9
mm	mm		gpm									
0.60	0.60	2	0.75	1.19	1.45	1.67	1.86	2.03	2.18	2.32	2.45	2.57
0.65	0.65	2	0.88	1.38	1.69	1.94	2.16	2.35	2.53	2.69	2.84	2.98
0.70	0.70	2	0.90	1.41	1.72	1.98	2.20	2.40	2.58	2.75	2.90	3.04
0.75	0.75	2	0.98	1.58	1.89	2.18	2.43	2.64	2.84	3.02	3.19	3.35
0.80	0.80	2	1.24	1.94	2.35	2.72	3.03	3.31	3.55	3.78	3.99	4.19
0.85	0.80	2	1.34	2.09	2.54	2.96	3.29	3.59	3.86	4.10	4.33	4.54
0.90	1.00	2	1.67	2.61	3.18	3.67	4.08	4.45	4.79	5.09	5.37	5.64
0.95	1.00	2	1.79	2.82	3.40	3.97	4.41	4.81	5.17	5.50	5.81	6.09
1.00	1.20	2	2.10	3.31	4.03	4.53	5.04	5.50	5.91	6.29	6.63	6.96
1.05	1.20	2	2.27	3.59	4.37	5.02	5.59	6.10	6.55	6.97	7.36	7.72
1.10	1.40	2	2.59	4.06	4.95	5.69	6.33	6.90	7.42	7.89	8.33	8.74
1.15	1.40	2	2.75	4.33	5.28	6.06	6.75	7.36	7.91	8.41	8.88	9.32
1.20	1.80	2	3.19	4.98	6.07	6.98	7.77	8.47	9.10	9.68	10.22	10.72
1.25	1.80	2	3.47	5.42	6.60	7.58	8.44	9.20	9.89	10.52	11.10	11.65
1.30	2.40	2	3.71	6.10	7.44	8.55	9.51	10.37	11.15	11.86	12.52	13.13
1.35	2.40	2	4.14	6.52	7.92	9.10	10.13	11.04	11.87	12.63	13.33	13.98
1.40	2.40	2	4.47	7.02	8.52	9.79	10.89	11.87	12.77	13.58	14.34	15.04
1.45	2.60	2	4.82	7.58	9.24	10.61	11.81	12.88	13.84	14.73	15.55	16.31
1.50	2.60	2	5.13	8.06	9.83	11.30	12.57	13.71	14.73	15.68	16.55	17.36
1.55	2.80	2	5.51	8.66	10.55	12.13	13.50	14.72	15.82	16.83	17.76	18.63
1.60	2.80	2	5.87	9.22	11.24	12.92	14.38	15.68	16.86	17.93	18.93	19.86
1.65	3.00	2	6.24	9.81	11.96	13.74	15.29	16.68	17.93	19.07	20.13	21.12
1.70	3.00	2	6.62	10.41	12.69	14.59	16.24	17.70	19.03	20.24	21.37	22.42
1.75	3.00	2	7.02	11.03	13.45	15.46	17.20	18.76	20.16	21.45	22.64	23.75
1.80	3.20	2	7.42	11.67	14.23	16.36	18.20	19.84	21.33	22.70	23.96	25.13
1.85	3.20	2	7.84	12.33	15.03	17.28	19.23	20.96	22.53	23.97	25.31	26.55
1.90	3.00	4	8.27	13.01	15.86	18.22	20.28	22.11	23.77	25.29	26.69	28.00
1.95	3.00	4	8.71	13.70	16.70	19.20	21.36	23.29	25.04	26.64	28.12	29.49
2.00	3.00	4	9.17	14.41	17.57	20.19	22.47	24.50	26.34	28.02	29.58	31.03
2.05	3.00	4	9.63	15.14	18.46	21.22	23.61	25.74	27.67	29.44	31.07	32.60
2.10	3.00	4	10.11	15.89	19.37	22.26	24.77	27.01	29.04	30.89	32.61	34.21
2.15	3.20	4	10.59	16.66	20.30	23.34	25.97	28.31	30.44	32.38	34.18	35.85
2.20	3.20	4	11.09	17.44	21.26	24.43	27.19	29.64	31.87	33.90	35.79	37.54
2.25	3.20	4	11.60	18.24	22.24	25.56	28.44	31.01	33.33	35.46	37.43	39.27
2.30	3.20	4	12.12	19.06	23.24	26.71	29.72	32.40	34.83	37.06	39.12	41.03
2.35	3.20	4	12.65	19.90	24.26	27.88	31.02	33.82	36.36	38.69	40.83	42.84
2.40	3.20	4	13.20	20.75	25.30	29.08	32.36	35.28	37.92	40.35	42.59	44.68
2.45	3.20	4	13.75	21.63	26.37	30.30	33.72	36.76	39.52	42.05	44.38	46.56
2.50	3.20	4	14.32	22.52	27.45	31.55	35.11	38.28	41.15	43.78	46.21	48.48
2.55	3.50	4	14.90	23.43	28.56	32.83	36.53	39.83	42.81	45.55	48.08	50.44
2.60	3.50	4	15.49	24.36	29.69	34.13	37.98	41.40	44.51	47.35	49.99	52.43
2.65	3.50	4	16.09	25.30	30.85	35.45	39.45	43.01	46.24	49.19	51.93	54.47
2.70	3.50	4	16.70	26.27	32.02	36.80	40.95	44.65	48.00	51.07	53.90	56.54
2.75	3.50	4	17.33	27.25	33.22	38.18	42.48	46.32	49.79	52.98	55.92	58.66
2.80	3.50	4	17.96	28.25	34.44	39.58	44.04	48.02	51.62	54.92	57.97	60.81



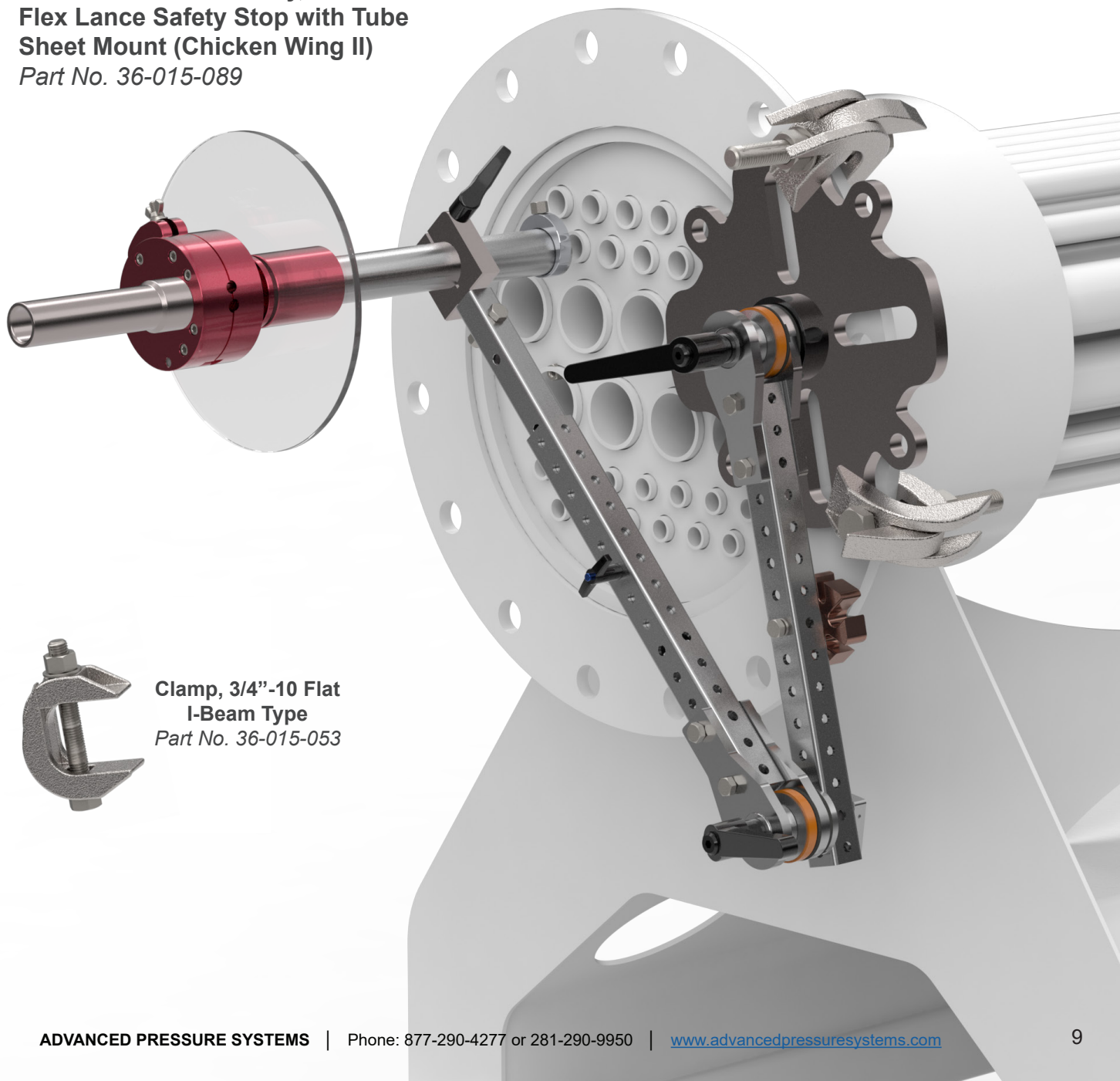
ARTICULATED FLEX LANCE SAFETY STOP FOR TUBE SHEET MOUNTING

This versatile lance stop or anti-withdrawal device, called a “Chicken Wing,” attaches easily to the tube sheet for safer pipe cleaning operations and takes the hand-held Flex Lance Safety Grip to the next level. It is for vertical or horizontal applications, and its wide range of expansion accommodates any size of tube sheet.

