

C Series Valves

- Accurate, repeatable
- Minimal pressure surge
- Smooth, chatter-free bypass
- Adjustable
- Easy to service
- No external springs or moving parts
- Various seal material
- Stainless steel or brass bodies
- Used with any positive displacement pump



Hydra-Cell[®]
SIMPLY BUILT TO LAST

C Series Valves

C Series Hydra-Cell Valves bypass system fluid to prevent excess system pressure. When a system discharge is completely closed – such as a closed spray gun, closed valve or plugged nozzle – the Hydra-Cell Valve bypasses the total system fluid flow. They also balance system pressure for multiple-gun operations.

The Hydra-Cell Valve design is simple: a tapered plunger with a valve seat. When excess pressure overcomes the adjustable spring pressure on the plunger, the plunger lifts off the seat, allowing fluid to bypass and reduce system pressure. When a Hydra-Cell Valve is mounted in the discharge line, its modified flow-through design reduces wear on the plunger and seat. Baffles on either side of the plunger and seat extend life by directing the flow around these internal components.

For service, simply remove the top of the body and replace the worn internal components. Hydra-Cell Valves can be serviced in place without removing any fittings or plumbing.



C22/C23/C24 Series (See page 86)

C22, C23, and C24 Series Hydra-Cell Regulating Valves are available in a choice of stainless steel, nickel alloy or solid brass materials and accommodate 3/4" to 1-1/4" NPT plumbing.

- Heavy-duty construction
- Flow-through design
- Immediate response



C46 Series (See page 90)

C46 Series Valves are available in a choice of stainless steel or solid brass materials and accommodate 3/8" NPT plumbing.

- Heavy-duty construction
- Flow-through or off-line design
- Quick response

C62 Series Sealless Diaphragm Valves (See page 92)

C62 Series Hydra-Cell Sealless Diaphragm Valves bypass system fluid to prevent excess system pressure. When a system discharge is completely closed – such as a closed spray gun, closed valve or plugged nozzle – the Hydra-Cell Valve bypasses the total system fluid flow. They also balance system pressure for multiple-gun operations.

- Ideal for high pressure, dirty fluids
- Sealless, flow-through design
- Heavy-duty construction
- Immediate response

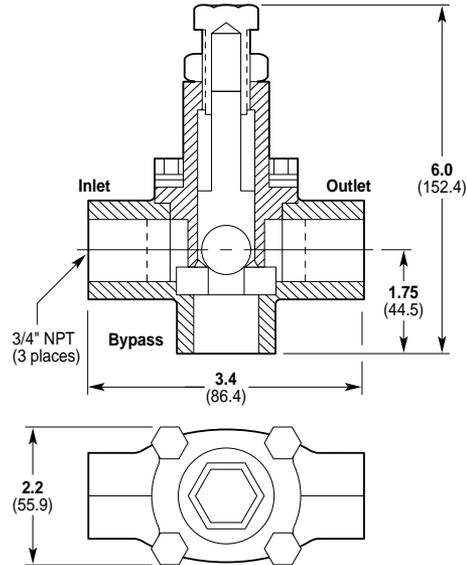


C22/23/24 Series Valves



C-22 with 3/4" NPT Ports

Configuration
AA AB AC



Capacity	Maximum		Minimum	
	gpm	l/min	gpm	l/min
C-22	10	37.8	3	11.3
C-23	20	75.7	3	11.3
C-24	40	151.4	5	18.9

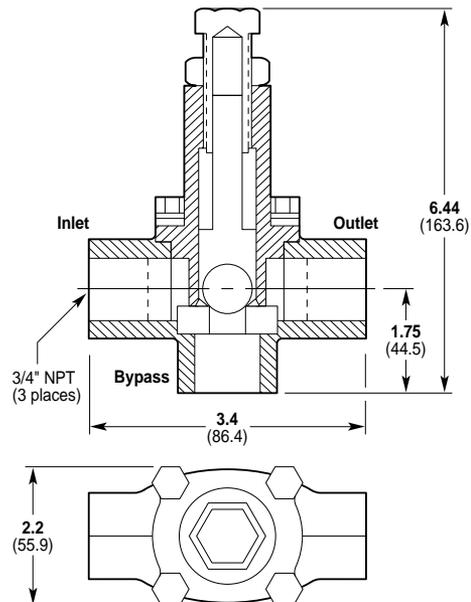
Pressure Range	Model Configuration			
	AA	AB	AC	AE
psi				
C-22	75-500	500-1000	1000-1500	1500-2500
C-23	75-500	500-1000	1000-1500	—
C-24	75-500	500-1000	1000-1500	—
bar				
C-22	3.5-34.5	34.5-69	69-103	103-172
C-23	3.5-34.5	34.5-69	69-103	—
C-24	3.5-34.5	34.5-69	69-103	—

