

	SERIES	DESCRIPTION	BODY NO.	PAGE NO.
<b>CV</b> Check Valves	<b>PARKER STANDARD BODIES AND CAVITIES</b>			
<b>SH</b> Shuttle Valves	C04-2	04 Size, 2 Way	B04-2-*	BC7
	C04-3	04 Size, 3 Way	B04-3-*	BC8
	C08-2	08 Size, 2 Way	B08-2-*	BC9
	C08-3	08 Size, 3 Way	B08-3-*	BC10
	C08-4	08 Size, 4 Way	B08-4-*	BC11
<b>LM</b> Load/Motor Controls	C09-2	09 Size, 2 Way	B09-2-*	BC12
	C10-2	10 Size, 2 Way	B10-2-*	BC13
	C10-2T	10 Size, 2 Way, "T" Body	B10-2T-*	BC14
	C10-3	10 Size, 3 Way	B10-3-*	BC15
<b>FC</b> Flow Controls	C10-3S	10 Size, 3 Way, Short	B10-3S-*	BC16
	C10-4	10 Size, 4 Way	B10-4-*	BC17
	C11-3	11 Size, 3 Way	4082075	BC18
	C12-2	12 Size, 2 Way	B12-2-*	BC19
	C12-3	12 Size, 3 Way	B12-3-*	BC20
<b>PC</b> Pressure Controls	C12-3L	12 Size, 3 Way, Long	B12-3L-*	BC21
	C12-4	12 Size, 4 Way	B12-4-*	BC22
	C12-4L	12 Size, 4 Way, Long	B12-4L-*	BC23
	C16-2	16 Size, 2 Way	B16-2-*	BC24
<b>LE</b> Logic Elements	C16-3	16 Size, 3 Way	B16-3-*	BC25
	C16-3S	16 Size, 3 Way, Short	B16-3S-*	BC26
	C16-4	16 Size, 4 Way	B16-4-*	BC27
	C20-2	20 Size, 2 Way	B20-2-*	BC28
	C20-3S	20 Size, 3 Way, Short	B20-3S-*	BC29
<b>DC</b> Directional Controls	<b>COUNTERBALANCE CAVITIES AND BODIES</b>			
	MHC-010	Single and Dual Counterbalance Bodies	MHC-010-*	BC30
	MHC-022	Single and Dual Counterbalance Bodies	MHC-022-*	BC31
<b>MV</b> Manual Valves	MHC-025	Single and Dual Counterbalance Bodies	MHC-025-*	BC32
	MHC-050	Single and Dual Counterbalance Bodies	MHC-050-*	BC33
<b>SV</b> Solenoid Valves	<b>PILOT PISTON CAVITIES</b>			
	10 Size	10 Size Cavity for Single Check and Pilot Piston		BC34
	16 Size	16 Size Cavity for Single Check and Pilot Piston		BC34
	10 Size	10 Size Cavity for Dual Check and Pilot Piston		BC34
	16 Size	16 Size Cavity for Dual Check and Pilot Piston		BC34
<b>PV</b> Proportional Valves	<b>STANDARD CAVITY PLUGS</b>			
		Cavity Plugs		BC35
<b>CE</b> Coils & Electronics	<b>CARTPAK BODIES</b>			
	BD03-PN	P Port Interrupt, 2-Way, Body Only	BD03-PN-*	BC36
	BD03-PN2	P Port Interrupt, 2-Way, Body Only	BD03-PN2-*	BC37
	BD03-PNR	P Port Interrupt, Reducing Function, Body Only	BD03-PNR-*	BC38
	BD03-PNS	P Port Interrupt, Sequencing Function, Body Only	BD03-PNS-*	BC39
	BD03-PT	P to T, Body Only	BD03-PT-*	BC40
<b>BC</b> Bodies & Cavities	BD03-ABN	A and B Port Interrupt, Body Only	BD03-ABN-*	BC41
	BD03-ABX	A and B Port Crossover, Body Only	BD03-ABX-*	BC42
	BD03-ABT	A and B Ports to Tank, Body Only	BD03-ABT-*	BC43
	BD03-DDX	Ports A and B Drain to Crossover Port, Body Only	BD03-DDX-*	BC44
<b>TD</b> Technical Data	BD03-BDA	B Port Drain to A, Body Only	BD03-BDA-*	BC45
	BD03-ADB	A Port Drain to B, Body Only	BD03-ADB-*	BC46

SERIES	DESCRIPTION	BODY NO.	PAGE NO.
<b>SPECIAL BODIES AND CAVITIES</b>			
CAVOW-2	2 Port	LB1079*	BC47
CAVSW-3	3 Port	LB1081*	BC48
CAVT11A	3 Port or 4 Port Dual	LB1082*	BC49
CAVT21A	4 Port	LB1083*	BC50
2C	2 Port	LB1021*	BC51
2G	2 Port	LB1032*	BC52
2R	2 Port	LB105**	BC53
2U	2 Port	LB102**	BC54
2X	2 Port	LB1051*	BC55
3A	3 Port	LB100**	BC56
3C	3 Port or 4 Port Dual	LB100**	BC57
3J	3 Port	LB1009*	BC58
3K	3 Port		BC59
3M	3 Port or 4 Port Dual	LB100**	BC60
3X	3 Port	LB1055*	BC61
3Z	3 Port	LB103**	BC62
4C	4 Port	LB1056*	BC63
5A	5 Port	LB103**	BC64
53-1	3 Port or 4 Port Dual	LB1031*	BC65
54-1	3 Port	LB10591	BC66
68-1	3 Port or 4 Port Dual	LB102**	BC67
91-1	3 Port	LB1015*	BC68
100-1	5 Port	LB1031*	BC69

**CV**

Check Valves

**SH**

Shuttle Valves

**LM**

Load/Motor Controls

**FC**

Flow Controls

**PC**

Pressure Controls

**LE**

Logic Elements

**DC**

Directional Controls

**MV**

Manual Valves

**SV**

Solenoid Valves

**PV**

Proportional Valves

**CE**

Coils & Electronics

**BC**

Bodies & Cavities

**TD**

Technical Data



CV

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SH

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LM

Load/Motor Controls

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Solenoid Valves

PV

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CE

Coils & Electronics

BC

Bodies & Cavities

TD

Technical Data

**INTRODUCTION**

This Technical Tips section is split into three parts; Standard Line Bodies, Cavities, and Cartpaks. In the standard line bodies section, we highlight the features and options of our standard offering of line bodies. In the cavity section we discuss “common” cavities and form tools. In the Cartpak section, we present the features and options to Parker’s line of D03 style sandwich bodies. The Technical Tips are provided to help you become more familiar with Parker Hannifin’s line of product and assist you in applying our product.

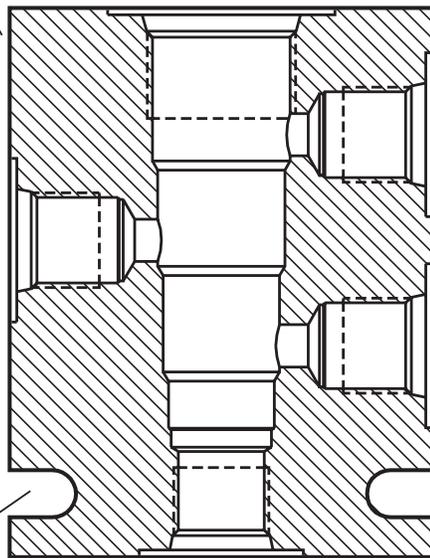
**STANDARD LINE BODIES**

Parker offers standard line bodies for each valve and cavity size. Below are some of the features of Parker’s standard line bodies.

**Yellow Zinc Coating**  
Steel bodies are coated with yellow zinc dichromate providing protection from salt spray.

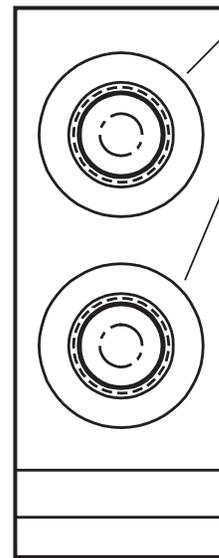
**Common Cavity**  
Allows single body to be used for a number of functions.

**Various Port Sizes**  
Each body has a variety of port sizes and types available.



**Slotted Mounting Holes**  
Allows several bodies to be stacked together and held by one set of bolts.

**Aluminum and Steel Bodies**  
Light weight aluminum bodies are available for low pressure applications. Durable steel bodies are available for higher pressures.



**Clear Anodized**  
Aluminum bodies are thin coated with a clear anodize providing corrosion resistance.

**COMMON OPTIONS & FEATURES**

**Aluminum vs. Steel:** Parker offers standard line bodies in both aluminum and steel. Aluminum bodies are most often used for general applications. They are lightweight and less costly than steel bodies. Parker’s aluminum bodies are coated with a clear anodize to provide a corrosion resistant protection. Aluminum bodies should never be used in applications above 210 bar (3000 psi.) Steel bodies are more durable and

heavier than aluminum bodies. They are ideal for applications with elevated pressures or where rugged construction is desired. Steel bodies are suitable for applications up to 350 bar (5000 psi.) Parker’s steel bodies are coated with yellow zinc dichromate providing corrosion resistance. Yellow zinc dichromate even provides the steel body many hours of protection from salt spray.

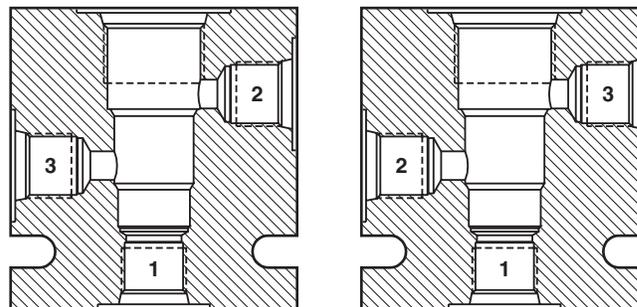
**COMMON OPTIONS & FEATURES (Cont.)**

**Pressure Drop:** The pressure drop through a line body is fairly minimal. Each catalog page shows a pressure drop curve. This should be added to the pressure drop through the cartridge when trying to estimate total pressure drop for a function.

**Porting:** Parker offers a variety of port sizes and types for each line body. While NPT or pipe ports were once very popular and are still offered, we recommend SAE ports for new applications. SAE ports and fittings provide a more secure connection than pipe ports. BSPP ports are also available.

**Port Numbering Change:** With this catalog, we have re-numbered the ports on our 3-way line bodies. In the past, three way bodies were numbered with the nose

being port 1, the middle port labeled (3), and the top port labeled (2). Over the years, this has caused some confusion, so we have relabeled the ports sequentially from the bottom. For identification, the current design will be marked with a Parker symbol like the one shown.



Previous Design

Current Design

**CAVITIES**

The hole that the cartridge valve is screwed into is called a cavity. Many cartridge producers manufacture valves that fit a “common” cavity. With a “common” cavity, a valve theoretically could be removed from a cavity and replaced by another manufacturer’s product. One should be careful though to check cross drill ports and thread depths when pursuing this activity. While it is true that many manufacturer’s products fit inside another’s cavity, the cross drills sometimes expose an o-ring to pressure, causing the o-ring to be extruded.

**Valve / Cavity Compatibility Chart:** Through acquisition, Parker Hannifin has accumulated a number of manufacturers with “common” cavities. To accommodate all of our product lines, we have released a new cavity for our Winner’s Circle product line. The cavities shown in this catalog are considered Winner’s Circle Cavities. The Winner’s Circle valves are downward and upward compatible with the Parker Series of product. On each catalog page, you will find a chart like the one shown on this page. The purpose of this chart is to help identify if a valve from one acquisition can be replaced by the Winner’s Circle valve, or another acquisition. The valves are designated by the columns of the chart and the cavities by the rows. If you have an existing cavity, you find it on the chart and follow across to see which valves you may put in the cavity. For instance, using the chart below, let’s say you have an existing manifold in which you had manufactured a FPS cavity (maybe you were using a SV2A-10). By finding the row labeled FPS and following across, you find that you could use the new Winner’s Circle product, an FPS product, or a CEC product of the same size in this cavity. A Parker or Waterman valve will not fit in this cavity without modifying the cavity. This chart is provided to help you in converting to the Winner’s Circle product line.

		VALVE				
		Winner’s Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner’s Circle	X	X	X	X	X
	Parker	X	X	X		
	Waterman	X	X	X		
	FPS	X			X	X
	CEC	X			X	X

**Cavity Tools:** On each catalog page, cavity tools are listed for your use in creating special manifolds. More is discussed on manifold construction in the Technical Data section of this catalog. For 3-way and 4-way valves, you will find a roughing and a finishing tool. The rougher is a step drill used to prep the cavity for the finishing tool. The rougher removes the mass of material and is necessary because the finisher is not designed for primary forming. The finisher is a precision tool used to provide the final dimensions of the cavity. No rougher is offered for 2-way cavities because a standard drill bit can be used to remove the mass of material.

CV

Check Valves

SH

Shuttle Valves

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Load/Motor Controls

FC

Flow Controls

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Pressure Controls

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Logic Elements

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Directional Controls

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Manual Valves

SV

Solenoid Valves

PV

Proportional Valves

CE

Coils & Electronics

BC

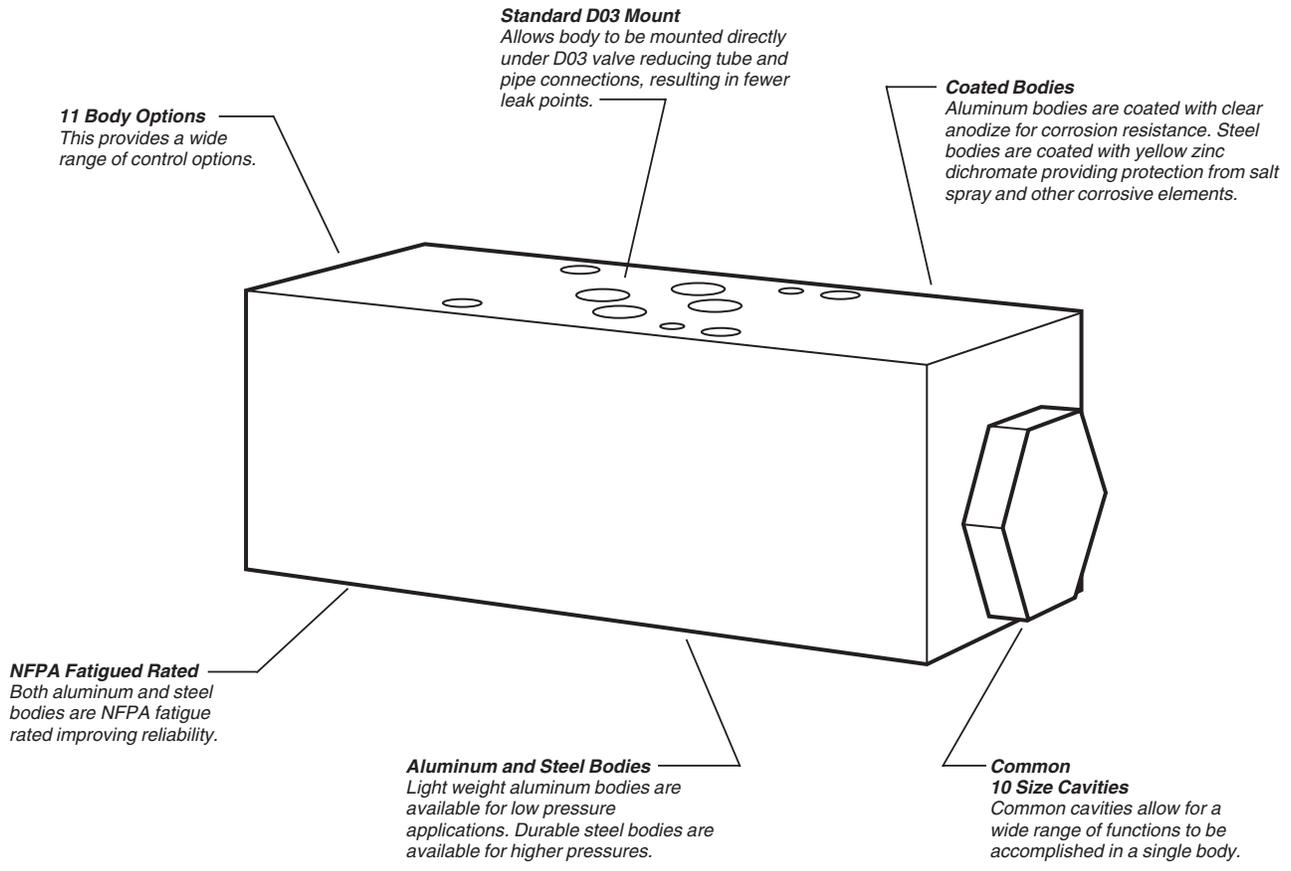
Bodies & Cavities

TD

Technical Data

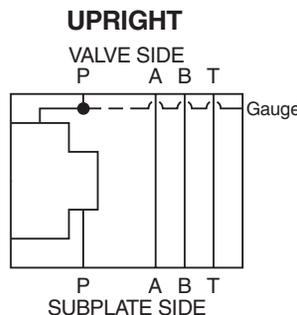
**CARTPAK BODIES**

Parker Cartpak sandwich mounted bodies are designed to be mounted under a standard ISO 4401-03, NFPA D03, CETOP 3 size valve, and provide a multitude of different functions. The bodies are designed to accept a common 10 size cartridge valve allowing the designer the flexibility to use a single body to provide pressure, directional, flow, or load control. One or more Cartpak bodies may be “sandwiched” underneath a Parker D1 Series directional valve to provide the control functions for all portions of a hydraulic circuit. The ISO standard fatigue rated bodies are available in either aluminum or ductile iron.



**Catalog Pages:** Each Cartpak catalog page is laid out in a similar format and is designed to help you select the proper body for your application. In the top left corner of the page there is a brief description and body schematic. The body schematic shows the cartridge cavity and the ports connecting to it. This schematic can be used to understand which valves can be used in the body. For instance, in the

example shown here, flow from the subplate in port P is directed into the nose of the cartridge. The side port of the cartridge is connected to the valve side of port P. Thus, you want to choose cartridges providing the function desired, and use the nose as the inlet. For instance, a FC101 meters flow from its nose port to its side port and would be ideal for the p-port interrupt body shown.



## Technical Tips

In addition to the body schematic, we also provide a hydraulic schematic at the bottom of each catalog page. This schematic shows a variety of Parker cartridge part numbers that can be used with this body. This list is not intended to be comprehensive, but it is intended to show the wide variety of options that can be achieved with each body. You will also note, the product listing shows the orientation of the block (upright or inverted), the cavity for the cartridge, and cavity plugs (when necessary.) Once again, many options can be achieved with each body.

**O-Ring Plates:** Since many of the Cartpak bodies can be “flipped” to achieve extra functions, the faces of the bodies must be flat. Thus, an o-ring plate with o-rings must be used to seal the mounting surface. One plate with o-rings will be provided with any body that can be inverted. *Below are the kit numbers;*

**Nitrile Kit - 717939    Fluorocarbon Kit - 717939V**

**Flipping Cartpaks:** As mentioned before, many Cartpak bodies can be flipped to create extra options. The catalog pages show some of the functions that can be achieved by “flipping.” The words “upright” and “inverted” are written on the bodies to help you identify which side you are looking at. To invert the body, while facing the long face of the body (in other words, the sides without any ports or cavities), rotate the valve 180 degrees away from your body in an upward fashion. By doing this, you have essentially switched the P port and T port.

**Stacking Cartpaks:** Cartpak bodies can be stacked on top of one another to provide a number of functions in a single assembly. When stacking Cartpak bodies though, you want to take some care in the order in which the bodies are stacked. In general, flow controls should be stacked as close to the subplate stack as possible, while pilot operated check valves or counterbalance valves should be stacked as close to the D03 valve as possible.

The D03 line of bodies has a common height of 40mm (1.58 in.). Below is a list of bolt kits available from Parker.

UNC Bolt Kits for use with D1V Directional Control Valves & Manapaks/Cartpaks (D1V*-75 Design, Solenoid Operated)					
	Number of Manapaks/Cartpaks @ 1.58" (40mm) thickness				
	0	1	2	3	4
D1V-75	BK209 1.25"	BK243 2.88"	BK225 4.38"	BK244 6.00"	BK245 7.50"
D1V-75 Plus Tapping Plate	BK176 2.25"	BK56 3.81"	BK212 5.38"	BK107 7.00"	BK106 8.50"

**Note:** All bolts are SAE grade 8, 10-24 UNC-2A thread, torque to 5.6 N.m. (50 in.-lbs.)

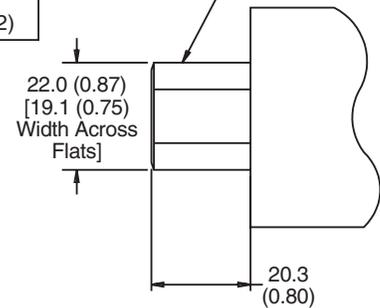
## Bodies and Cavities

**Gauge Ports:** Several of the Cartpak bodies are equipped with a SAE #4 gauge port to assist the user during installation and troubleshooting. We offer hex adapter plugs, should your pressure gauge have a different thread type.

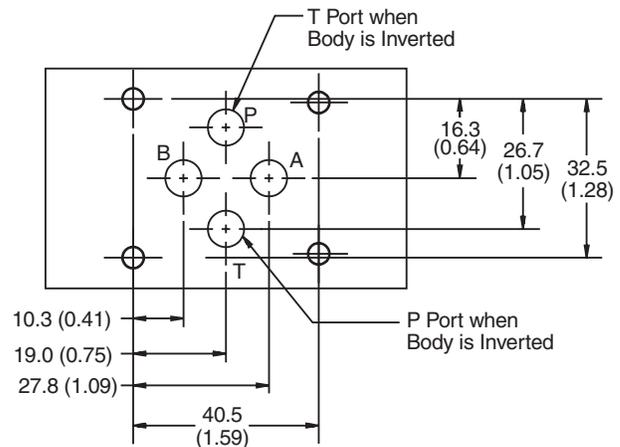
### Hex Adapter Plug to convert from SAE #4

1830016	BSPP
1830017	BSPT
1830018	NPTF
1830019	Metric (M12)

Hex Adapter Plug for Converting from #4- SAE to NPTF, M12, BSPT or BSPP Gauge Ports, Where Applicable



**D03 Pad Dimensions:** Below is the common dimensions of the standard D03 mount pad. Since these dimensions are common to all Cartpak bodies, we do not identify them on the individual valve pages.



CV

Check Valves

SH

Shuttle Valves

LM

Load/Motor Controls

FC

Flow Controls

PC

Pressure Controls

LE

Logic Elements

DC

Directional Controls

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Proportional Valves

**CE**

Coils & Electronics

**BC**

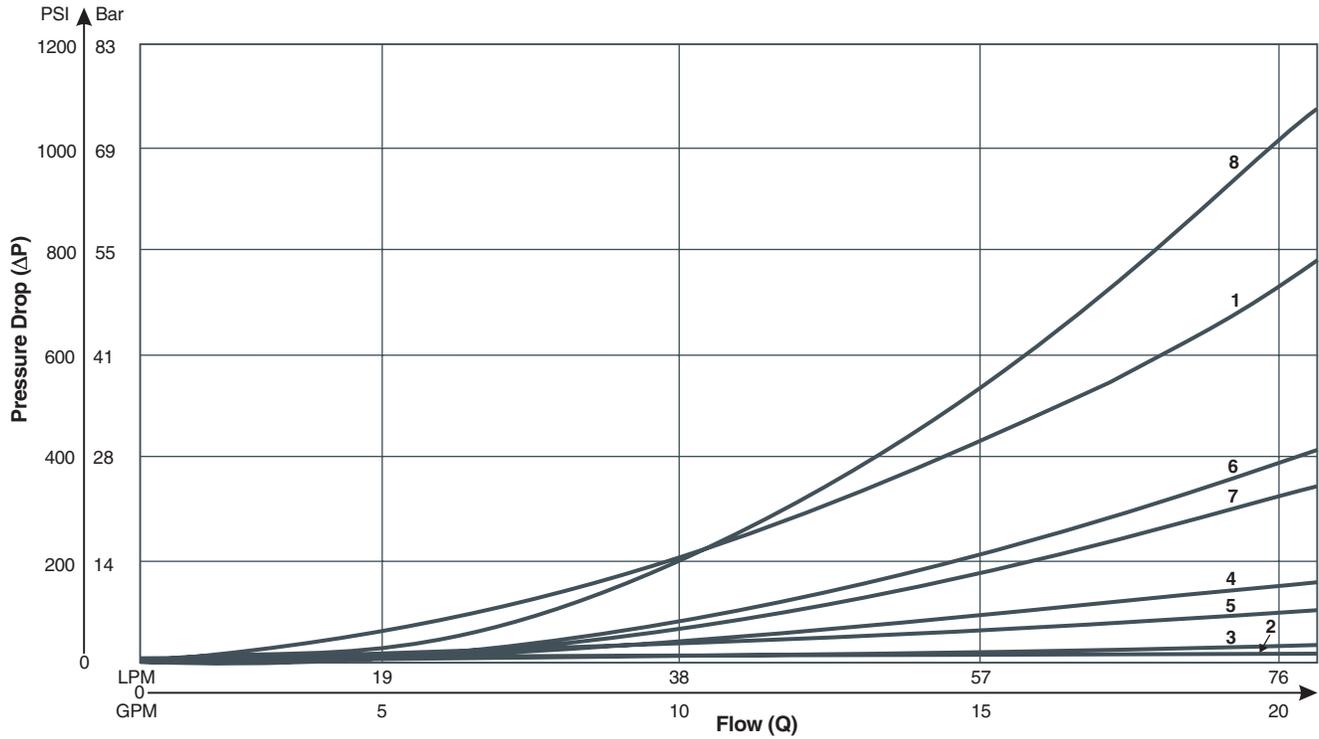
Bodies & Cavities

**TD**

Technical Data

**PRESSURE DROP CHART**

The following charts outline the pressure drop through the Parker Cartpak bodies. The pressure drop is minus the cartridge valve.



Body	Orientation	P	T	A	B
BD03-PN	Upright	1	2	3	3
	Inverted	2	1	3	3
BD03-PT	Upright	3	3	3	3
	Inverted	3	3	3	3
BD03-ABN	Upright	3	3	4	4
	Inverted	3	3	4	4
BD03-ABT	Upright	3	3	3	3
	Inverted	3	3	3	3
BD03-ABX	Upright	5	5	3	3
BD03-PNR	Upright	6	3	3	3
BD03-PNS	Upright	7	3	3	3
BD03-DDX	Upright	3	3	1	1
BD03-BDA	Upright	6	3	3	3
BD03-ADB	Upright	6	3	3	3
BD03-PN2	Upright	8	3	3	3
	Inverted	3	8	3	3



Technical Information

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
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- PC Pressure Controls
- LE Logic Elements
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- PV Proportional Valves
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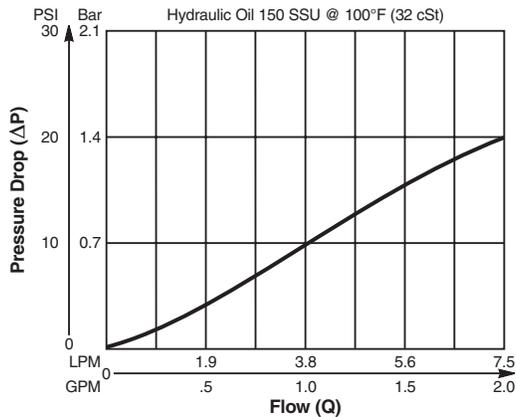
Valve/Cavity Compatibility

For additional information see Technical Tips on pages BC1-BC6.

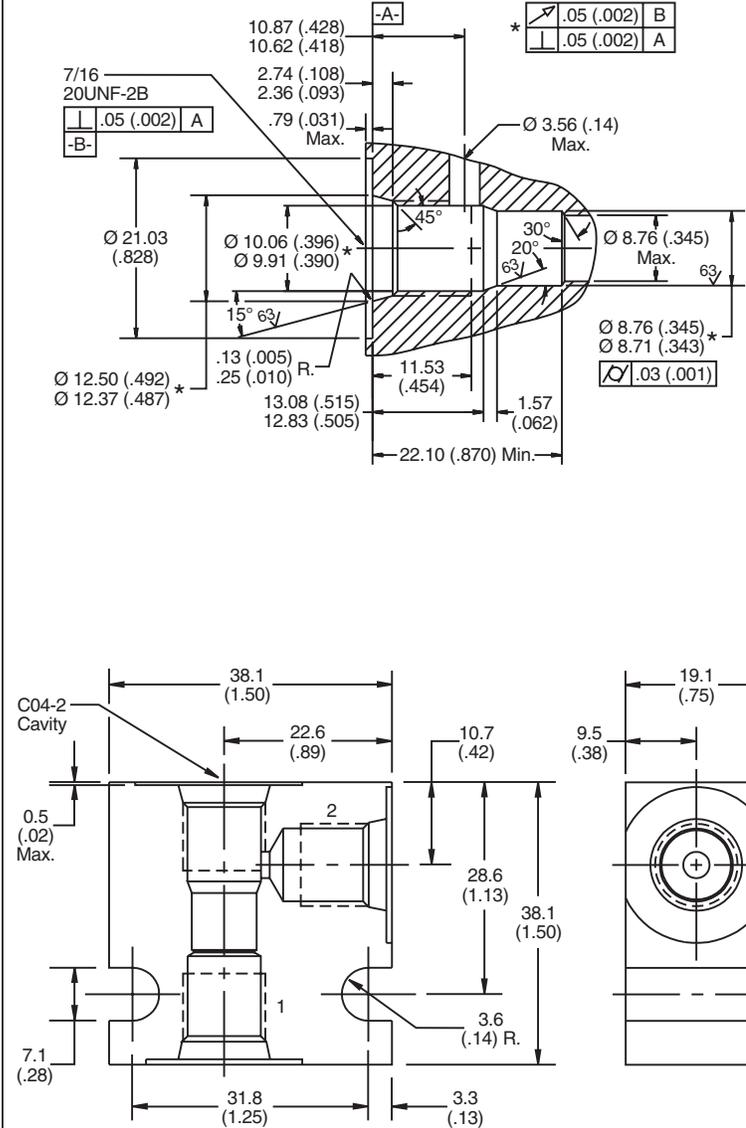
CAVITY	VALVE				
	Winner's Circle	Parker	Waterman	FPS	CEC
Winner's Circle	X	X	X		
Parker	X	X	X		
Waterman	X	X	X		
FPS					
CEC					

Performance Curve

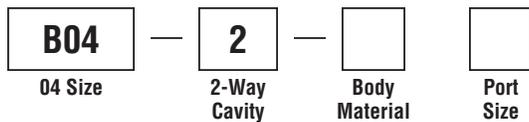
Pressure Drop vs. Flow



Dimensions Millimeters (Inches)



Ordering Information



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
4T	SAE - 4

**Form Tool:** Rougher None  
Finisher NFT04-2F  
**Weight:** .07 kg (.15 lbs.)





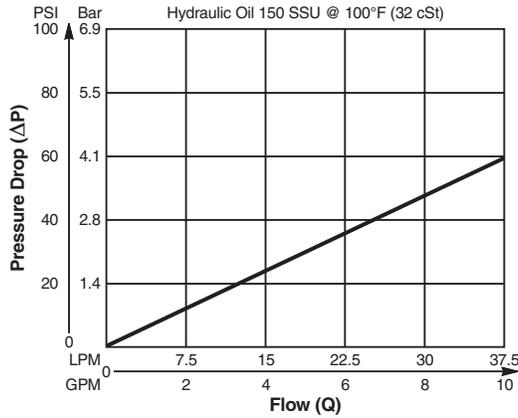
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

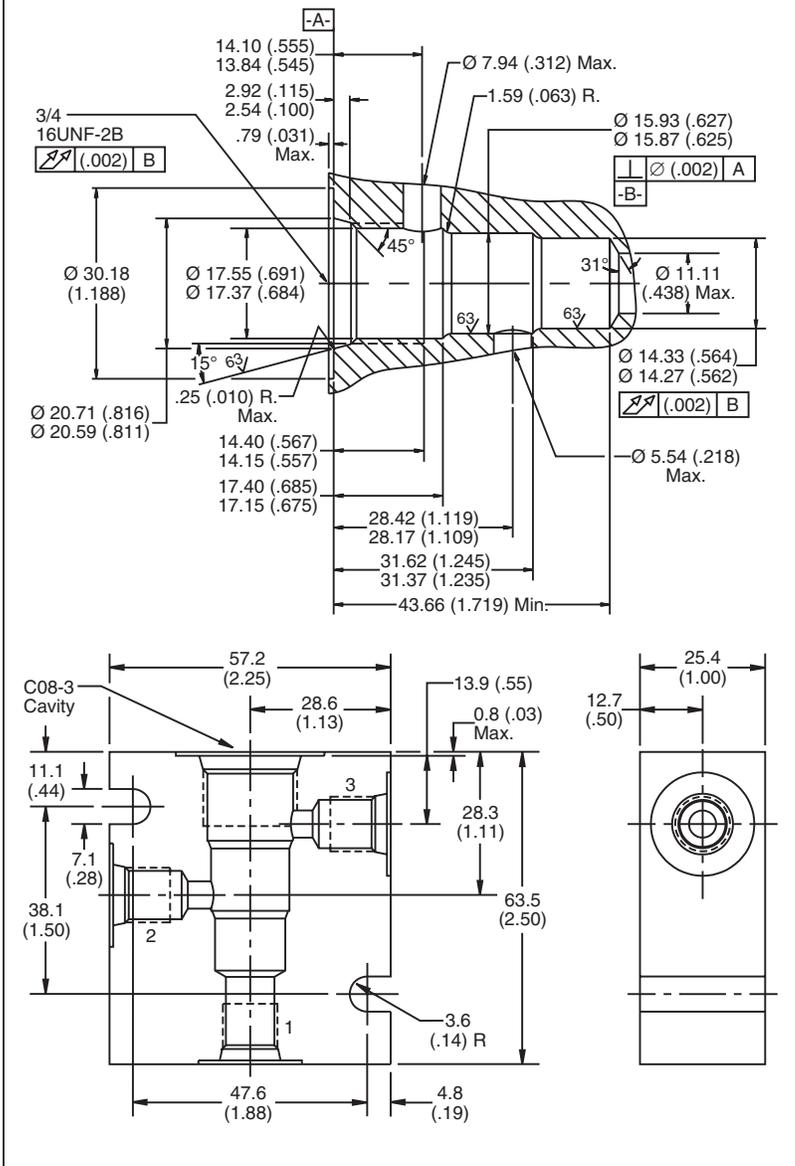
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle	X	X	X		
	Parker	X	X	X		
	Waterman	X	X	X		
	FPS				X	X
	CEC				X	X

**Performance Curve**

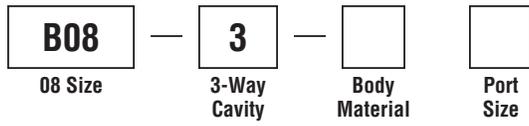
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
4P	1/4" NPTF
4T	SAE - 4
6T	SAE - 6
6B	3/8" BSPG

**Form Tool:** Rougher NFT08-3R  
 Finisher NFT08-3F  
**Weight:** .27 kg (.60 lbs.)

- CV** Check Valves
- SH** Shuttle Valves
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- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
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- MV** Manual Valves
- SV** Solenoid Valves
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- BC** Bodies & Cavities
- TD** Technical Data



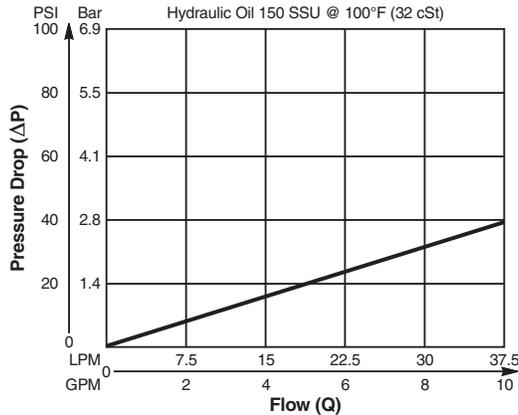
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

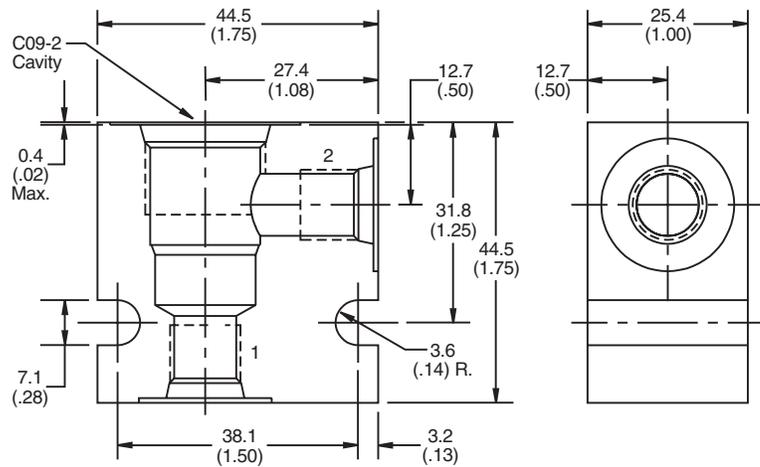
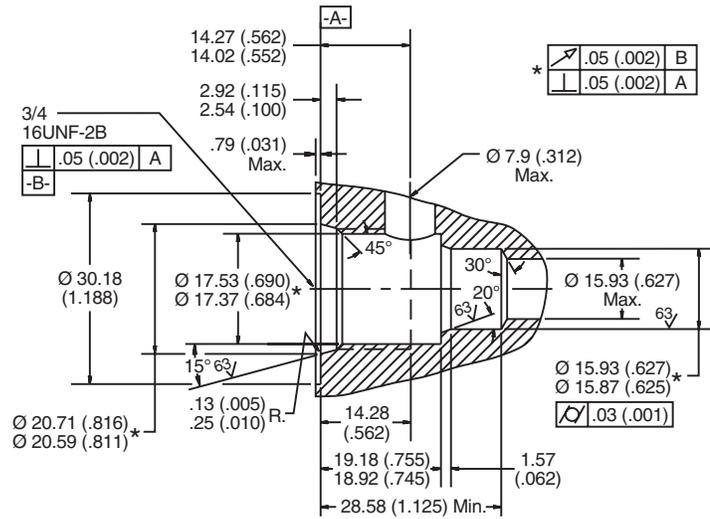
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle					
	Parker		X	X		
	Waterman		X	X		
	FPS					
	CEC					

**Performance Curve**

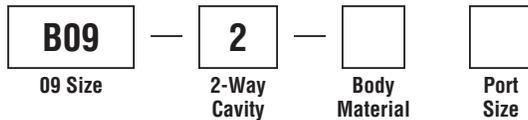
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
6T	SAE - 6
6B†	3/8" BSPG

† Steel body only.

