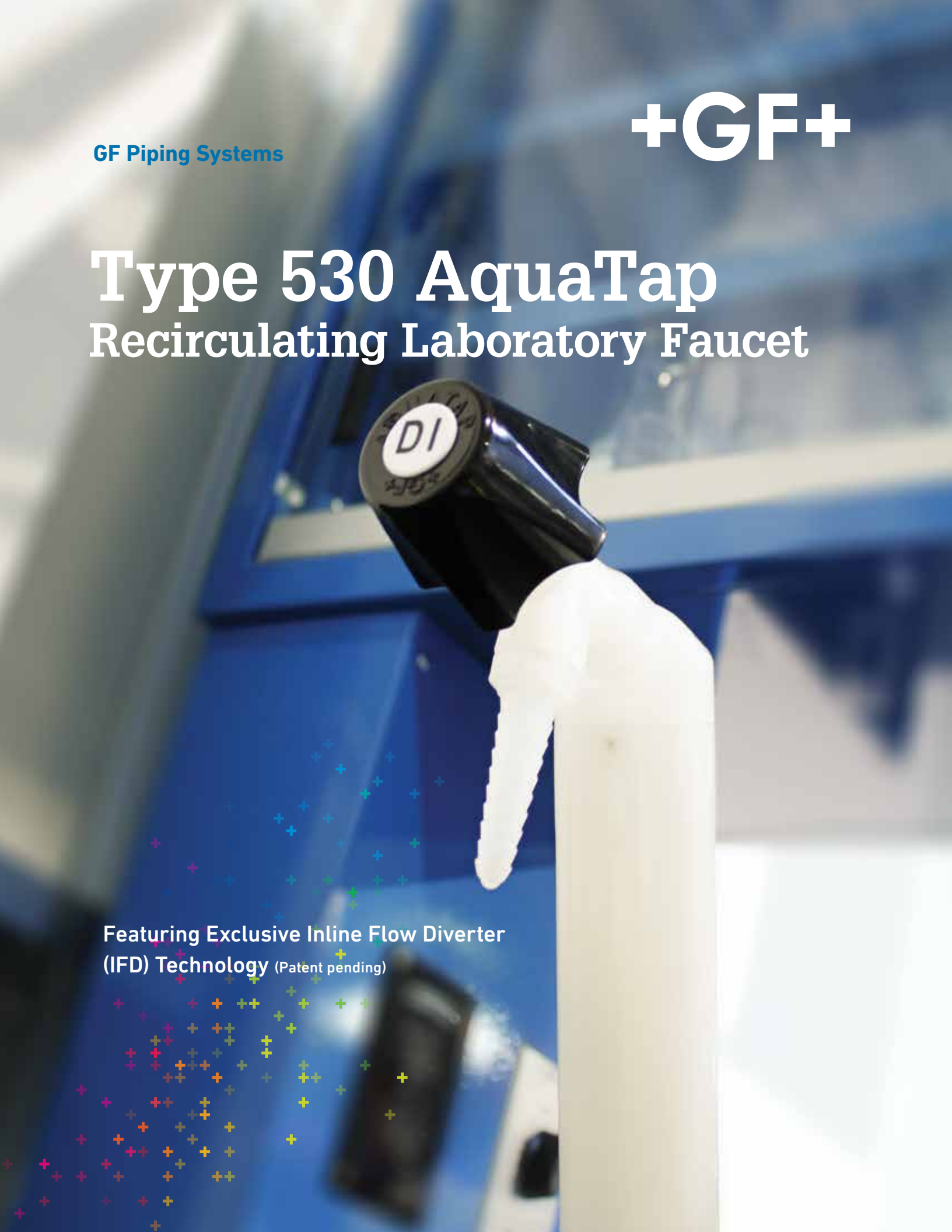
GF Piping Systems

+GF+

Type 530 AquaTap
Recirculating Laboratory Faucet



Featuring Exclusive Inline Flow Diverter (IFD) Technology (Patent pending)

Type 530 AquaTap™ Recirculating Laboratory Faucet

Featuring Inline Flow Diverter (IFD) Technology (Patent pending)

General

The Type 530 recirculating laboratory faucet is designed to provide constant DI fluid flow to point of use when used with the new Inline Flow Diverter (IFD). The unique design of the IFD provides high flow from the distribution main through the faucet for constant water movement. The IFD uses a slight orifice reduction to create a differential pressure imbalance which forces water through the faucet with minimal pressure loss. The system is further enhanced by using smooth bore interconnecting tubing for design flexibility and simplified piping installations.