Construction is zinc plated steel with steel handles, anodized aluminum housing, and it includes a Lexan® splash guard. The stops for six sizes of lances (both Parker and Spir Star) are provided by a quick-change insert, which is built in to the design. This eliminates the problem of lost lance stops and makes changing to a different lance diameter quick and easy.

Hose Catcher Assembly, Articulated Flex Lance Safety Stop with Tube Sheet Mount (Chicken Wing II)

Part No. 36-015-089



Clamp, 3/4"-10 Flat I-Beam Type
Part No. 36-015-053

Control Guns

HAND-HELD DUMP STYLE CONTROL GUNS

These guns are the new standard and are built tough for the demands of today's contracting environment.

Features:

- Lightweight and easy to overhaul in the field with JS compatible cartridges
- The shoulder stock and hand grips are both adjustable, and the trigger has a safety lock to prevent accidental discharge
- Dump tube port is positionable

15K NPT Dump Style Control Guns w/ 48" Barrels

Part No. 60-010-051 - 1/2" NPT & Part No. 60-010-052 - 3/8" NPT

Cartridge Assembly, 15K JS Compatible Gun

Part No. 60-010-020

Gun Cartridge Nut, 15K

Part No. 60-010-005

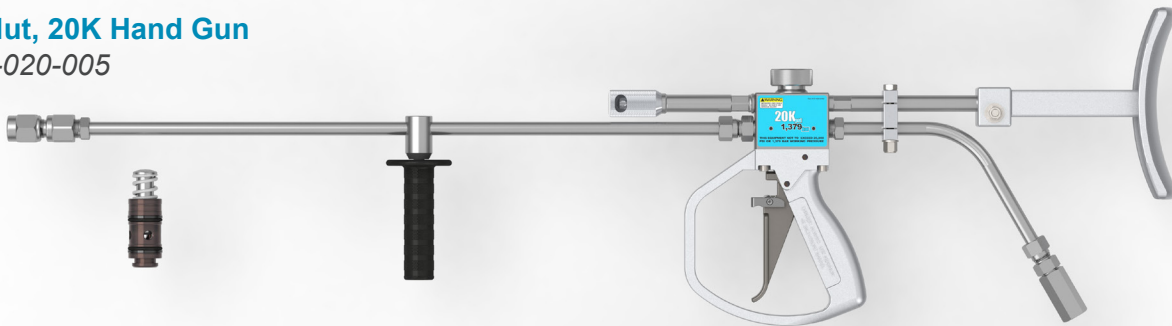


20K NPT Dump Style Control Gun w/ 48" Barrel

Part No. 60-020-006 - 9/16" NPT

Cartridge Nut, 20K Hand Gun

Part No. 60-020-005

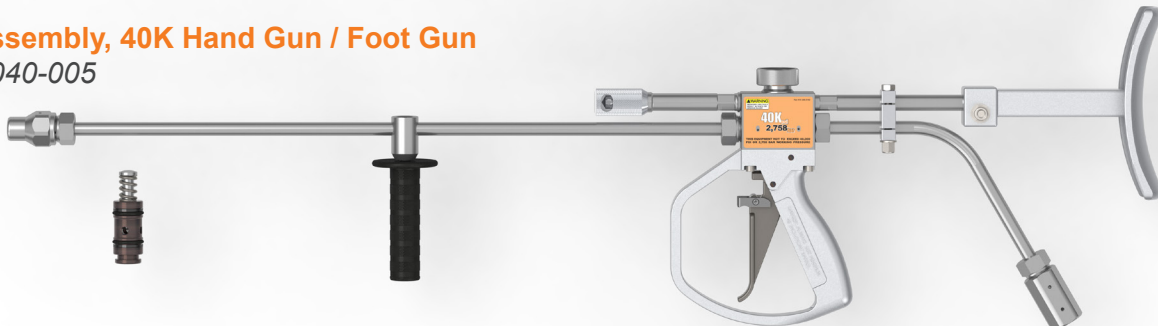


40K NPT Dump Style Control Gun w/ 48" Barrel

Part No. 60-040-007 - 9/16" NPT

Cartridge Assembly, 40K Hand Gun / Foot Gun

Part No. 60-040-005



Control Guns

HAND-HELD DOUBLE DUMP STYLE CONTROL GUNS

Our Double Dump Style Control Guns feature ergonomic advantages and a specially designed front handle. The handle itself is at a 90-degree angle to the barrel, thus conforming to the operator's hand and arm. Some other guns simply use two standard handles, which are cumbersome, uncomfortable, too heavy, and difficult to use.

Features:

- Lightweight and easy to overhaul in the field with Jetstream compatible cartridges
- The shoulder stock and hand grips are both adjustable, and the trigger has a safety lock to prevent accidental discharge
- APS Double Dump Style Control Guns are available in 3/8" barrel size for 15K, 9/16" MP barrel size for 20K, and 9/16" HP barrel for the 40K

15K NPT Double Dump Style Control Gun w/ 48" Barrel

Part No. 60-050-006 - 3/8" NPT

Cartridge Assembly, 15K JS Compatible Gun

Part No. 60-010-020



20K MP Double Dump Style Control Gun w/ 48" Barrel

Part No. 60-055-001 - 9/16" MP

Cartridge Assembly, 20K JS Compatible Gun

Part No. 60-020-010

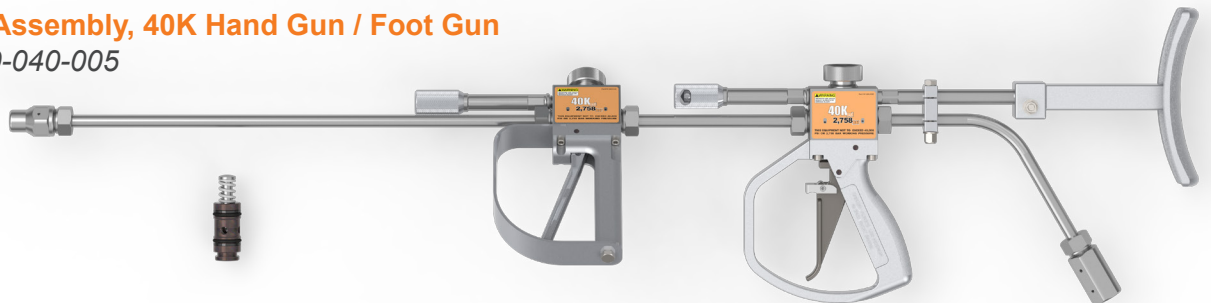


40K HP Double Dump Style Control Gun w/ 48" Barrel

Part No. 60-040-015 - 9/16" HP

Cartridge Assembly, 40K Hand Gun / Foot Gun

Part No. 60-040-005



Control Guns

HAND-HELD ZERO THRUST STYLE CONTROL GUNS

Our Hand-Held Zero Thrust Style Control Guns are designed primarily for underwater use, where the self-canceling forwards and backwards thrusts allow the operator to carry out blasting operations without being propelled away from the intended work area. These guns have applications on dry land, where a balanced tool is needed - for example, in a suspended gondola on the side of a building.