**Form Tool:** Rougher None  
 Finisher FT09-2  
**Weight:** 11 kg (.25 lbs.)

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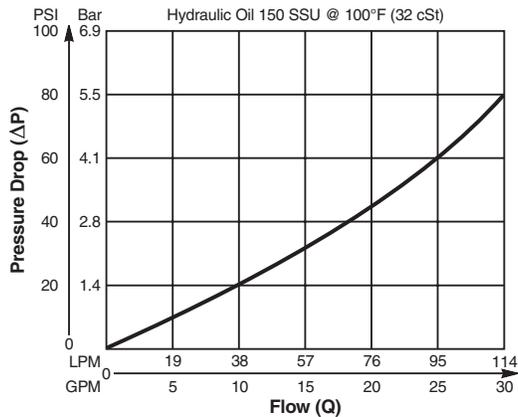
Valve/Cavity Compatibility

For additional information see Technical Tips on pages BC1-BC6.

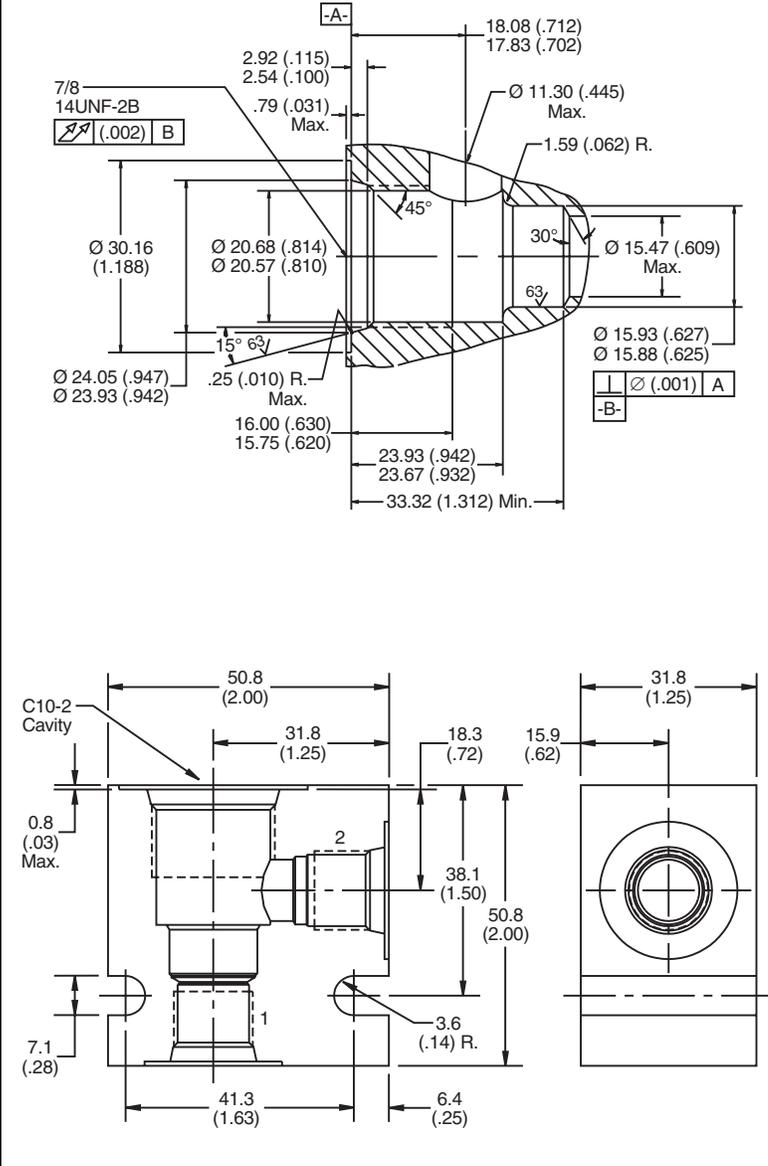
CAVITY	VALVE				
	Winner's Circle	Parker	Waterman	FPS	CEC
Winner's Circle	X	X	X	X	X
Parker	X	X	X		
Waterman	X	X	X		
FPS	X			X	X
CEC	X			X	X

Performance Curve

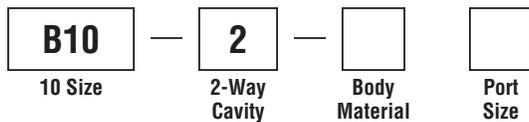
Pressure Drop vs. Flow



Dimensions Millimeters (Inches)



Ordering Information



Code	Body Material	Code	Port Size
Omit	Steel	4P	1/4" NPTF
A	Aluminum	6P	3/8" NPTF
		8P	1/2" NPTF
		6T	SAE - 6
		8T	SAE - 8
		6BT	3/8" BSPG

† Steel body only.

**Form Tool:** Rougher None  
Finisher NFT10-2F  
**Weight:** .45 kg (1.0 lbs.)

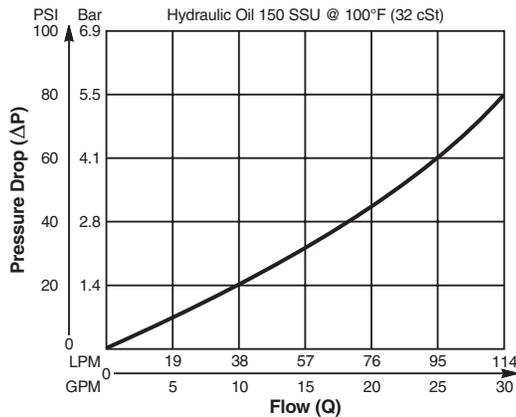
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

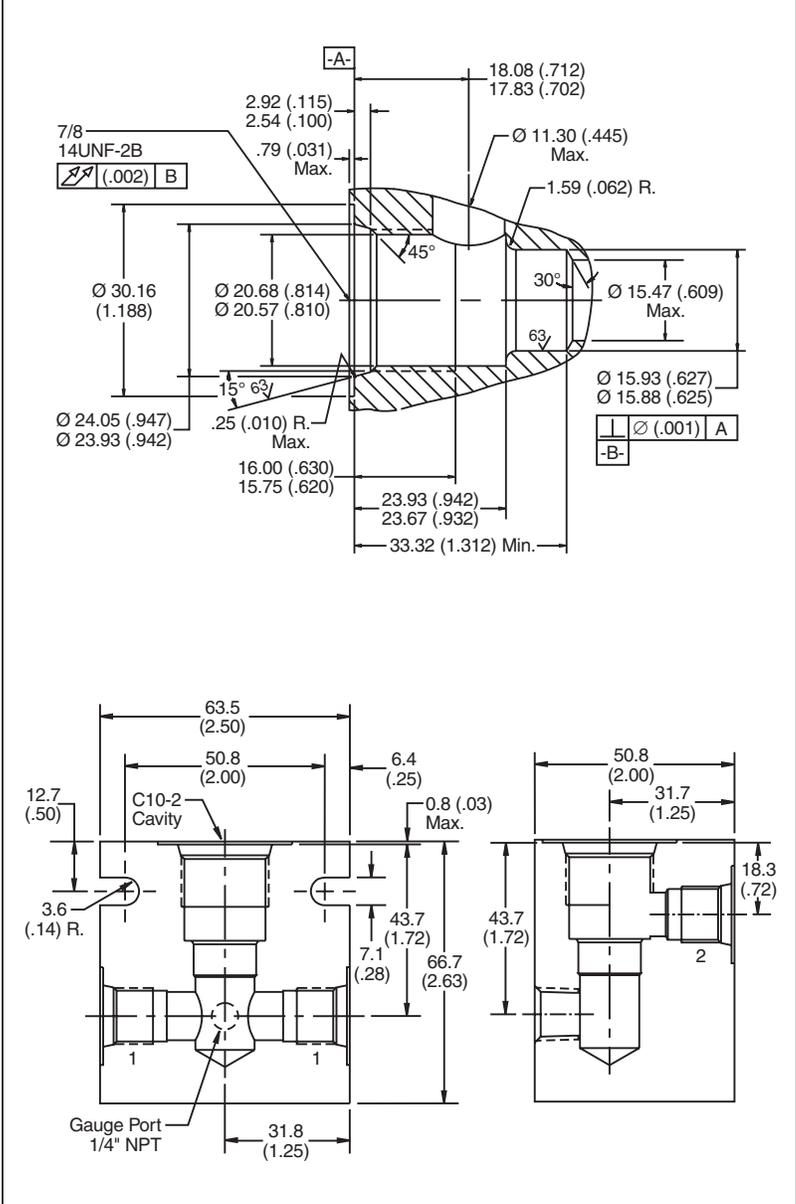
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle	X	X	X	X	X
	Parker	X	X	X		
	Waterman	X	X	X		
	FPS	X			X	X
	CEC	X			X	X

**Performance Curve**

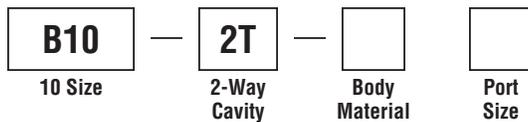
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material
Omit	Steel

Code	Port Size
T6T	SAE - 6
T8T	SAE - 8

**Form Tool:** Rougher None  
 Finisher NFT10-2F  
**Weight:** 1.4 kg (3.0 lbs.)

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

Technical Information

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

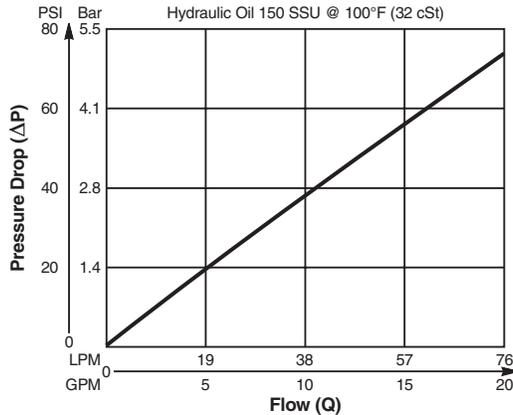
Valve/Cavity Compatibility

For additional information see Technical Tips on pages BC1-BC6.

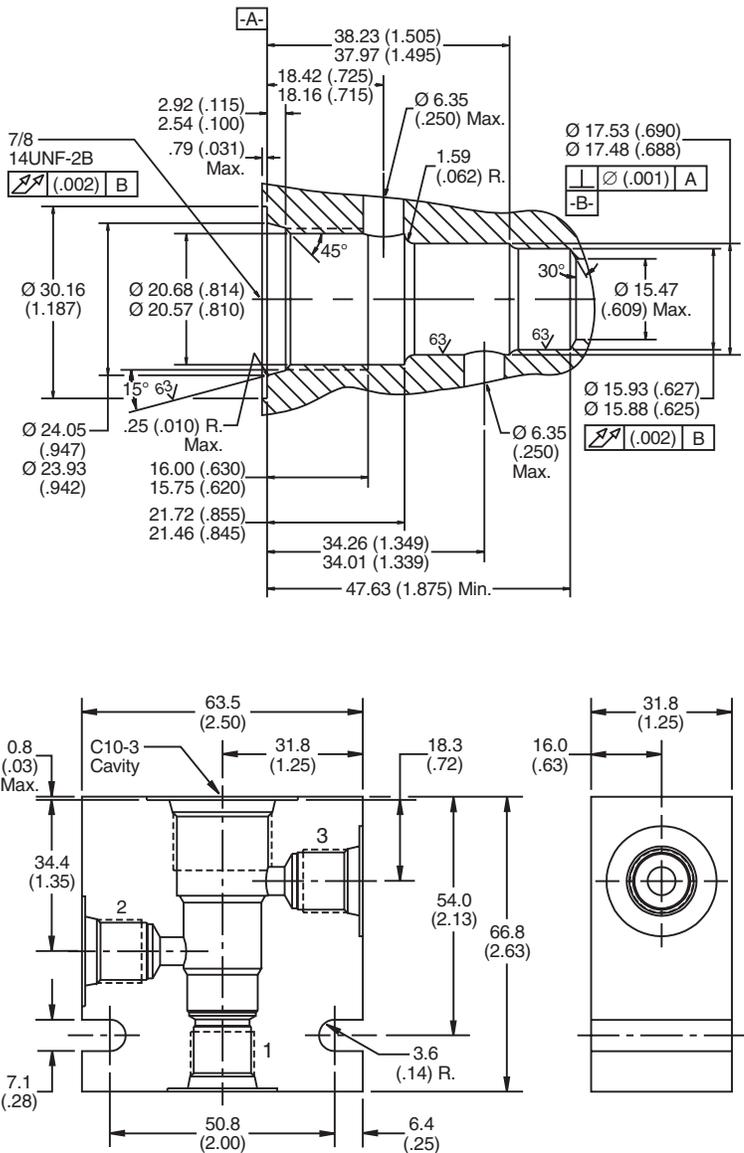
CAVITY	VALVE				
	Winner's Circle	Parker	Waterman	FPS	CEC
Winner's Circle	X	X	X	X	X
Parker	X	X	X	X	X
Waterman	X	X	X	X	X
FPS	X	X	X	X	X
CEC	X	X	X	X	X

Performance Curve

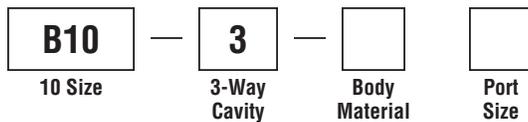
Pressure Drop vs. Flow



Dimensions Millimeters (Inches)



Ordering Information



Code	Body Material	Code	Port Size
Omit	Steel	4P	1/4" NPTF
A	Aluminum	6P	3/8" NPTF
		8P	1/2" NPTF
		6T	SAE - 6
		8T	SAE - 8
		6B†	3/8" BSPG
		8B	1/2" BSPG

† Steel body only.

**Form Tool:** Rougher NFT10-3R  
Finisher NFT10-3F  
**Weight:** .77 kg (1.7 lbs.)

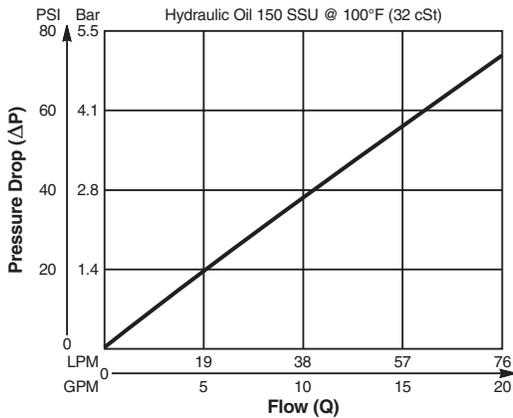
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

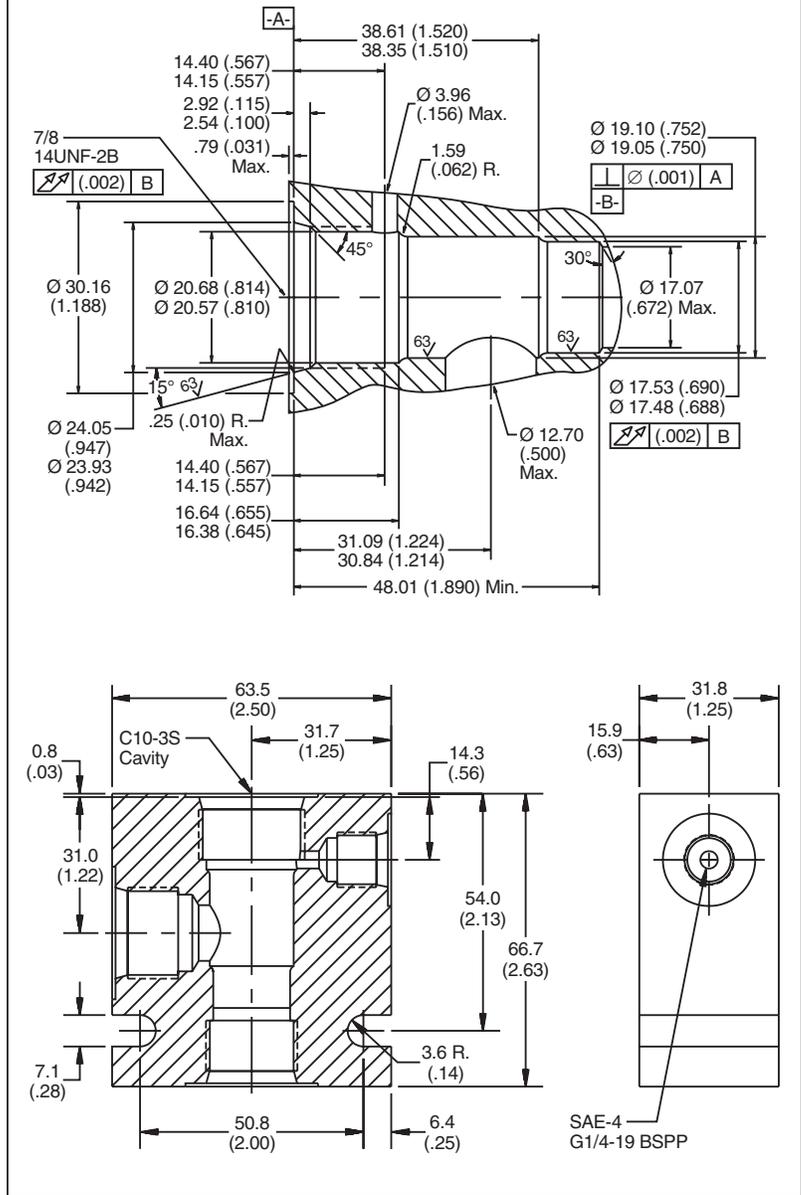
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle	X			X	X
	Parker					
	Waterman					
	FPS	X			X	X
	CEC	X			X	X

**Performance Curve**

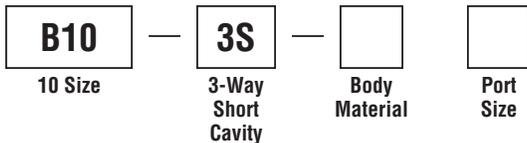
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
6T	SAE - 6
8T	SAE - 8
6B	3/8" BSPG
8B	1/2" BSPG

**Form Tool:** Rougher NFT10S-3R  
 Finisher NFT10S-3F  
**Weight:** .77 kg (1.7 lbs.)

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

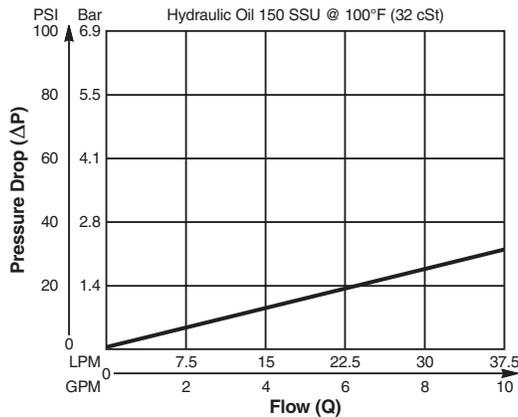
### Valve/Cavity Compatibility

For additional information see Technical Tips on pages BC1-BC6.

CAVITY	VALVE				
	Winner's Circle	Parker	Waterman	FPS	CEC
Winner's Circle	X	X	X	X	X
Parker	X	X	X	X	X
Waterman	X	X	X	X	X
FPS	X	X	X	X	X
CEC	X	X	X	X	X

### Performance Curve

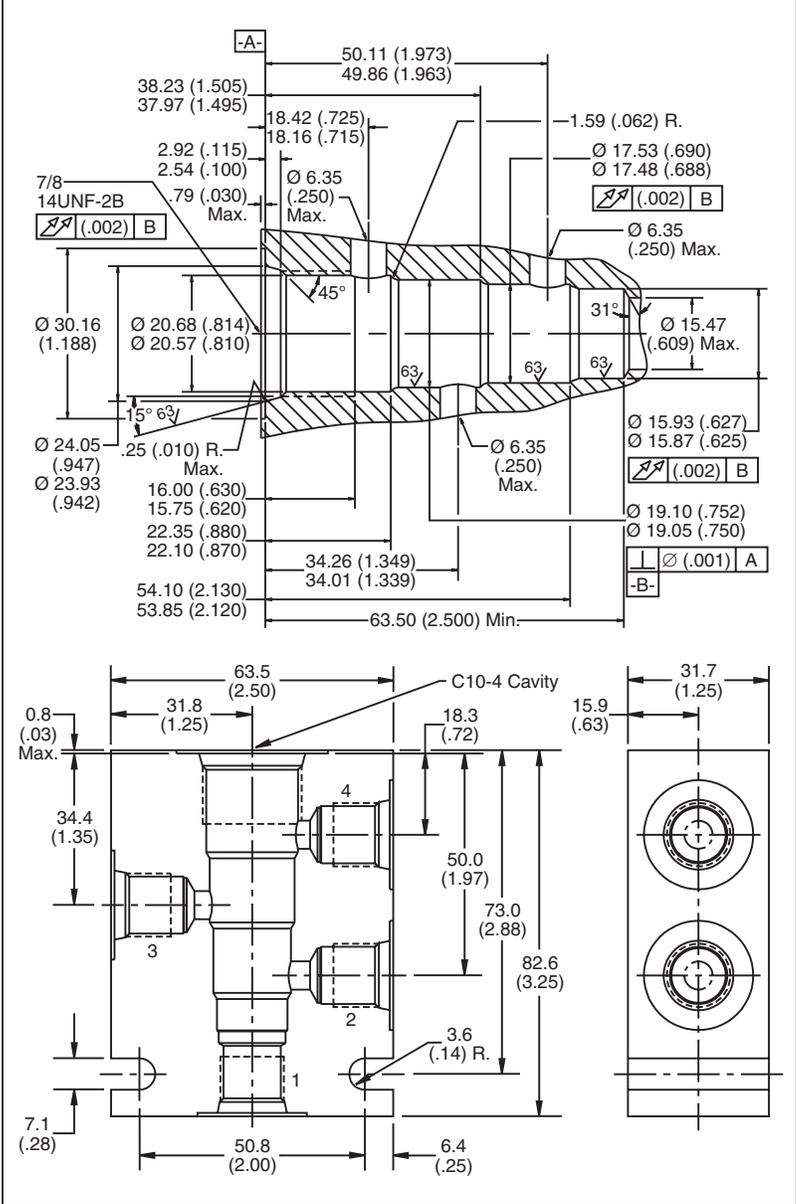
#### Pressure Drop vs. Flow



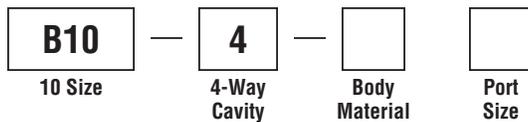
#### NOTE:

When machining for use with DF102P, Ports 1 and 4 must be connected in the manifold/block.

### Dimensions



### Ordering Information



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
6P	3/8" NPTF
6T	SAE - 6
8T	SAE - 8
6B†	3/8" BSPG

† Steel body only.

**Form Tool:** Rougher NFT10-4R  
 Finisher NFT10-4F  
**Weight:** .90 kg (2.0 lbs.)

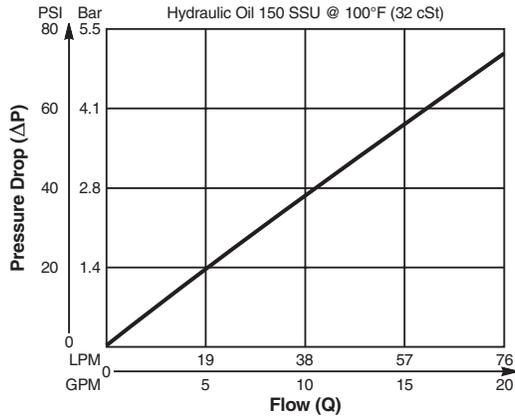
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

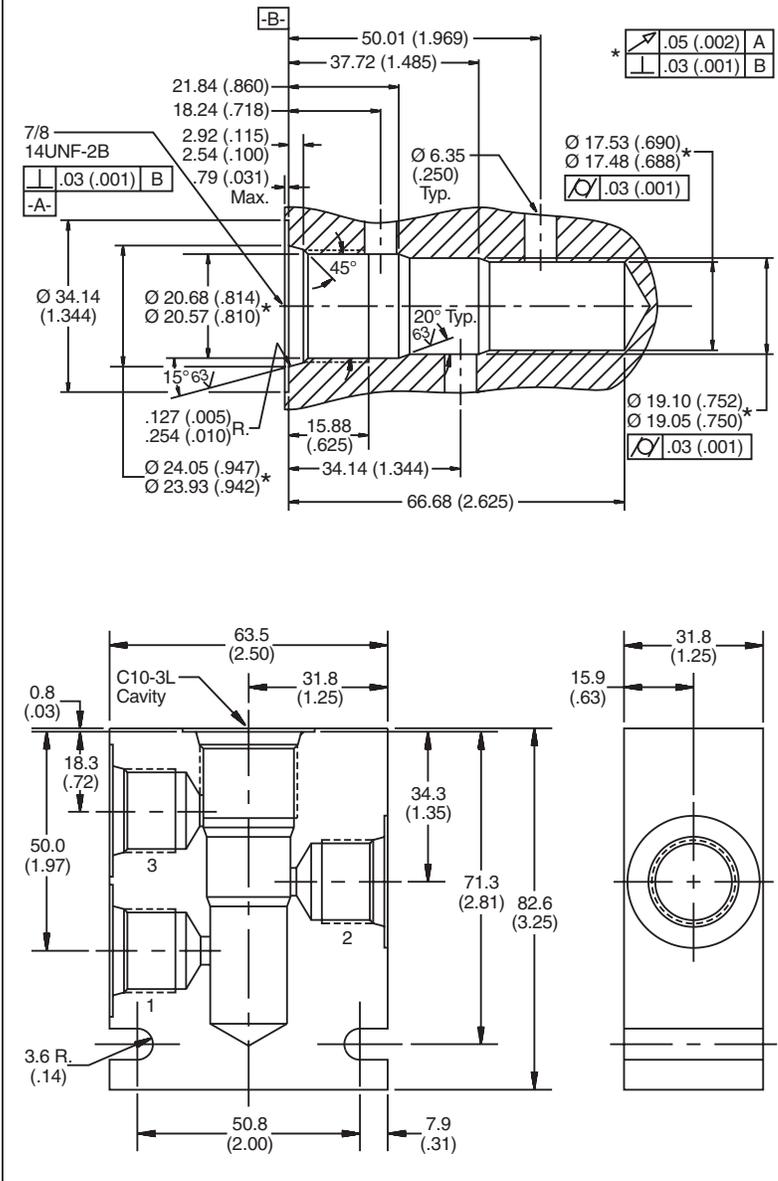
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle					
	Parker		X	X	X	
	Waterman		X	X	X	
	FPS		X	X	X	
	CEC					

**Performance Curve**

**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**

Part Number = 4082075

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data



Technical Information

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

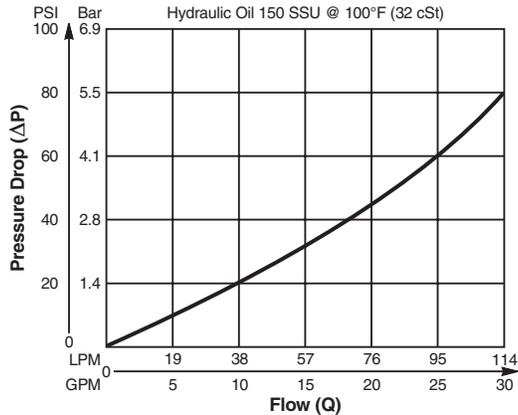
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

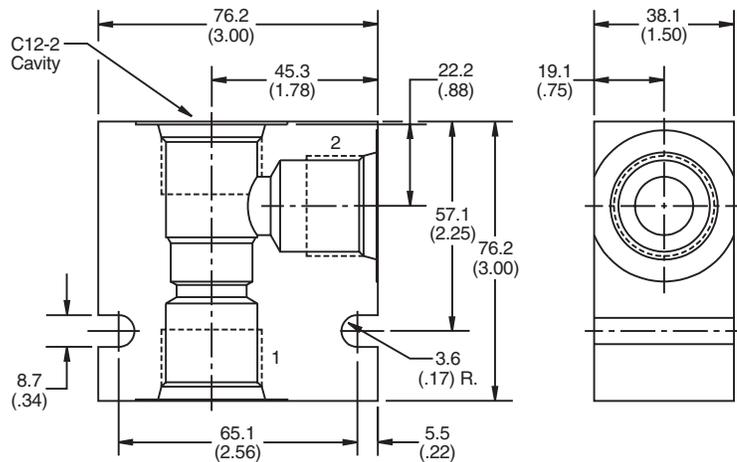
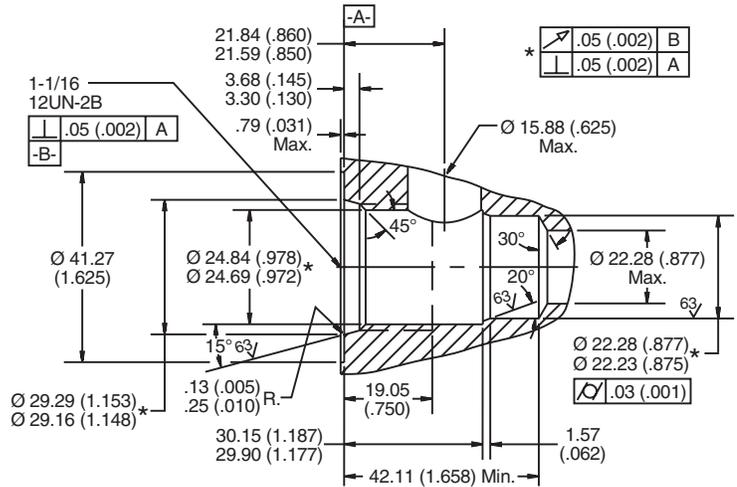
CAVITY	VALVE				
	Winner's Circle	Parker	Waterman	FPS	CEC
Winner's Circle	X	X	X		
Parker	X	X	X		
Waterman	X	X	X		
FPS					
CEC					X

**Performance Curve**

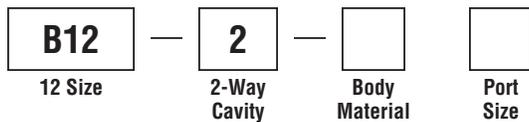
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material	Code	Port Size
Omit	Steel	12P	3/4" NPTF
A	Aluminum	8T	SAE - 8
		12T	SAE - 12

**Form Tool:** Rougher None  
Finisher NFT12-2F  
**Weight:** .45 kg (1.0 lbs.)

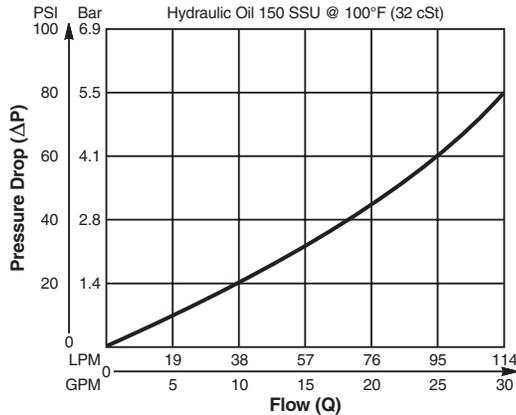
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

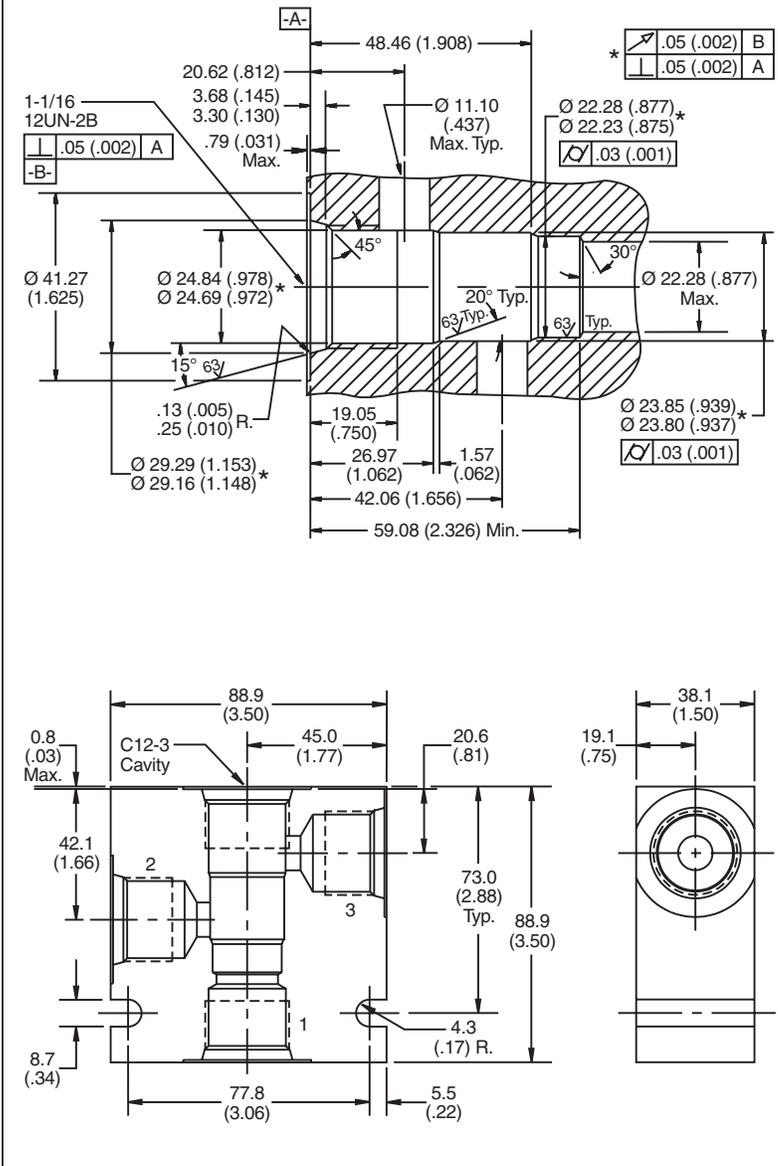
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle	X	X	X		
	Parker	X	X	X		
	Waterman	X	X	X		
	FPS					
	CEC					X

**Performance Curve**

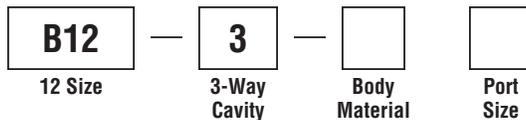
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
8T	SAE - 8
12T	SAE - 12
8B†	1/2" BSPG

† Steel body only.