Max Temperature 200°F

Inlet and Outlet Ports	
C-22	3/4" NPT
C-23	1" NPT
C-24	1-1/4" NPT

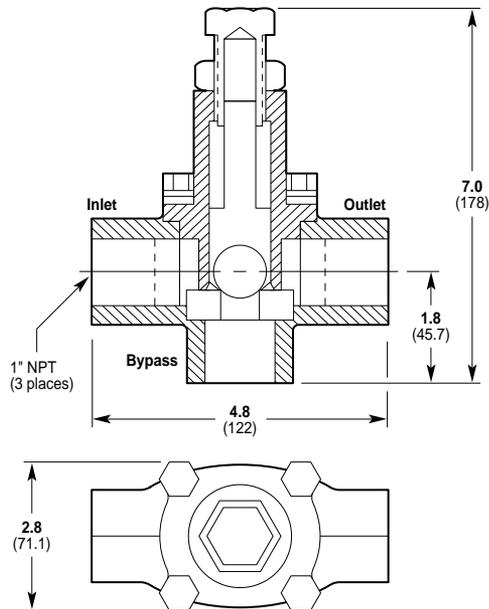
Weight	
C-22	3 lbs (1.3 kg)
C-23	6 lbs (2.7 kg)
C-24	10 lbs (4.5 kg)

Configuration
AE

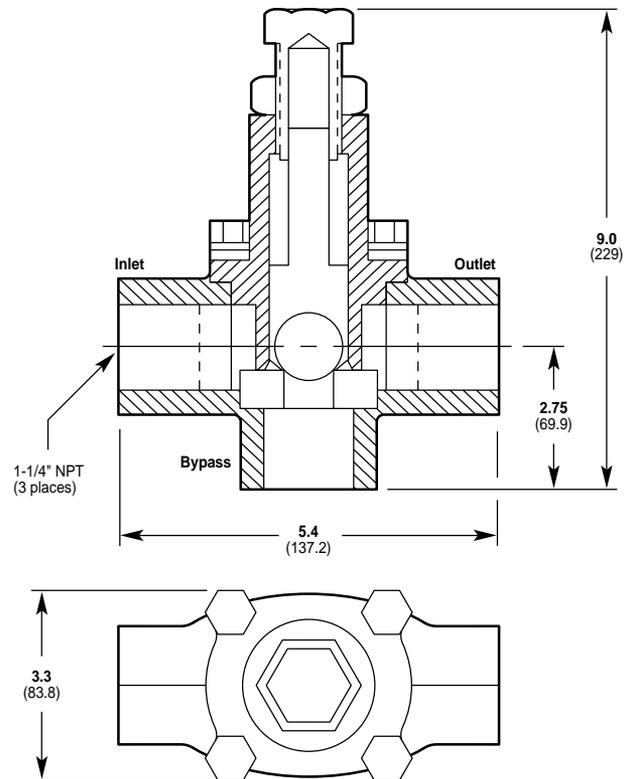


C22/23/24 Series Valves

C-23 with 1" NPT Ports



C-24 with 1-1/4" NPT Ports



Installation Guidelines

C Series Valves are installed in the discharge line of the pump between the pump and any shut-off device, valve or spray gun. Bypassed fluid should return to the tank or inlet plumbing. Do not install a shut-off device of any kind in the bypass line.

When operating as a pressure-regulating relief valve, 10% of the valve's rated flow should be bypassed at all times. Check the system periodically to ensure this requirement is met. Failure to do so may result in pressure spikes and premature system wear.