Features:

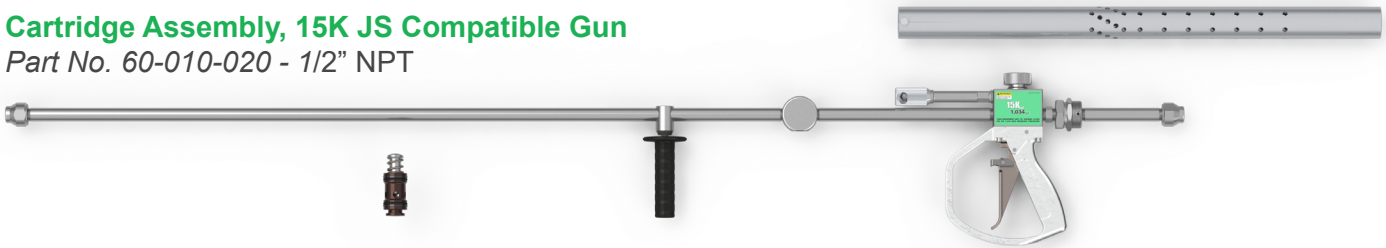
- The quick-change rebuild cartridge allows field overhaul in 30 seconds or less
- For corrosion resistance, all components are of high grade stainless steel, and the complete assembly weighs as little as 15.15 lbs (6.89 kg)

15K NPT Zero Thrust Style Control Gun w/ 48" Barrel

Part No. 60-010-035 - 1/2" NPT

Cartridge Assembly, 15K JS Compatible Gun

Part No. 60-010-020 - 1/2" NPT

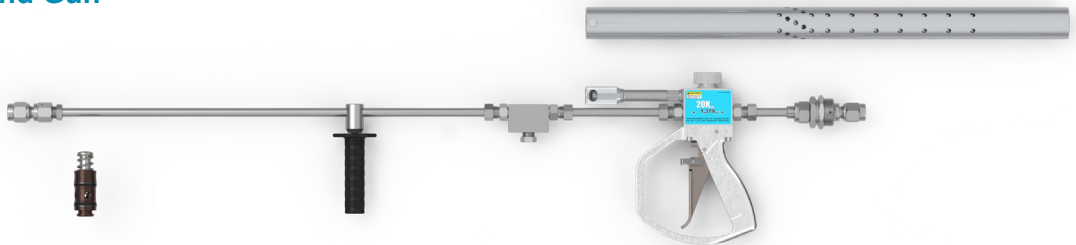


20K MP Zero Thrust Style Control Gun w/ 48" Barrel

Part No. 60-020-013 - 9/16" MP

Cartridge Nut, 20K Hand Gun

Part No. 60-020-005

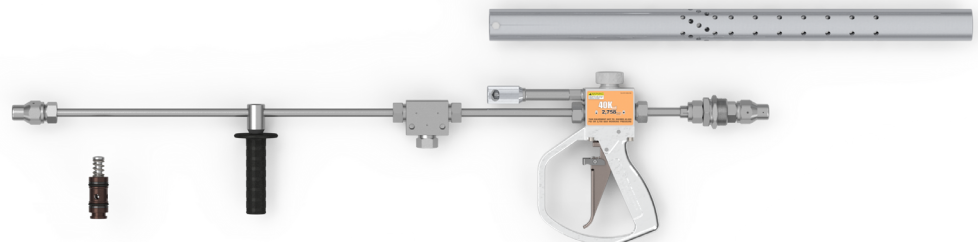


40K HP Zero Thrust Style Control Gun w/ 48" Barrel

Part No. 60-040-012 - 9/16" HP

Cartridge Assembly, 40K Hand Gun / Foot Gun

Part No. 60-040-005



HAND-HELD DRY SHUT-OFF STYLE CONTROL GUNS

Enjoy the same benefits of our renowned Dump Style Control Guns with the added advantage of reduced water consumption, thus limiting the amount of waste to be removed from the work site.

Features:

- Lightweight (13-15 lbs depending on the barrel diameter) and easy to overhaul in the field with Jetstream compatible cartridges
- The adjustable comfort-contoured shoulder stocks front hand grips contribute to ease of use for operators, tending to diminish fatigue
- All feature the Quick-Change Cartridge for field overhaul in 30 seconds or less using common tools

15K NPT Dry Shut-Off Style Control Gun w/ 48" Barrel

Part No. 60-010-305 - 3/8" NPT

Cartridge Assembly, 15K Dry Shut-Off Gun

Part No. 60-010-304

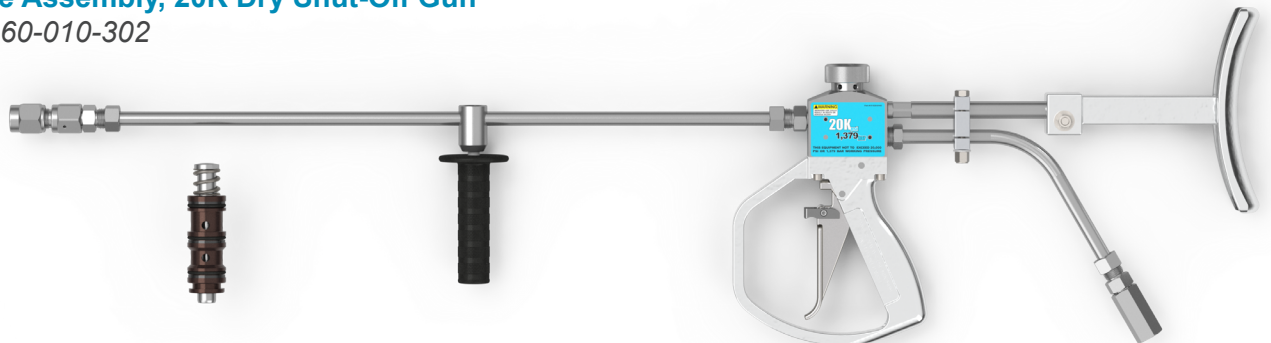


20K MP Dry Shut-Off Style Control Gun w/ 48" Barrel

Part No. 60-020-307 - 9-16" MP

Cartridge Assembly, 20K Dry Shut-Off Gun

Part No. 60-010-302



Control Guns

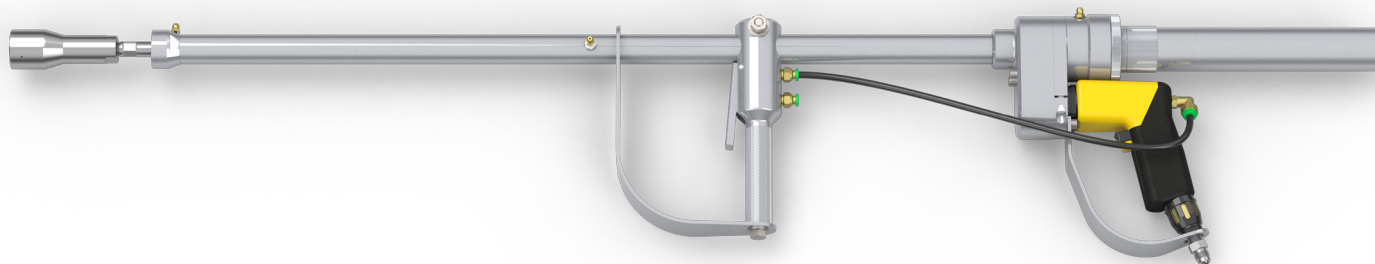
HAND-HELD ROTARY STYLE CONTROL GUN

The APS Cobra is an air operated control gun with a rotating barrel. The simple, robust design, combined with the high quality of manufacturing, makes this the perfect tool for Ultra High Pressure (UHP) jetting applications. When used together with our Tri-Mode Control Valve, the combination is the most cost-effective, easy-to-use and maintain system on the market. It is ideal for the removal of paint and corrosion leaving a white metal finish, which is ready for coating.

Water jetting at UHP produces a surface which is equal to NACE No. 5/SSPC-SP12. Many of the major coating and paint manufacturers recommend the use of water jetting for surface preparation, and they produce coating products specially formulated for surfaces prepared by this method. The environmental advantages of HP and UHP water blasting for industrial cleaning are widely recognized, making it the preferred method for several industries.

Features:

- Lightweight aluminum and stainless steel construction
- Highest quality air motor
- The barrel supported on a ball bearing for smooth operation
- Heavy duty thrust bearing in sealed swivel assembly
- Quick-change swivel seal assembly
- The ability to accept a wide range of nozzles for almost any application

