

SAFETY

UP TO 15,000 PSI (1000 BAR)

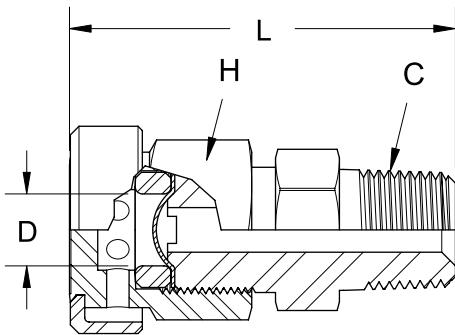


RUPTURE DISC HOLDERS

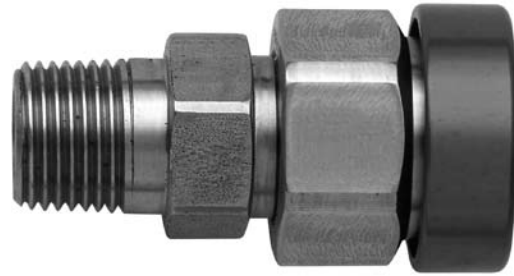
For protection from dangerous over-pressurization rupture discs function in a waterblast system analogous to the function of fuses in an electrical circuit. When the system pressure exceeds that of the burst disc, the disc bursts and allows water to flow out of the holder's cap, relieving the system of high pressure.

- May be used as primary and/or secondary relief devices
- Tamper-resistant design
- Discs are quickly and easily replaceable
- Assembly components machined from high quality stainless steel

NOTE: Burst Disc not included with assembly.



Part No. 51035



Disc Selection

For **primary** relief devices, select disc with burst pressure of approximately **1.2 times** desired operating pressure.

Example

Operating pressure: 10,000 psi (700 bar)
 Desired burst pressure: 10,000 psi x 1.2 = 12,000 psi
 700 bar x 1.2 = 840 bar
 Select 12,000 psi (827 bar) Burst Disc, part no. 51049

For **secondary** relief devices, select disc with burst pressure of approximately **1.4 times** desired operating pressure.

Example

Operating pressure: 10,000 psi (700 bar)
 Desired burst pressure: 10,000 psi x 1.4 = 14,000 psi
 700 bar x 1.4 = 980 bar
 Select 14,000 psi (965 bar) Burst Disc, part no. 51050

Part No.	Connection Type* (C)	Overall Length (L)		Disc Blow Out Diameter (D)		Flats (H)		Maximum Working Pressure	
		in	mm	in	mm	in	mm	psi	bar
51035	1/2" NPT Male	2.7	69	.50	12.7	1.25	31.8	15,000	1000

* See details on all connection types beginning on page I-2.

Burst Discs

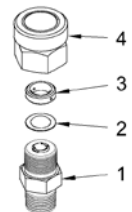
See Disc Selection instructions above.

Part No.	Burst Disc Pressure	
	psi	bar
53738	6,000	414
51047	8,000	552
51048	10,000	690
51049	12,000	827
51050	14,000	965
51051	16,000	1103
55316	18,000	1241
51052	20,000	1379



Replacement Parts

Item	Part No.	Description
1	51033	Base
2	**	Burst Disc
3	51040	Hold-Down Ring
4	51037	Cap



** See Burst Discs chart at left

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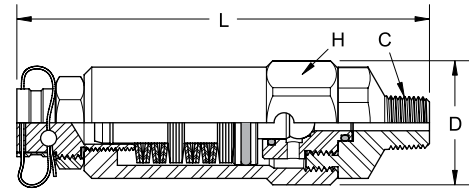
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SEVERE SERVICE RELIEF VALVES

For use as a primary relief device to protect waterblast systems and operators from dangerous overpressurization, the Severe Service Relief Valve opens to safely bypass some of the system flow in circumstances where the operating pressure exceeds the factory set opening pressure of the valve.