When used as a pressure regulator, system pressure will increase approximately 10% when the system is fully bypassed. Consult operating manual for specific ratings.

C22/23/24 Series Valves

Materials of Construction

C22, C23 and C24 Series Valves are manufactured in a choice of heavy-duty materials to meet specific plumbing needs.



Valve Bodies/Tops

Brass
Nickel Alloy (Hastelloy Remelt,
CMW12D)
316 Stainless Steel



Valve Seats

316 Stainless Steel
17-4 Stainless Steel
Hastelloy® C
Tungsten carbide



O-Rings/Seals

EPDM/Teflon
Buna-N/Buna-N
Viton® /Teflon
Urethane/UHMW Polyethylene
Viton®/UHMW Polyethylene



Plungers

316 Stainless Steel
17-4 Stainless Steel
Hastelloy® C
Tungsten carbide

C22/23/24 Series Valves

Ordering Information

A complete C22/23/24 Series Model Number contains 11 digits of customer-specified design options: for example C22DABNSSEF.



75-1500 psi (5-103 bar)

Digit	Order Code	Description
1-4	Valve Configuration	
	C22A	3-10 gpm (11.3-37.8 l/min)
	C23A	3-20 gpm (11.3-75.7 l/min)
	C24A	5-40 gpm (18.9-151.4 l/min)
5	Pressure Range	
	A	75-500 psi (5-34.5 bar)
	B	500-1000 psi (34.5-69 bar)
	C	1000-1500 psi (69-103 bar)
6	Body/Top Material	
	B	Brass
	H	Nickel Alloy (Hastelloy® Remelt, CMW12D)
	K	Brass w/Stainless Steel Sleeve
	S	316 Stainless Steel
7	Seals/Back-up Seals	
	A	Urethane/UHMW polyethylene
	B	Viton®/UHMW polyethylene
	E	EPDM/Teflon
	N	Buna-N/Buna-N
	V	Viton®/Teflon
8	Valve Seats	
	H	Hastelloy® C
	R	316 Stainless Steel
	S	17-4 HT Stainless Steel
	T	Tungsten Carbide
9	Plungers	
	H	Hastelloy® C
	R	316 Stainless Steel
	S	17-4 HT Stainless Steel
	T	Tungsten Carbide
10	Seat Size	
	E	For C22A Models
	J	For C23A Models
	N	For C24A Models
11	Port Size	
	F	For C22A Models (3/4" NPT)
	G	For C23A Models (1" NPT)
	H	For C24A Models (1-1/4" NPT)

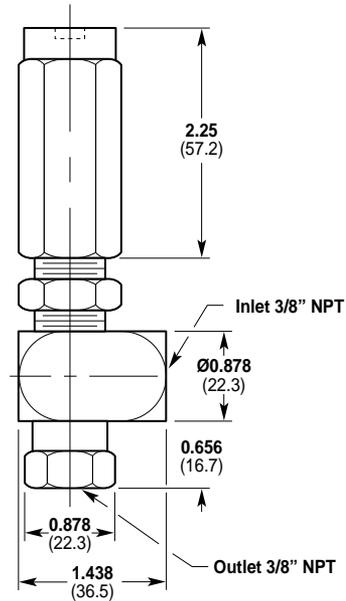
1500-2500 psi (103-172 bar)

Digit	Order Code	Description
1-4	Valve Configuration	
	C22A	3-10 gpm (11.3-37.8 l/min)
	C23A	3-20 gpm (11.3-75.7 l/min)
5	Pressure Range	
	E	1500-2500 psi (103-172 bar)
6	Body/Top Material	
	C	High Pressure Brass
	T	High Pressure Nickel Alloy (Hastelloy® Remelt, CMW12D)
	R	High Pressure 316 Stainless Steel
7	O-rings/Seals	
	A	Urethane/UHMW polyethylene
	B	Viton®/UHMW polyethylene
	E	EPDM/Teflon
	N	Buna-N/Buna-N
	V	Viton®/Teflon
8	Valve Seats	
	H	Hastelloy® C
	R	316 Stainless Steel
	S	17-4 HT Stainless Steel
	T	Tungsten Carbide
9	Plungers	
	H	Hastelloy® C
	R	316 Stainless Steel
	S	17-4 HT Stainless Steel
	T	Tungsten Carbide
10	Seat Size	
	E	For C22A Models
J	For C23A Models	
11	Port Size	
	F	For C22A Models (3/4" NPT)
	G	For C23A Models (1" NPT)