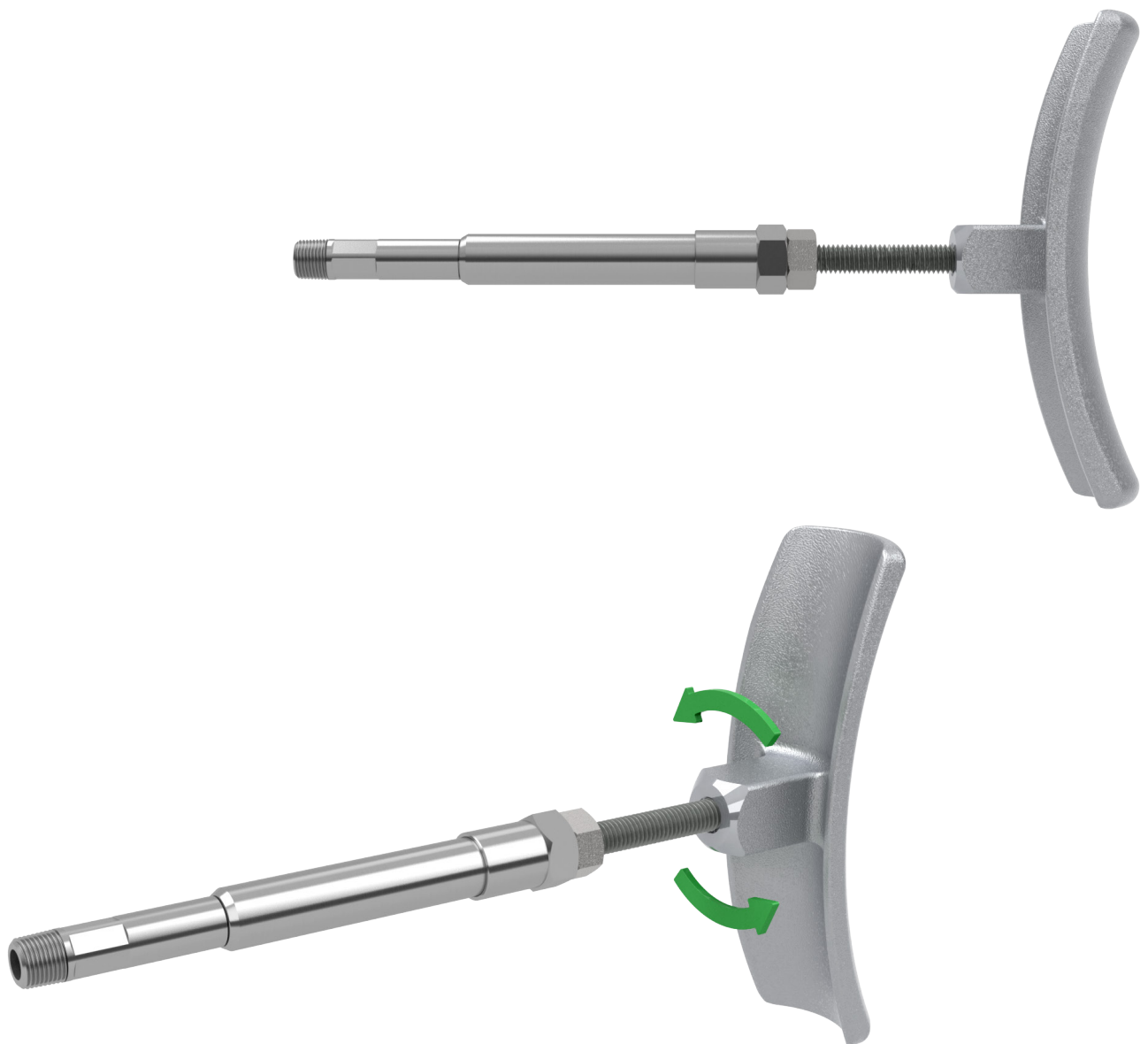


Part No.	Barrel Length	Overall Length	Rotation Speed	Weight	Air Demand (Pressure PSI / Volume CFM)	Max Flow	Required Inlet Connection	Nozzle Connection	Operating Pressure
60-072-001	36 in.	46 in.	1700-3000 rpm	10.75 lbs	90 / 22	7 gpm	3/8" HP Female	9/16" HP Button	40K psi
60-072-062	48 in.	58 in.	1700-3000 rpm	12.3 lbs	90 / 22	7 gpm	3/8" HP Female	9/16" HP Button	40K psi

Control Guns
ADJUSTABLE SWIVEL TYPE SHOULDER STOCK

This fully adjustable shoulder stock is interchangeable with the standard version. It has the additional feature of being able to swivel during operation of the gun, to accommodate shoulder movements of the operator. This will help minimize operator fatigue. It is fully adjustable for length. The swiveling action can be made inoperable by means of a lock nut.

The assembly comprises all corrosion resistant materials, including a cast aluminum shoulder plate with all other components being stainless steel.



Control Guns

AIR ACTUATED DUMP / DIVERTER VALVES

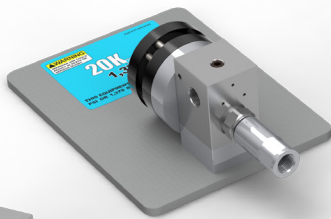
Air Actuated Dump / Diverter Valves allow an operator to remotely control pressure in cleaning applications from 15,000 to 40,000 psi. When air is sent to the cylinder, the valve closes and allows the system to build pressure. The valve opens when the air is exhausted, reducing system pressure to near atmospheric.

Features:

- 30-second field replaceable cartridge design for minimal downtime
- Remote pneumatic operation for reduced operator fatigue and added convenience and safety
- Inlet and outlet connections threaded 9/16" MP for most pressures
- Heavy duty air cylinder
- All components precision machined from stainless steel

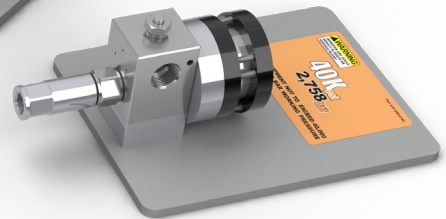
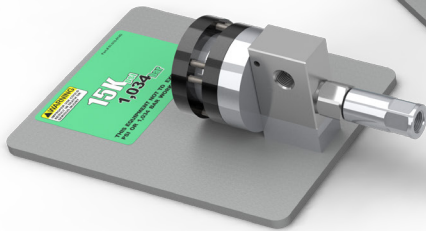
Foot Gun Assembly, 20K Air Actuated w/ Base Plate

Part No. 61-020-019



High Flow 20K, Air Operated Diverter Valve w/ Base Plate

Part No. 61-020-034.2



Foot Gun Assembly, 15K Air Actuated

Part No. 61-001-007

Foot Gun Assembly, 40K Air Actuated w/ Base Plate

Part No. 61-040-006



Cartridge Assembly, 15K JS Compatible Gun

Part No. 60-010-020

Cartridge Assembly, 20K JS Compatible Gun

Part No. 60-020-010

Cartridge Assembly, CF Mag used in 15/20K, (JS Compatible: 52750)

Part No. 61-020-030

Cartridge Assembly, 40K Hand Gun / Foot Gun

Part No. 60-040-005

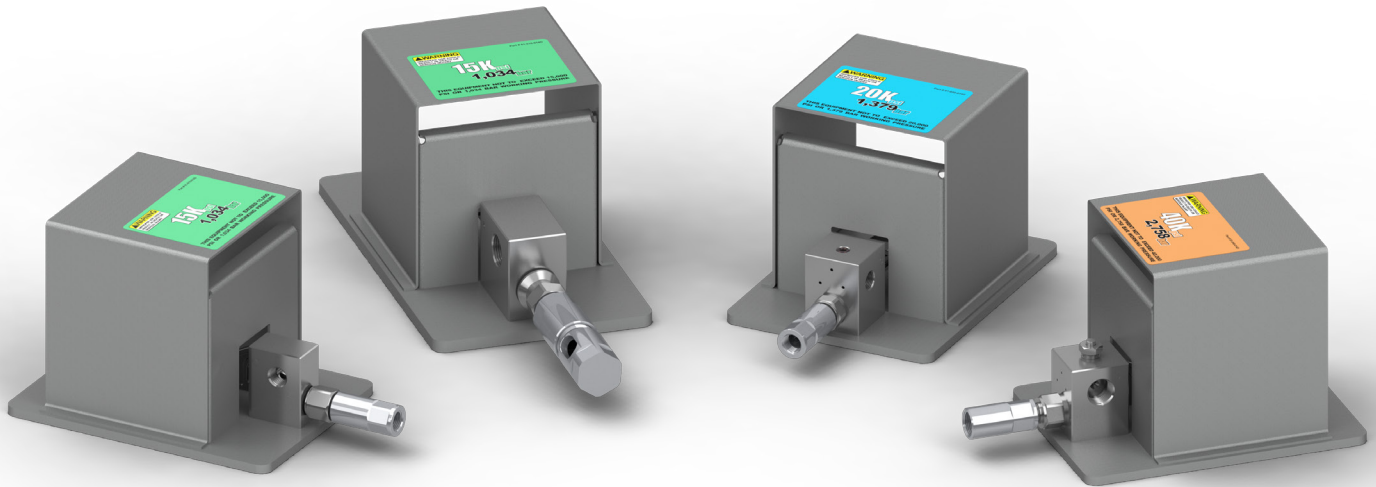
Control Guns

FOOT OPERATED CONTROL VALVES

These Foot Operated Control Valves (Foot Guns) are designed for smooth, reliable operation. They are easily rebuilt in the field in 30 seconds by unscrewing the dump tube, which removes the used valve assembly. The operator then snaps a new cartridge style valve in to the dump tube adapter and returns the whole assembly to the gun.