**Form Tool:** Rougher NFT12-3R  
 Finisher NFT12-3F  
**Weight:** 2.0 kg (4.5 lbs.)

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

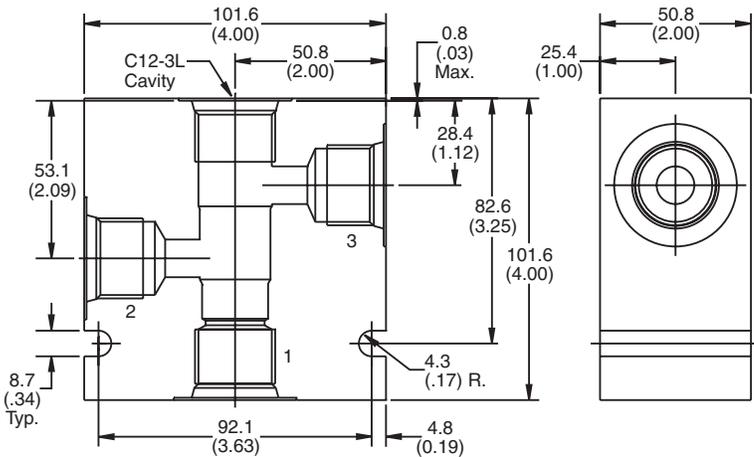
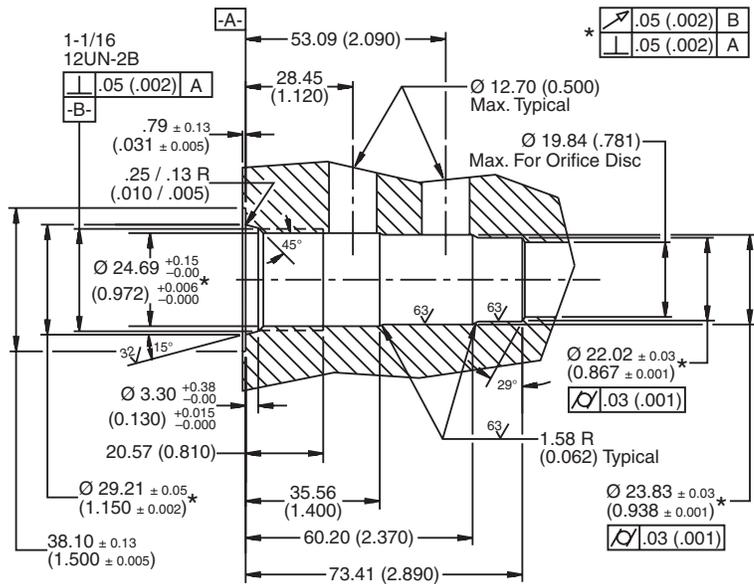
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

**Valve/Cavity Compatibility**

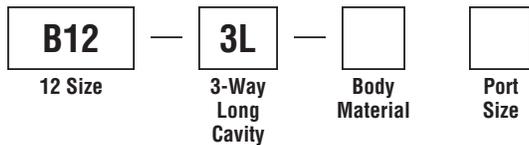
For additional information see Technical Tips on pages BC1-BC6.

**Performance Curve**  
Pressure Drop vs. Flow

**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
12T	SAE - 12

**Form Tool:** Rougher NFT12L-3R  
Finisher NFT12L-3F

**Weight:**

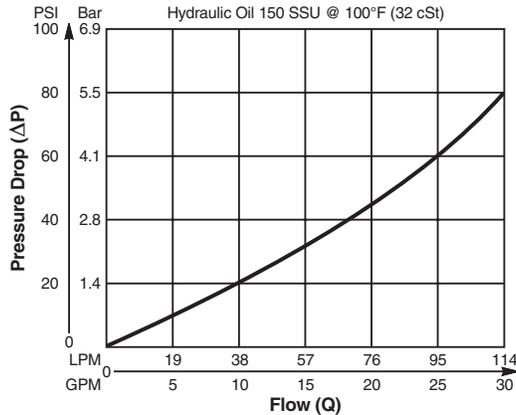
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

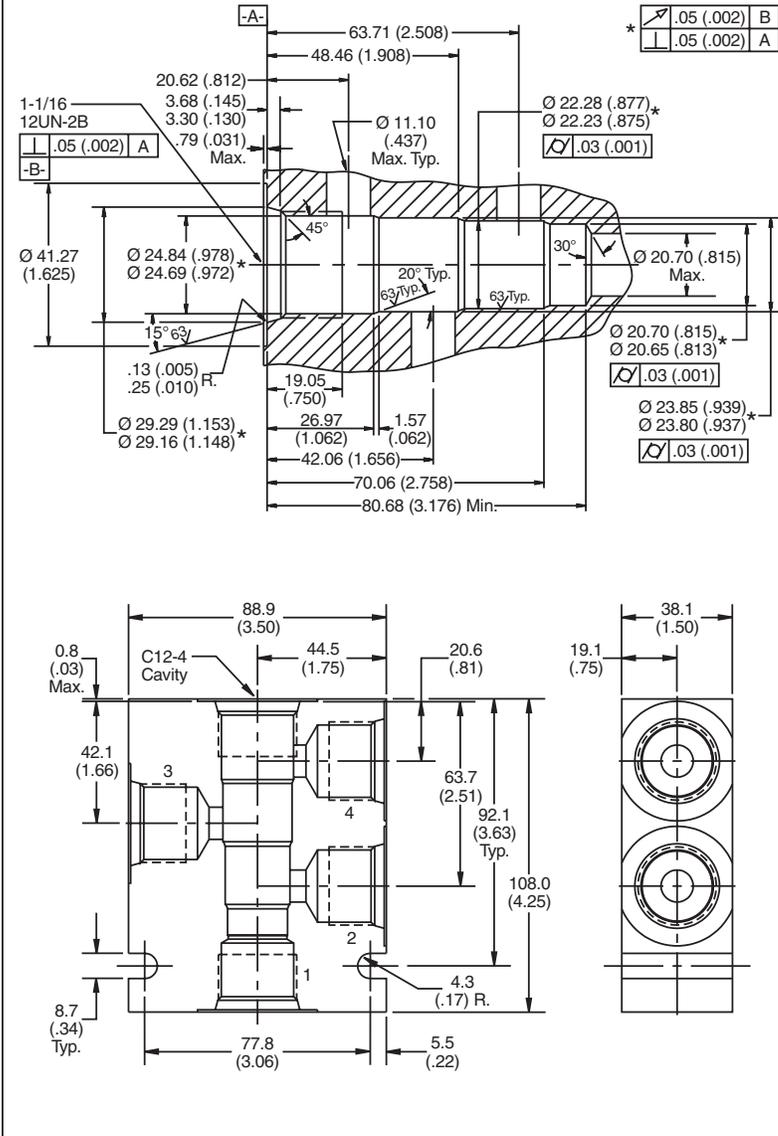
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle	X	X	X		
	Parker	X	X	X		
	Waterman	X	X	X		
	FPS					
	CEC					X

**Performance Curve**

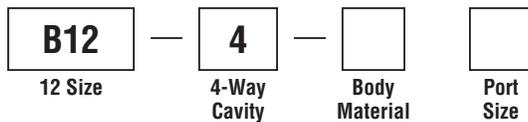
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
12T	SAE - 12

**Form Tool:** Rougher NFT12-4R  
 Finisher NFT12-4F  
**Weight:** 3.3 kg (7.3 lbs.)

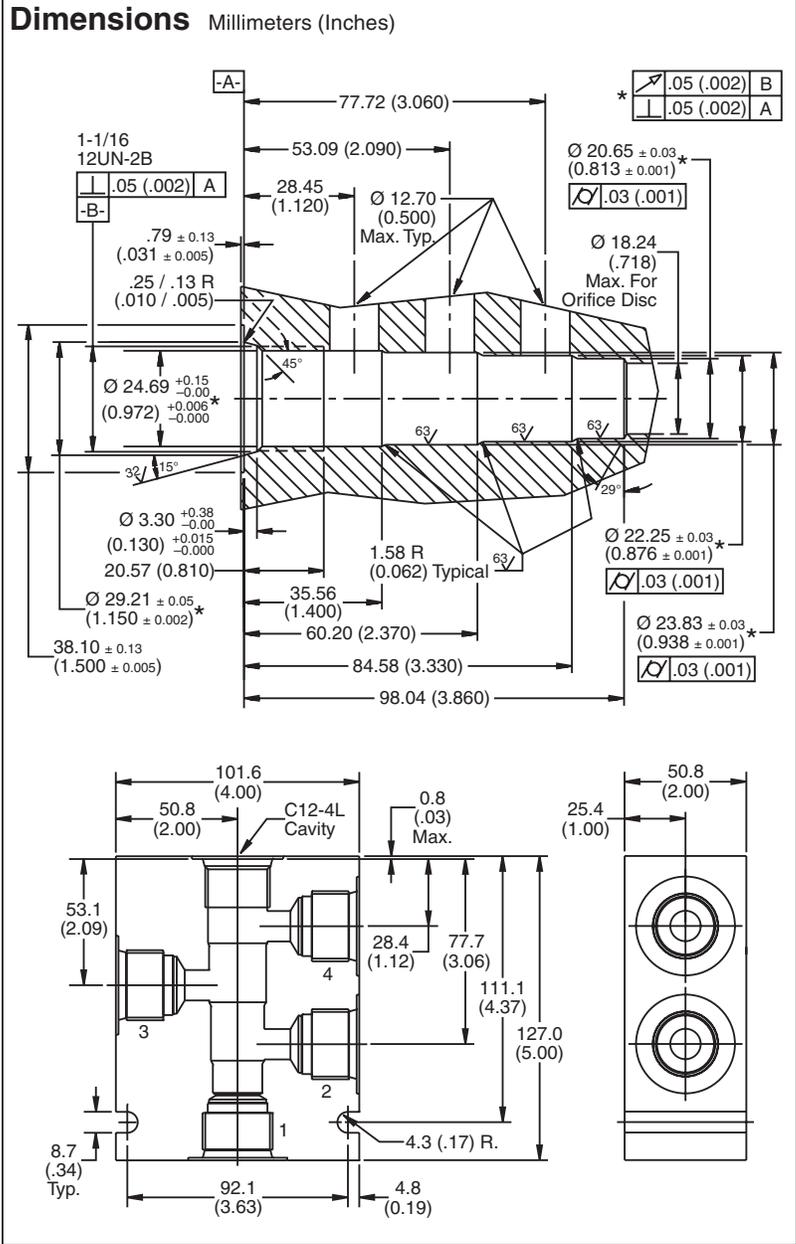
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
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- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

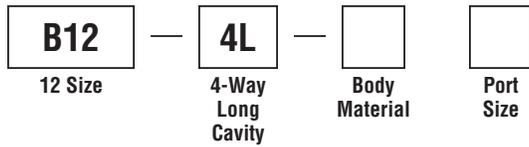
### Valve/Cavity Compatibility

For additional information see Technical Tips on pages BC1-BC6.

### Performance Curve Pressure Drop vs. Flow



### Ordering Information



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
12T	SAE - 12

**Form Tool:** Rougher NFT12L-4R  
Finisher NFT12L-4F

**Weight:**

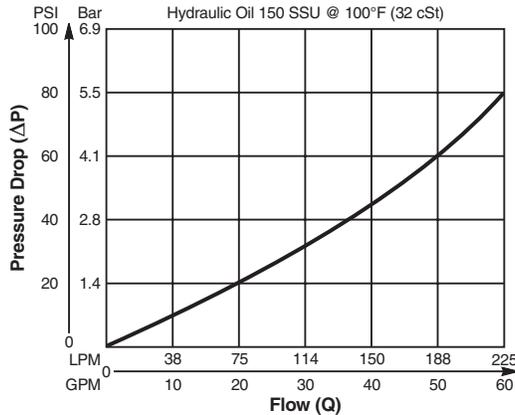
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

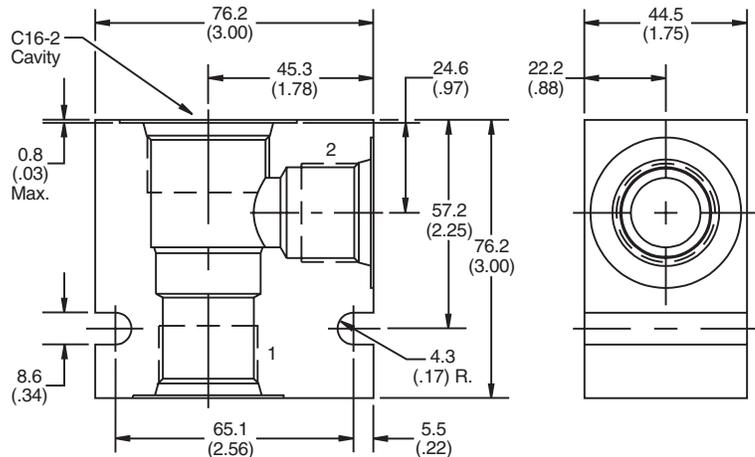
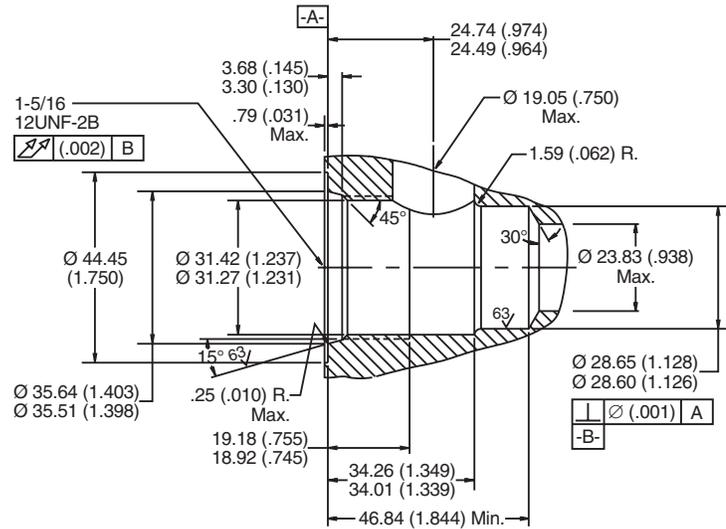
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle	X	X	X	X	X
	Parker	X	X	X		
	Waterman	X	X	X		
	FPS	X			X	X
	CEC	X			X	X

**Performance Curve**

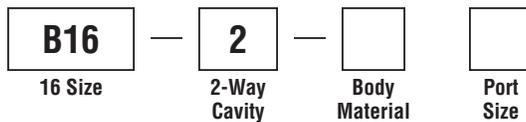
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
12P	3/4" NPTF
16P	1" NPTF
8T	SAE - 8
12T	SAE - 12
16T	SAE - 16
12B†	3/4" BSPG
16B	1" BSPG

† Steel body only.

**Form Tool:** Rougher None  
 Finisher NFT16-2F  
**Weight:** 1.5 kg (3.4 lbs.)

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

Technical Information

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

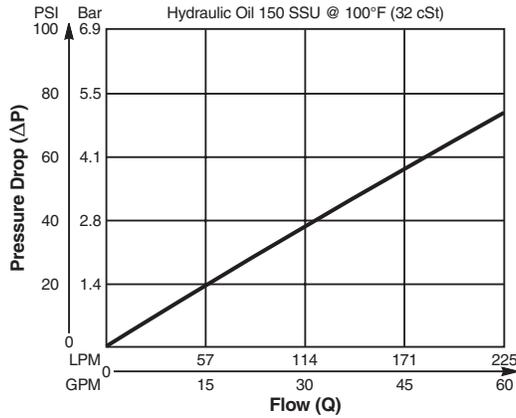
Valve/Cavity Compatibility

For additional information see Technical Tips on pages BC1-BC6.

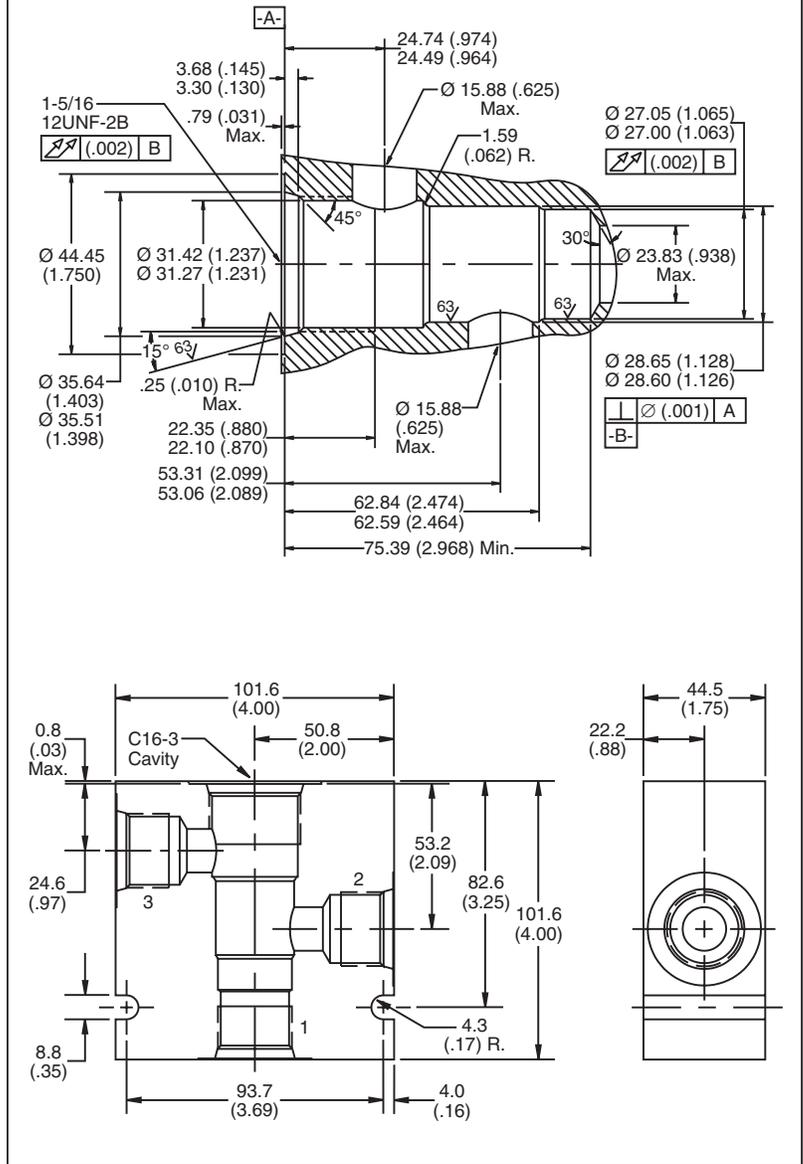
CAVITY	VALVE				
	Winner's Circle	Parker	Waterman	FPS	CEC
Winner's Circle	X	X	X	X	X
Parker	X	X	X		
Waterman	X	X	X		
FPS	X			X	X
CEC	X			X	X

Performance Curve

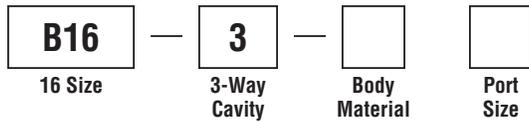
Pressure Drop vs. Flow



Dimensions Millimeters (Inches)



Ordering Information



Code	Body Material	Code	Port Size
Omit	Steel	12T	SAE - 12
A	Aluminum	16T	SAE - 16

**Form Tool:** Rougher NFT16-3R  
Finisher NFT16-3F  
**Weight:** 3.0 kg (6.5 lbs.)

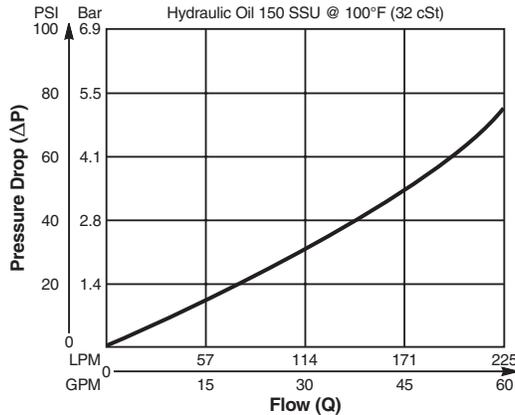
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

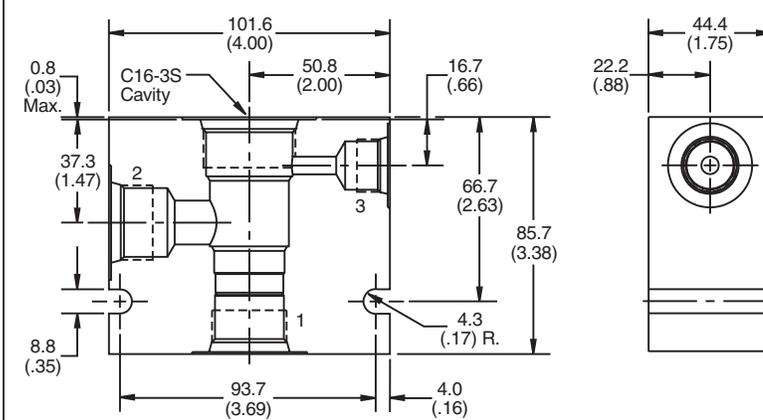
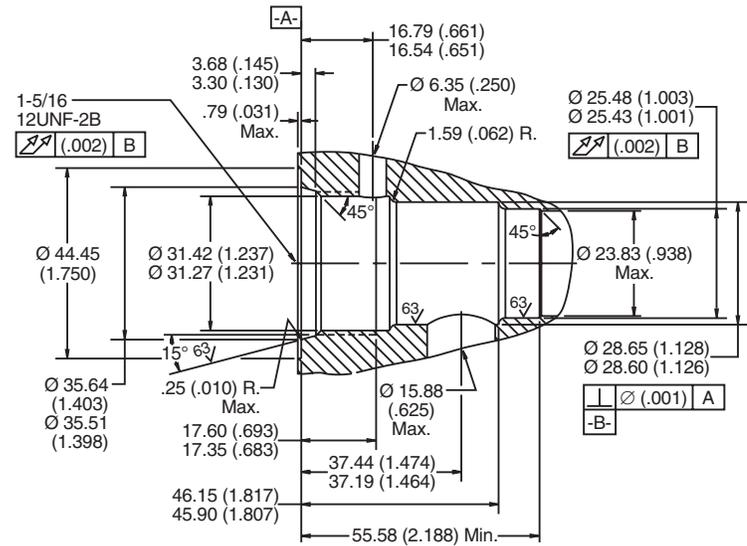
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle	X	X	X	X	X
	Parker	X	X	X	X	X
	Waterman	X	X	X	X	X
	FPS	X	X	X	X	X
	CEC	X	X	X	X	X

**Performance Curve**

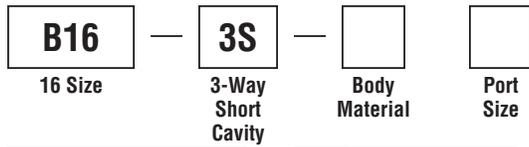
**Pressure Drop vs. Flow**



**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material	Code	Port Size
Omit	Steel	16T	SAE - 16
A	Aluminum	16B	1" BSPG

**Form Tool:** Rougher NFT16S-3R  
 Finisher NFT16S-3F  
**Weight:** 2.4 kg (5.4 lbs.)

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

Technical Information

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

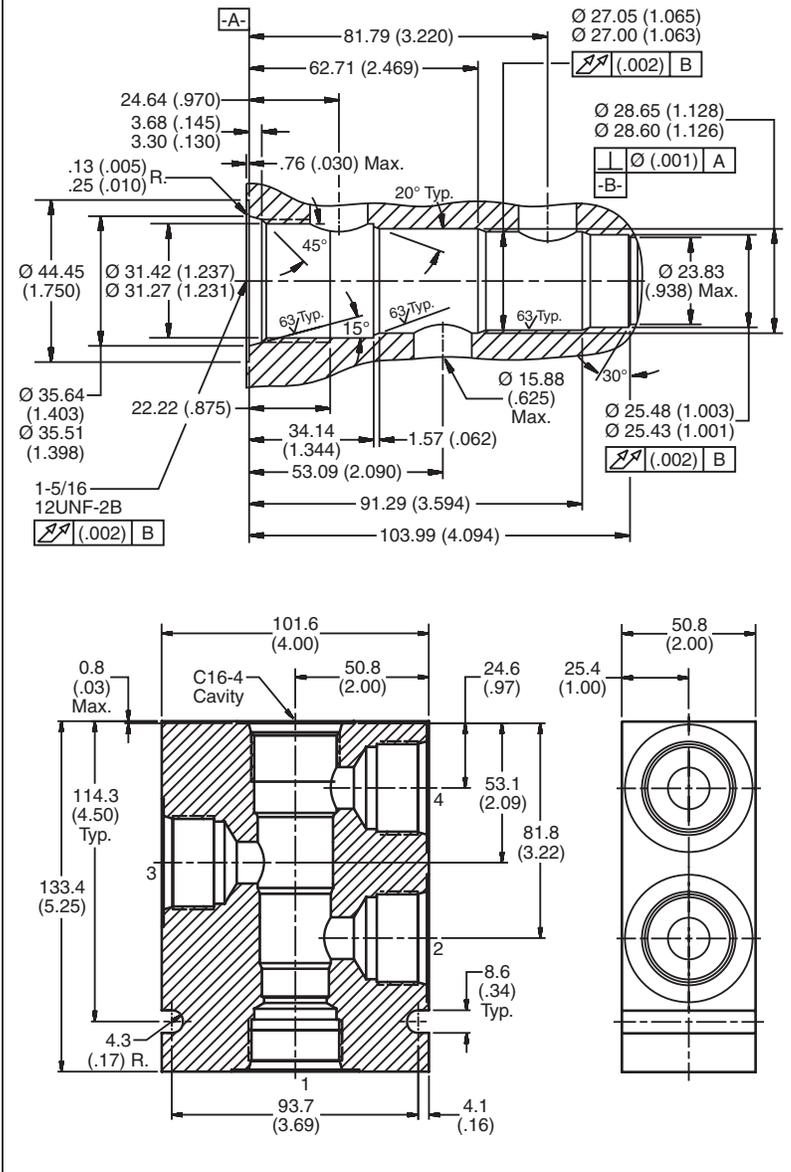
**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

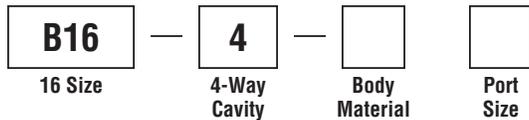
CAVITY	VALVE				
	Winner's Circle	Parker	Waterman	FPS	CEC
Winner's Circle	X	X	X	X	X
Parker	X	X	X		
Waterman	X	X	X		
FPS	X			X	X
CEC	X			X	X

**Performance Curve**  
Pressure Drop vs. Flow

**Dimensions** Millimeters (Inches)



**Ordering Information**



Code	Body Material
Omit	Steel
A	Aluminum

Code	Port Size
16T	SAE - 16

**Form Tool:** Rougher NFT16-4R  
Finisher NFT16-4F  
**Weight:** 3.75 kg (8.125 lbs.)



- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

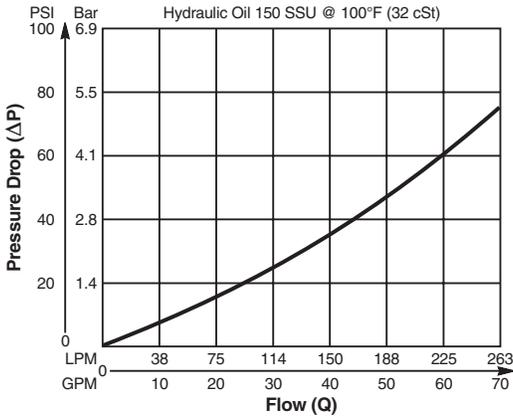
### Valve/Cavity Compatibility

For additional information see Technical Tips on pages BC1-BC6.

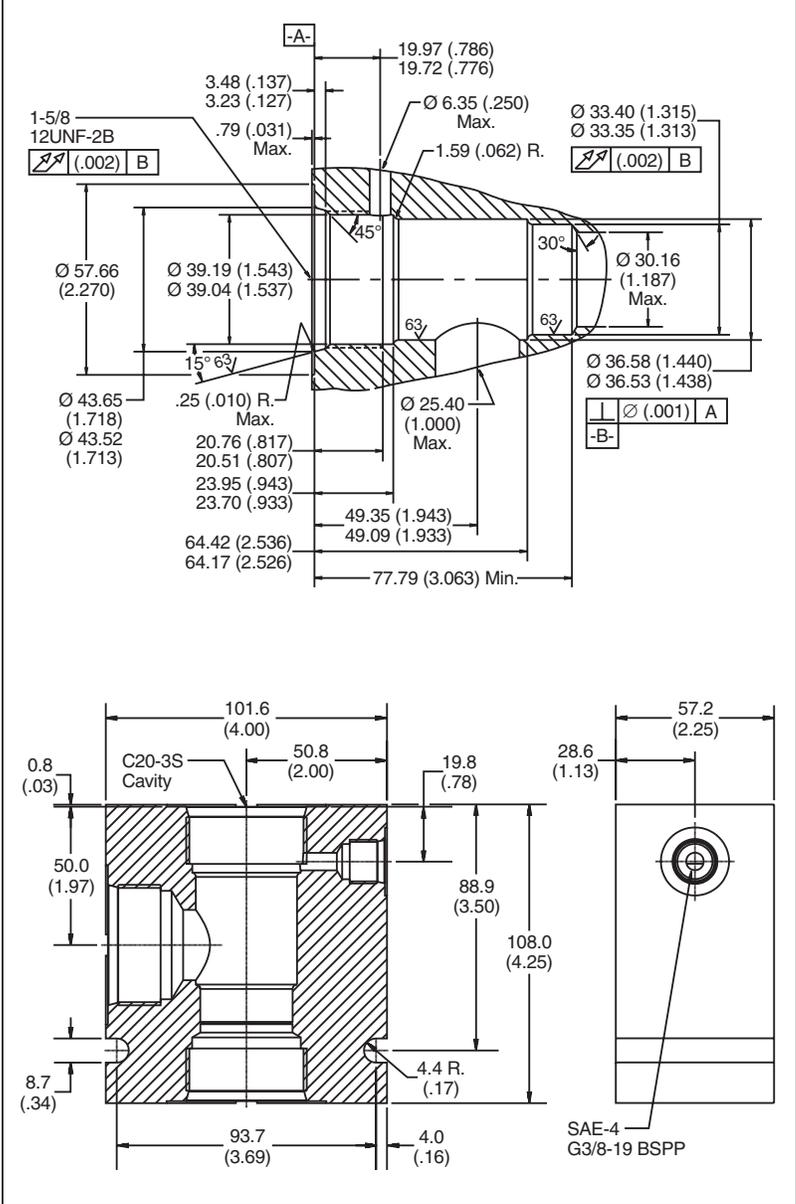
		VALVE				
		Winner's Circle	Parker	Waterman	FPS	CEC
CAVITY	Winner's Circle	X				X
	Parker					
	Waterman					
	FPS					
	CEC	X				X

### Performance Curve

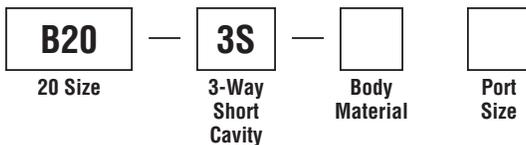
#### Pressure Drop vs. Flow



### Dimensions



### Ordering Information



Code	Body Material	Code	Port Size
Omit	Steel	20T	SAE - 20
		20B	1-1/4" BSPG

**Form Tool:** Rougher NFT20S-3R  
Finisher NFT20S-3F

**Weight:** 10.8 kg (22.2 lbs.)

**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

		VALVE	
		MHC-010	2-N-4*-10
CAVITY	MHC-010	X	X
	2-N-4*-10	X	X

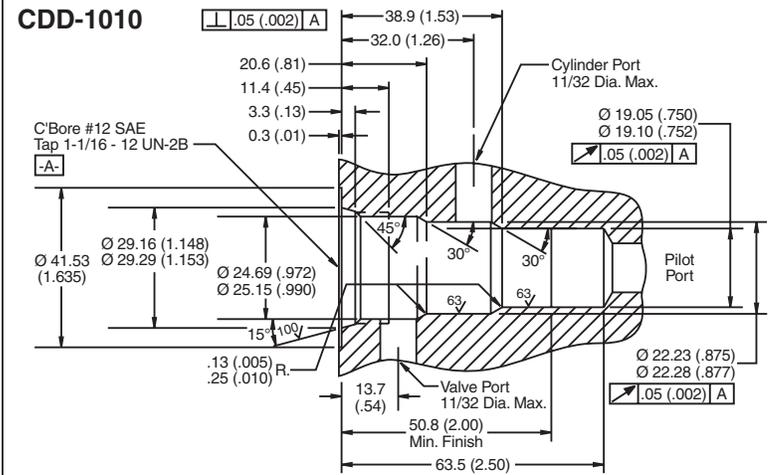
**Ordering Information**

<b>MHC</b>	<b>010</b>		<b>53</b>
Counterbalance Cartridge Valve	Nominal Flow Rating	Body Type	Port Size

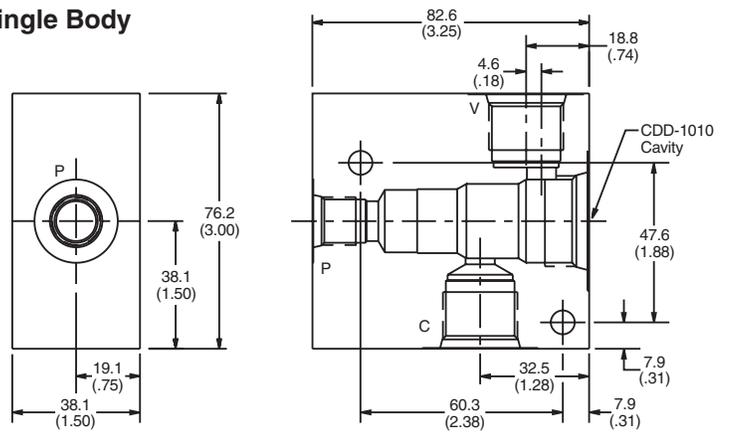
Code	Body Type	Code	Port Size
A	Single	53	SAE-10 through port
D	Dual		

**Form Tool:** FR-500  
**Weight:** Single 1.1 kg (2.25 lbs.)  
 Dual 1.9 kg (4.10 lbs.)

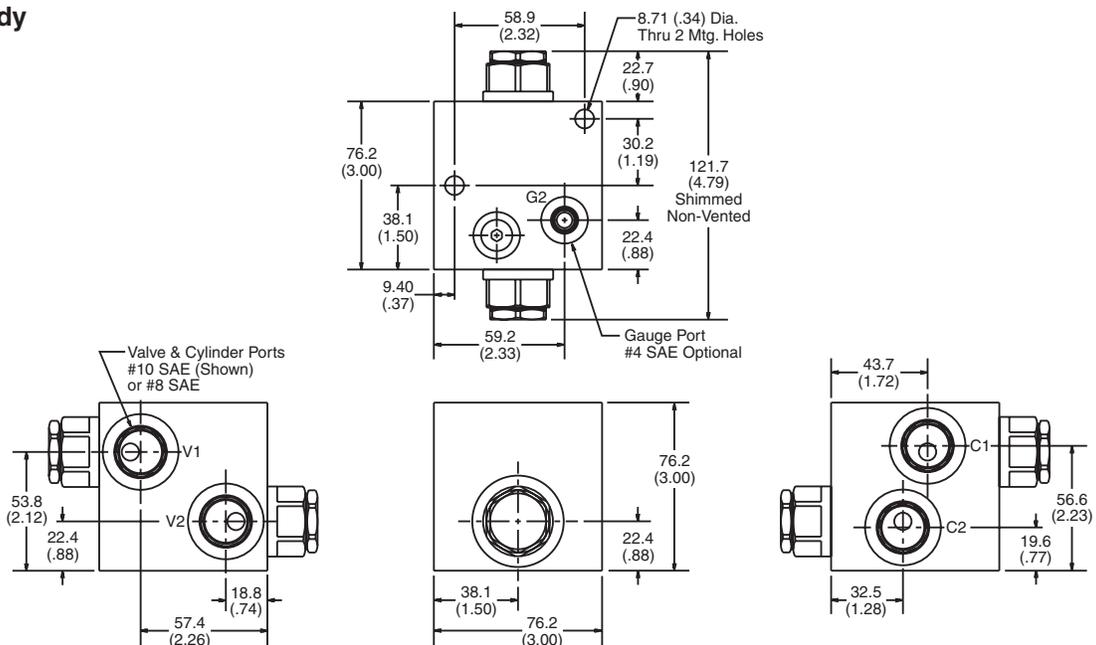
**Dimensions** Millimeters (Inches)



**Single Body**



**Dual Body**



- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data



Technical Information

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

Valve/Cavity Compatibility

For additional information see Technical Tips on pages BC1-BC6.