C46 Series Valves



C-46 for Off-Line Mount



Capacity	Maximum		Minimum	
	gpm	l/min	gpm	l/min
C-46 (Off-Line)	10	37.8	0.2	1
C-46 (In-Line)	7	26.5	0.2	1

Pressure Range

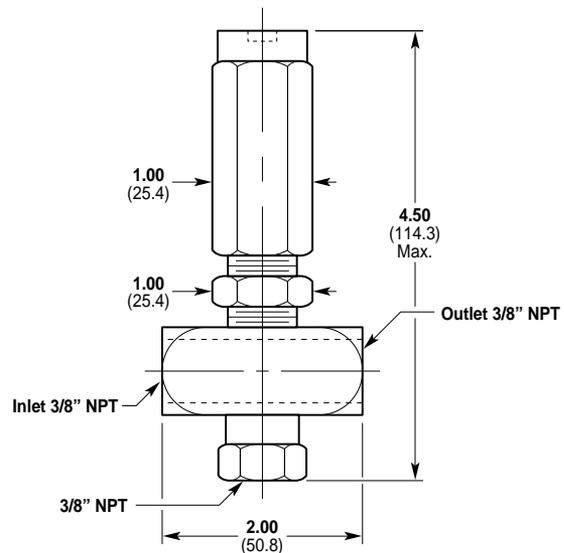
Low Spring	50-500 psi (3.5-34.5 bar)
Medium Spring	100-900 psi (6.9-62 bar)
Standard Spring	200-1500 psi (13.8-103 bar)

Max Temperature 180°F

Inlet and Outlet Ports 3/8" NPT

Weight 12 oz (0.33 kg)

C-46 for In-Line Mount



Materials of Construction

C46 Series Valves are manufactured in a choice of heavy-duty materials to meet specific pumping needs.

Bodies

Brass (available in-line or off-line)
316 Stainless Steel (available off-line only)

O-Rings

EPDM
Buna-N
Viton®

Piston

316 Stainless Steel

Piston Seal

EPDM
Buna-N
Viton®

Valve Seat

316 Stainless Steel

Spring

Low, Medium or Standard Chrome Vanadium-plated

C46 Series Valves

Ordering Information

A complete C46 Series Model Number contains 11 digits of customer-specified design options: for example C46AABESSEE.



Digit	Order Code	Description
1-3		Valve Configuration
	C46	0.2-10 gpm (1-37.8 l/min)
4		Mounting Design
	A	In-Line (brass only)
	B	Off-Line (brass or stainless steel)
5		Pressure Range (Spring Selection)
	A	Low Spring: 50-500 psi (3.5-34.5 bar)
	B	Medium Spring: 100-900 psi (6.9-62 bar)
	C	Standard Spring: 200-1500 psi (13.8-103 bar)
6		Body Material
	B	Brass
	S	316 Stainless Steel (Available Off-Line models only)
7		O-rings
	E	EPDM
	N	Buna-N
	V	Viton®
8		Piston
	S	316 Stainless Steel
9		Seat
	S	316 Stainless Steel
10		Seat Size
	E	For C46 Models
11		Port Size
	E	For C46 Models (3/8" NPT)

C62 Series Valves



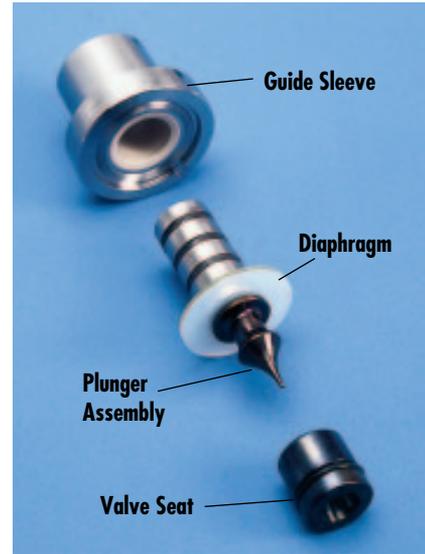
Superior Sealless Diaphragm Design.