- Designed for rigorous service and low maintenance
- Valves constructed with carbide or stainless steel ball and hardened stainless steel seat for long service life
- Cartridge style ball-seat valve and spring assemblies allow fast, simple field repair without affecting relief pressure setting
- Shipped from the factory preset and tested at customer specified opening pressure



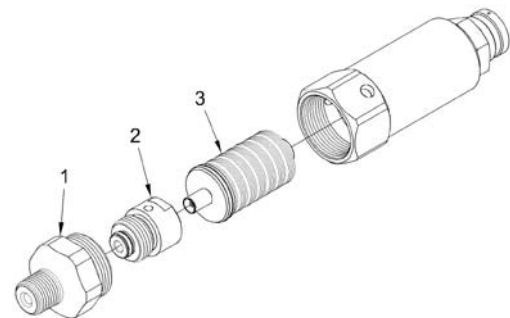
Part No.	Connection Type* (C)	Overall Length		Diameter		Ball Material	Relief Pressure Range **		Maximum Working Pressure	
		in	mm	in	mm		psi	bar	psi	bar
51470A	1/2" NPT Male	6.5	165	1.94	49.3	Carbide	0 – 6,000	0 – 415	5,000	350
51470B	1/2" NPT Male	6.5	165	1.94	49.3	Carbide	6,000 – 12,000	415 – 825	10,000	700
51470C	1/2" NPT Male	6.5	165	1.94	49.3	Carbide	12,000 – 18,000	825 – 1240	15,000	1000
51945A	3/4" NPT Male	6.7	170	1.94	49.3	Carbide	0 – 6,000	0 – 415	5,000	350
51945B	3/4" NPT Male	6.7	170	1.94	49.3	Carbide	6,000 – 12,000	415 – 825	10,000	700
51945C	3/4" NPT Male	6.7	170	1.94	49.3	Carbide	12,000 – 18,000	825 – 1240	15,000	1000
51460A	1" NPT Male	7.9	200	2.20	55.9	Stainless Steel	0 – 6,000	0 – 415	5,000	350
51460B	1" NPT Male	7.9	200	2.20	55.9	Stainless Steel	6,000 – 12,000	415 – 825	10,000	700

* See details on all connection types beginning on page 1-2.

** Relief pressure must be specified when ordering.

Replacement Parts

Item	Part No.	Description
1	51452	Base, 1/2" NPT Male
	51822	Base, 3/4" NPT Male
	51441	Base, 1" NPT Male
2	51500	Ball-Seat Cartridge, 1/2" & 3/4"
	51486	Ball-Seat Cartridge, 1"
3	51477	Spring Cartridge, 1/2" & 3/4", A Models
	51482	Spring Cartridge, 1/2" & 3/4", B Models
	51484	Spring Cartridge, 1/2" & 3/4", C Models
	51468	Spring Cartridge, 1", A Model
	51472	Spring Cartridge, 1", B Model



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SAFETY SHROUDS & WHIP HOSES

Safety shroud and whip hose sets provide necessary hand gun operator protection against dangerous hose failures.

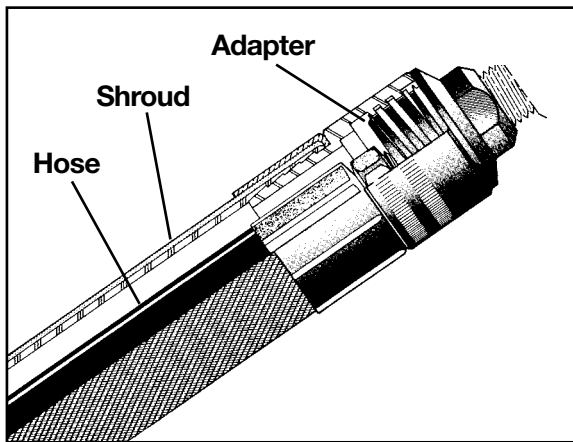
- Includes safety shroud, whip hose and adapter
- 3 ft (1 m) safety shrouds enclose the portion of the hose nearest the operator's body. Cordura over braided stainless steel construction.
- 6 ft (1.8 m) whip hoses should be changed periodically to ensure that the hose nearest the operator's body is always in good condition.
- Plated steel adapters connect whip hose and shroud to gun.