		VALVE	
		MHC-022	2-N-4*-25
CAVITY	MHC-022	X	X
	2-N-4*-25	X	X

Ordering Information

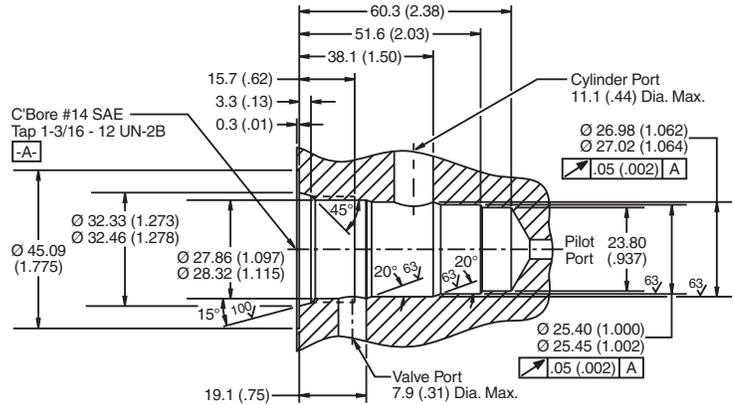
**MHC** — **022** — **53**  
 Counterbalance Cartridge Valve    Nominal Flow Rating    Body Type    Port Size

Code	Body Type	Code	Port Size
A	Single	53	SAE-10 through port
D	Dual		

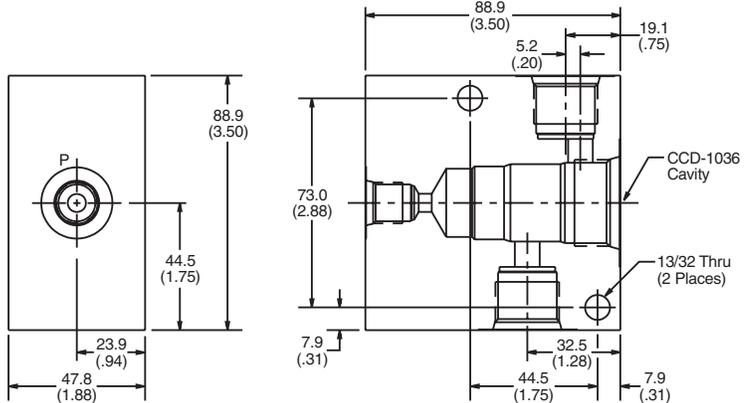
**Form Tool:** FR-501  
**Weight:** Single 1.7 kg (3.75 lbs.)  
 Dual 2.7 kg (5.90 lbs.)

Dimensions Millimeters (Inches)

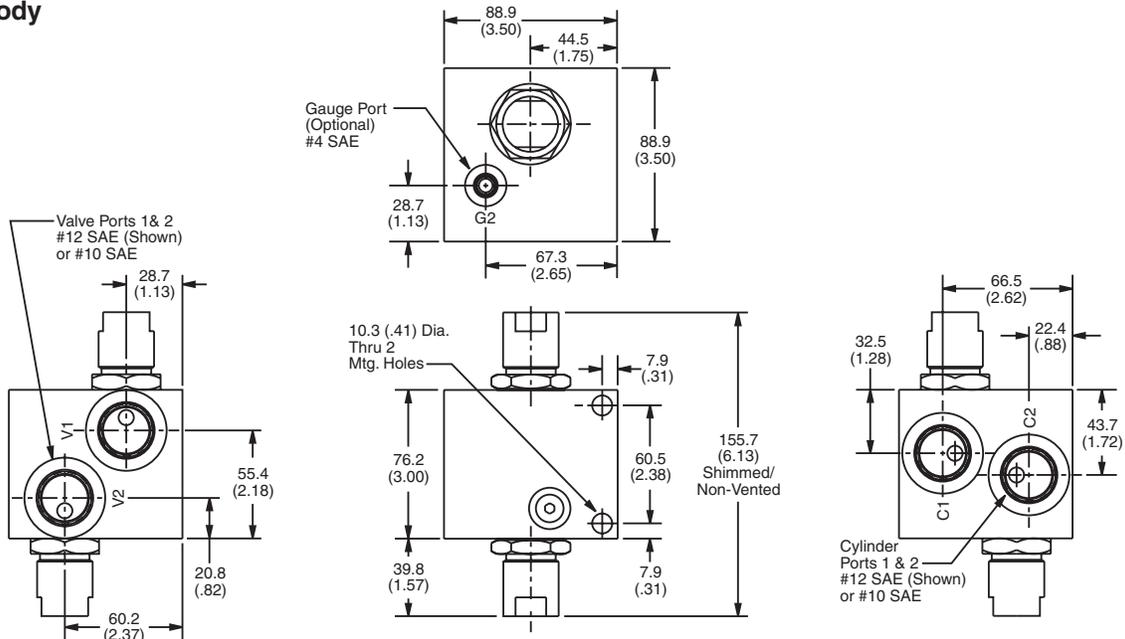
CDD-1036



Single Body



Dual Body



**Valve/Cavity Compatibility**

For additional information see Technical Tips on pages BC1-BC6.

		VALVE	
		MHC-025	2-N-4*-50
CAVITY	MHC-025	X	X
	2-N-4*-50	X	X

**Ordering Information**

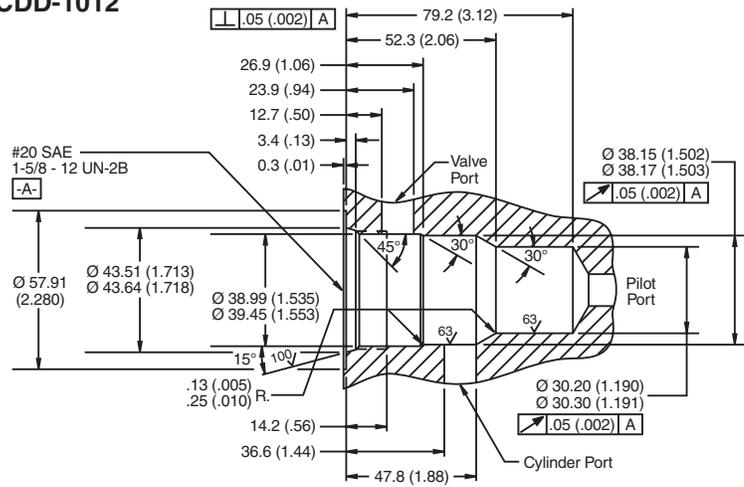
**MHC** — **025** — **54**  
 Counterbalance Cartridge Valve    Nominal Flow Rating    Body Type    Port Size

Code	Body Type	Code	Port Size
A	Single	54	SAE-12 through port
D	Dual		

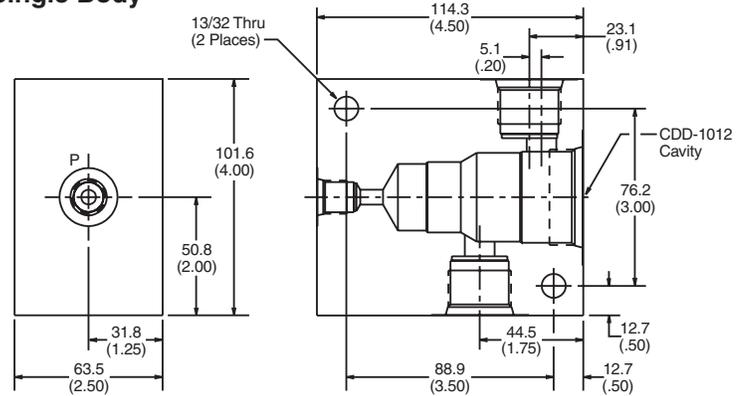
**Form Tool:** Drill FD-291  
 Reamer FR-105  
**Weight:** Single 3.3 kg (7.25 lbs.)  
 Dual 5.4 kg (11.90 lbs.)

**Dimensions** Millimeters (Inches)

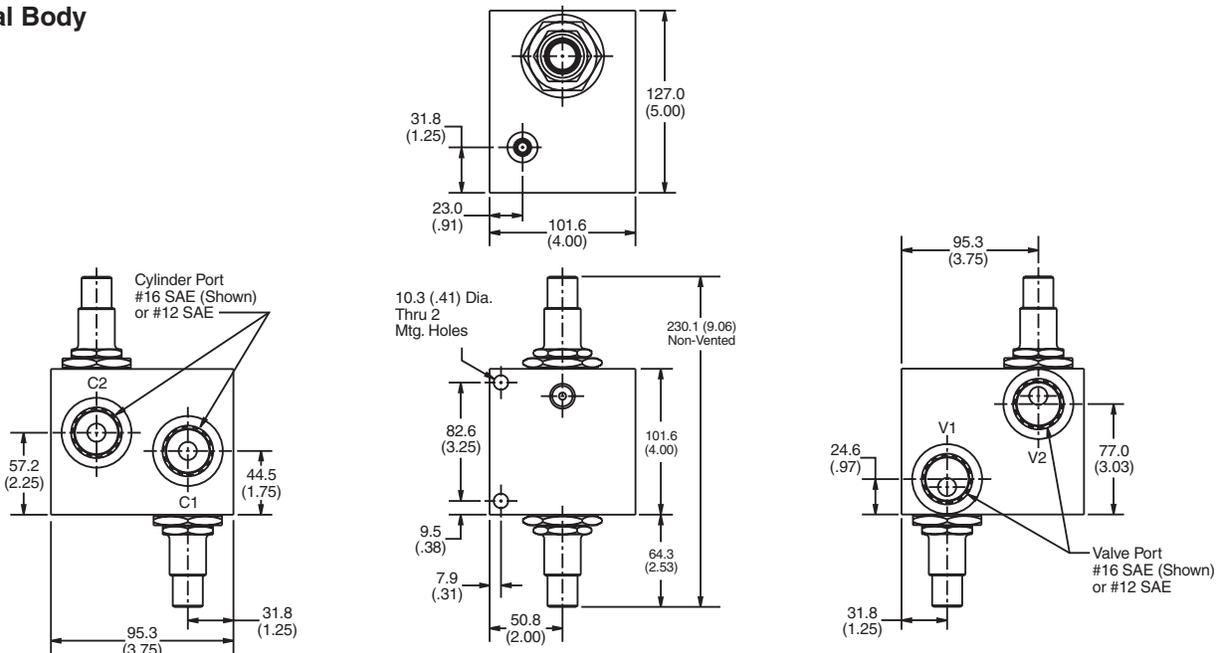
**CDD-1012**



**Single Body**



**Dual Body**



- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

CV

Check Valves

SH

Shuttle Valves

LM

Load/Motor Controls

FC

Flow Controls

PC

Pressure Controls

LE

Logic Elements

DC

Directional Controls

MV

Manual Valves

SV

Solenoid Valves

PV

Proportional Valves

CE

Coils & Electronics

BC

Bodies & Cavities

TD

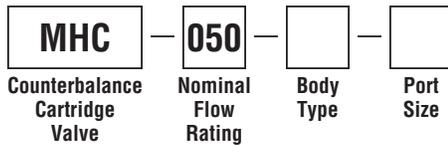
Technical Data

### Valve/Cavity Compatibility

For additional information see Technical Tips on pages BC1-BC6.

		VALVE	
		MHC-050	2-N-4*-100
CAVITY	MHC-050	X	X
	2-N-4*-100	X	X

### Ordering Information

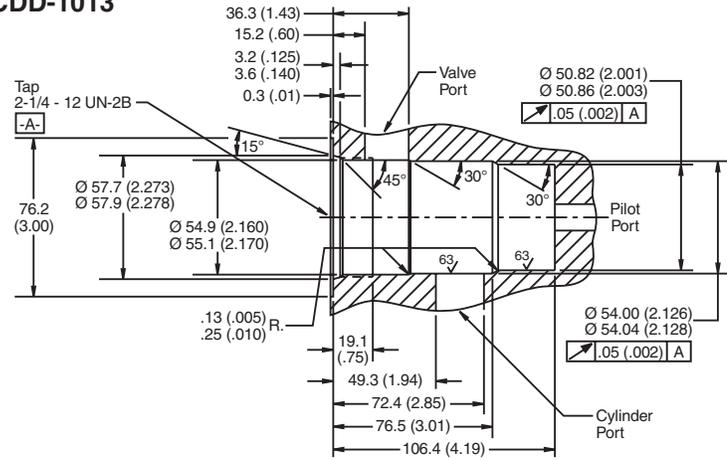


Code	Body Type	Code	Port Size
A	Single	54	SAE-12 through port
D	Dual	56	SAE-16 through port

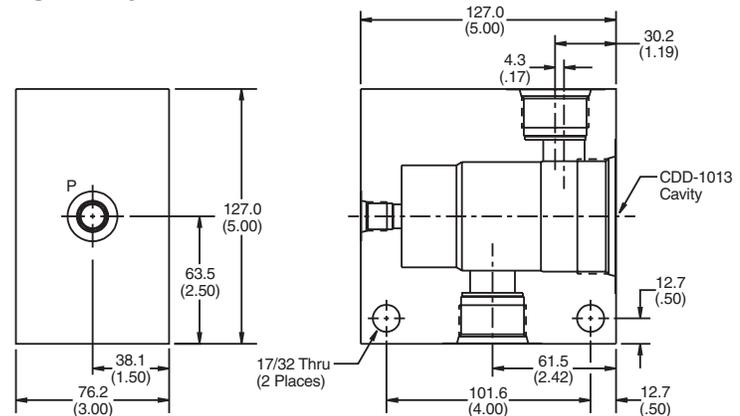
**Form Tool:** Drill FD-813  
Reamer FR-231  
**Weight:** Single 5.5 kg (12.00 lbs.)  
Dual 10.8 kg (23.85 lbs.)

### Dimensions Millimeters (Inches)

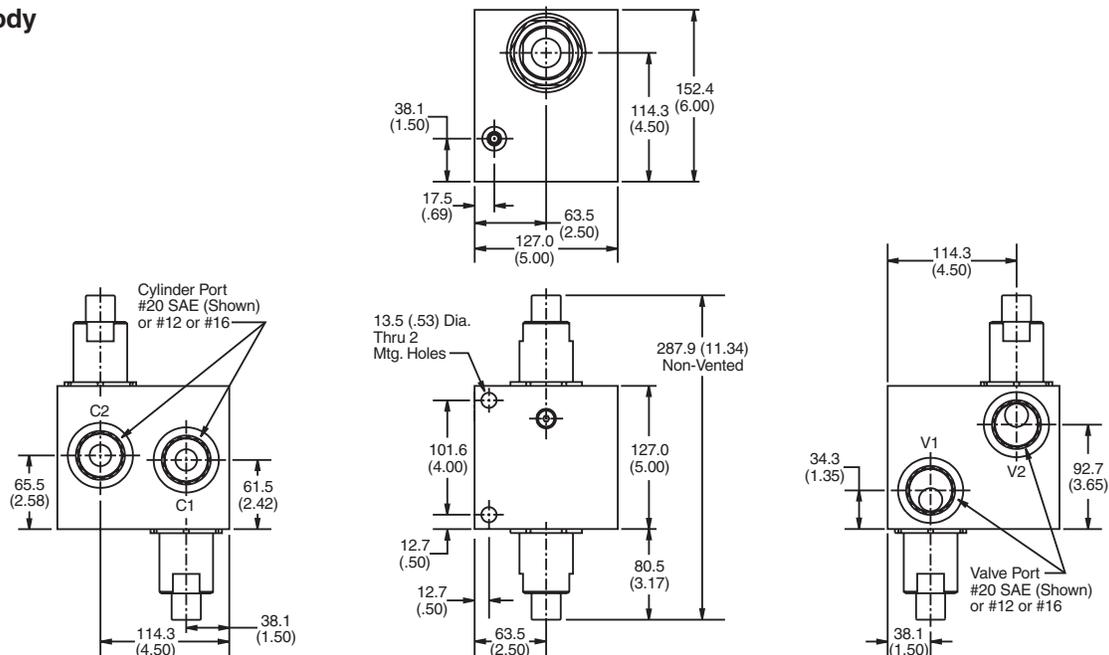
#### CDD-1013



#### Single Body



#### Dual Body

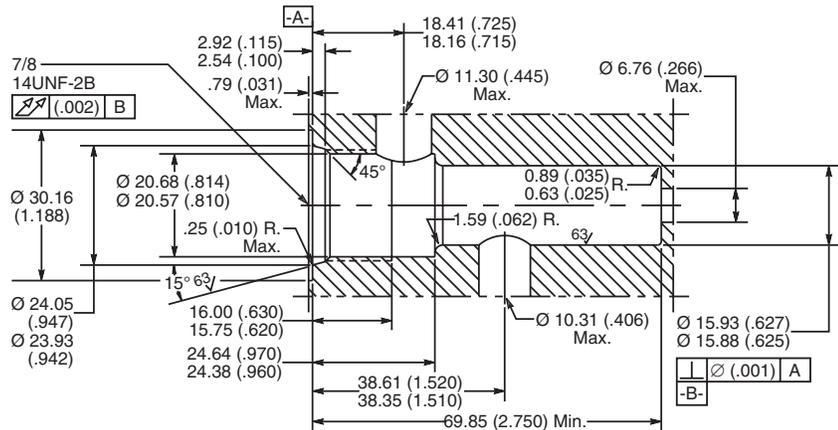


**Dimensions** Millimeters (Inches)

**10 Size Cavity for Single  
 Check and Pilot Piston**

*For Check Valve Use*  
 CVH103P\*\*

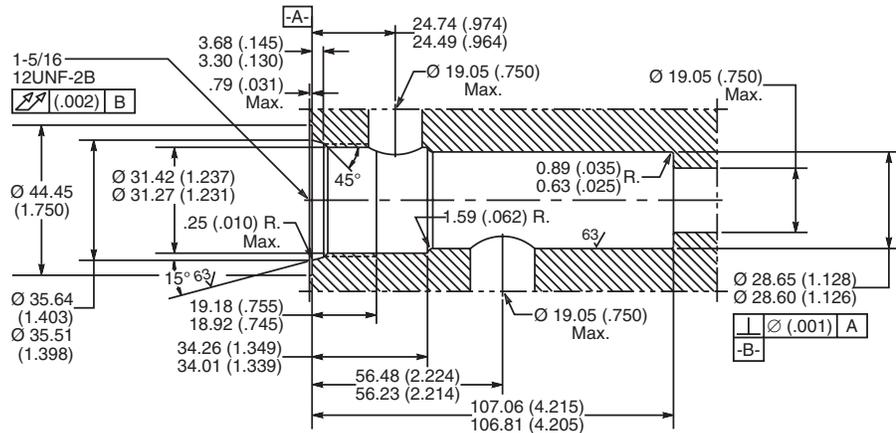
*For Pilot Piston Use*  
 717909 No Seal  
 717909N Buna-N  
 717909V Fluorocarbon



**16 Size Cavity for Single  
 Check and Pilot Piston**

*For Check Valve Use*  
 CVH161P\*\*

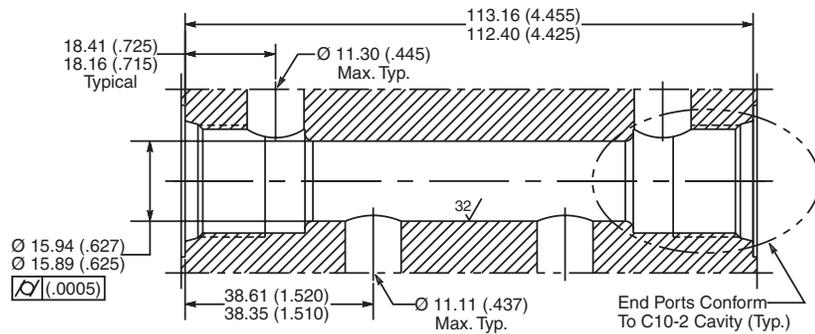
*For Pilot Piston Use*  
 717910 No Seal  
 717910N Buna-N  
 717910V Fluorocarbon



**10 Size Cavity for Dual  
 Check and Pilot Piston**

*For Check Valves Use 2*  
 CVH103P\*\*

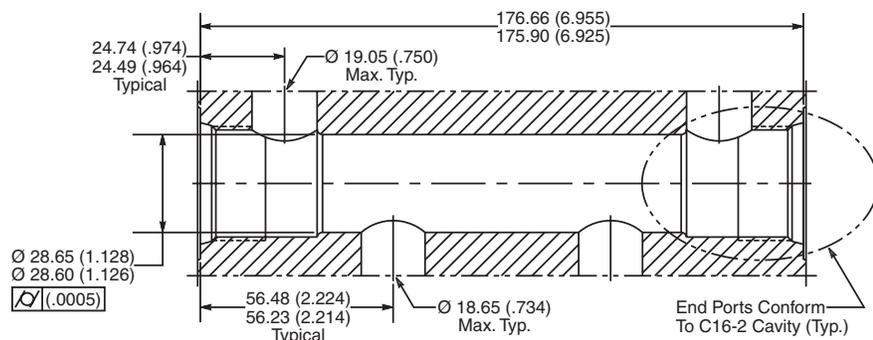
*For Pilot Piston Use*  
 717917 No Seal  
 717917N Buna-N  
 717917V Fluorocarbon



**16 Size Cavity for Dual  
 Check and Pilot Piston**

*For Check Valves Use 2*  
 CVH161P\*\*

*For Pilot Piston Use*  
 717918 No Seal  
 717918N Buna-N  
 717918V Fluorocarbon



<b>CV</b>
Check Valves
<b>SH</b>
Shuttle Valves
<b>LM</b>
Load/Motor Controls
<b>FC</b>
Flow Controls
<b>PC</b>
Pressure Controls
<b>LE</b>
Logic Elements
<b>DC</b>
Directional Controls
<b>MV</b>
Manual Valves
<b>SV</b>
Solenoid Valves
<b>PV</b>
Proportional Valves
<b>CE</b>
Coils & Electronics
<b>BC</b>
Bodies & Cavities
<b>TD</b>
Technical Data

**CV** Check Valves  
**SH** Shuttle Valves  
**LM** Load/Motor Controls  
**FC** Flow Controls  
**PC** Pressure Controls  
**LE** Logic Elements  
**DC** Directional Controls  
**MV** Manual Valves  
**SV** Solenoid Valves  
**PV** Proportional Valves  
**CE** Coils & Electronics  
**BC** Bodies & Cavities  
**TD** Technical Data

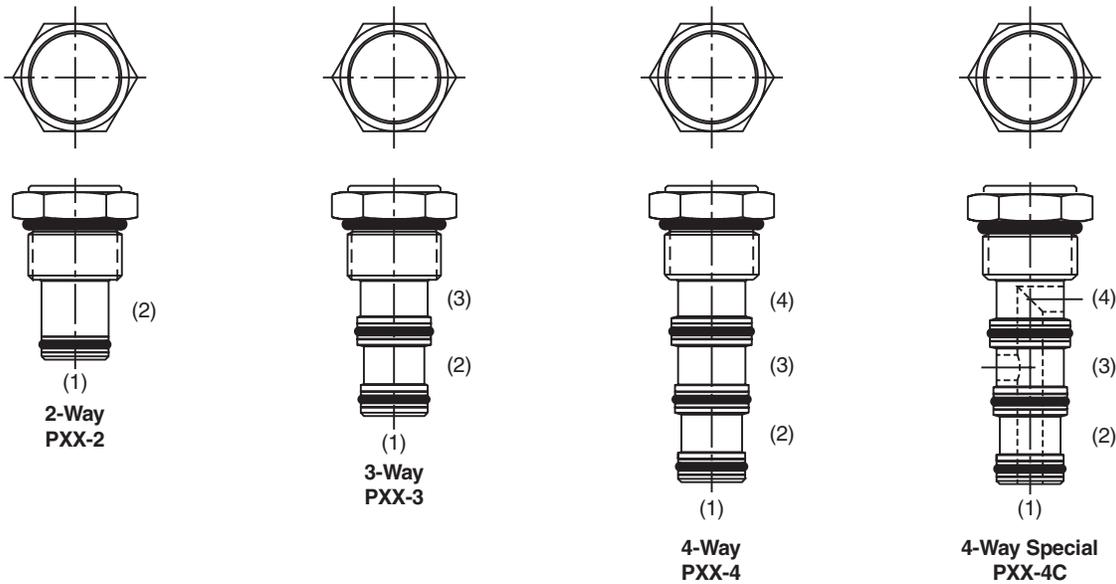
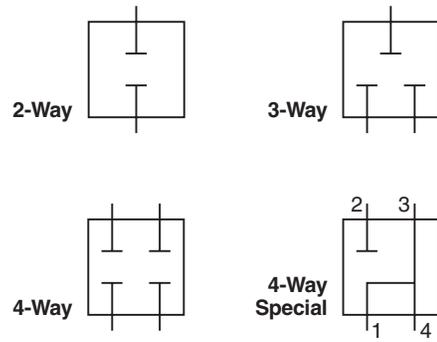
**General Description**

Parker cavity plugs can be used in any Integrated Hydraulic Circuit where one valve serves several machines and/or options. Two machines may have identical circuits except for one having a pressure reducing function, and the other not having this function. The machine that does not require this function can have the pressure reducing function replaced by a cavity plug; thereby utilizing a common body for both machines.

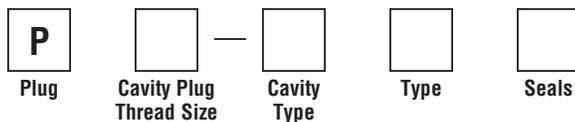
**Specifications**

Maximum Working Pressure - 350 Bar (5000 PSI)  
 Material - Steel

**Symbols**



**Ordering Information**



Code	Cavity Plug Thread Size
08*	3/4 - 16
10	7/8 - 14
12	1-1/16 - 12
16	1-5/16 - 12

Code	Cavity Type
2	Two Way
3	Three Way
4	Four Way

Code	Type								
	Two Way		Three Way			Four Way			
	1	2	1	2	3	1	2	3	4
Omit	C	C	C	C	C	C	C	C	C
A			O	O	C	O	O	O	C
B			O	C	O	O	O	C	O
C			C	O	O	O	C	O	O
D						*O	*O	*C	*C

Code	Seals
Omit	Nitrile
V	Fluorocarbon

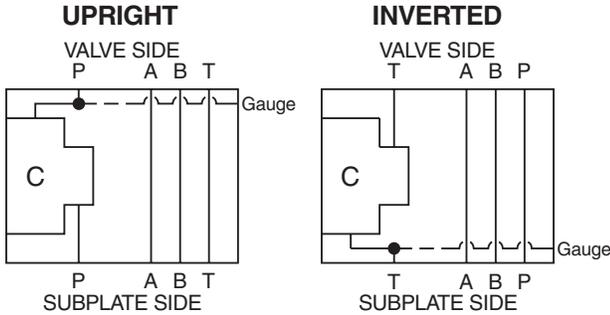
\* 08 Nose Diameter = 1/2"  
 Consult Factory for Shaded Areas.

C = Blocked O = Open  
 \* Only Available In Sizes 08 and 10.  
 Consult Factory for Shaded Areas.

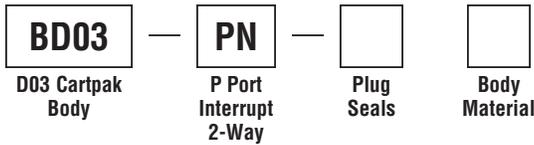
**General Description**

P Port Interrupt, 2-Way, D03 Cartpak Body.  
 For additional information see Technical Tips on pages BC1-BC6.

**Body Schematic**



**Ordering Information**



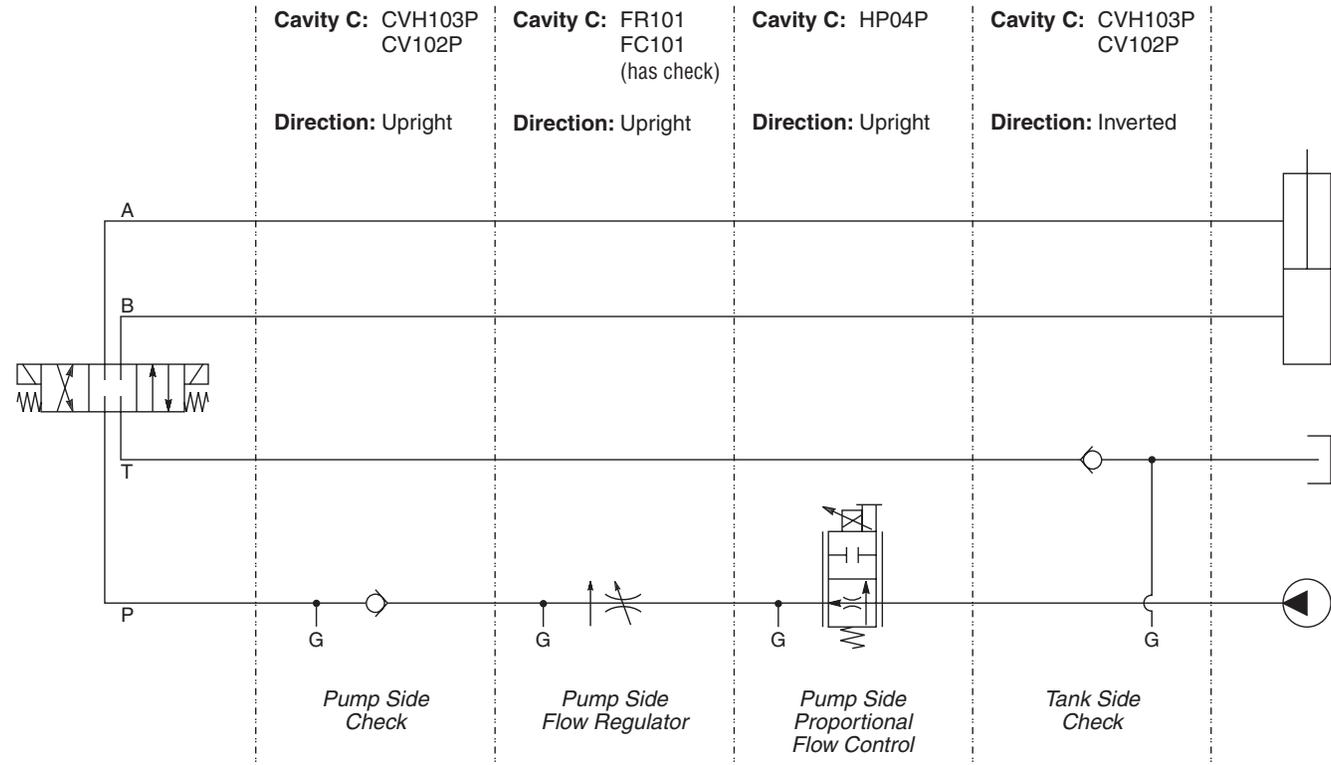
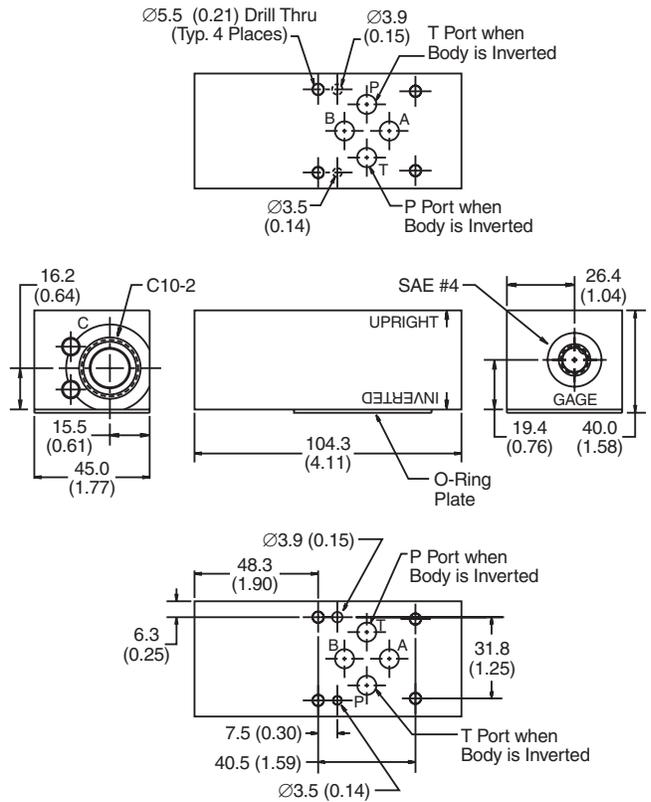
Code	Plug Seals
Omit	Nitrile
V	Fluorocarbon

Code	Body Material
A	Aluminum
S	Steel (Ductile Iron)

**Body supplied with:**

- Gage Port Plug Installed
- O-Ring Plate, O-Rings and Drive Pin Kit

**Dimensions** Millimeters (Inches)



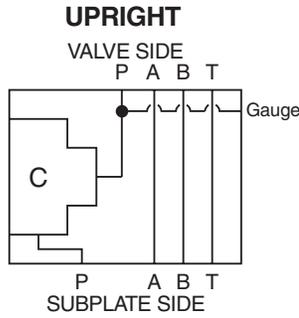
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
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**CV** Check Valves  
**SH** Shuttle Valves  
**LM** Load/Motor Controls  
**FC** Flow Controls  
**PC** Pressure Controls  
**LE** Logic Elements  
**DC** Directional Controls  
**MV** Manual Valves  
**SV** Solenoid Valves  
**PV** Proportional Valves  
**CE** Coils & Electronics  
**BC** Bodies & Cavities  
**TD** Technical Data

**General Description**

P Port Interrupt, 2-Way, D03 Cartpak Body.  
 For additional information see Technical Tips on pages BC1-BC6.