The Hydra-Cell C62 Valve design is simple: a tapered plunger with an attached diaphragm. When excess pressure overcomes the adjustable spring pressure on the plunger, the plunger lifts off the valve seat, allowing fluid to bypass and reduce system pressure. When a Hydra-Cell Valve is mounted in the discharge line, its modified flow-through design reduces wear on the plunger and seat.

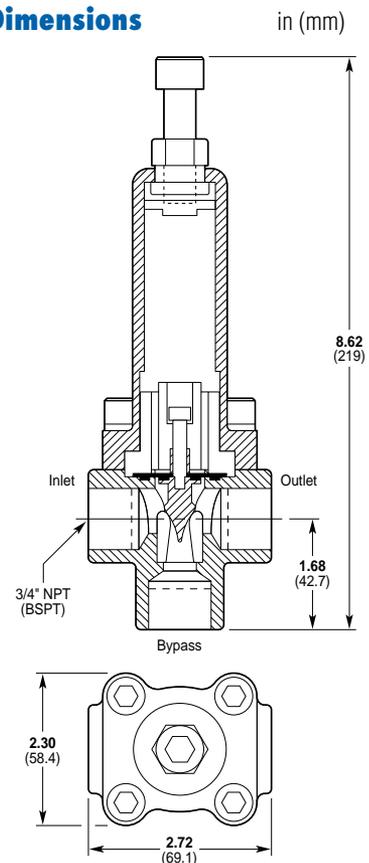
For service, simply remove the top of the valve and replace the worn internal components. Hydra-Cell Valves can be serviced in place without removing any fittings or plumbing.

Features

- Various materials available: stainless or brass bodies, PTFE diaphragm, etc.
- Made in America
- Heavy-duty industrial construction
- Accurate, repeatable
- Flow-through design
- Minimal pressure surge
- Smooth, chatter-free bypass
- No external springs or moving parts
- Use with any positive displacement pump
- Immediate response
- Adjustable, easy to service



Dimensions



Materials of Construction

Attention to detail. Wanner Engineering doesn't stop with a great design. We will custom fit your valve with the materials best suited for your specific application.

Bodies/Tops Material

- Brass
- Nickel Alloy (Hastelloy Remelt, CMW12D)
- 316 Stainless Steel

O-Rings/Diaphragms

- PTFE/PTFE
- Viton® /PTFE

Valve Seats

- Hastelloy® C
- 17-4 Stainless Steel
- 316 Stainless Steel

Plungers

- Hastelloy® C
- 17-4 Stainless Steel
- 316 Stainless Steel

Capacity	Maximum: 14 gpm (53 l/min) Minimum: 1 gpm (3.8 l/min)
Pressure Range	Configuration A: 50-500 psi (3.5-34.5 bar) Configuration B: 500-2500 psi (34.5-172 bar)
Max Temperature	200°F
Inlet and Outlet Ports	3/4" NPT (BSPT)
Weight	4 lbs (1.8 kg)

C62 Series Valves

Ordering Information

A complete C62 Series Model Number contains 11 digits of customer-specified design options: for example C62ABBVSSEF.



Digit	Order Code	Description
1-3		Valve Configuration
	C62	1-14 gpm (3-53 l/min)
4		Inlet/Outlet Ports
	A	NPT Threaded Ports
	D	BSPT Threaded Ports
5		Pressure Range
	A	75-500 psi (5.3-34.5 bar)
	B	500-2500 psi (34.5-172 bar)
6		Body/Top Material
	B	Brass
	H	Nickel Alloy (Hastelloy® Remelt, CMW12D)
	S	316 Stainless Steel
7		O-rings/Diaphragm
	J	Teflon/Teflon
	V	Viton®/Teflon
8		Valve Seats
	H	Hastelloy® C
	R	316 Stainless Steel
	S	17-4 HT Stainless Steel
9		Plungers
	H	Hastelloy® C
	R	316 Stainless Steel
	S	17-4 HT Stainless Steel
10		Seat Size
	E	For C62 Models
11		Port Size
	F	For C62 Models (3/4")