SHROUD & WHIP SETS

Part No.	Inlet Connection (to Hose)*	Outlet Connection (to Gun)*	Hose I.D.		Length		Max. Operating Pressure		Includes		
			in	mm	ft	m	psi	bar	Whip Hose	Shroud	Adapter
54060	1/2" NPT Male	1/2" NPT Fml	.50	12.7	6	1.8	15,000	1000	52241-0060505	50288-03	50290
54065	1/2" NPT Male	1/2" NPT Fml	.50	12.7	6	1.8	10,000	700	25513-0060505	50796-03	50109

* See details on all connection types beginning on page I-2.



SAFETY SHROUD ADAPTERS

Part No.	Inlet Connection (to Hose)*	Outlet Connection (to Gun)*	Max. Operating Pressure	
			psi	bar
50290	1/2" NPT Fml	1/2" NPT Fml	15,000	1000
50408	3/8" NPT Fml	1/2" NPT Fml	15,000	1000
50109	1/2" NPT Fml	1/2" NPT Fml	10,000	700
51103	3/8" NPT Fml	1/2" NPT Fml	10,000	700

* See details on all connection types beginning on page I-2.

SAFETY SHROUDS

Part No.	Length		Max. Operating Pressure	
	ft	mm	psi	bar
50288-03	3	0.9	15,000	1000
50288-06	6	1.8	15,000	1000
50796-03	3	0.9	10,000	700
50796-06	6	1.8	10,000	700

6 FT (1.8 M) WHIP HOSES

Part No.	Connection*	Hose I.D.		Max. Operating Pressure	
		in	mm	psi	bar
52241-0060505	1/2" NPT Male	.50	12.7	15,000	1000
52178-0060404	3/8" NPT Male	.38	9.5	15,000	1000
25513-0060505	1/2" NPT Male	.50	12.7	10,000	700
25576-0060404	3/8" NPT Male	.38	9.5	10,000	700

* See details on all connection types beginning on page I-2.

Related Items

DURASAFE™ HAND GUNS — See pages C-1 – C-6

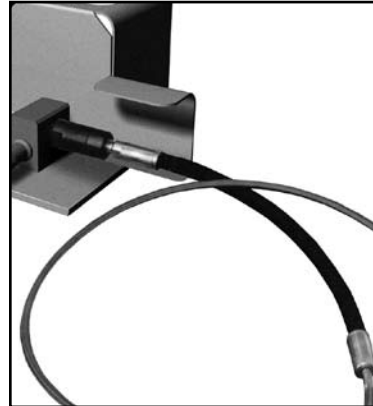
SAFETY

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STRAIN RELIEF HOSE

Used for flex lance applications, the strain relief hose prevents kinking of the flex lance to extend service life.

- Rubber hose material is more flexible and manageable than thermoplastic flex lance material
- Connects the foot control gun and the flex lance



Part No.	Length		Inlet Connection* (to Foot Gun)	Outlet Connection* (to Flex Lance)	Hose I.D.		Max. Operating Pressure	
	ft	m			in	mm	psi	bar
50135	3	0.9	1/2" NPT Male	1/4" NPT Fml	.50	12.7	15,000	1000
50138	3	0.9	1/2" NPT Male	1/8" NPT Fml	.50	12.7	15,000	1000

* See details on all connection types beginning on page I-2.

Related Items

FLEX LANCES — See pages D-4 – D-6

HOSE CHECKS

Installed on hose ends to prevent injury by restraining the hose in the event of an end fitting failure.

Steel Hose Checks

Manufactured from galvanized high tensile wire rope with spring-loaded retainers for easy installation and removal.

For 1" I.D. hoses or larger: Part No. 53412

Hoses smaller than 1" I.D.: Part No. 52242



Steel Hose Check

Nylon Hose Checks

Made from durable strap with extra-heavy stitching. Fits any high pressure hose.