**Body Schematic**

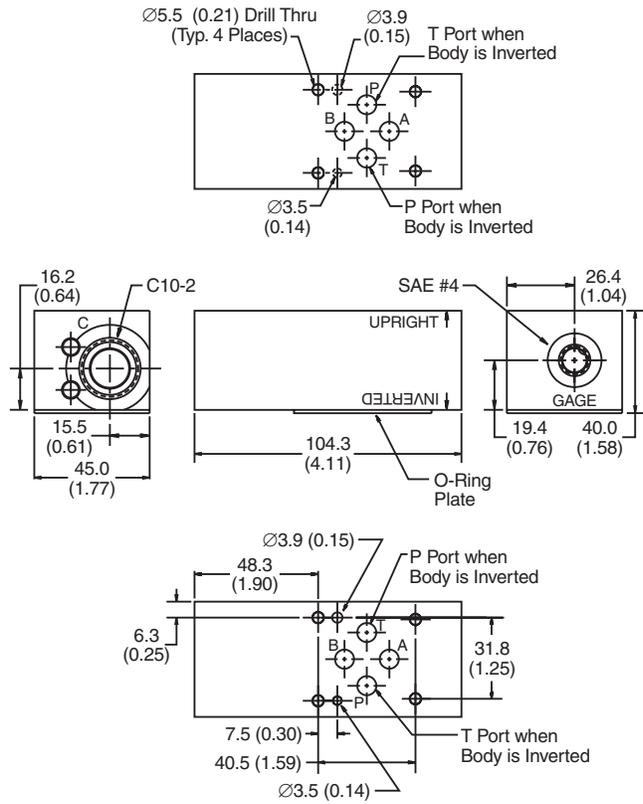


**Ordering Information**

<b>BD03</b> D03 Cartpak Body	<b>PN2</b> P Port Interrupt 2-Way	Plug Seals	Body Material
<b>Code</b>	<b>Plug Seals</b>	<b>Code</b>	<b>Body Material</b>
Omit	Nitrile	A	Aluminum
V	Fluorocarbon	S	Steel (Ductile Iron)

- Body supplied with:**
- Gage Port Plug Installed
  - O-Ring Plate, O-Rings and Drive Pin Kit

**Dimensions** Millimeters (Inches)

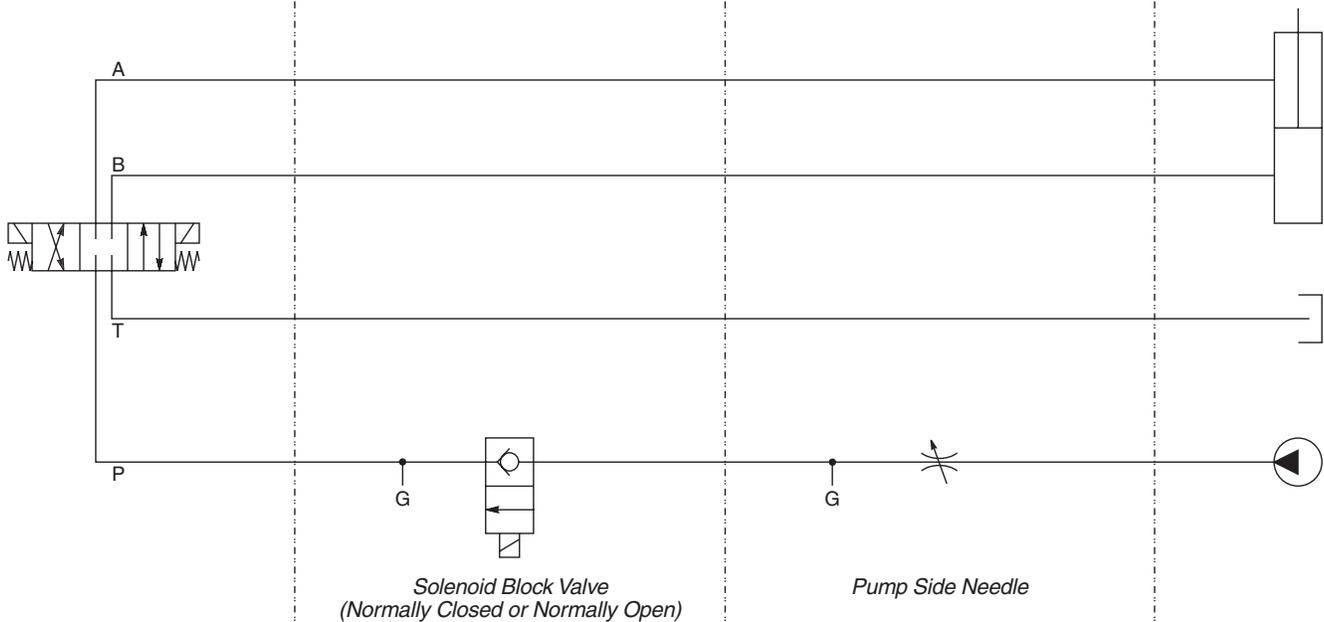


**Cavity C:** DSL101\*  
DSH101\*

**Direction:** Upright

**Cavity C:** NVH101  
FV101

**Direction:** Upright



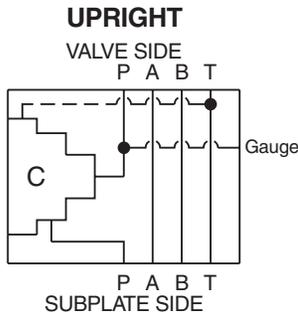
*Solenoid Block Valve  
 (Normally Closed or Normally Open)*

*Pump Side Needle*

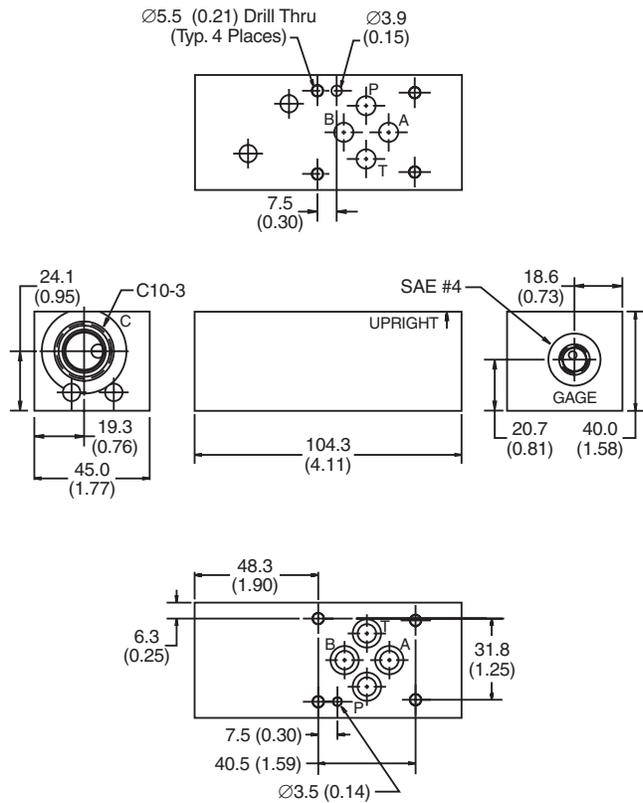
**General Description**

P Port Interrupt, Reducing Function, D03 Cartpak Body. For additional information see Technical Tips on pages BC1-BC6.

**Body Schematic**



**Dimensions** Millimeters (Inches)



**Ordering Information**



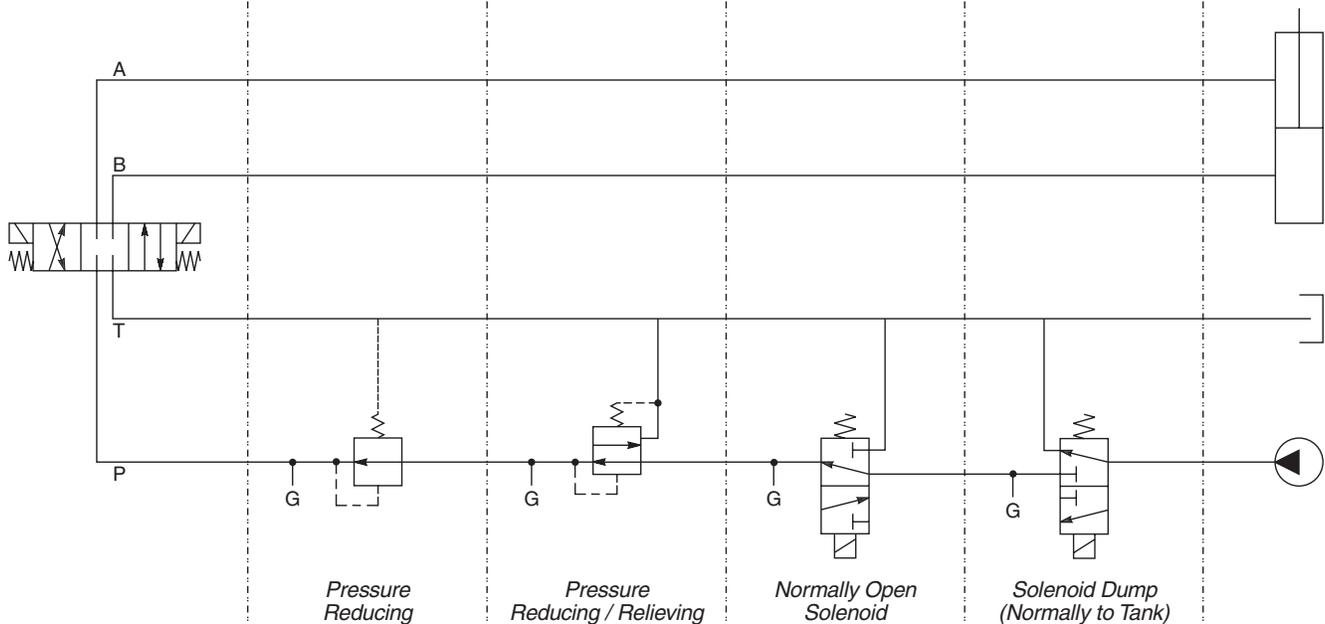
Code	Plug Seals
Omit	Nitrile
V	Fluorocarbon

Code	Body Material
A	Aluminum
S	Steel (Ductile Iron)

**Body supplied with:**

- Gage Port Plug Installed
- O-Rings and Drive Pin

Cavity C: PRH102	Cavity C: PRH101 PR103	Cavity C: DSL103A DSH103A	Cavity C: DSL103N DSH103N
Direction: Upright	Direction: Upright	Direction: Upright	Direction: Upright

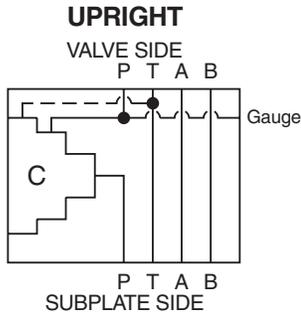


- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
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- BC** Bodies & Cavities
- TD** Technical Data

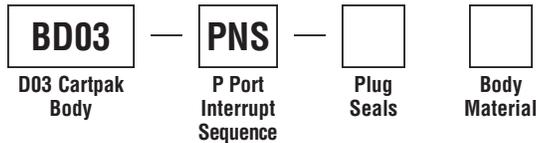
**General Description**

P Port Interrupt, Sequence Function, D03 Cartpak Body. For additional information see Technical Tips on pages BC1-BC6.

**Body Schematic**



**Ordering Information**



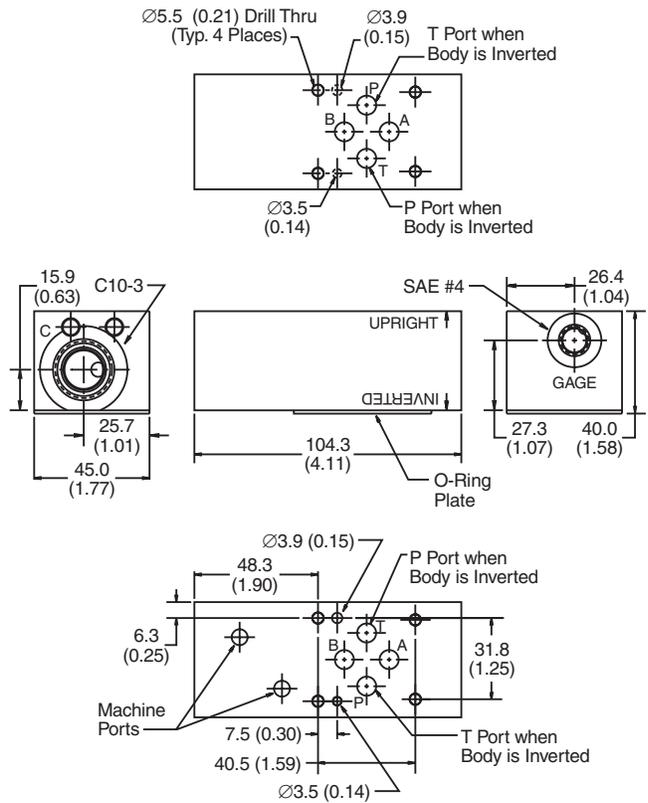
Code	Plug Seals
Omit	Nitrile
V	Fluorocarbon

Code	Body Material
A	Aluminum
S	Steel (Ductile Iron)

**Body supplied with:**

- Gage Port Plug Installed
- O-Ring Plate, O-Rings and Drive Pin Kit

**Dimensions** Millimeters (Inches)

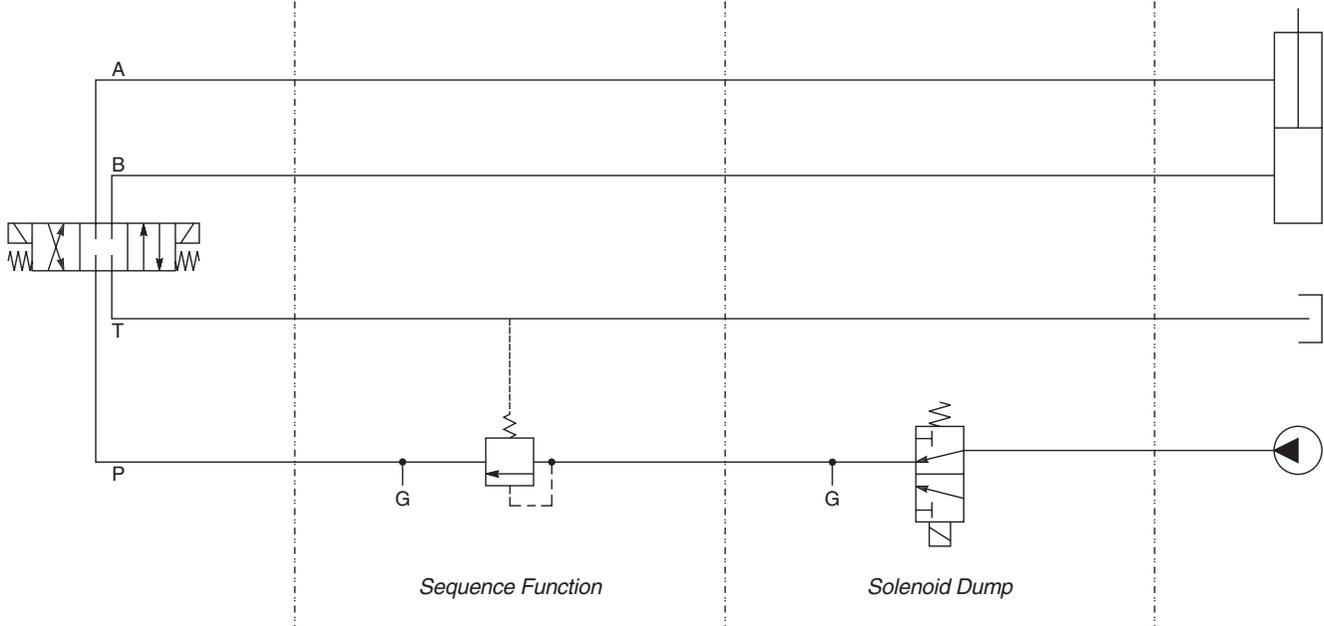


**Cavity C:** SVH101

**Direction:** Upright

**Cavity C:** DSL103A  
DSH103A

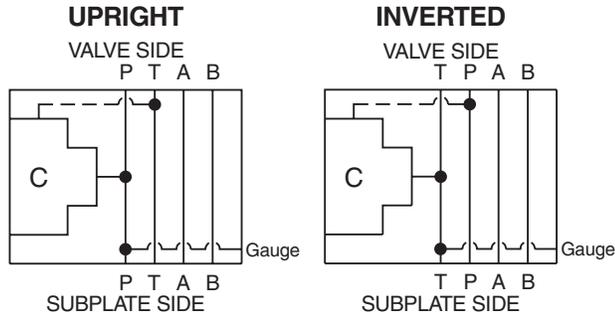
**Direction:** Upright



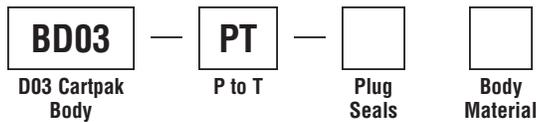
**General Description**

P to T D03 Cartpak Body.  
 For additional information see Technical Tips on pages BC1-BC6.

**Body Schematic**



**Ordering Information**

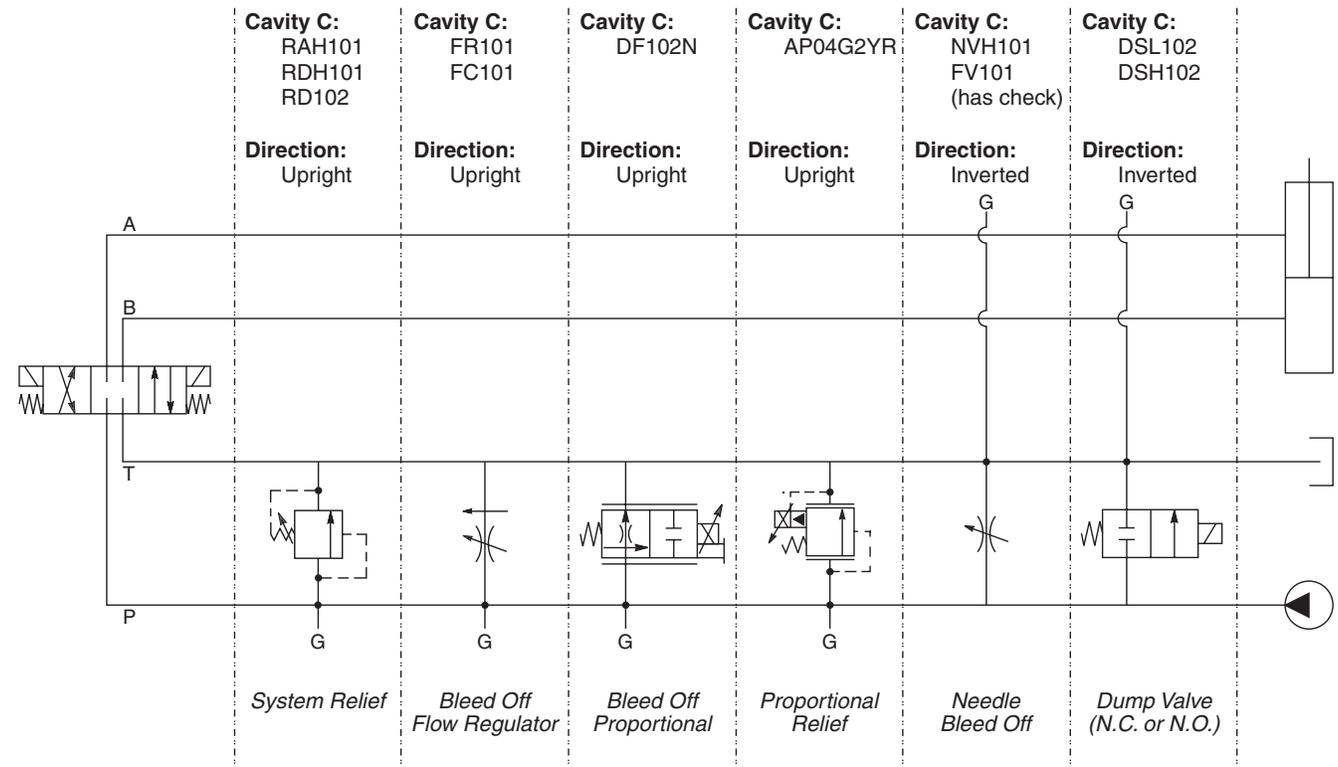
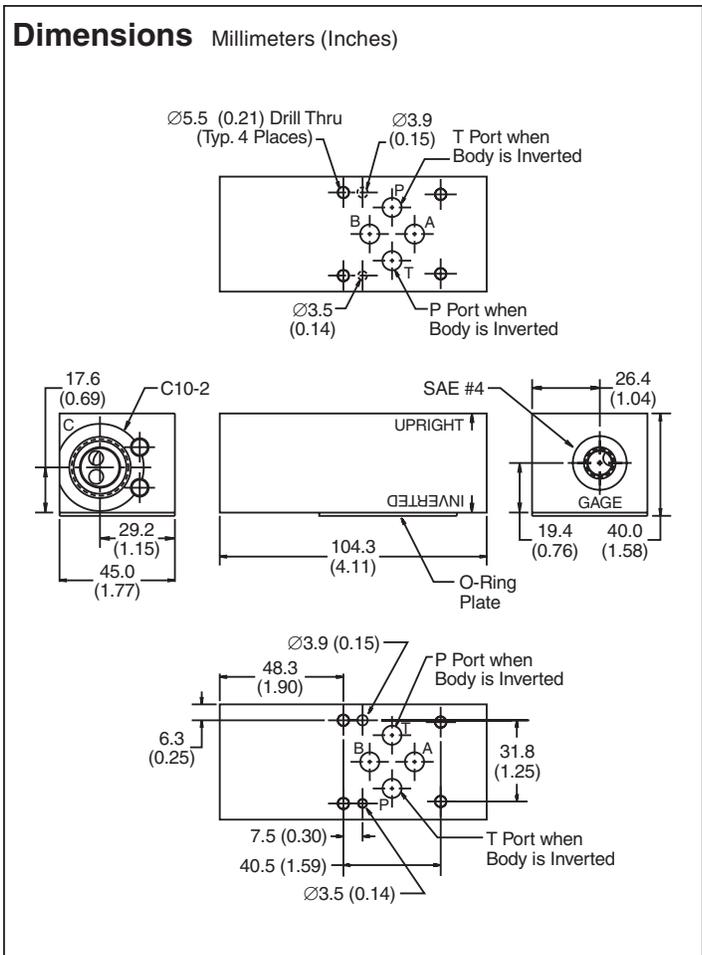


Code	Plug Seals
Omit	Nitrile
V	Fluorocarbon

Code	Body Material
A	Aluminum
S	Steel (Ductile Iron)

**Body supplied with:**

- Gage Port Plug Installed
- O-Ring Plate, O-Rings and Drive Pin Kit



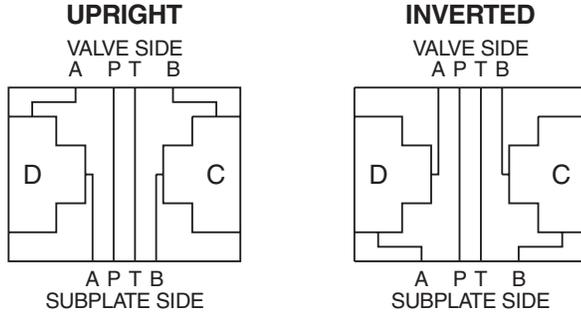
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
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- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

### General Description

A and B Port Interrupt D03 Cartpak Body.  
 For additional information see Technical Tips on pages BC1-BC6.

### Body Schematic



### Ordering Information

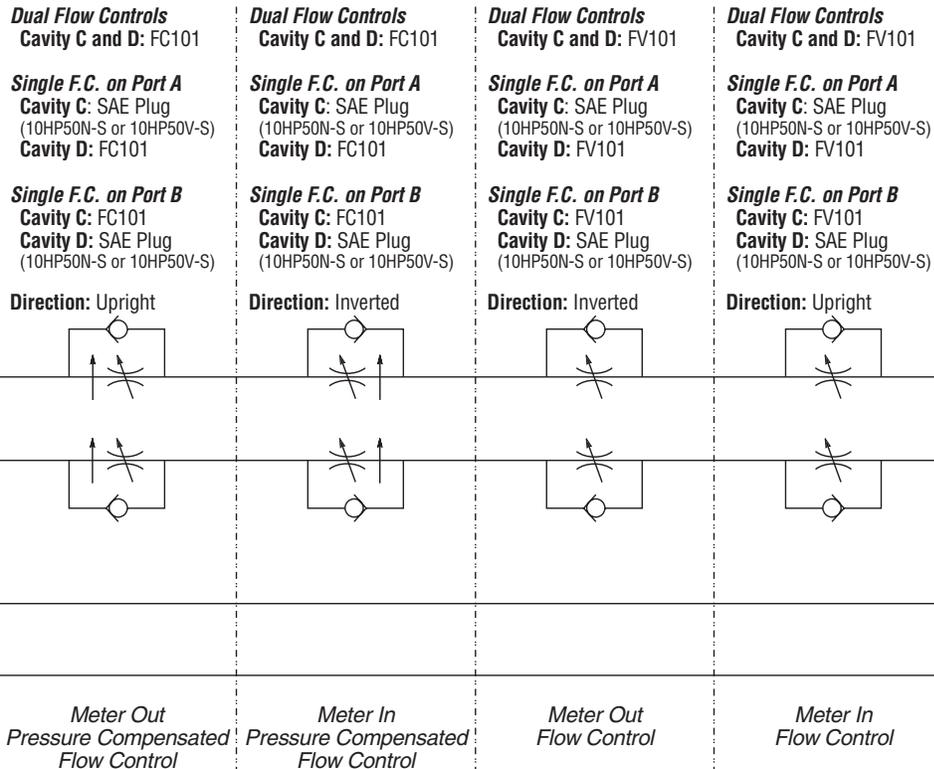
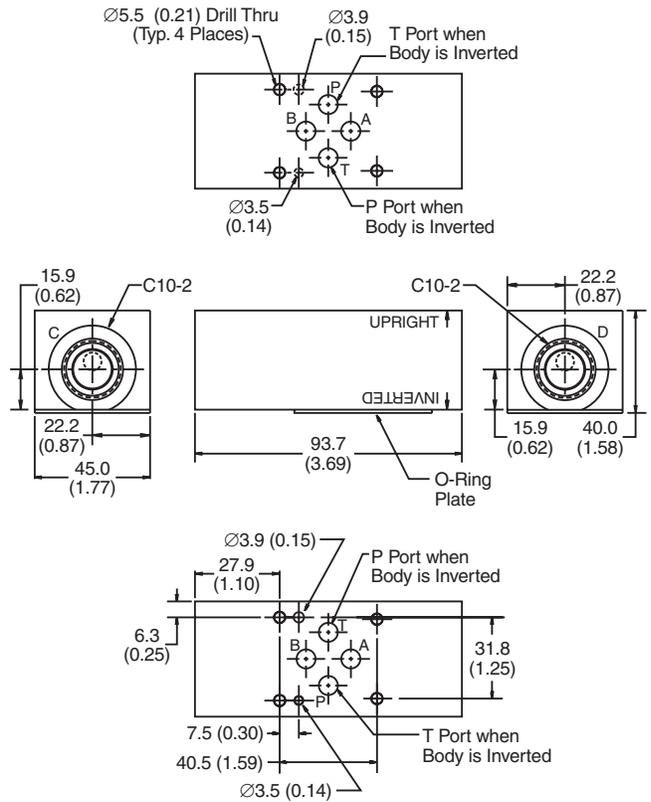
<b>BD03</b>	<b>ABN</b>		
D03 Cartpak Body	A & B Port Interrupt	Plug Seals	Body Material

Code	Plug Seals	Code	Body Material
Omit	Nitrile	A	Aluminum
V	Fluorocarbon	S	Steel (Ductile Iron)

**Body supplied with:**  
 • O-Ring Plate, O-Rings and Drive Pin Kit

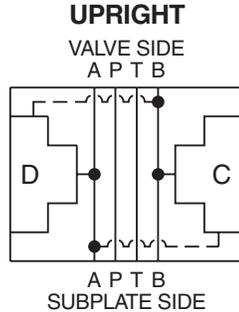
### Dimensions Millimeters (Inches)



**General Description**

A and B Crossover D03 Cartpak Body.  
 For additional information see Technical Tips on pages BC1-BC6.

**Body Schematic**



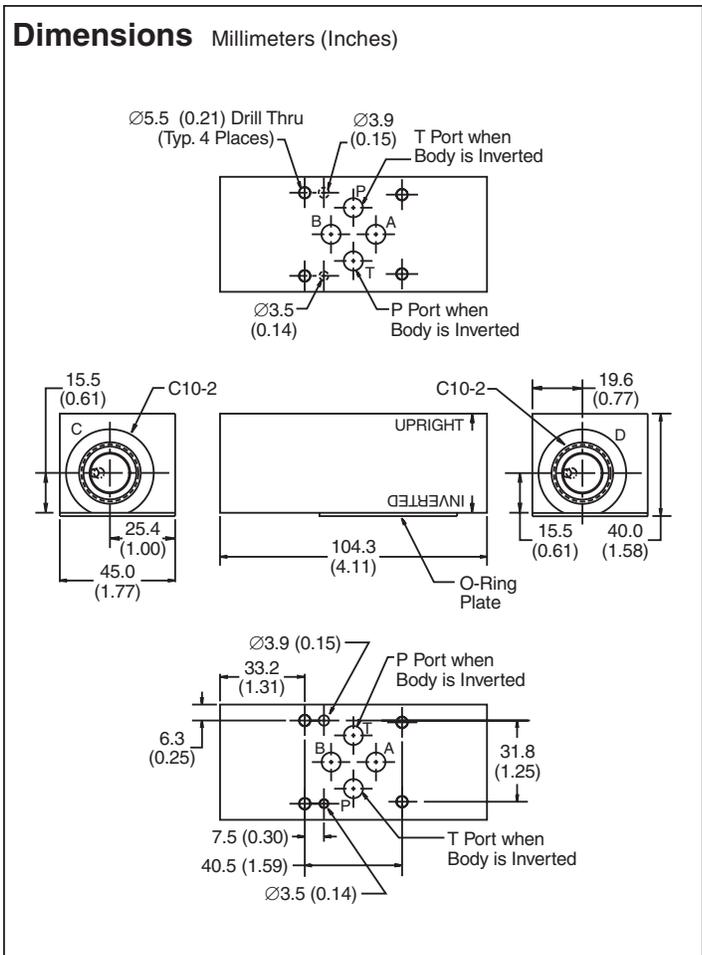
**Ordering Information**



Code	Plug Seals
Omit	Nitrile
V	Fluorocarbon

Code	Body Material
A	Aluminum
S	Steel (Ductile Iron)

**Body supplied with:**  
 • O-Ring Plate, O-Rings and Drive Pin Kit



**Option 1**  
 Cavity C: RAH101, RD102  
 Cavity D: RAH101, RD102

**Option 2**  
 Cavity C: RDH103  
 Cavity D: RDH103

**Direction:** Upright

**Option 1**  
 Cavity C: P10-2  
 Cavity D: RDH103

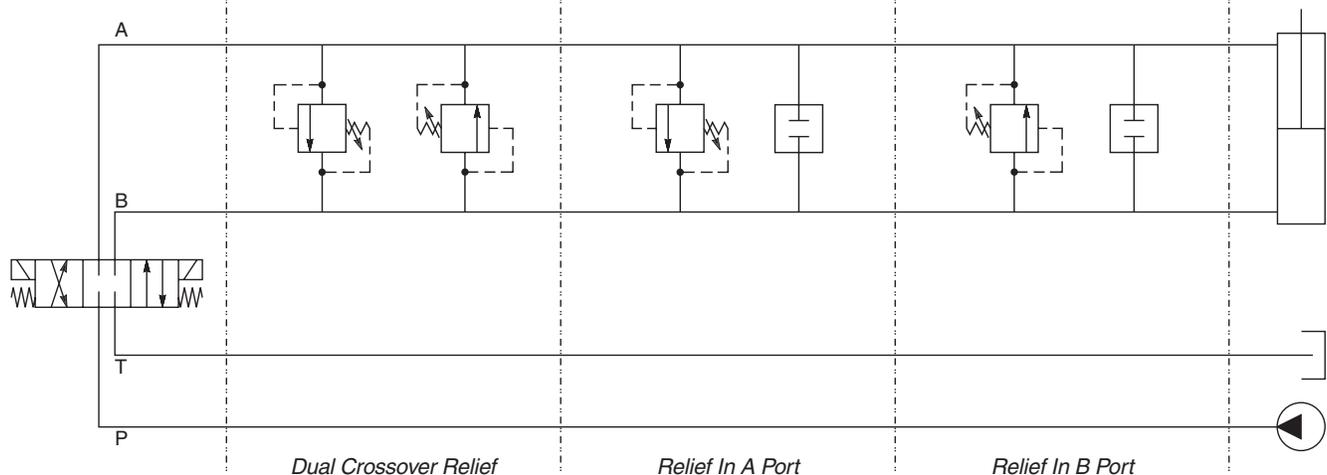
**Option 2**  
 Cavity C: RAH101, RD102  
 Cavity D: P10-2

**Direction:** Upright

**Option 1**  
 Cavity C: RDH103  
 Cavity D: P10-2

**Option 2**  
 Cavity C: P10-2  
 Cavity D: RAH101, RD102

**Direction:** Upright



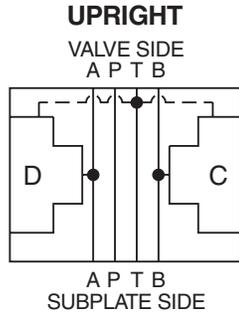
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

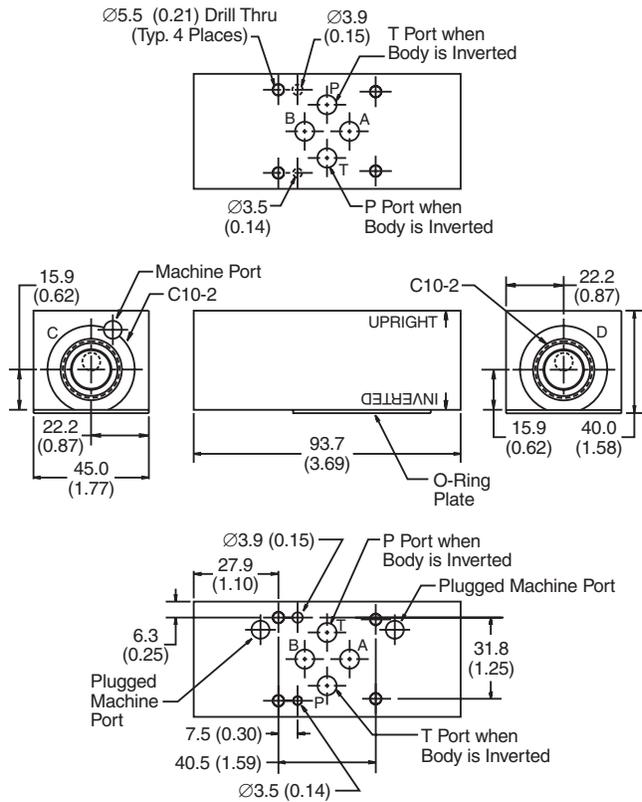
### General Description

A and B Ports to Tank D03 Cartpak Body.  
 For additional information see Technical Tips on pages BC1-BC6.