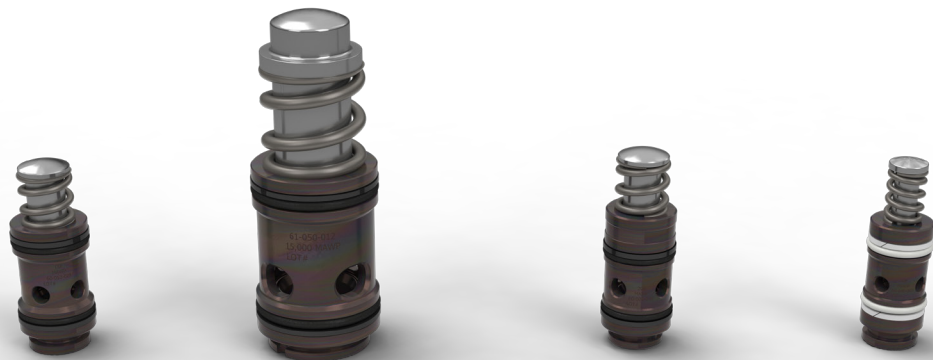
Foot Gun Assembly, High Volume 15K 1" NPT Dump Style
Part No. 61-050-001

Foot Gun Assembly, APS 20K 9/16" MP
Part No. 61-020-003



Gun Inlet Tube, 15K
Part No. 60-010-012

Foot Gun Assembly, APS 40K 9/16" HP
Part No. 61-040-003



Cartridge Assembly, 15K JS Compatible Gun
Part No. 60-010-020

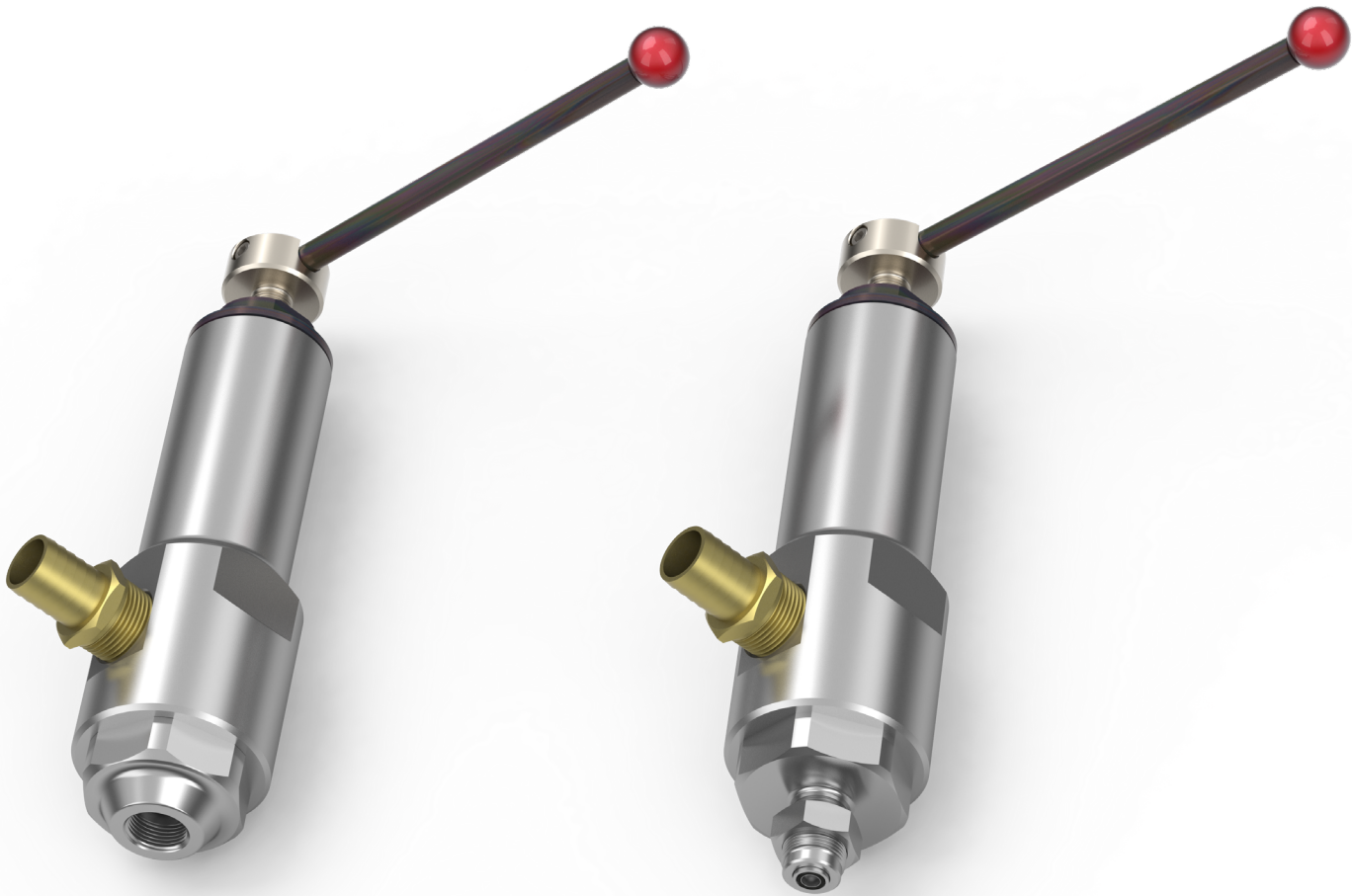
Cartridge Assembly, 15K High Flow Foot Gun (APS)
Part No. 61-050-012

Cartridge Assembly, 20K JS Compatible Gun
Part No. 60-020-010

Cartridge Assembly, 40K Hand Gun / Foot Gun
Part No. 60-040-005

Control Guns
UNLOADER VALVES

Unloader Valves allow for the operation of multiple guns from one or more pumps. Changes in the flow demands for high pressure water are automatically accommodated, with the excess being diverted back to the feed side of the pump. These valves can also be rebuilt in the field in five minutes.



Shut-In Regulator, 15K
Hand-Adjustable 3/4" NPT
(F) Inlet
(JS Compatible: 55515)
Part No. 60-010-350

Shut-In Regulator, 20K
Hand-Adjustable Inlet
1"-16 Port Male
(JS Compatible: 55570)
Part No. 60-020-361

These Valve and Seat Assemblies (Cartridges) and Seal Kits replace the corresponding Uni-Valve components in JS Fluid Ends. Please check the JS Part No. shown below the APS Part No. when making a selection.

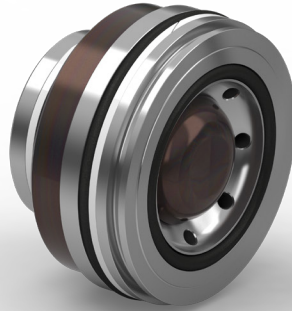
Valve Assembly, Cartridge (1st Gen.)

Part No. 25-004-430

(JS Compatible 50365)

Compatible w/ JS UNx
Fluid End Model Numbers:

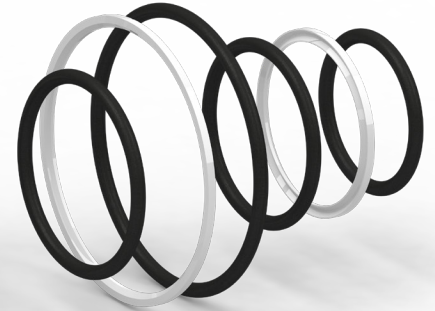
- 4215
- 3615 (1st Generation)
- 4215N (1st Generation)
- 4515B (1st Generation)
- 4015B
- 3715B



Seal Kit for Cartridge Valve

Part No. 25-004-431

(JS Compatible 50370)



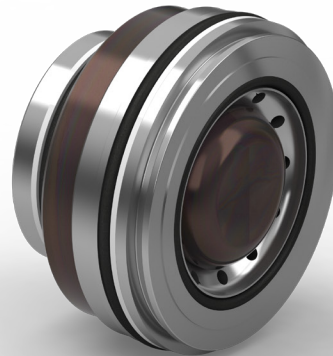
Cartridge Valve Assembly, 15K

Part No. 25-004-458

(JS Compatible 52870)

Compatible w/ JS UNx
Fluid End Model Numbers:

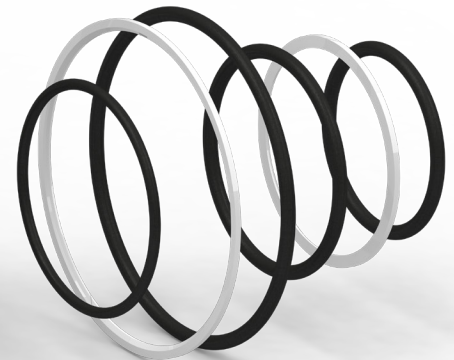
- 5015Q
- 4215HF
- 3615 (1st Generation)
- 4215N
- 4215QN
- 4515B



Seal Kit, 15K Cartridge Valve

Part No. 25-004-459

(JS Compatible 52875)



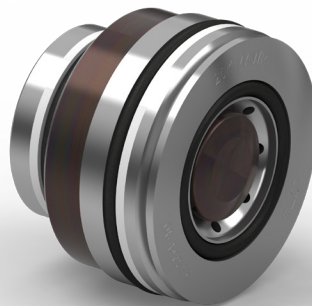
Valve Assembly, 20K

Part No. 25-004-407

(JS Compatible 51790)

Compatible w/ JS UNx
Fluid End Model Numbers:

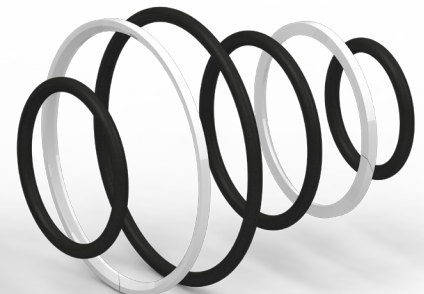
- 5020Q
- 4220
- 3620



Seal Kit, 20K Cartridge Valve

Part No. 25-004-409

(JS Compatible 54065)



Accessories

PRESSURE REGULATING VALVES

A Pressure Regulating Valve (PRV) is used on both diesel and electric pumping units to divert a portion of the flow to a low pressure outlet. It is a hand-adjusted needle valve, and it can be used to control pressure when the application requires a flow at the low end of the pumping unit operating range. For electric units a PRV is required equipment because the speed of the drive is not adjustable.