Part No. 27863



Nylon Hose Check

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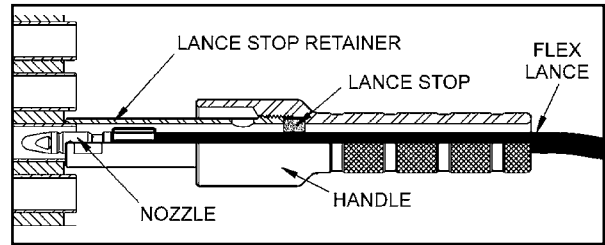
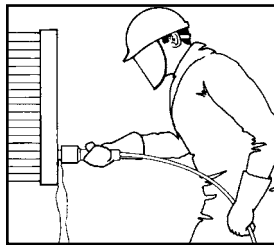


FLEX LANCE SAFETY GRIP

For use in flex lance tube cleaning operations, the safety grip prevents a nozzle from unexpectedly exiting a tube by providing a stop through which the sleeve of the flex lance will not pass. Package includes handle, lance stop retainer for use on tubes up to 3/4" O.D., and the three most commonly used lance stops.



Part No. 54164



Flex Lance Safety Grip Part No. 54164

SAFETY GRIP ACCESSORIES

Lance Stops

Choose lance stops below based on flex lance inside diameter.



Lance Stop Part No.	Flex Lance Series No.	Flex Lance Nominal I.D.	
		in	mm
51779	27560	5/16	8
51044*	26108	1/4	6
51038*	26106	3/16	5
51036*	26104	5/32	4
	28596	1/8	3

* Included in package above

Safety Grip Shield

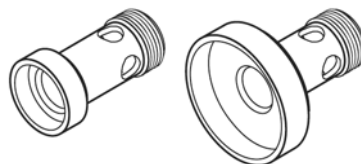
Clear, plastic shield attaches to the safety grip handle to deflect water exiting the tube away from the operator.

Part No. J55785



Lance Stop Retainers

Choose lance stop retainers based on the outside diameter of the tube to be cleaned.



Lance Stop Retainers

Part No.	Length
51055	for tubes up to 3/4" O.D. (included in package)
51425	for tubes up to 1" O.D.
51427	for tubes up to 2" O.D.

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TURTLESKIN WATERARMOR

TurtleSkin® WaterArmor provides waterblast operators with the highest level of protection available from high-pressure waterjets. Its patented fabric has the tightest weave ever achieved in aramid, a fiber two times the strength of steel and fives times lighter.

- Proven protection up to 40,000 psi (2750 bar)
- Lightweight, hinged panel design provides flexibility without fatigue
- One-size-fits-all money-saving design
- Modular design — buy only what you need
- Open back keeps operator cooler longer
- Built-in knee pad for added comfort when kneeling



Safety Suit (Item A) includes 30" duffel bag for storage and transport.

Item (s)	Part No.	Description
A	27885C*	Safety Suit — Torso & Chaps
B	27884	Gaiters (Shins & Feet)
C	28589	Gauntlets (Hands & Forearms)

* Includes duffel bag

SAFETY

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EYEWEAR



PREMIUM SAFETY GLASSES

- Stylish design
- Adjustable nose pad
- Rubber coated temple tips
- Scratch resistant, UV-blocking coating
- Anti-fog lens vent
- Z87+ approved

Part No. Lens/Frame

J70316 Clear/Gray

J70317 Gray/Gray



ECONOMY SAFETY GLASSES

- Scratch resistant, UV-blocking coating
- Z87+ approved

Part No. Lens/Frame

J70318 Clear/Frosted



SAFETY GOGGLES

- Soft-frame with indirect ventilation
- Impact and chemical splash protection
- Anti-fog coating
- Neoprene strap
- Z87+ approved

Part No.

25620

GLOVES



14" PVC/NITRILE GLOVES

- Excellent chemical resistance
- Fully coated with jersey lining
- Rough finish
- Size 10

Part No.

25624



12" PVC GLOVES

- Cotton lining
- Rough finish
- Size 10

Part No.