### Body Schematic



### Dimensions Millimeters (Inches)

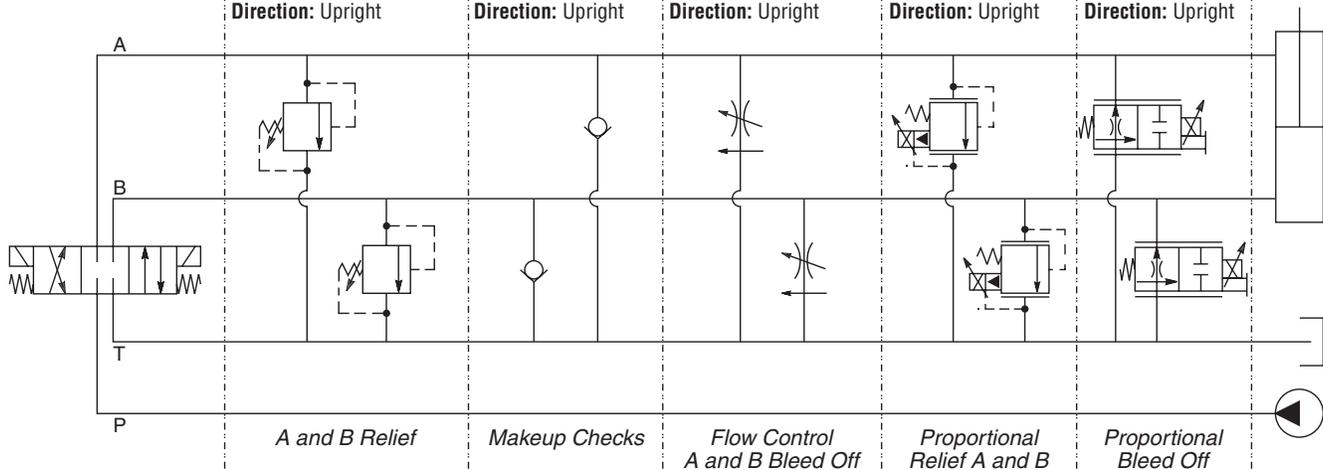


### Ordering Information

<b>BD03</b> D03 Cartpak Body	<b>ABT</b> A & B Ports to Tank	Plug Seals	Body Material
<b>Code</b> Plug Seals	<b>Code</b> Body Material		
<b>Omit</b> Nitrile	<b>A</b> Aluminum		
<b>V</b> Fluorocarbon	<b>S</b> Steel (Ductile Iron)		

**Body supplied with:**  
 • O-Ring Plate, O-Rings and Drive Pin Kit

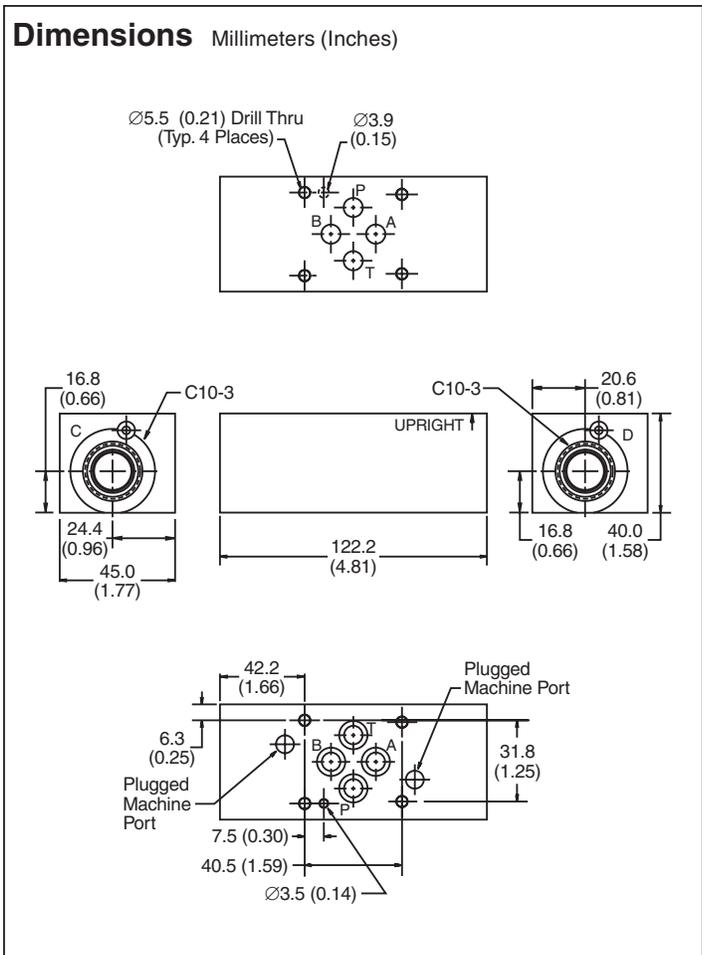
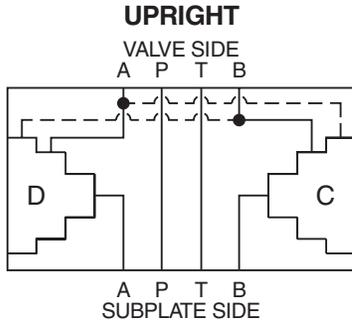
<b>Dual Relief</b> Cavity C and D: RAH101, RD102	<b>Dual Makeup Checks</b> Cavity C and D: CVH104P	<b>Dual Bleed Off</b> Cavity C and D: FR101, FC101	<b>Dual Relief</b> Cavity C and D: AP04G2YR	<b>Dual Bleed Off</b> Cavity C and D: DF102N
<b>Relief on Port A</b> Cavity C: P10-2 Cavity D: RAH101, RD102	<b>Check on Port A</b> Cavity C: P10-2 Cavity D: CVH104P	<b>Bleed Off on Port A</b> Cavity C: P10-2 Cavity D: FR101, FC101	<b>Relief on Port A</b> Cavity C: P10-2 Cavity D: AP04G2YR	<b>Bleed Off on Port A</b> Cavity C: P10-2 Cavity D: DF102N
<b>Relief on Port B</b> Cavity C: RAH101, RD102 Cavity D: P10-2	<b>Check on Port B</b> Cavity C: CVH104P Cavity D: P10-2	<b>Bleed Off on Port B</b> Cavity C: FR101, FC101 Cavity D: P10-2	<b>Relief on Port B</b> Cavity C: AP04G2YR Cavity D: P10-2	<b>Bleed Off on Port B</b> Cavity C: DF102N Cavity D: P10-2
<b>Direction:</b> Upright	<b>Direction:</b> Upright	<b>Direction:</b> Upright	<b>Direction:</b> Upright	<b>Direction:</b> Upright



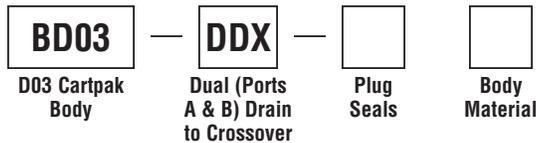
**General Description**

Dual (Ports A and B) Drain to Crossover Port D03 Cartpak Body. For additional information see Technical Tips on pages BC1-BC6.

**Body Schematic**



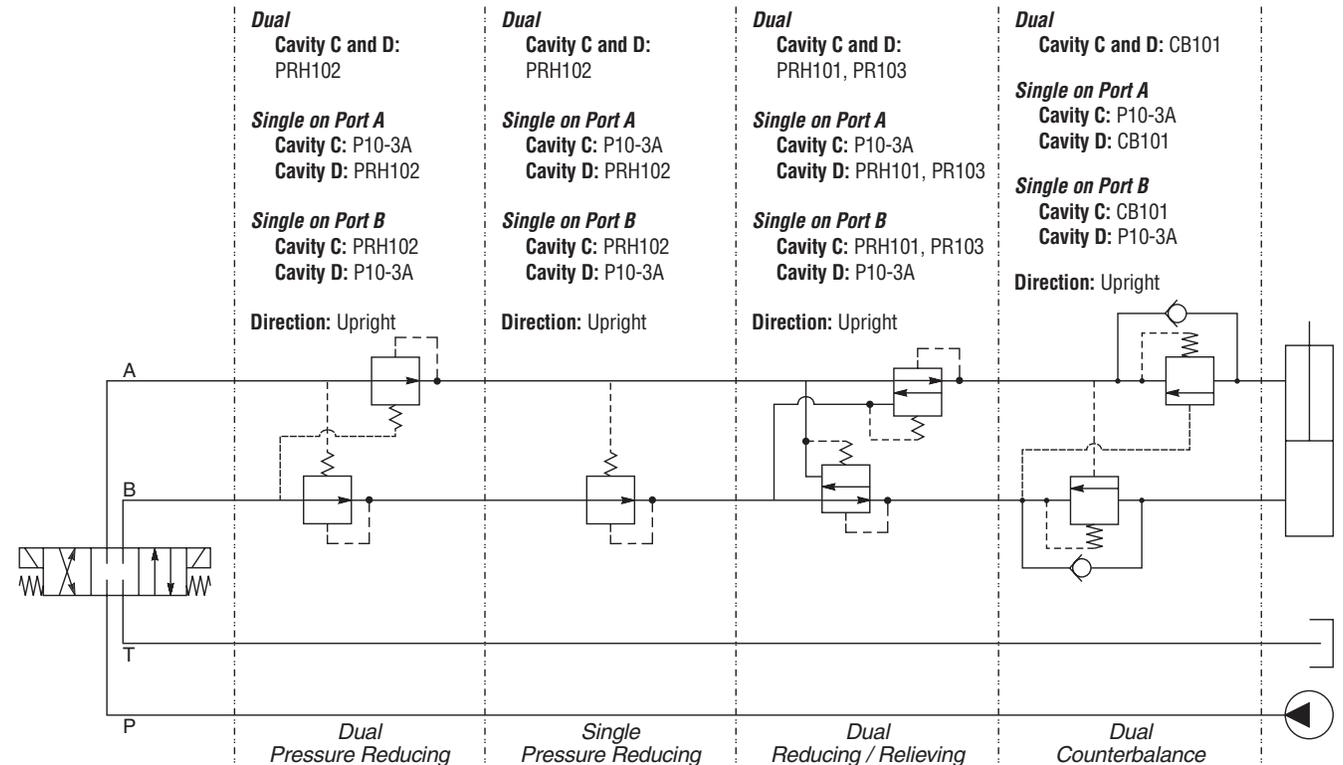
**Ordering Information**



Code	Plug Seals
Omit	Nitrile
V	Fluorocarbon

Code	Body Material
A	Aluminum
S	Steel (Ductile Iron)

**Body supplied with:**  
 • O-Rings and Drive Pin



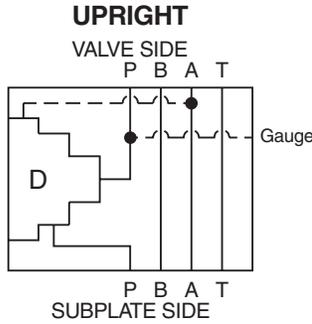
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

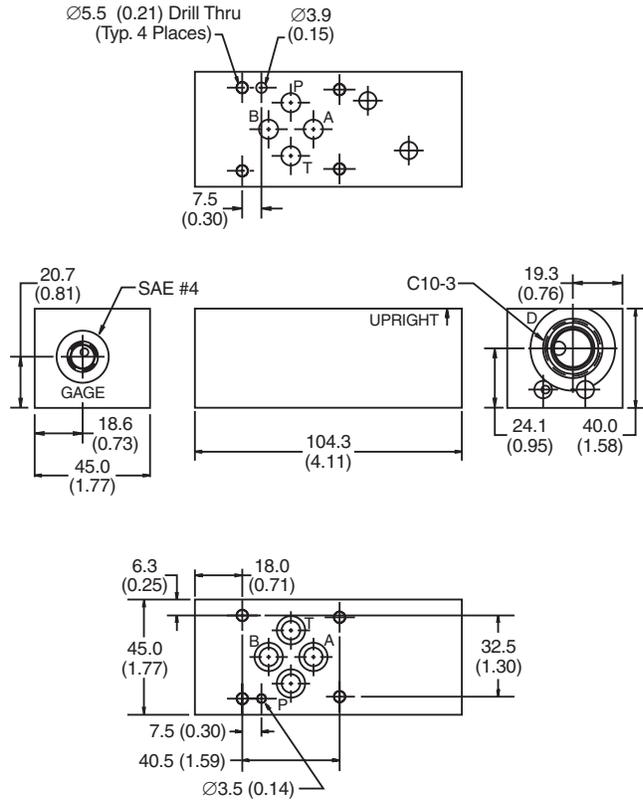
### General Description

B Port Drain to A D03 Cartpak Body.  
 For additional information see Technical Tips on pages BC1-BC6.

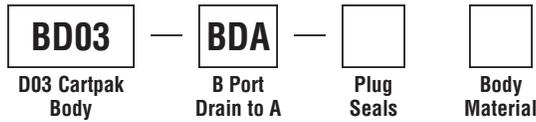
### Body Schematic



### Dimensions Millimeters (Inches)



### Ordering Information



Code	Plug Seals
Omit	Nitrile
V	Fluorocarbon

Code	Body Material
A	Aluminum
S	Steel (Ductile Iron)

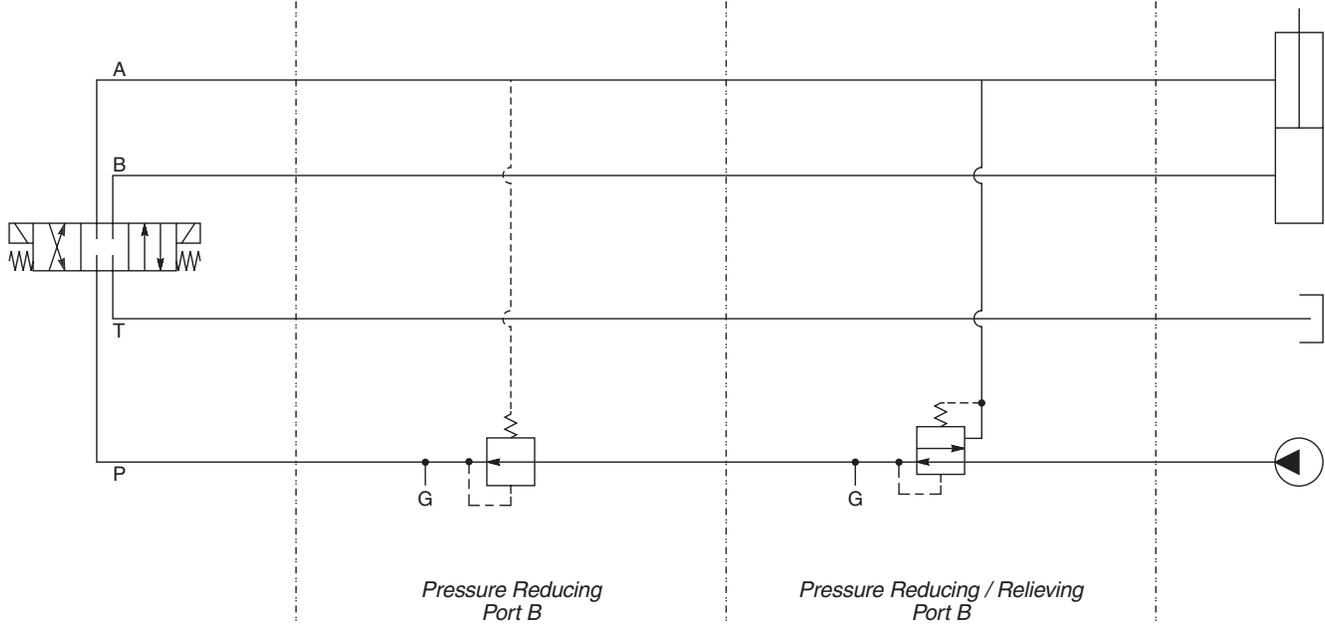
- Body supplied with:**
- Gage Port Plug Installed
  - O-Rings and Drive Pin

Cavity D: PRH102

Direction: Upright

Cavity D: PRH101  
 PR103

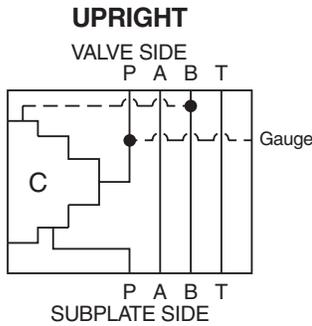
Direction: Upright



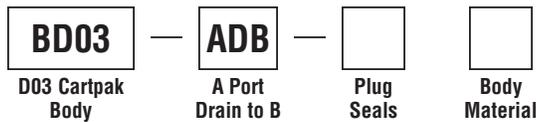
**General Description**

A Port Drain to B D03 Cartpak Body.  
 For additional information see Technical Tips on pages BC1-BC6.

**Body Schematic**



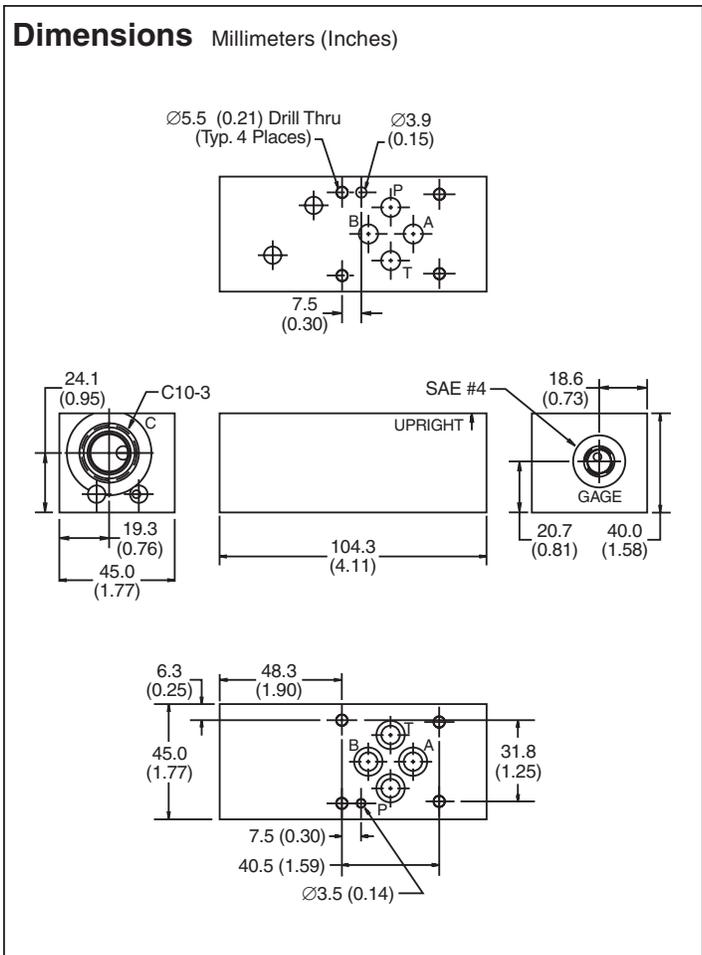
**Ordering Information**



Code	Plug Seals
Omit	Nitrile
V	Fluorocarbon

Code	Body Material
A	Aluminum
S	Steel (Ductile Iron)

- Body supplied with:**
- Gage Port Plug Installed
  - O-Rings and Drive Pin

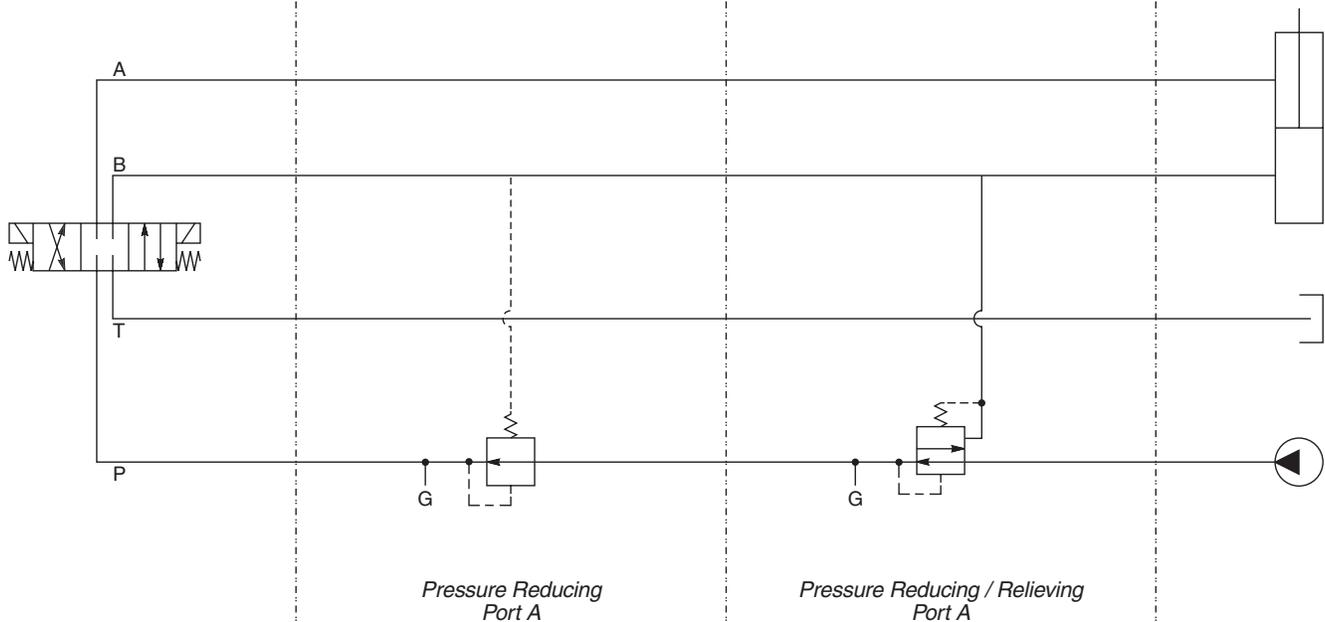


Cavity C: PRH102

Direction: Upright

Cavity C: PRH101  
PR103

Direction: Upright

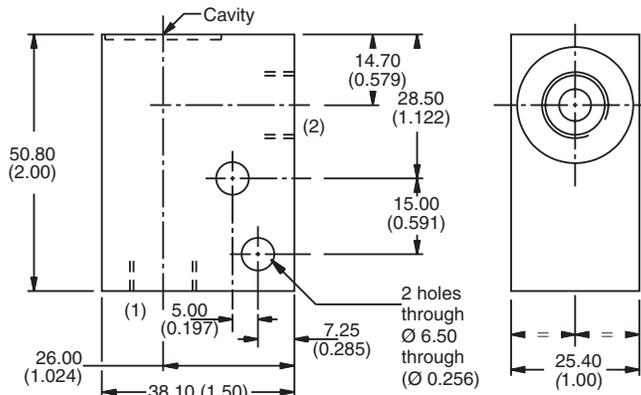
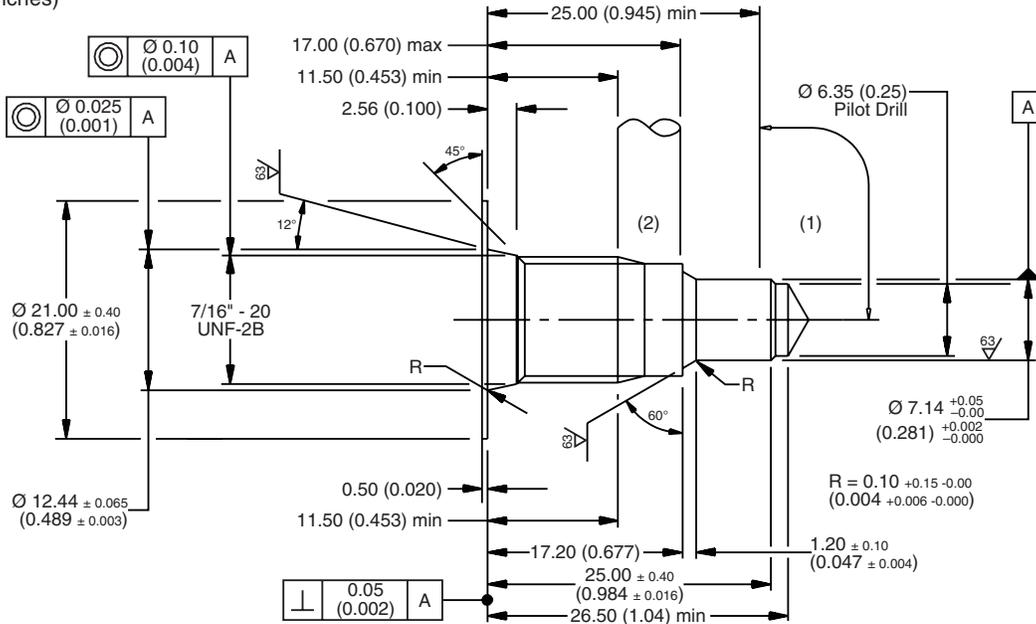


- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

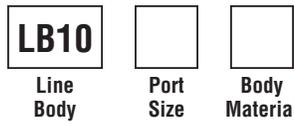
For additional information see Technical Tips on pages BC1-BC6.

**Dimensions**

Millimeters (Inches)



**Ordering Information**



Code	Port Size
795	1/4 SAE
796	1/4 BSP

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For CAV0W-2	
Pilot Drill Ø	6.35 (0.25)
Step Drill	8DS31369
Reamer (Alum)	8RM31082A
Reamer (Steel)	8RM31082S
Counterbore	—
Tap	8TP31221

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

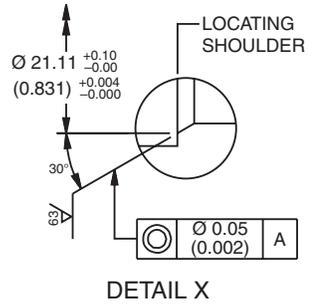
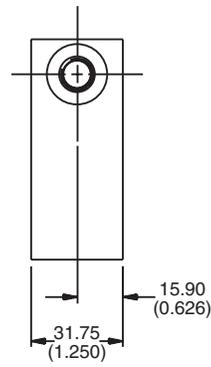
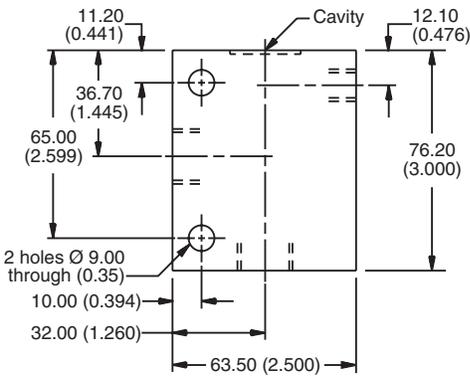
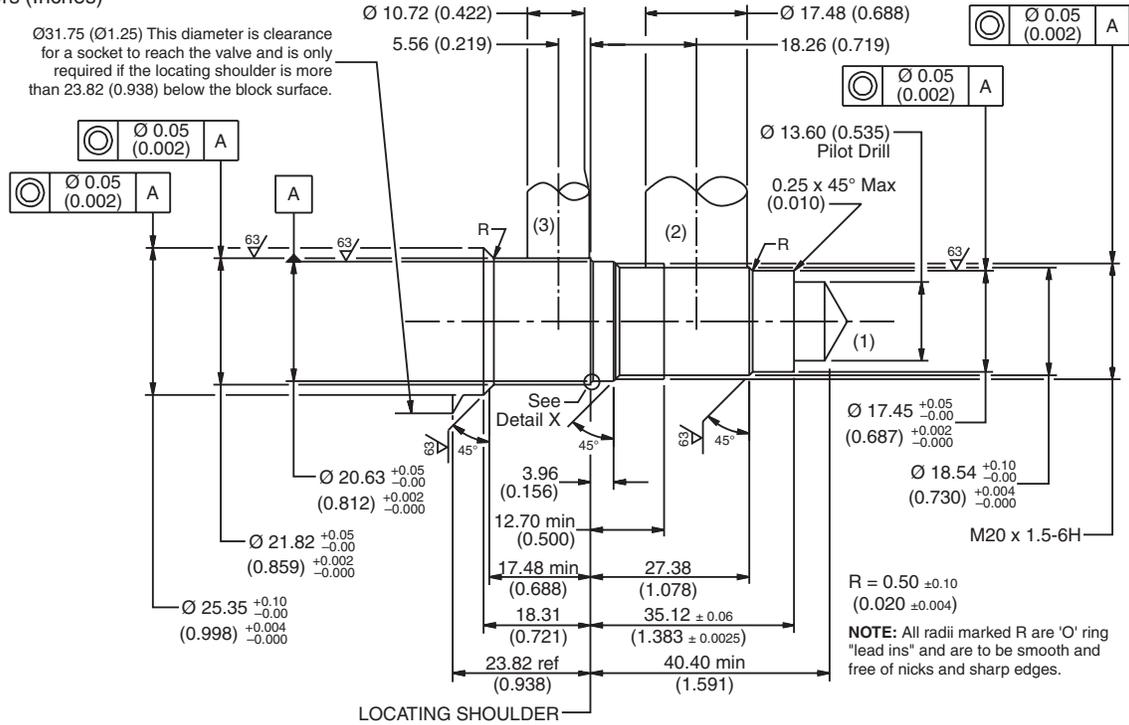


For additional information see Technical Tips on pages BC1-BC6.

**Dimensions**

Millimeters (Inches)

Ø31.75 (Ø1.25) This diameter is clearance for a socket to reach the valve and is only required if the locating shoulder is more than 23.82 (0.938) below the block surface.



**Ordering Information**

<b>LB10</b>		
Line Body	Port Size	Body Material

Code	Port Size
825	1/2 SAE (Main) 1/4 SAE (Aux.)
826	1/2 BSP (Main) 1/4 BSP (Aux.)

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For CAVT11A	
Pilot Drill Ø	13.60 (0.535)
Step Drill	8DS31387
Reamer (Alum)	8RM31095A
Reamer (Steel)	8RM31095S
Counterbore	—
Tap	8TP31209

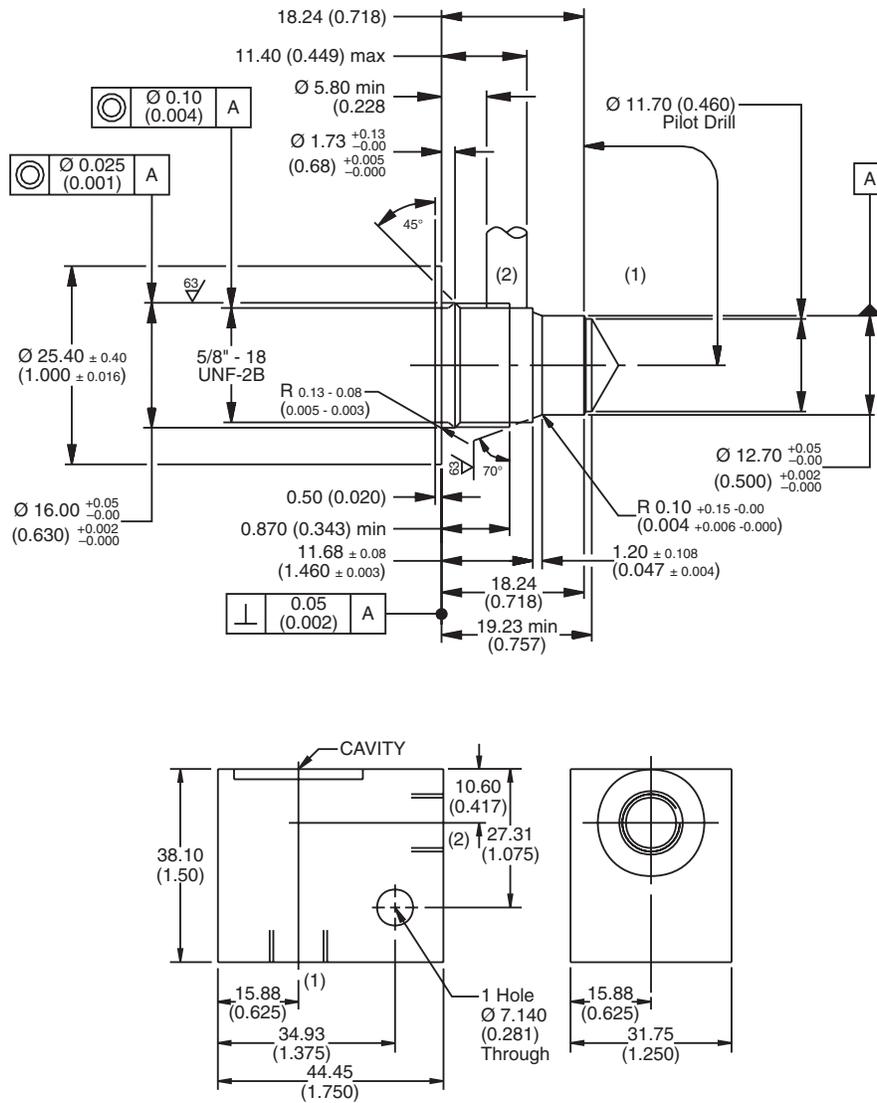
- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data



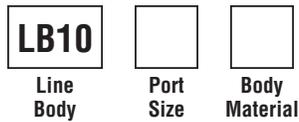


For additional information see Technical Tips on pages BC1-BC6.