The design provides:

- Simple field rebuild using the quick-change cartridge makes down time two minutes or less, including the locking of the adjuster handle, after the pressure is set
- Easy handle adjustment without the need for wrenches
- All components machined from stainless steel
- Direct mounting to fluid end discharge manifold
- A base mounted model, called a Gauge Board, is available with protective cage and gauge (*see next page*)

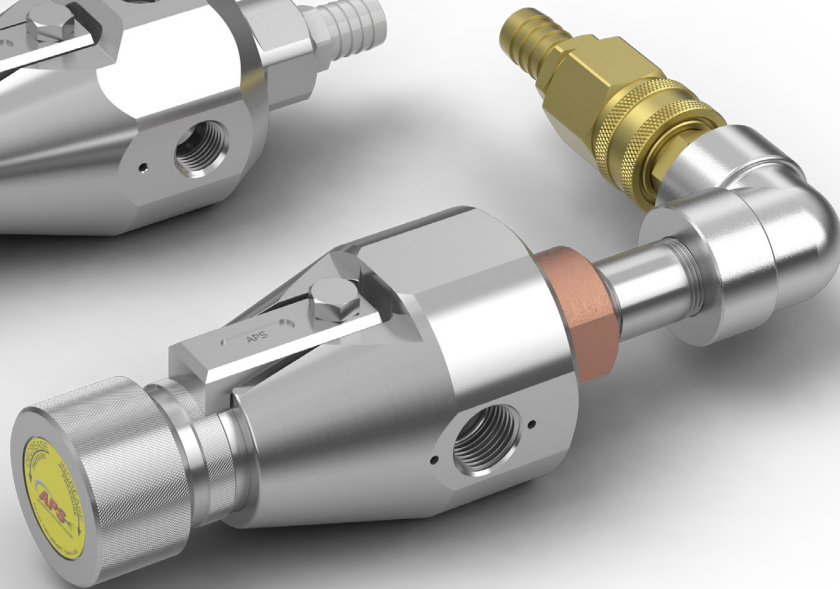
Assembly, 15K JS Compatible Pressure Regulating Valve (PRV)

Part No. 65-110-015



Assembly, 20K JS Compatible Pressure Regulating Valve (PRV)

Part No. 65-120-015



Assembly, 40K JS Compatible Pressure Regulating Valve (PRV)

Part No. 65-040-010



**Gauge Board Assembly,
Pressure Gauge & 15K PRV**
Part No. 65-010-004



**Gauge Board Assembly, Pressure
Gauge & 20K PRV**
Part No. 65-020-005



**Cartridge Assembly,
15K FDV**
Part No. 70-010-004



**Cartridge Assembly,
20K FDV / PRV**
Part No. 70-020-011

FLOW DIVIDER VALVES

The new Flow Divider Valves (FDV's) are for applications where two dump style guns are to be operated from one pump. The FDV will maintain full pressure to either gun when the other gun is dumping. When both guns are operating, the flow and pressure will be unaffected.

These valves are very easy to set up. They are of very rugged construction, and the only wear part is a cartridge which can be quickly changed in the field.

Assembly, JS Compatible 15K FDV without Pressure Gauge

Part No. 70-022-001

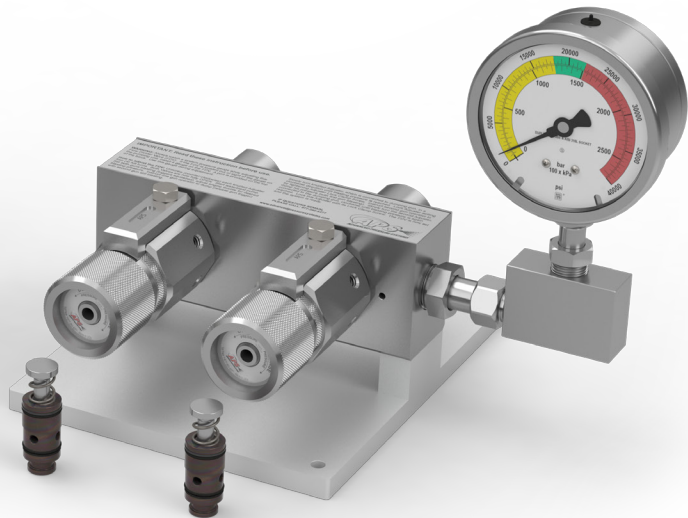


Cartridge Assembly, 15K FDV

Part No. 70-010-004

Assembly, JS Compatible 20K FDV without Pressure Gauge (JS Compatible: 52190)

Part No. 70-032-001



Cartridge Assembly, 20K FDV / PRV

Part No. 70-020-011

The 40K Tri-Mode Valve, commonly called a Tumble Box, has been developed after extensive research aimed at identifying the features that contractors and end users need most. The air side incorporates a robust, easy-to-operate shut-off valve, and a large, easy-to-read, horizontally mounted gauge that is protected by a heavy rubber buffer. The shuttle valve is a simple cartridge type design, which is easy to service and replace.

The Tri-Mode Valve has three distinct operating modes:

- **Pressure Dump Mode:** This is used when more than one gun is being supplied with high pressure water by the same pump. To achieve this arrangement, a nozzle with the same flow as the combined nozzles of the gun is located at the inlet to the energy diffuser. This maintains the same system pressure when there is not flow to the gun. The energy from the jet is absorbed by impacting the inside of the dissipater tube and then flowing away out of the end of the tube assembly.
- **Low Pressure Dump Mode:** This is used when only one gun is used, and the high pressure water is supplied by a plunger pump. (Intensifier pumps do not work well if subjected to frequent pressure reductions to atmosphere.) In this configuration the Energy Diffuser and the nozzle assembly are not required, and the unused flow is discharged at low pressure when the trigger of the gun is released.
- **Dry Shut-Off Mode:** This is employed when the pump has its own pressure compensator system (unloader). This is commonly found on an intensifier pump, as are plunger pumps. The unused flow is diverted at the pump, so the energy diffuser port at the valve can be plugged.

**Assembly, Tri-Mode 40K Tumble
Box with Dual Air Control Hose**
Part No. 60-070-076



**Cartridge Assembly, Cobra Tumble
Box (New Style)**
Part No. 60-070-111

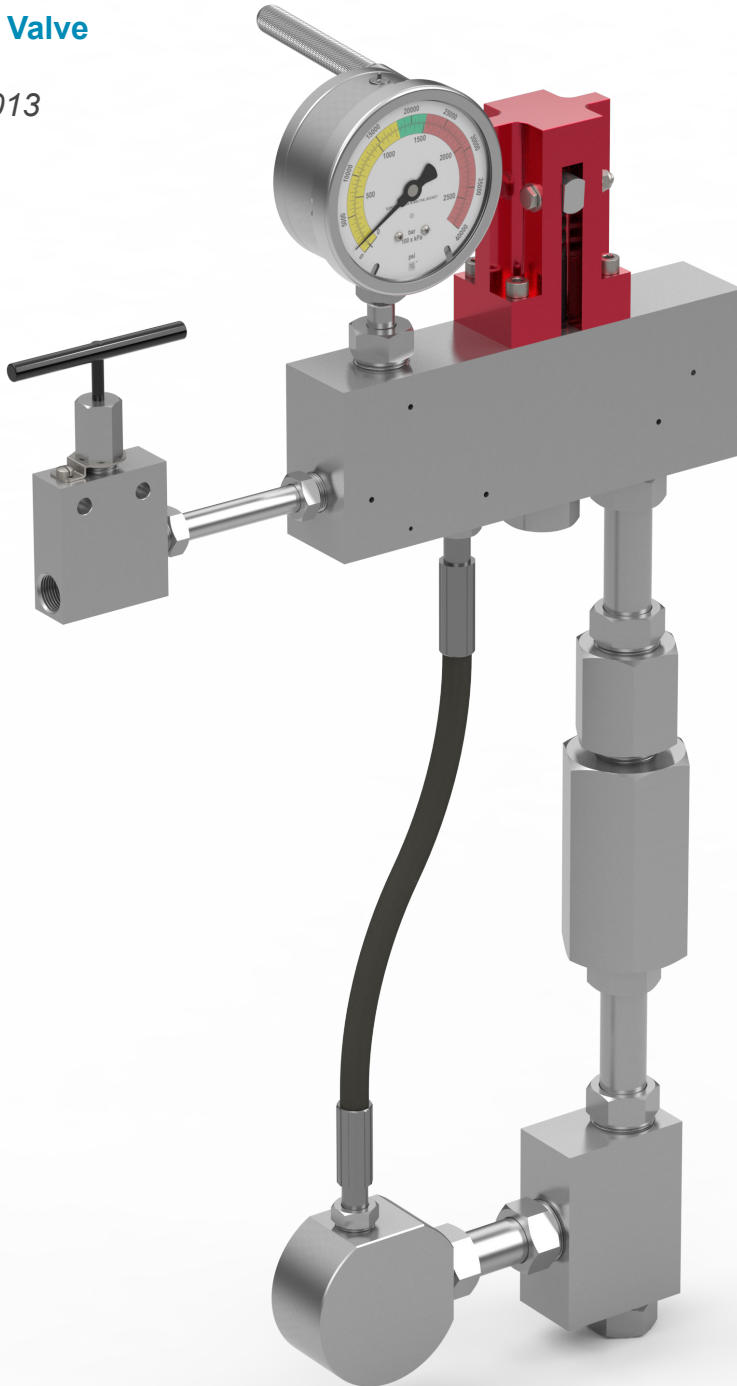
Accessories

HYDROSTATIC TEST VALVE

The Hydrostatic Test Valve is designed for the pressure testing of drill pipe and production or casing pipes. It is designed for pressures up to 20K psi. The large 1" MP primary connections enable rapid filling of the piping to be tested. The lever operated dump valve provides precise adjustment of the inlet pressure. This valve uses a 20K dump gun cartridge which can quickly be replaced in the field. A needle valve is used to bleed off pressure as necessary.