J70327

SAFETY

PROTECTIVE CLOTHING



WATERBLAST SUIT

- PVC/Polyester
- Bib overall pants
- Hooded jacket with storm fly
- Face shield bib with Velcro® strip
- Sizes M to 5XL

Part No.

J70323-size

Face shield, visor and hard hat sold separately.



RAIN SUIT

- PVC/Polyester
- Bib overall pants
- Jacket with removable hood
- Sizes M to 7XL

Part No.

25617-size

SAFETY

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HARD HATS

- Lightweight polyethylene with impact-absorbing ridges and rain trough
- Six-point nylon suspension with ratchet knob or pin-lock adjustment
- Washable soft brow pad
- Universal accessory slot
- White
- ANSI Z89.1-2003 Type I, Class G & E



Part No.	Adjustment
J70315	Ratchet knob
25625	Pin-lock

FACE PROTECTION



UNIVERSAL FACE SHIELD BRACKET

- Fits over the brim of most cap-style hard hats and retains with strap
- Face shields sold separately
- Plastic

Part No.
25621

FACE SHIELDS

- Polycarbonate
- 8"h x 15-1/2"w x 0.040"
- Multiple mounting slots allow use with most bracket models
- Shields with Velcro[®] strip intended for use with waterblast suits with face shield bibs



Part No.	Style
26255	Clear
26255T	Tinted
26255V	Clear w/ Velcro [®]

HEARING PROTECTION



EAR PLUGS

- Molded polyurethane foam
- Noise Reduction Rating (NRR)
Uncorded: 33 Corded: 30

Part No.	Type/Qty
J70321	Uncorded/200 pr.
J70322	Corded/100 pr.

FOOT AND LEG PROTECTION

PREMIUM 16" RUBBER KNEE BOOTS

- Steel toe
- Anchored metatarsal guard
- Stainless steel midsoles resist puncture
- Removable and washable cushioned insoles
- Waterproof
- Meets ANSI Z41 PT99 Sect 1, 2 & 5
- Made in U.S.A.
- Black and yellow
- Sizes 6-14



Part No.
J70324-size

ECONOMY 16" RUBBER KNEE BOOTS

- Steel toe
- Waterproof
- Black
- Sizes 7-13



Part No.
27168-size

12" NEOPRENE BOOTS

- Steel toe
- Very resistant to both organic and inorganic chemicals
- Suction-gripping neoprene tread patterns lock on to slick floors
- Tough, comfortable fabric lining
- Cushion insoles reduce fatigue for all-day comfort
- Waterproof
- Copper/tan
- Meets ANSI Z41 PT 99 Sect 1
- Made in U.S.A.
- Sizes 6-14



Part No.
J70326-size

SHIN & FOOT GUARDS

- Aluminum guards provide protection for shins and feet
- Padded instep
- Nylon straps
- One size fits all



Part No.
26894

SAFETY

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BARRICADES AND SIGNS

SIGNS



“Health Hazard” Caution Sign

8-1/2" x 11"

Part No. 26247



“Restricted” Caution Sign

8-1/2" x 11"

Part No. 26253



“Waterblasting” Danger Sign

8-1/2" x 11"

Part No. 25614



Safety Warning Sticker: “Always Wear Your Safety Gear”

Part No. 28501

BARRICADES



“Caution: Waterblasting In Progress” Safety Tape

- Barricade tape
- Yellow
- 3" x 300' (75 mm x 90 m) roll

Part No. 26444



“Danger: Hydroblasting” Safety Tape

- Barricade tape
- Red
- 3" x 1000' (75 mm x 300 m) roll

Part No. J70413

MEDIA



SAFETY VIDEO

An essential training tool for anyone working in or around waterblasting, this video provides in-depth information for basic waterblast safety with emphasis on operation, pumps, equipment and applications. Available in several formats.

Part No.	Format
27019	VHS (NTSC format: North America)
27019P	VHS (PAL format)
28632	DVD
28633	Video CD

SAFETY WARNING DECAL SET

Created to promote safe use of waterblasting equipment, this comprehensive decal package provides important warnings and instructions applicable to any waterblast unit.

Part No. 29902