Up to three faucets can be served from a single IFD. The faucet is made from high purity PVDF, and the IFD is available in SYGEF® PVDF, PROGEF® Natural PP and PROGEF® Standard PP in either weld or sanitary clamp connections. Simple heat flaring tools make leak-proof, minimum crevice connections between components.

Technical Features

- Ideal flow characteristics
- Sleek robust design
- Continuous flow up to valve eliminating dead-legs
- Easy flare-style connection method
- Deck or wall mounting options
- Needle-type flow control for precise metering

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120° Open/Close

The valve handle allows the operator to reach a complete stop from open to full close with only a 120 ° turn. ADA compliant handle available.

Media Identification

The handle comes with a removable indexing button in the center to identify the dispensed media. Color coded to SEFA recommended Practice No. 7.

Removable Outlet

The valve comes standard with a threaded barbed connector and a 1/4" FNPT outlet for optional flow aerators or various other tube fittings for feeding typical laboratory tools.

High Purity Material

AquaTap™ faucets come standard in high purity PVDF material. PVDF is valued for its high abrasion resistance, excellent chemical resistance and low extractable.

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Optional Aerator

As an option, an aeration nozzle is available for replacement of the standard barb nozzle.

Type 530 AquaTap™

Flow Isolation

Featuring Fuseal® Corrosive Waste Piping System

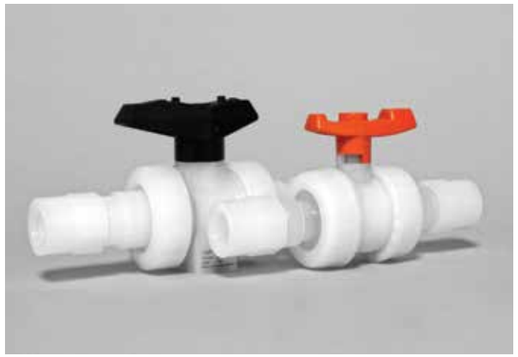
See www.gfps.com for more information on this product.

General

The AquaTap™ faucet comes packaged with two PROGEF® Natural PP isolation ball valves; these valves allow for isolation of flow to the faucet for routine maintenances or for renovation without interruption to the main water system. SYGEF® PVDF isolation ball valves are available but sold separately.

Installation

The isolation ball valves are to be installed at the location where the threaded nuts sit on the tubing (shown on the left hand side) and are used in place of the straight connector fitting. Connection from the faucet to the Inline Flow Diverter (IFD) is still required.



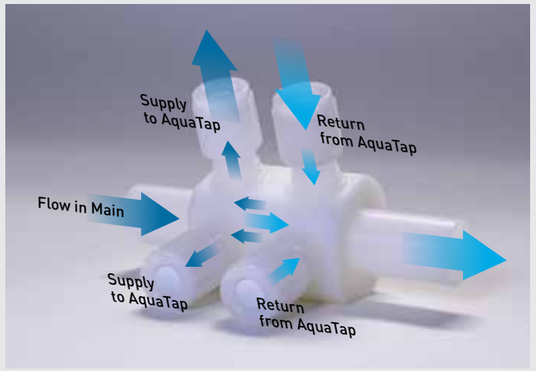
Type 546 SYGEF PVDF Isolation Ball Valve

- Size: ½"
- Material: PVDF
- Pressure: PN10 (up to 150 psi)
- Temperature: -4˚F to 284˚F
- End connection: 5/8" flare adapters
- Seal: FPM