Hydrostatic Test Valve Assembly

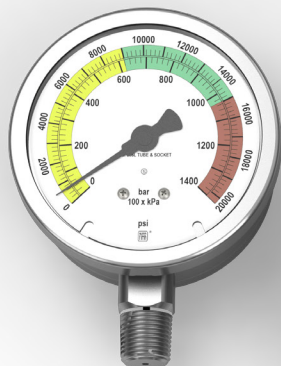
Part No. 67-000-013



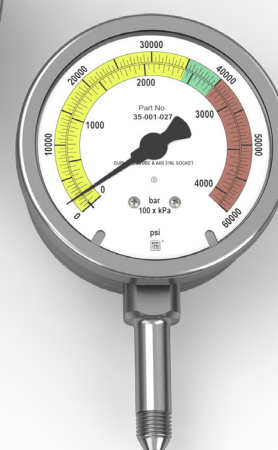
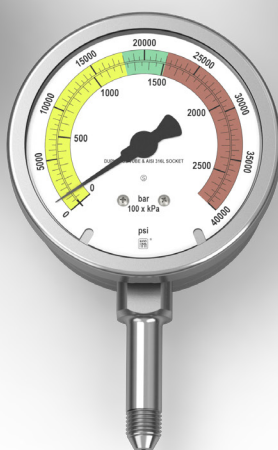
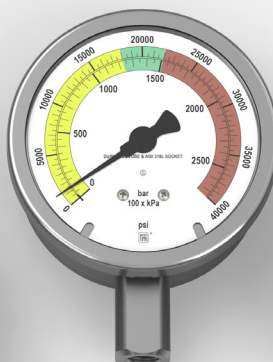
WATER BLASTING PRESSURE GAUGES

We offer a complete range of pressure gauges designed specifically for water blasting applications. Features include stainless steel construction, glycerine filled, clear laminated safety glass, precision movement, and easy-to-read, color-coded gauge faces.

**Standard 0-20K (15K)
4" Gauge**
Part No. 35-001-003



**Standard 0-40K (20K) 4" Gauge
with 9/16" HP LH Tube Nipple Inlet**
Part No. 35-001-025



**Standard 0-40K (20K) 4" Gauge
with 1/4" HP Female Inlet**
Part No. 35-001-005

**Standard 0-60K (40K) 4" Gauge
with 9/16" HP LH
Tube Nipple Inlet**
Part No. 35-001-027

Part No.	Description	PSI / Bar
35-001-003	Pressure Gauge, 4" 0-20K Range, 15K MAWP SS GF 1/2" NPTM Bottom Mount (GDWJ Type: 77512020)	15K / 1034
35-001-004	Pressure Gauge, 6" 0-20K Range, 15K MAWP SS GF 1/2" NPTM Bottom Mount (Nuova Fima)	15K / 1034
35-001-024	Pressure Gauge, 4" 0-20K Range, 15K MAWP SS GF 1/2" BSPP Bottom Mount	15K / 1034
35-001-033	Pressure Gauge, 4" 0-30K Range, 15K MAWP SS GF 1/2" NPTM Bottom Mount (Nuova Fima)	15K / 1034
35-001-005	Pressure Gauge, 4" 0-40K Range, 20K MAWP SS GF 1/4" HPF Bottom Mount (Nuova Fima)	20K / 1379
35-001-025	Pressure Gauge, 4" 0-40K Range, 20K MAWP SS GF 9/16" HP Tube Nipple Bottom Mount (Nuova Fima)	20K / 1379
35-001-007	Pressure Gauge, 6" 0-60K Range, 40K MAWP SS GF 1/4" HPF (9/16"-18 RHF) Bottom Mount	40K / 2758
35-001-012	Pressure Gauge, 4" 0-60K Range, 40K MAWP SS GF 1/4" HPF Bottom Mount (Nuova Fima)	40K / 2758
35-001-027	Pressure Gauge, 4" 0-60K Range, 40K MAWP SS GF 9/16" HPF Tube Nipple Bottom Mount (Nuova Fima)	40K / 2758
35-001-028	Pressure Gauge, 6" 0-60K Range, 40K MAWP SS GF 9/16" HPM Tube Nipple Bottom Mount (Nuova Fima)	40K / 2758

WATERJET THREAD PROTECTION



Benefits:

Yellow Lube Water Blasting Thread Protection eliminates wear and galling. Yellow Lube adheres to heavily loaded rotating, reciprocating or sliding parts. It may be used on any heavily loaded equipment that would normally be lubricated with an extreme pressure grease. Yellow Lube is a film forming lubricant having a strong polar attraction to metal. During use, a chemical reaction occurs on areas subjected to heavy loading and frictional heat. This reaction creates a resilient, self-lubricating layer in the metal surface that helps prevent further abrasive contact.

Applications:

Yellow Lube Water Blasting Thread Protection is a thread lubricant designed to protect and seal stainless NPT fittings. In high pressure applications such as water blasting, steps to creating a seal are as follows:

1. Be sure the fitting is clean and dry
2. Apply Yellow Lube to all mating surfaces
3. Make fitting up hand tight
4. Using a wrench or other device, tighten the connection one to one and a quarter full turns
5. Solid metal to metal seal will have been established: the crest of the threads will be buried in the root, but without galling

Part No. 24-001-023 - 3 oz Tube

Part No. 24-001-011 - 6 oz Tube



Specifications

NLGI Grade	2 1/2
Appearance.....	Yellow, smooth
Solids Content.....	45%
Temperature Range.....	0°F. to 300°F.
Oil description	Synthetic
Viscosity, SUS @ 1 00°F.	730
Water spray off (with 5% salt spray)ASTM D-4049	0%
Evaporation Rate	Nil
Thickener	Inorganic (non-melt)
U.S. Environmental Protection Agency static sheen test	Pass
Active Toxicity*	None
K-Factor	(316 Stainless Steel Bolts) 0.174

Accessories
ROTATING PIPE CLEANING SYSTEM

APS is now an authorized distributor of the “Super Hurricane” Rotating Pipe Cleaning System. It is lightweight, tough, reliable, and built to take on the toughest blocked pipelines in the utility, industrial, or coal preparation industries. It is constructed with a stainless steel tubular frame.

The “Super Hurricane” can clean as far as 1,200 feet through fifteen 90° elbows, inside or outside corners, even irregular surfaces, such as weld beads without stopping.

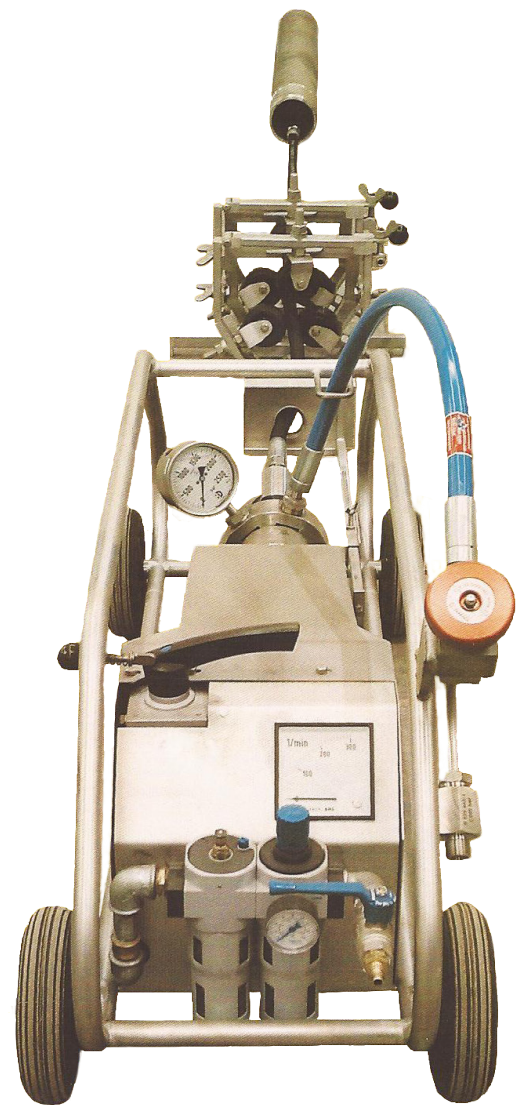
“Super Hurricane” removes aluminum, hydrate, silicate, calcide, bauxite, calcium oxide, cement, ferrum oxide, hard nickel coke, magnesium oxide, polystyrene, slag and mill scale, titanium 2-oxide, silicium oxide, sodium chroiderust, or any other corrosion build-up.

