

By-Pass Hose with Fittings

Brass Models

7090, 7091, 7093

Stainless Steel Models

7094, 7098

FEATURES

- Flexible hose reduces pulsation in by-pass line.
- Absorbs pressure spikes from the regulating device while in by-pass.
- Helps prolong the life of the pump seals and pump liquid end.
- Designed for easy, compact installation.
- Optional assembly with 145°F Thermo Valve for added protection.

SPECIFICATIONS

	U.S. Measure	Metric Measure
MODEL 7094 3/8" x 3/8" STAINLESS STEEL		
Maximum Flow	3.5 GPM	(13.2 L/M)
Hose Pressure Rating	300 PSI	(21 BAR)
Maximum Temperature	160°F	(71°C)
Hose Connection	3/8" NPTM	(3/8" NPTM)
Elbow Fittings (Manifold)	3/8" NPTM x 3/8" NPTF	(3/8" NPTM x 3/8" NPTF)
Hose Barb (Unloader)	3/8" NPTM x 3/8" Pushlok	(3/8" NPTM x 3/8" Pushlok)
Length	24"	(609 mm)
Weight	13.09 oz.	(.37 kg)

7094.36 By-Pass with RTP 145°F Thermo Valve

MODEL 7098 1/2" x 1/2" STAINLESS STEEL

Maximum Flow	8.0 GPM	(30 L/M)
Hose Pressure Rating	300 PSI	(21 BAR)
Maximum Temperature	160°F	(71°C)
Hose Connection	1/2" NPTM	(1/2" NPTM)
Elbow Fittings (Manifold)	1/2" NPTM x 1/2" NPTF	(1/2" NPTM x 1/2" NPTF)
Hose Barb (Unloader)	1/2" NPTM x 1/2" Pushlok	(1/2" NPTM x 1/2" Pushlok)
Length	37"	(940 mm)
Weight	23.58 oz.	(.67 kg)

7097.37 By-Pass with RTP 145°F Thermo Valve

SPECIFICATIONS

	U.S. Measure	Metric Measure
MODEL 7090 1/4" x 3/8" BRASS		
Maximum Flow	3.5 GPM	(13.2 L/M)
Hose Pressure Rating	300 PSI	(21 BAR)
Maximum Temperature	160°F	(71°C)
Hose Connection	1/4" NPTM	(1/4" NPTM)
Hose Connection (Swivel)	3/8" SAEF 45°	(3/8" SAEF 45°)
Elbow Fittings (Manifold)	1/4" NPTM x 1/4" NPTF	(1/4" NPTM x 1/4" NPTF)
Elbow Fittings (Unloader)	3/8" NPTM x 3/8" Pushlok	(3/8" NPTM x 3/8" Pushlok)
Length	15"	(381 mm)
Weight	6.89 oz.	(.20 kg)

7090.40 By-Pass with Brass 145°F Thermo Valve

7090.35 By-Pass with RTP 145°F Thermo Valve

MODEL 7091 3/8" x 1/2" BRASS

Maximum Flow	5.0 GPM	(19 L/M)
Hose Pressure Rating	200 PSI	(14 BAR)
Maximum Temperature	160°F	(71°C)
Hose Connection	3/8" NPTM	(3/8" NPTM)
Hose Connection (Swivel)	1/2" SAEF 45°	(1/2" SAEF 45°)
Elbow Fittings (Manifold)	3/8" NPTM x 3/8" NPTF	(3/8" NPTM x 3/8" NPTF)
Elbow Fittings (Unloader)	3/8" NPTM x 1/2" SAEM 45°	(3/8" NPTM x 1/2" SAEM 45°)
Length	24"	(610 mm)
Weight	12.57 oz.	(.36 kg)

7091.41 By-Pass with Brass 145°F Thermo Valve

7091.36 By-Pass with RTP 145°F Thermo Valve

MODEL 7093 1/2" x 1/2" BRASS

Maximum Flow	8.0 GPM	(30 L/M)
Hose Pressure Rating	200 PSI	(14 BAR)
Maximum Temperature	160°F	(71°C)
Hose Connection	1/2" NPTM	(1/2" NPTM)
Hose Connection (Swivel)	1/2" SAEF 45°	(1/2" SAEF 45°)
Elbow Fittings (Manifold)	1/2" NPTF x 1/2" NPTF	(1/2" NPTF x 1/2" NPTF)
Elbow Fittings (Unloader)	1/2" NPTM x 1/2" SAEM 45°	(1/2" NPTM x 1/2" SAEM 45°)
Length	24"	(609 mm)
Weight	16.78 oz.	(.48 kg)