**Dimensions**  
 Millimeters (Inches)



**Ordering Information**



Code	Port Size
324	1/4 SAE
325	1/4 BSP

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 2G	
Pilot Drill Ø	11.70 (0.46)
Step Drill	8DS31384
Reamer (Alum)	8RM31092A
Reamer (Steel)	8RM31092S
Counterbore	—
Tap	8TP31223

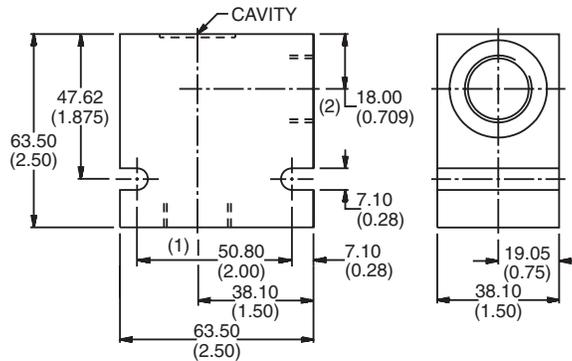
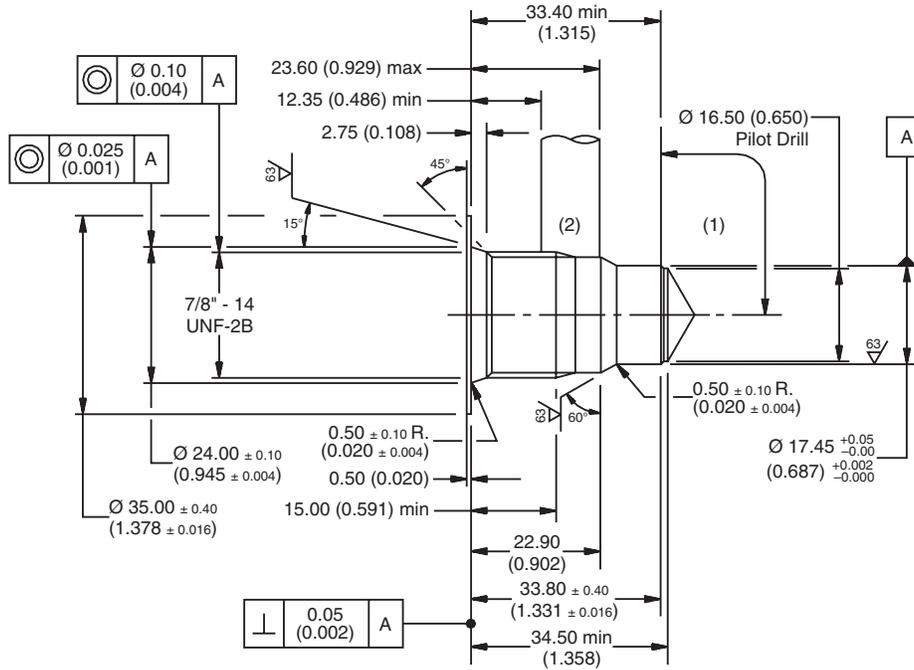
- CV**
- Check Valves
- SH**
- Shuttle Valves
- LM**
- Load/Motor Controls
- FC**
- Flow Controls
- PC**
- Pressure Controls
- LE**
- Logic Elements
- DC**
- Directional Controls
- MV**
- Manual Valves
- SV**
- Solenoid Valves
- PV**
- Proportional Valves
- CE**
- Coils & Electronics
- BC**
- Bodies & Cavities
- TD**
- Technical Data

Technical Information

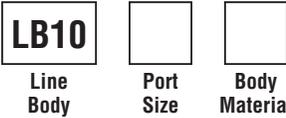
For additional information see Technical Tips on pages BC1-BC6.

Dimensions

Millimeters (Inches)



Ordering Information



Code	Port Size
543	1/2 SAE
545	1/2 BSP

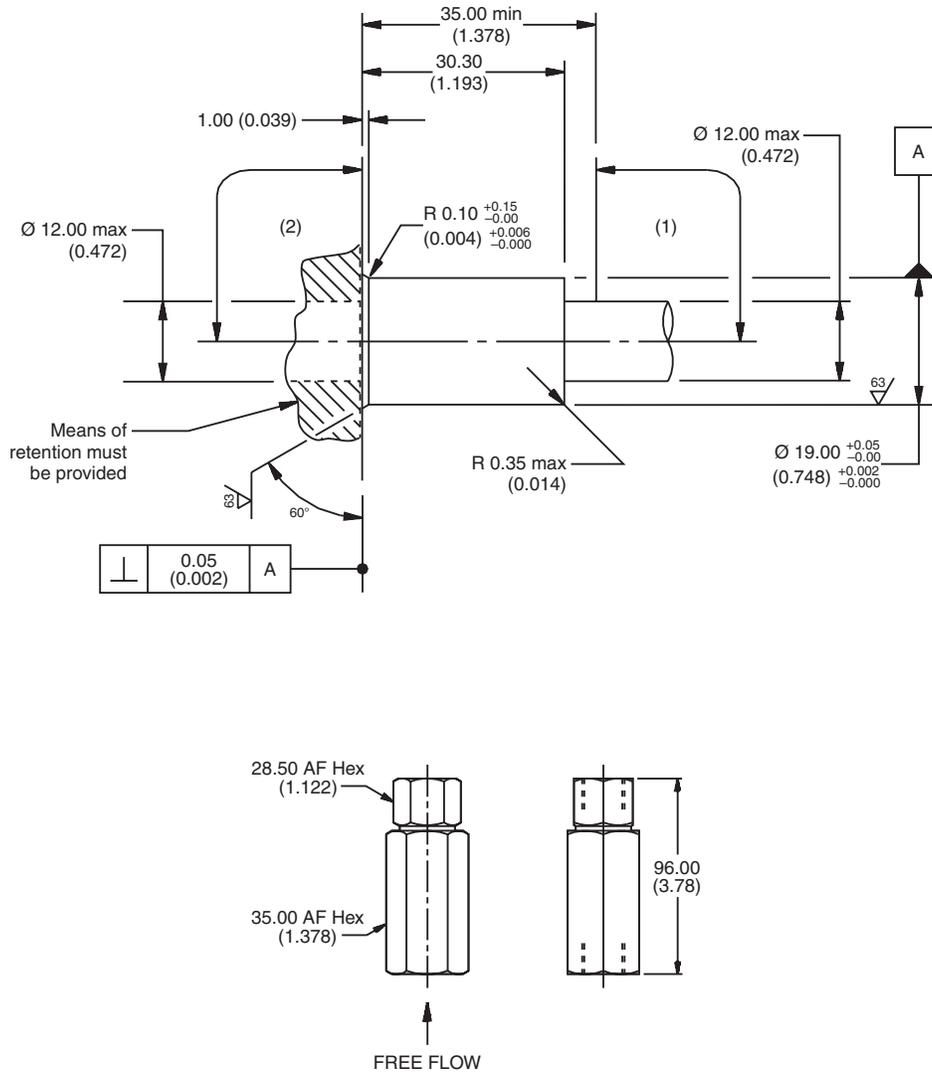
Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 2R
Pilot Drill Ø
Step Drill
Reamer (Alum)
Reamer (Steel)
Counterbore
Tap

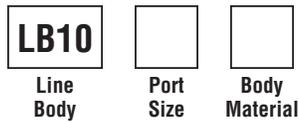
- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

For additional information see Technical Tips on pages BC1-BC6.

**Dimensions**  
 Millimeters (Inches)



**Ordering Information**



Code	Port Size
205	1 BSP
220	1 SAE

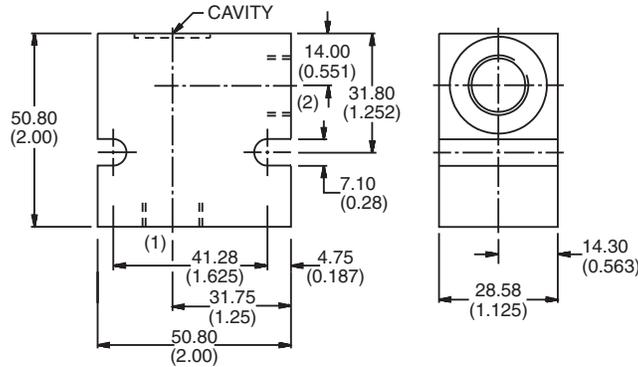
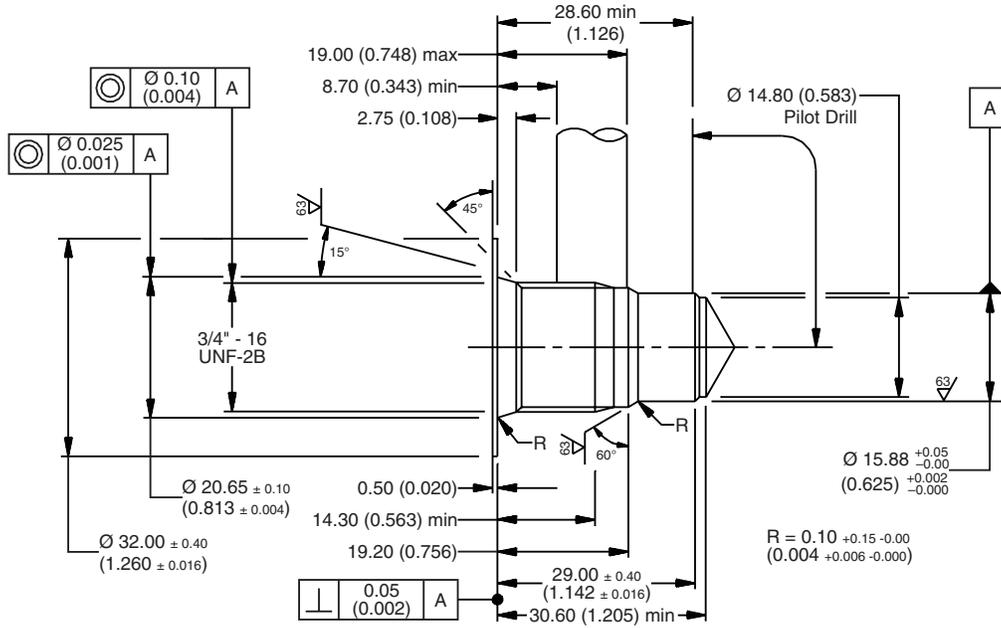
Code	Body Material
S	Steel

Cavity Tooling For 2U	
Pilot Drill Ø	—
Step Drill	—
Reamer (Alum)	—
Reamer (Steel)	—
Counterbore	—
Tap	—

- CV**  
Check Valves
- SH**  
Shuttle Valves
- LM**  
Load/Motor Controls
- FC**  
Flow Controls
- PC**  
Pressure Controls
- LE**  
Logic Elements
- DC**  
Directional Controls
- MV**  
Manual Valves
- SV**  
Solenoid Valves
- PV**  
Proportional Valves
- CE**  
Coils & Electronics
- BC**  
Bodies & Cavities
- TD**  
Technical Data

For additional information see Technical Tips on pages BC1-BC6.

**Dimensions**  
 Millimeters (Inches)



**Ordering Information**

<b>LB10</b>			
Line Body	Port Size	Body Material	

Code	Port Size
513	3/8 SAE
515	1/4 BSP

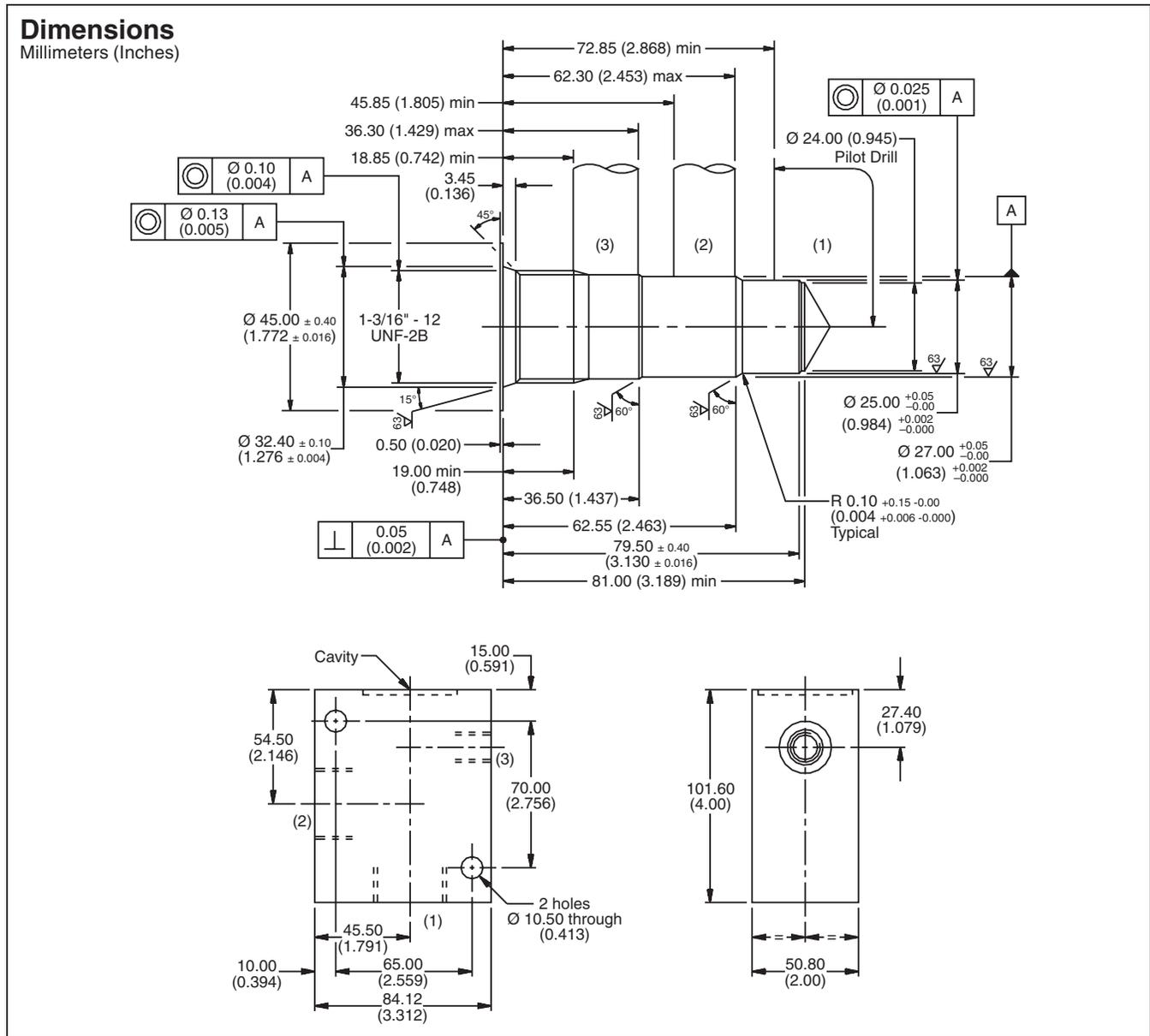
Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 2X	
Pilot Drill Ø	14.80 (0.583)
Step Drill	8DS31344
Reamer (Alum)	8RM31057A
Reamer (Steel)	8RM31057S
Counterbore	—
Tap	8TP31202

**NOTE:**  
 Use parker C09-2 cavity and body.

CV Check Valves  
 SH Shuttle Valves  
 LM Load/Motor Controls  
 FC Flow Controls  
 PC Pressure Controls  
 LE Logic Elements  
 DC Directional Controls  
 MV Manual Valves  
 SV Solenoid Valves  
 PV Proportional Valves  
 CE Coils & Electronics  
 BC Bodies & Cavities  
 TD Technical Data

For additional information see Technical Tips on pages BC1-BC6.



### Ordering Information

<b>LB10</b>		
Line Body	Port Size	Body Material

Code	Port Size
007	3/4 BSP
066	1 SAE

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 3A	
Pilot Drill Ø	24.00 (0.94)
Step Drill	8DS31303
Reamer (Alum)	8RM31003A
Reamer (Steel)	8RM31003S
Counterbore	8CB31100
Tap	8TP31200

**CV**  
Check Valves

**SH**  
Shuttle Valves

**LM**  
Load/Motor Controls

**FC**  
Flow Controls

**PC**  
Pressure Controls

**LE**  
Logic Elements

**DC**  
Directional Controls

**MV**  
Manual Valves

**SV**  
Solenoid Valves

**PV**  
Proportional Valves

**CE**  
Coils & Electronics

**BC**  
Bodies & Cavities

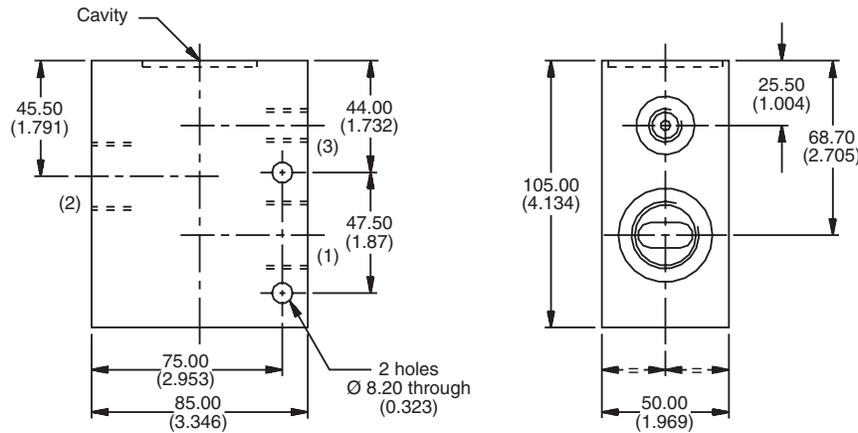
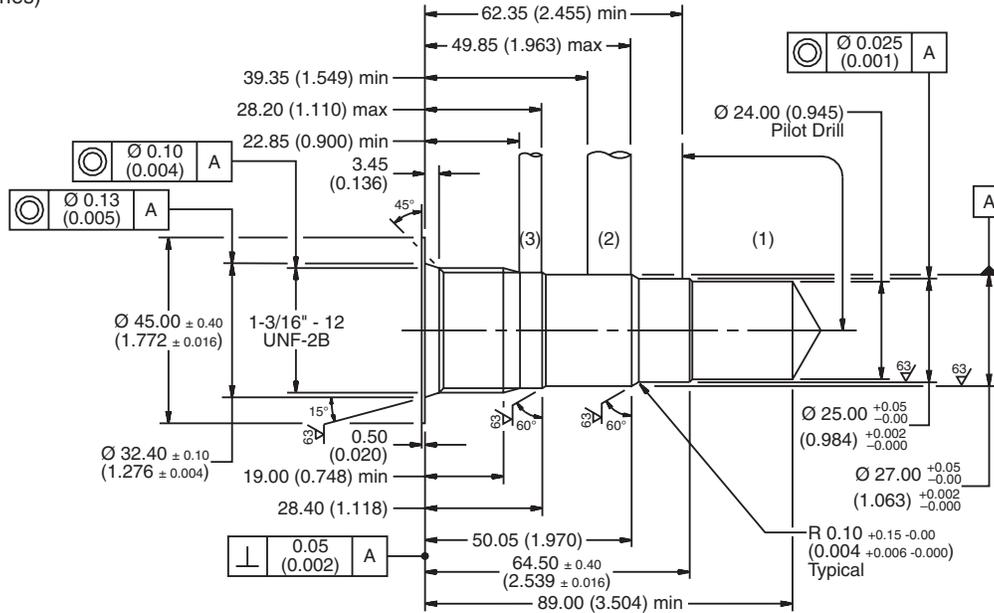
**TD**  
Technical Data

Technical Information

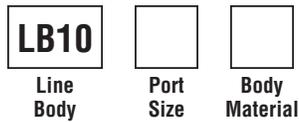
For additional information see Technical Tips on pages BC1-BC6.

Dimensions

Millimeters (Inches)



Ordering Information



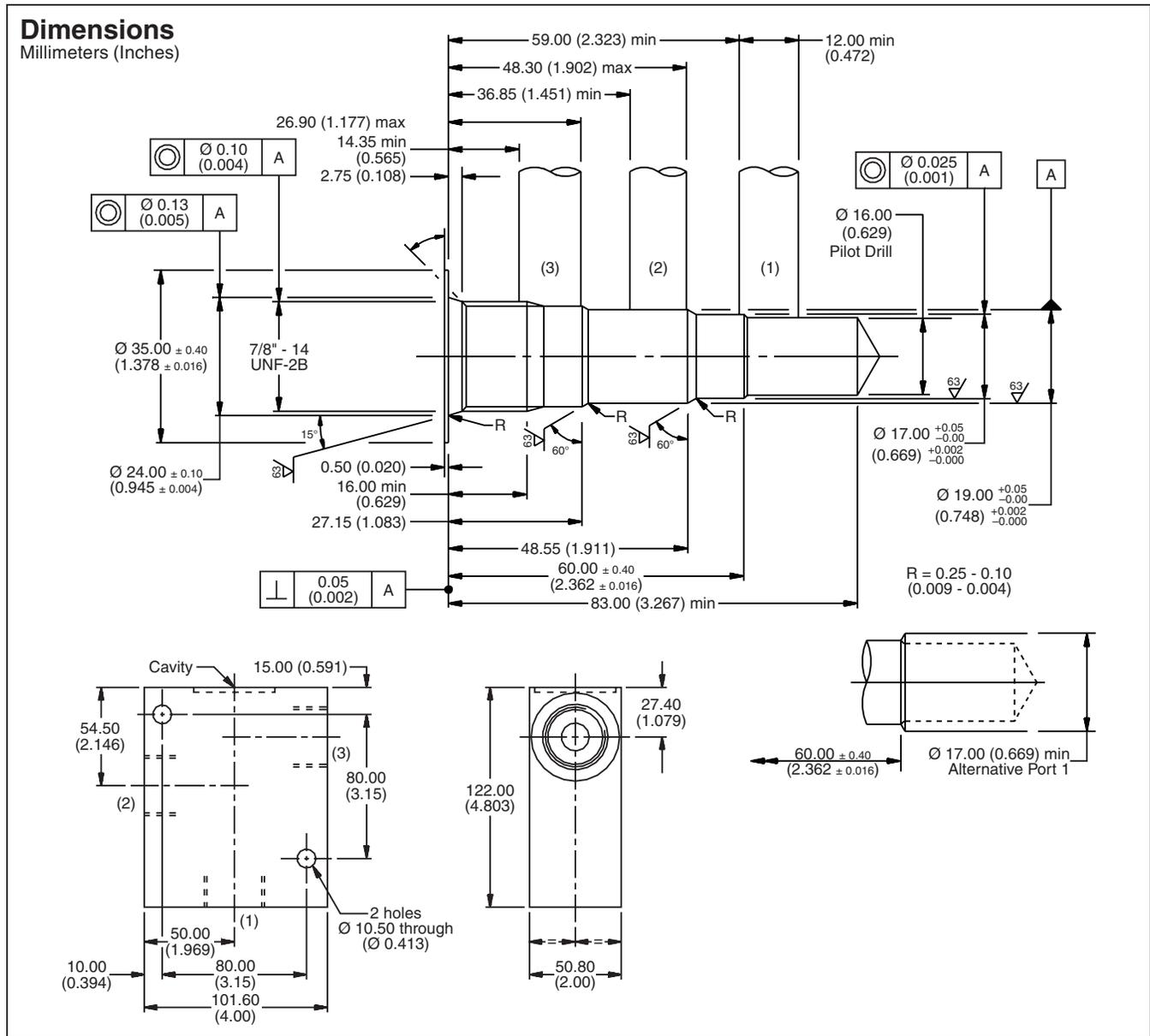
Code	Port Size
039	3/4 BSP (Main) 1/4 BSP (Aux.)
069	1 SAE (Main) 1/4 SAE (Aux.)
034	3/4 BSP Dual Cavity
234	3/4 SAE Dual Cavity

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 3C	
Pilot Drill Ø	24.00 (0.94)
Step Drill	8DS31305
Reamer (Alum)	8RM31005A
Reamer (Steel)	8RM31005S
Counterbore	8CB31100
Tap	8TP31200

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

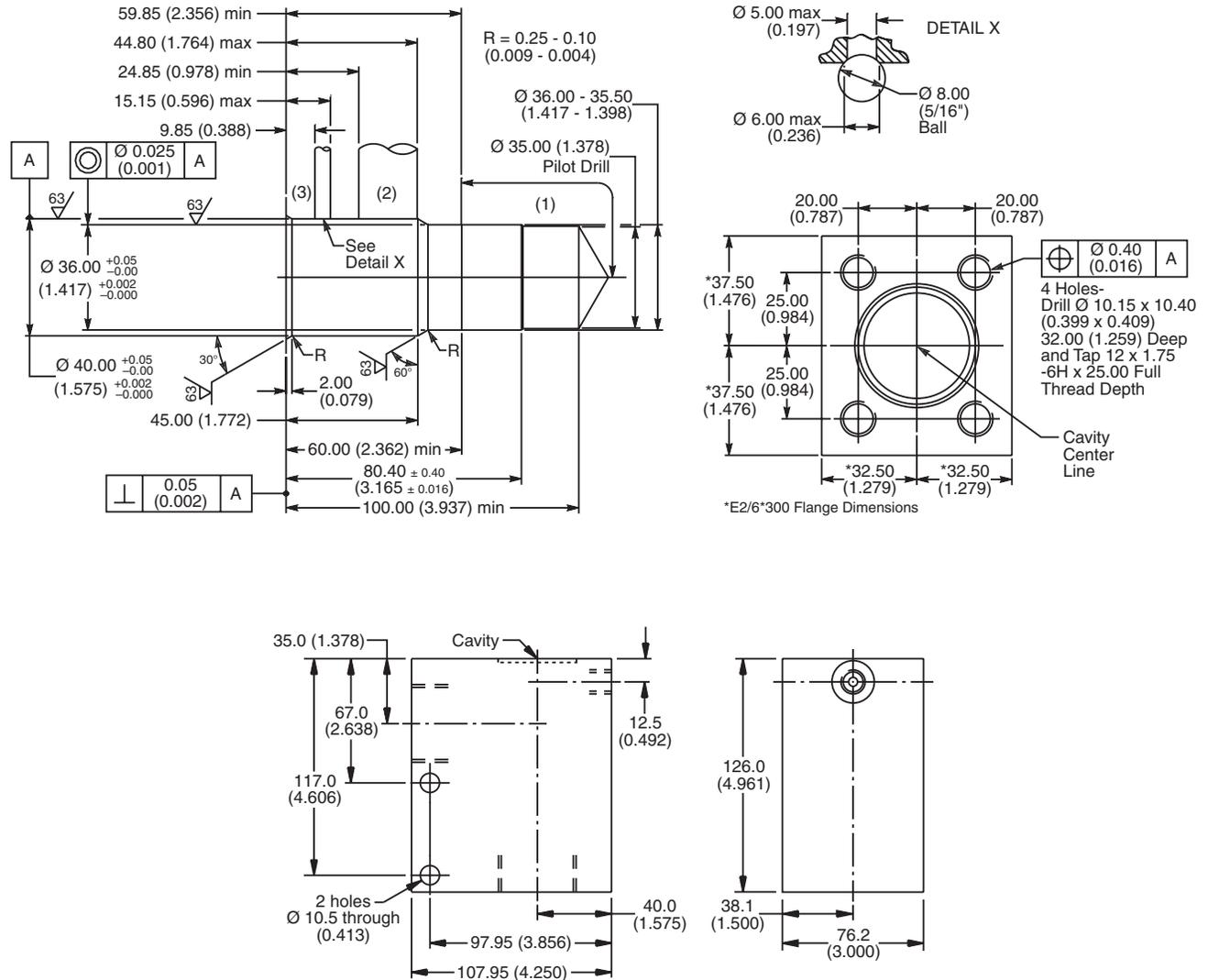
For additional information see Technical Tips on pages BC1-BC6.



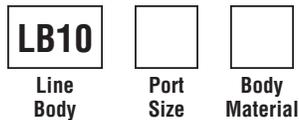
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

For additional information see Technical Tips on pages BC1-BC6.

**Dimensions**  
 Millimeters (Inches)



**Ordering Information**



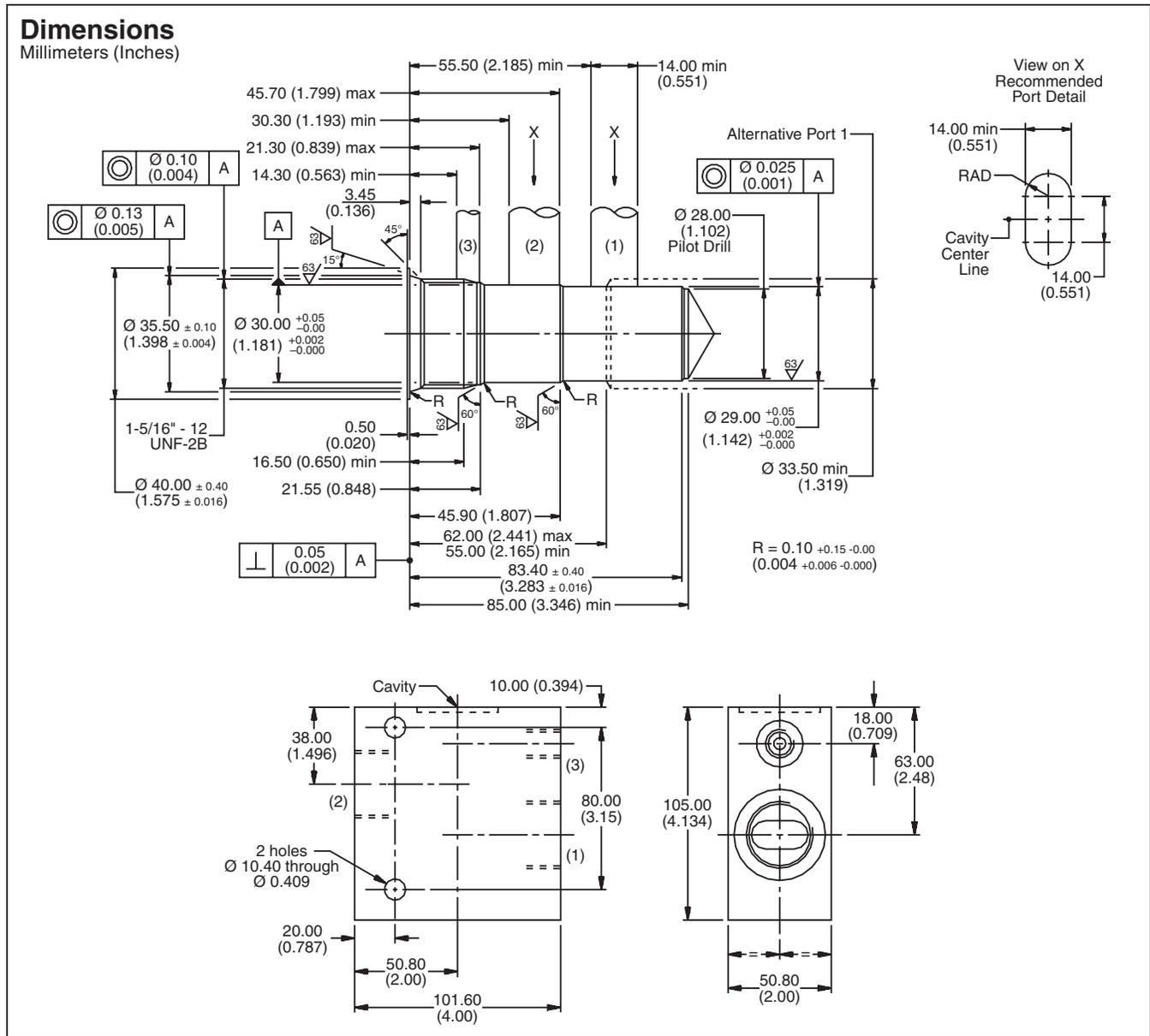
Code	Port Size
089	1-1/4 BSP (Main) 1/4 BSP (Aux)

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 3K	
Pilot Drill Ø	35.00 (1.38)
Step Drill	8DS31310
Reamer (Alum)	8RM31010A
Reamer (Steel)	8RM31010S
Counterbore	—
Tap	8TP31215

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

For additional information see Technical Tips on pages BC1-BC6.



### Ordering Information

<b>LB10</b>		
Line Body	Port Size	Body Material

Code	Port Size
076	1 BSP (Main) 1/4 BSP (Aux.)
078	1 SAE (Main) 1/4 SAE (Aux.)
104	1 BSP Dual Cavity
105	1 SAE Dual Cavity

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 3M	
Pilot Drill Ø	28.00 (1.10)
Step Drill	8DS31311
Reamer (Alum)	8RM31011A
Reamer (Steel)	8RM31011S
Counterbore	8CB31103
Tap	8TP31203

**CV**  
Check Valves

**SH**  
Shuttle Valves

**LM**  
Load/Motor Controls

**FC**  
Flow Controls

**PC**  
Pressure Controls

**LE**  
Logic Elements

**DC**  
Directional Controls

**MV**  
Manual Valves

**SV**  
Solenoid Valves

**PV**  
Proportional Valves

**CE**  
Coils & Electronics

**BC**  
Bodies & Cavities

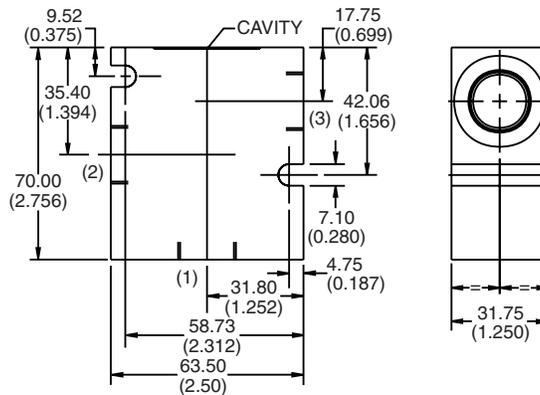
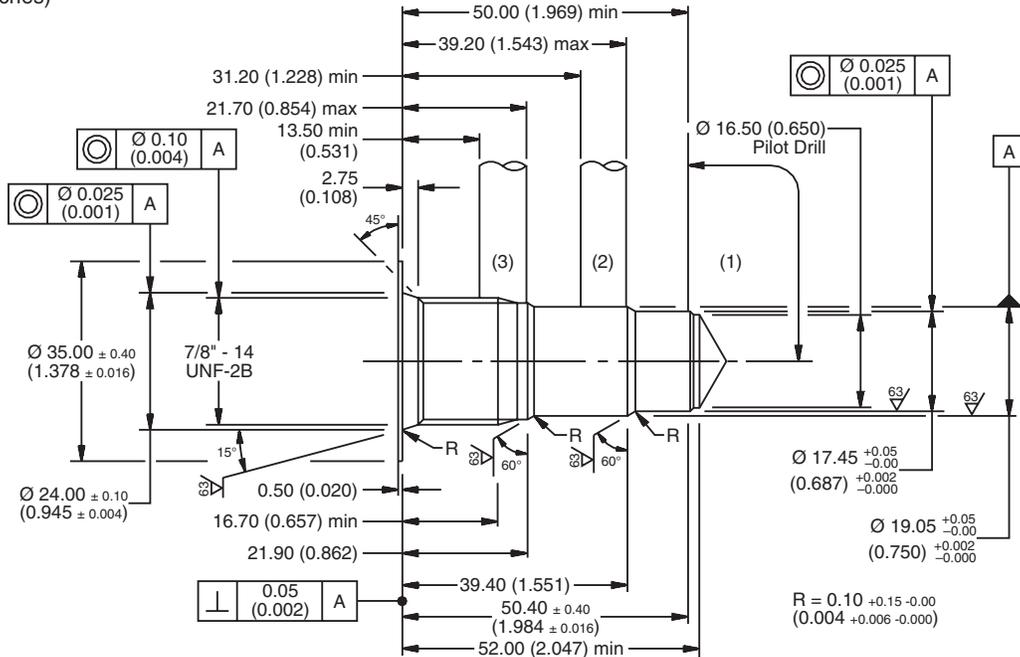
**TD**  
Technical Data

Technical Information

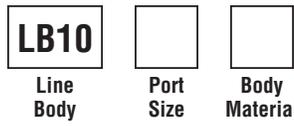
For additional information see Technical Tips on pages BC1-BC6.