Features:

- Weight: 98 pounds
- Overall size: 48” Long x 20” Wide x 20” Tall
- Flowrate QD: Maximum 120 l/min to 3,000 l/min
- Uses 50 gallons of water per minute
- Water pressure: 300 - 1,450 Bar (21K psi)
- Air consumption: 72.5 psi (30 liters per second)
- 3.5 kW output motor
- Operating pressure gauge
- Includes a nozzles RPM gauge

The “Super Hurricane” Rotating Pipe Cleaning System process is completely environmentally friendly.

**Super Hurricane, Rotating
Hose Device**
Part No. 99-250-000



Produced by

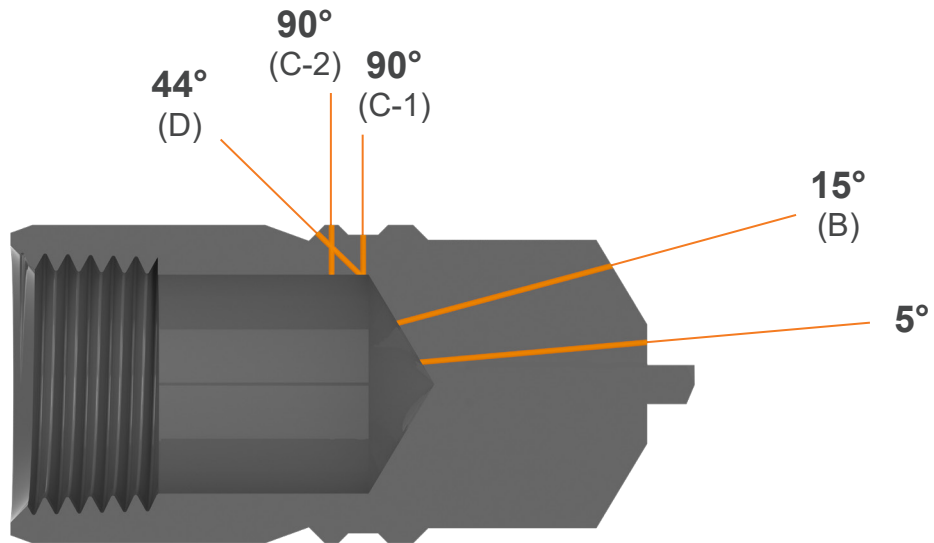


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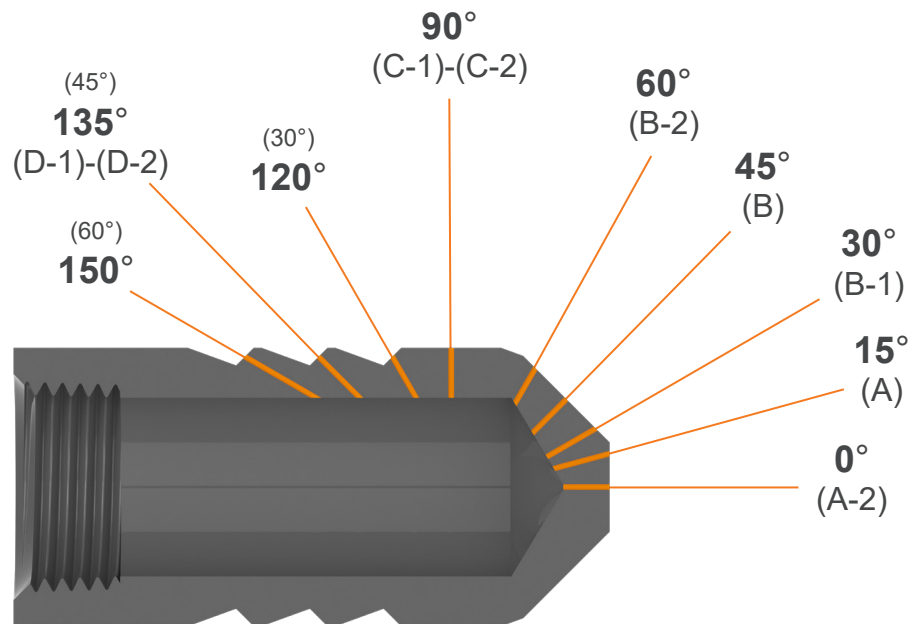
Extras NOZZLE DRILL PATTERNS

Advanced Pressure Systems tungsten carbide tipped tube nozzles are to be used in rotary applications for the removal of hardened plugs in heat exchanger tubes.

Please specify drilling pattern, pressure, and flow when ordering.



Standard Nozzles with Carbide Blade

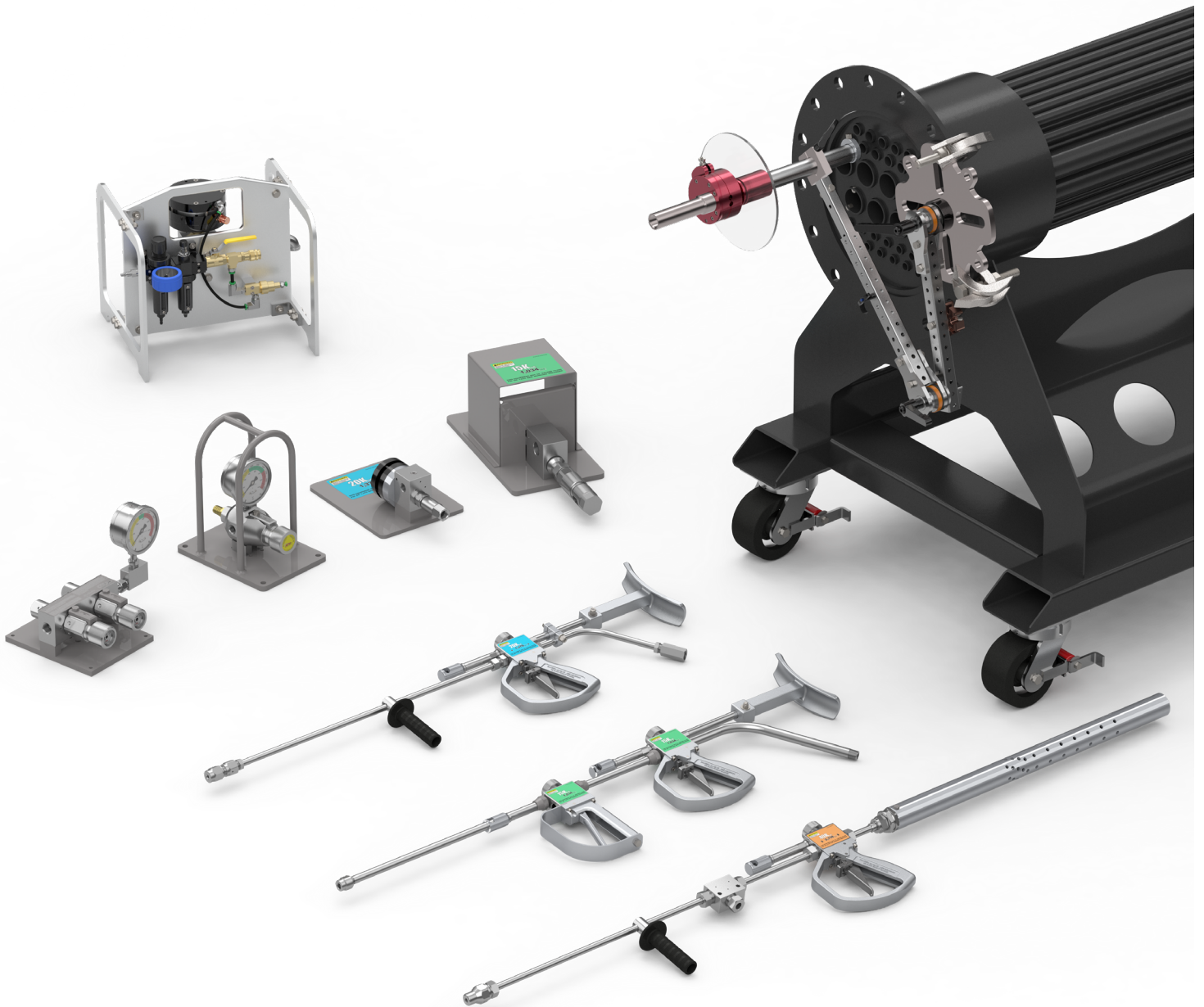


Typical Tube Nozzle Drill Pattern

SPECIALTY PRODUCTS

Water Blasting Parts and Equipment

Tube Nozzles | Surface Nozzles | Lances & Related | Control Guns
Replacement Pump Parts | Accessories



ADVANCED PRESSURE SYSTEMS

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Website: <http://www.advancedpressuresystems.com>