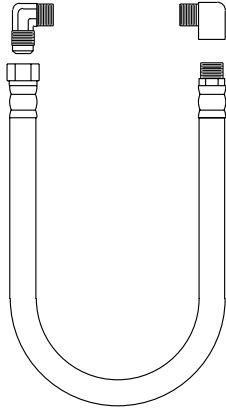
7093.42 By-Pass with Brass 145°F Thermo Valve

7093.37 By-Pass with RTP 145°F Thermo Valve

"Customer confidence is our greatest asset"

EXPLODED VIEW

By-Pass Hose with Fittings



PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
—	7090	BB	By-Pass Hose w/Brass Fittings	1
—	7091	BB	By-Pass Hose w/Brass Fittings	1
—	7093	BB	By-Pass Hose w/Brass Fittings	1
—	7094	SS	By-Pass Hose w/Stainless Steel Fittings	1
—	7098	SS	By-Pass Hose w/Stainless Steel Fittings	1

Material Codes (Not Part of Part No.): BB=Brass SS=316 Stainless Steel

SELECTION: The By-pass Hose Assembly connects the by-pass of the unloader directly to the inlet of the pump through the special by-pass port on the underside of the inlet manifold on the 2SF and 4SF pumps or standard inlet port on 3CP, 5CP 5PFR and 7PFR pumps.

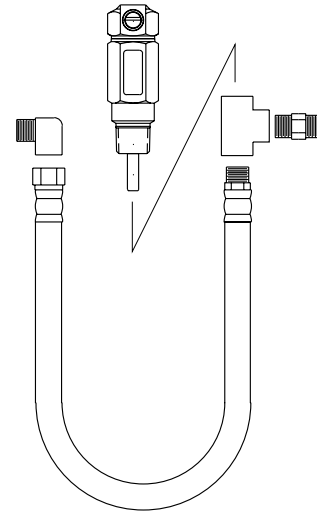
INSTALLATION: Match the hose size with the pump and unloader fittings. Do not under size. **DO NOT USE WITH REGULATOR OR UNLOADER WITHOUT CHECK VALVE.** First thread one **male elbow** into the **inlet manifold port**. Then thread the other **male elbow** into the **by-pass port of the unloader**. Next thread the **hose** into female elbow on **inlet manifold**.

Connect the **swivel-end of hose** to the elbow from **unloader by-pass**. As an added safety precaution, a **Thermo Valve®** should be installed to protect the pump in the event the unit is accidentally left in by-pass for an excessive period. For the Thermo Valve, the unloader elbow is replaced with a Tee and Nipple.

OPERATION: Caution should be exercised when routing the by-pass liquid to the inlet of the pump. The higher the initial

EXPLODED VIEW

By-Pass Hose with Fittings and Thermo Valve



PARTS LIST

ITEM	P/N	MATL	DESCRIPTION	QTY
—	7090.40	BB	By-Pass Hose w/Brass Thermo Valve	1
—	7090.35	RTP	By-Pass Hose w/RTP Thermo Valve	1
—	7091.41	BB	By-Pass Hose w/Brass Thermo Valve	1
—	7091.36	RTP	By-Pass Hose w/RTP Thermo Valve	1
—	7093.42	BB	By-Pass Hose w/Brass Thermo Valve	1
—	7093.37	RTP	By-Pass Hose w/RTP Thermo Valve	1
—	7094.36	SS	By-Pass Hose w/RTP Thermo Valve	1
—	7097.37	SS	By-Pass Hose w/RTP Thermo Valve	1

Note: See Individual Data Sheet for Thermo Valves.

Material Codes (Not Part of Part No.): BB=Brass
RTP=Reinforced Composite SS=316 Stainless Steel

temperature of the system liquid, the **shorter the time needed to build-up excessive temperature**. High temperature applications should use a Thermo Valve in the by-pass line or route the by-pass to a baffled reservoir.

CAUTION:

By-Pass Hose Assembly is designed for **cold water or ambient temperature** operation. **DO NOT EXCEED 6 MINUTES IN BY-PASS** operation. Excessive temperatures will cause premature wear or damage to the pump and **VOID THE WARRANTY**.

MAINTENANCE: If hose develops leaks, bulges or cracks, replace with new hose immediately.

WARRANTY

90 Day Warranty

Refer to complete CAT PUMPS Warranty for further information.

Products described hereon are covered by one or more of the following U.S. patents 3558244, 3652188, 3809508, 3920356, 3930756 and 5035580

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