Dimensions

Millimeters (Inches)



Ordering Information



Code	Port Size
553	1/2 SAE
554	3/8 BSP

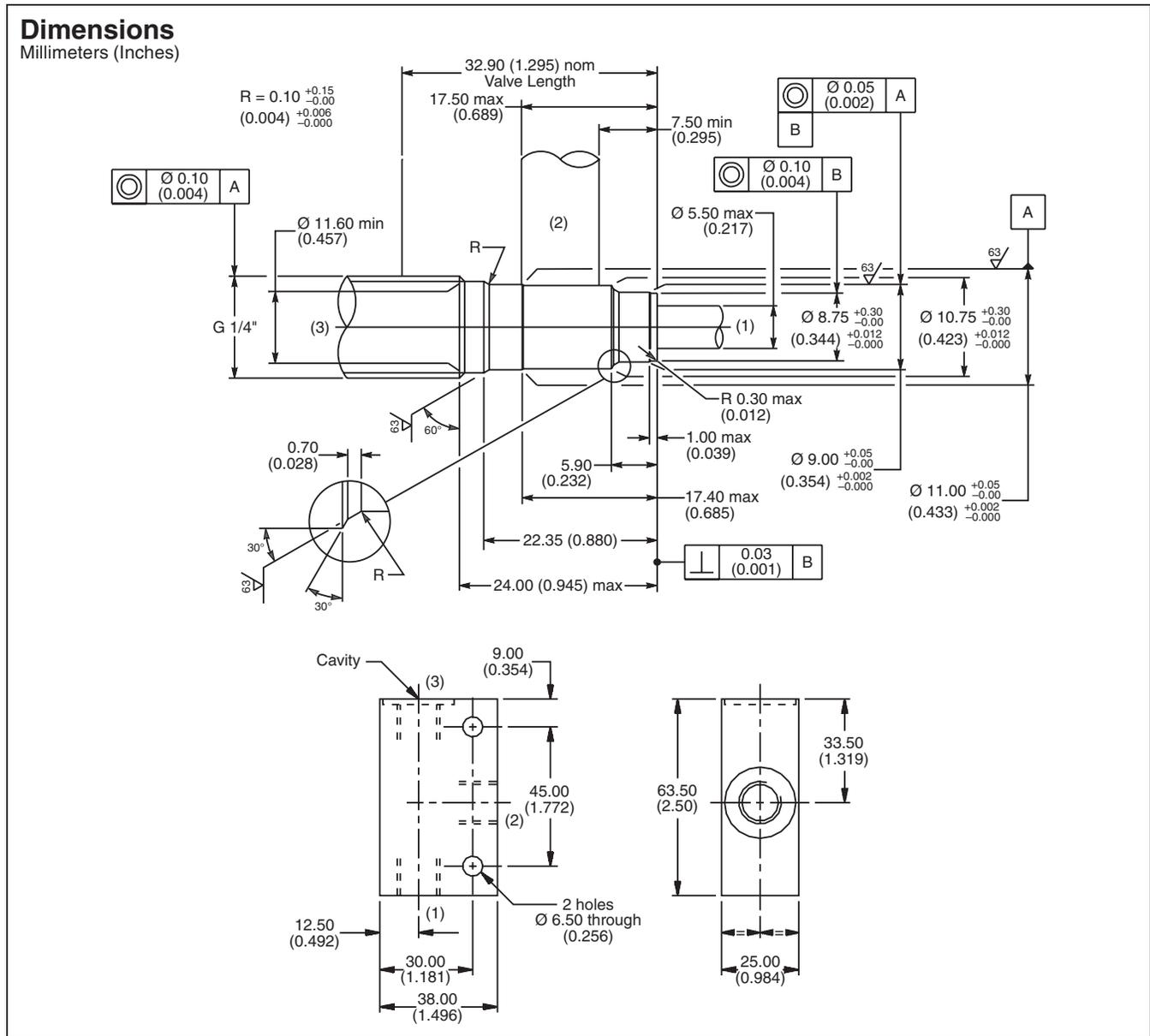
Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 3X	
Pilot Drill Ø	16.50 (0.650)
Step Drill	8DS31343
Reamer (Alum)	8RM31062A
Reamer (Steel)	8RM31062S
Counterbore	—
Tap	8TP31201

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data



For additional information see Technical Tips on pages BC1-BC6.



### Ordering Information

<b>LB10</b>		
Line Body	Port Size	Body Material

Code	Port Size
313	1/4 BSP
320	1/4 SAE

Code	Body Material
A	Aluminum
S	Steel

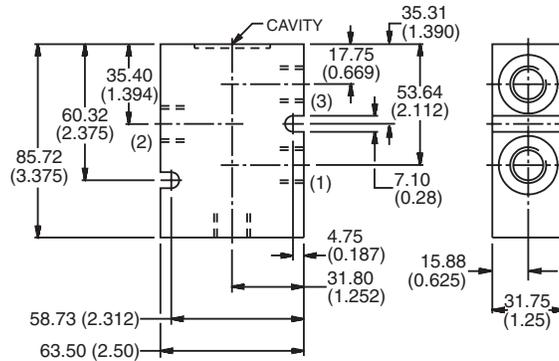
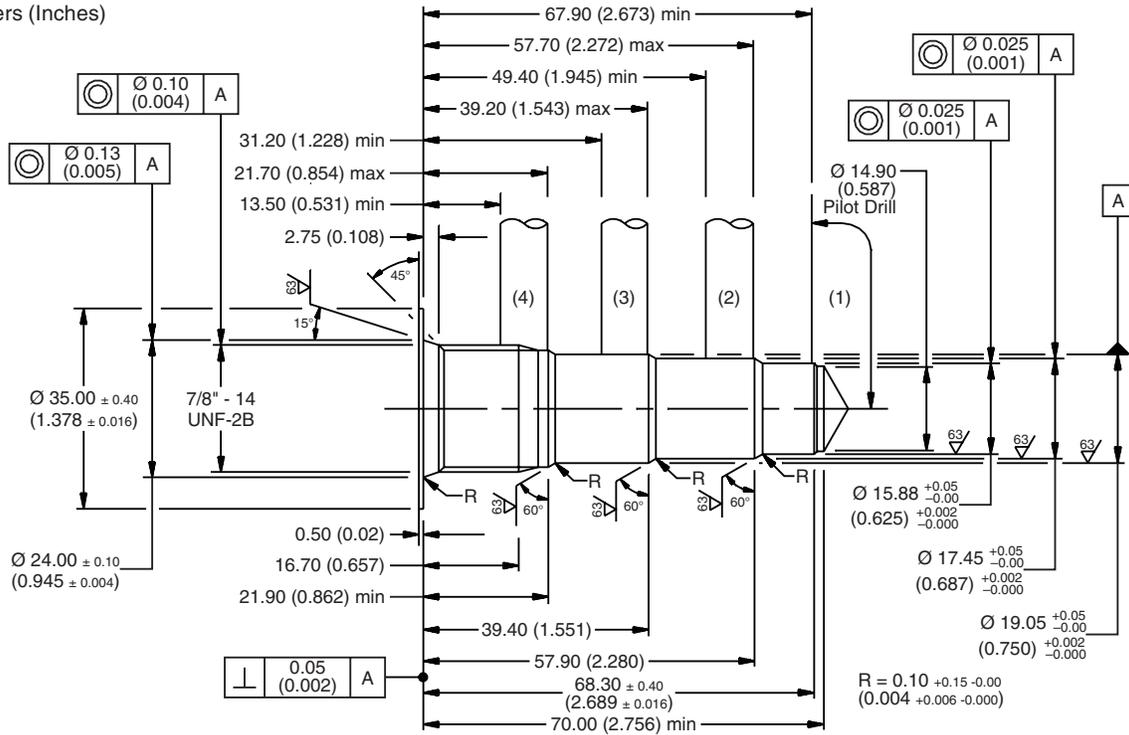
Cavity Tooling For 3Z	
Pilot Drill Ø	8.50 (0.335)
Step Drill	8DS31355
Reamer (Alum)	8RM31055A
Reamer (Steel)	8RM31055S
Counterbore	—
Tap	8TP31219

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

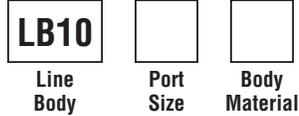
For additional information see Technical Tips on pages BC1-BC6.

**Dimensions**

Millimeters (Inches)



**Ordering Information**



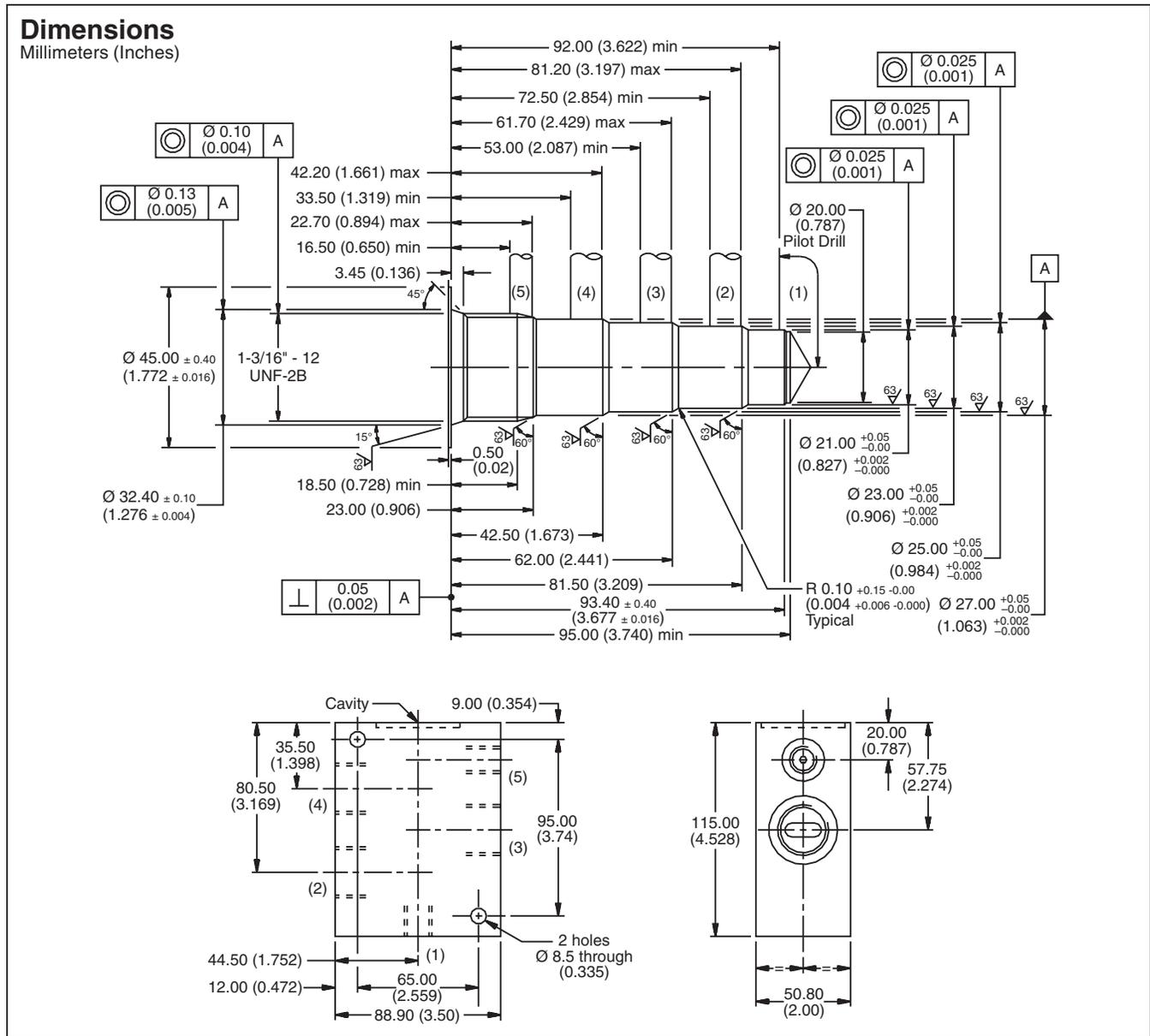
Code	Port Size
562	1/2 SAE
563	3/8 BSP

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 4C	
Pilot Drill Ø	14.90 (0.587)
Step Drill	8DS31346
Reamer (Alum)	8RM31063A
Reamer (Steel)	8RM31063S
Counterbore	—
Tap	8TP31201

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

For additional information see Technical Tips on pages BC1-BC6.



### Ordering Information

**LB10**       

Line    Port    Body  
 Body    Size    Material

Code	Port Size
314	3/4 BSP (Main) 1/4 BSP (Aux.)
321	3/4 SAE (Main) 1/4 SAE (Aux.)

Code	Body Material
A	Aluminum
S	Steel

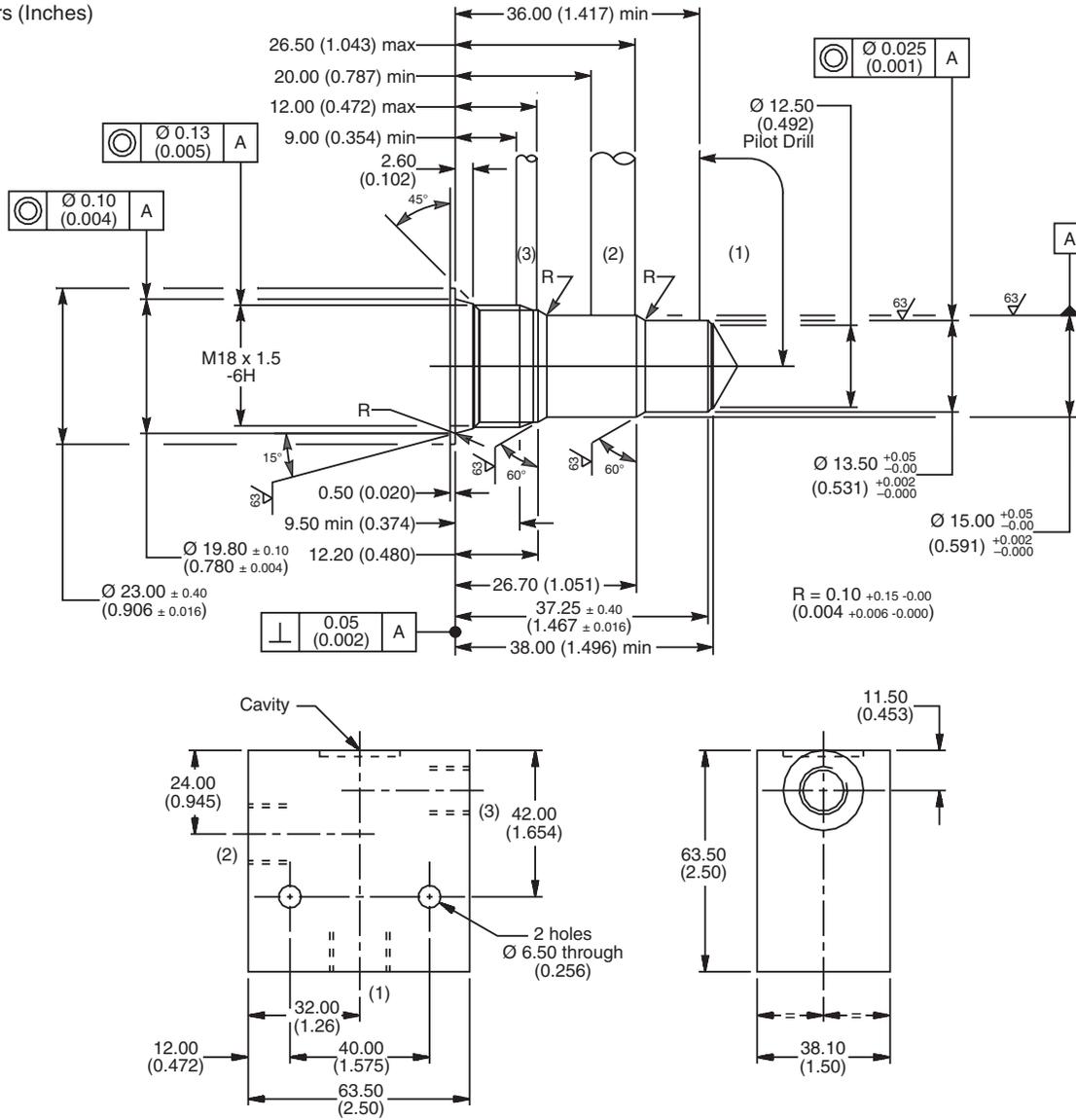
Cavity Tooling For 5A	
Pilot Drill Ø	20.00 (0.78)
Step Drill	8DS31353
Reamer (Alum)	8RM31053A
Reamer (Steel)	8RM31053S
Counterbore	8CB31100
Tap	8TP31200

- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

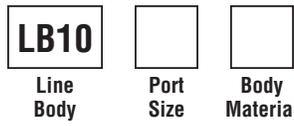
For additional information see Technical Tips on pages BC1-BC6.

**Dimensions**

Millimeters (Inches)



**Ordering Information**



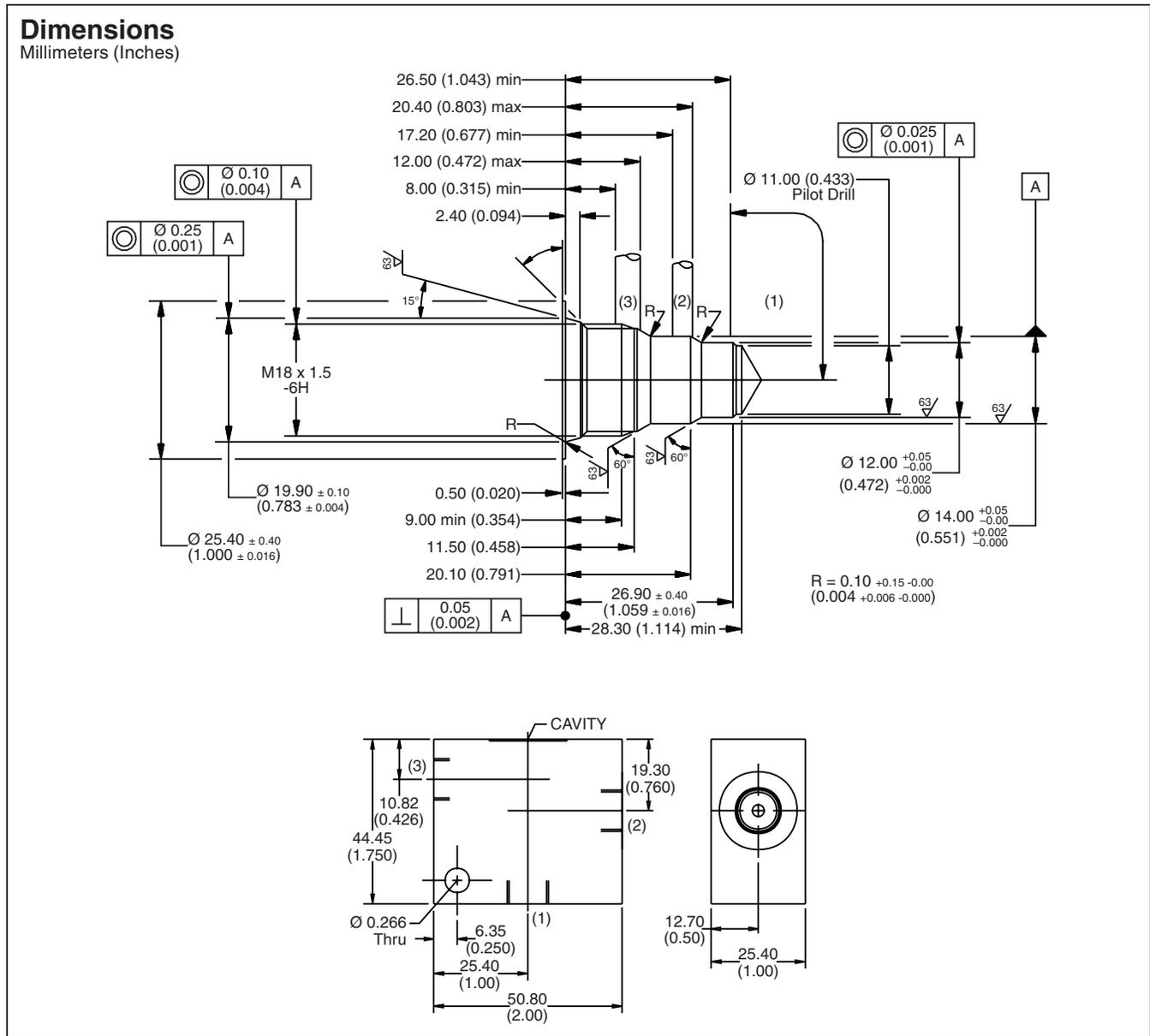
Code	Port Size
310	3/8 BSP (Main) 1/4 BSP (Aux.)
318	3/8 SAE (Main) 1/4 SAE (Aux.)
312	3/8 BSP Dual Cavity

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 53-1	
Pilot Drill Ø	12.50 (0.49)
Step Drill	8DS31349
Reamer (Alum)	8RM31081A
Reamer (Steel)	8RM31081S
Counterbore	—
Tap	8TP31207

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

For additional information see Technical Tips on pages BC1-BC6.



### Ordering Information

<b>LB10</b>		
Line Body	Port Size	Body Material

Code	Port Size
591	1/4 SAE

Code	Body Material
A	Aluminum
S	Steel

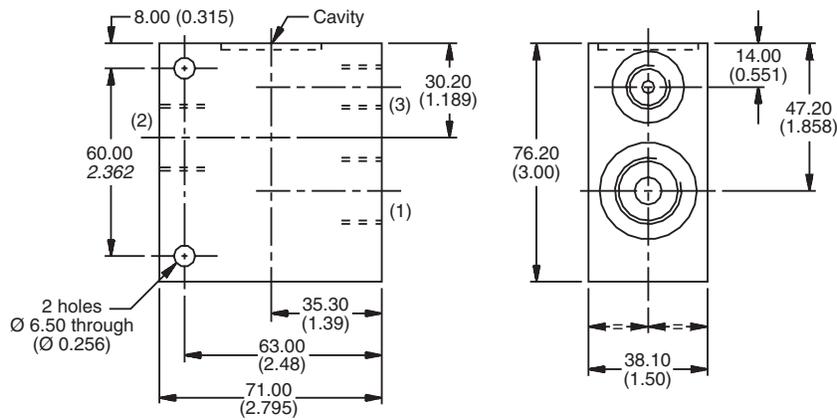
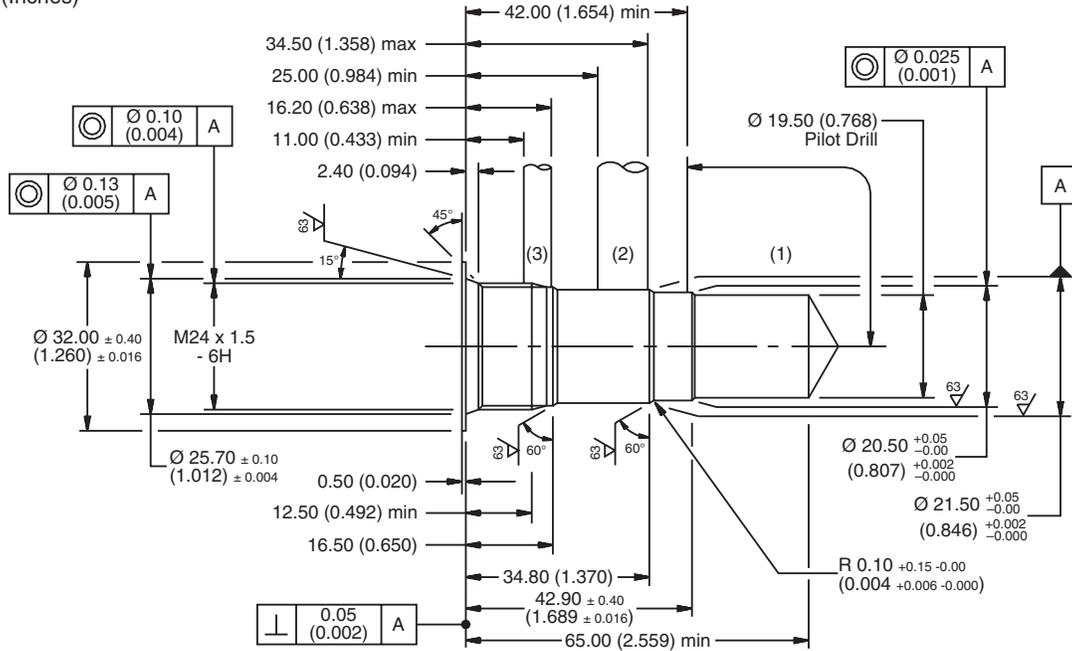
Cavity Tooling For 54-1	
Pilot Drill $\varnothing$	11.00 (0.433)
Step Drill	8DS31379
Reamer (Alum)	8RM31087A
Reamer (Steel)	8RM31087S
Counterbore	—
Tap	8TP31207

Technical Information

For additional information see Technical Tips on pages BC1-BC6.

Dimensions

Millimeters (Inches)



Ordering Information

**LB10**

Line Body    Port Size    Body Material

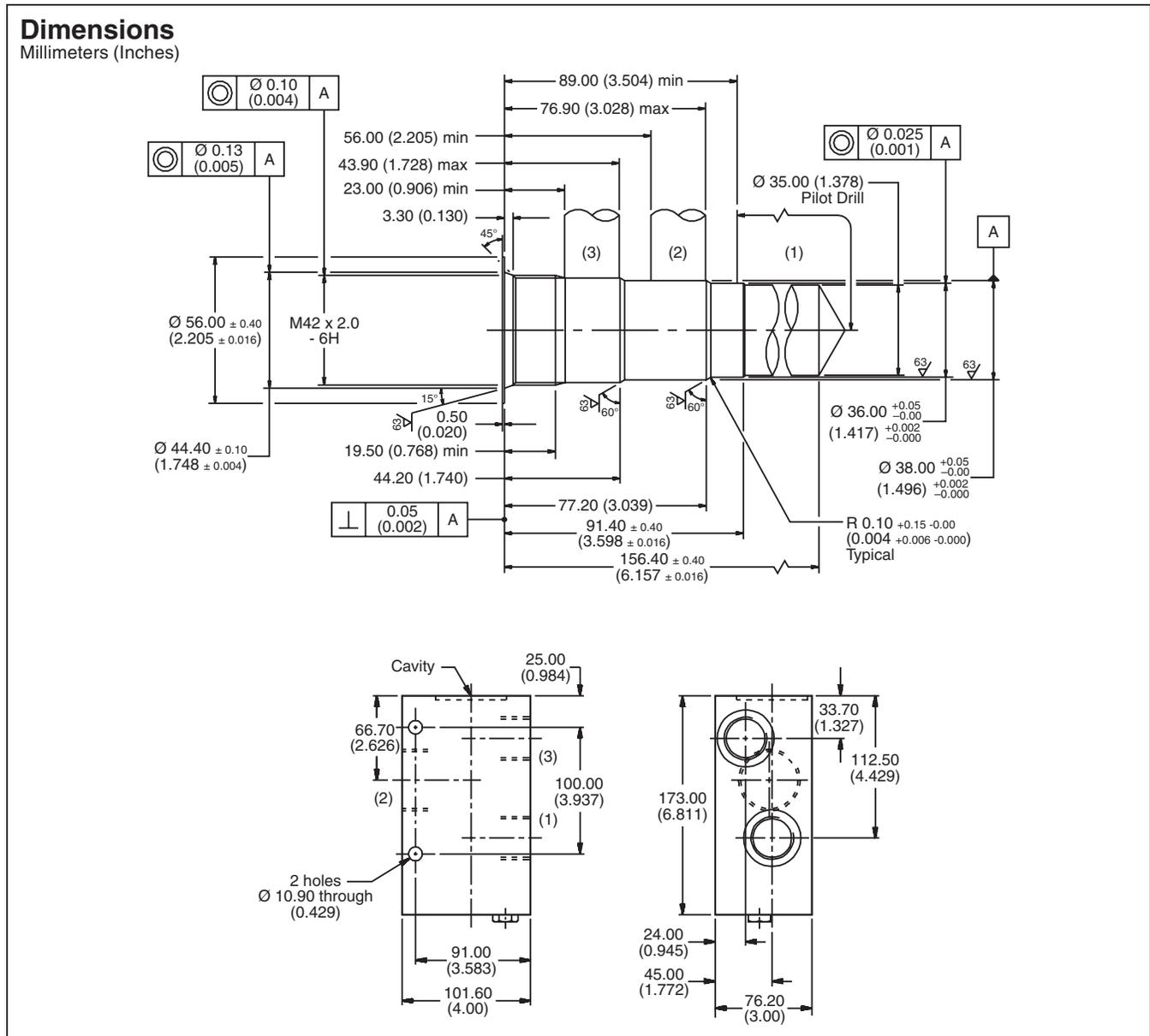
Code	Port Size
251	1/2 BSP (Main) 1/4 BSP (Aux.)
253	1/2 SAE (Main) 1/4 SAE (Aux.)

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 68-1	
Pilot Drill Ø	19.50 (0.77)
Step Drill	8DS31341
Reamer (Alum)	8RM31041A
Reamer (Steel)	8RM31041S
Counterbore	8CB31116
Tap	8TP31216

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
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- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data

For additional information see Technical Tips on pages BC1-BC6.



### Ordering Information

<b>LB10</b>		
Line Body	Port Size	Body Material

Code	Port Size
156	2 x 1 BSP (Main) 1 x 1-1/2 BSP (Aux.)
157	2 x 1 SAE (Main) 1 x 1-1/2 SAE (Aux.)

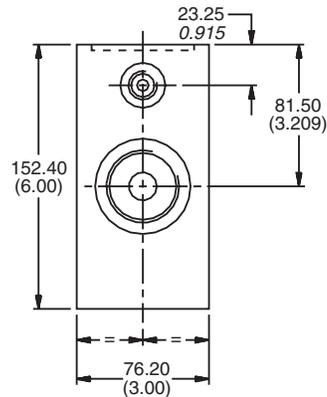
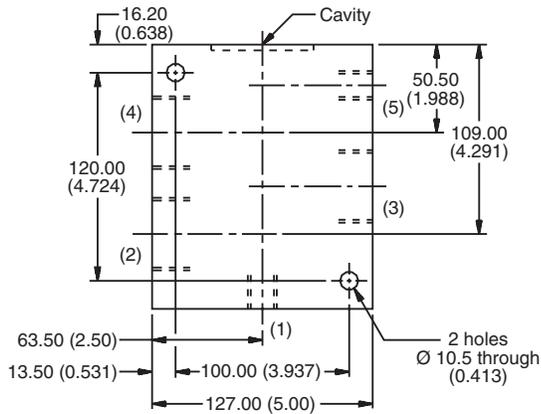
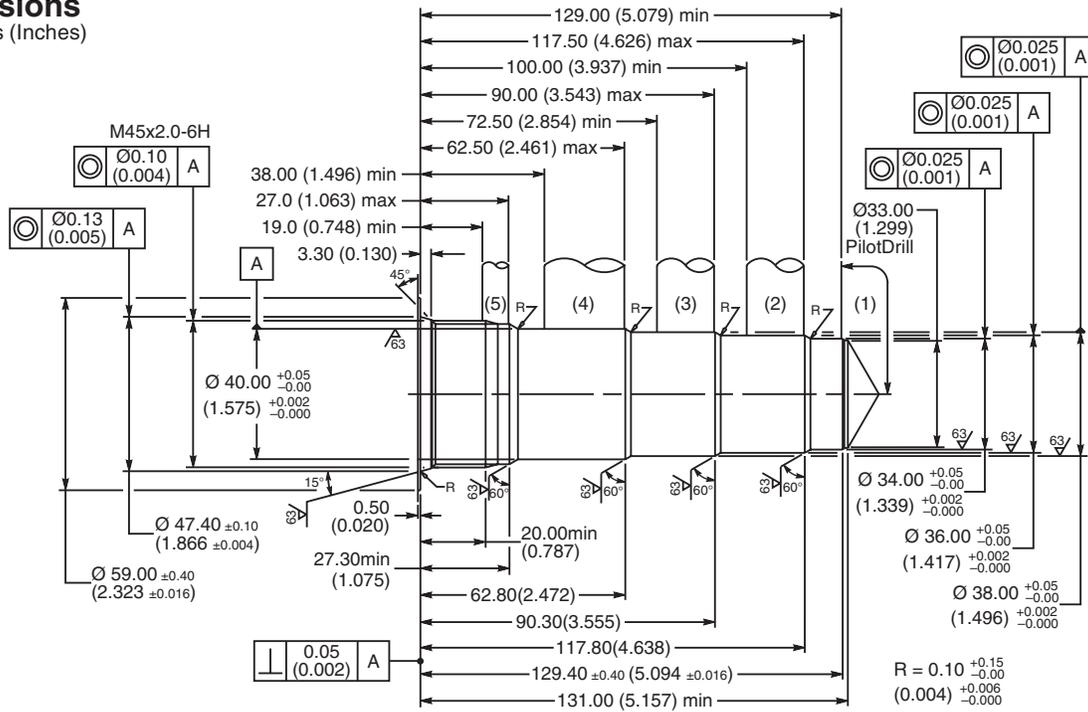
Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling For 91-1	
Pilot Drill Ø	35.00 (1.378)
Step Drill	8DS31332
Reamer (Alum)	8RM31032A
Reamer (Steel)	8RM31032S
Counterbore	8CB31118
Tap	8TP31213

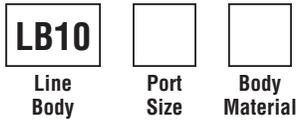
- CV** Check Valves
- SH** Shuttle Valves
- LM** Load/Motor Controls
- FC** Flow Controls
- PC** Pressure Controls
- LE** Logic Elements
- DC** Directional Controls
- MV** Manual Valves
- SV** Solenoid Valves
- PV** Proportional Valves
- CE** Coils & Electronics
- BC** Bodies & Cavities
- TD** Technical Data

For additional information see Technical Tips on pages BC1-BC6.

**Dimensions**  
 Millimeters (Inches)



**Ordering Information**



Code	Port Size
316	1-1/4 BSP (Main) 3/8 BSP (Aux)
317	1-1/4 SAE (Main) 3/8 SAE (Aux)

Code	Body Material
A	Aluminum
S	Steel

Cavity Tooling (100-1 Cavity)	
Pilot Drill $\varnothing$	33.00 (1.30)
Step Drill	8DS31350
Reamer (Alum)	8RM31050A
Reamer (Steel)	8RM31050S
Counterbore	8CB31119
Tap	8TP31218

- CV Check Valves
- SH Shuttle Valves
- LM Load/Motor Controls
- FC Flow Controls
- PC Pressure Controls
- LE Logic Elements
- DC Directional Controls
- MV Manual Valves
- SV Solenoid Valves
- PV Proportional Valves
- CE Coils & Electronics
- BC Bodies & Cavities
- TD Technical Data