Type 375 PROGEF Natural PP Isolation Ball Valve

- Size: ½"
- Material: Natural PP
- Pressure: PN10 (up to 150 psi)
- Temperature: 32˚F to 176˚F
- End connection: 5/8" flare adapters
- Seal: FPM

Inline Flow Diverter



The AquaTap faucet is designed to be installed in conjunction with an inline flower diverter (IFD) manufactured from three different materials: SYGEF® PVDF, PROGEF® Natural PP and PROGEF® Standard PP in either weld or sanitary clamp connections. The IFD is designed to provide high flow from the distribution main through the faucet for constant water movement. The IFD is engineered to create a differential pressure imbalance which forces water-through the faucet with minimal pressure loss. Installation of the IFD is in the distribution main and may serve up to three faucets.

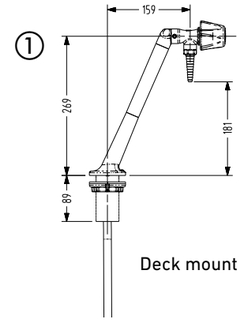
Incorporation of the IFD, in addition to flexible tubing into the piping system allows for material and labor savings without the associated hard pipe, fitting and extra valves needed for a traditional loop design. This comparison is illustrated on the following pages.

Mounting Style	PN	Part Number
① Deck Mount Hose Barb	6	175530101
② Deck Mount Short Version Female 3/8" NPT	6	175530105
③ Wall Mount to Ceiling Hose Barb	6	175530102
④ Wall Mount to Floor Hose Barb	6	175300103
⑤ Wall Mount with Hose Barb to floor short	6	175530107
⑥ Deck Mount Dual Head	6	175530104
⑦ Wall Mount Short to Ceiling	6	175530106
⑧ Wall Mount with Hose Barb at Mounting Elevation	6	175530118

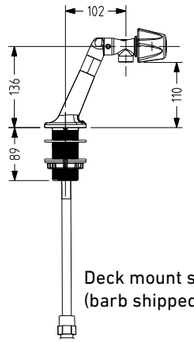
Mounting Hole Diameter 2"–2⅛"

Male-to-male coupler included (not shown in illustration)

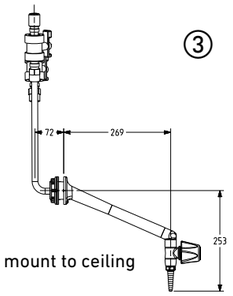
① Deck mount



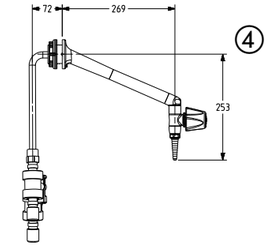
② Deck mount short (barb shipped loose)



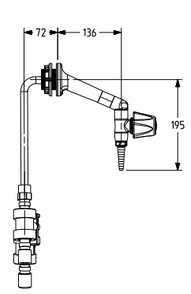
③ Wall mount to ceiling



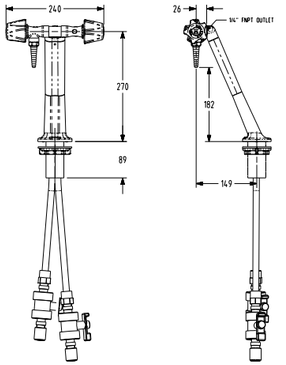
④ Wall mount to floor



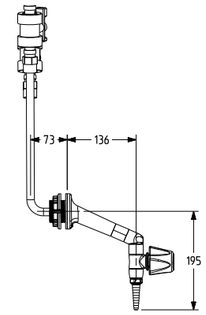
⑤ Wall mount to floor short



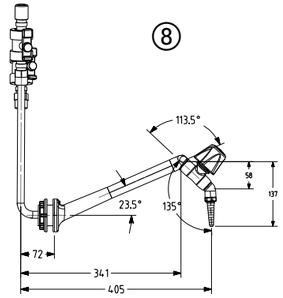
⑥ Deck mount dual head



⑦ Wall mount to ceiling short

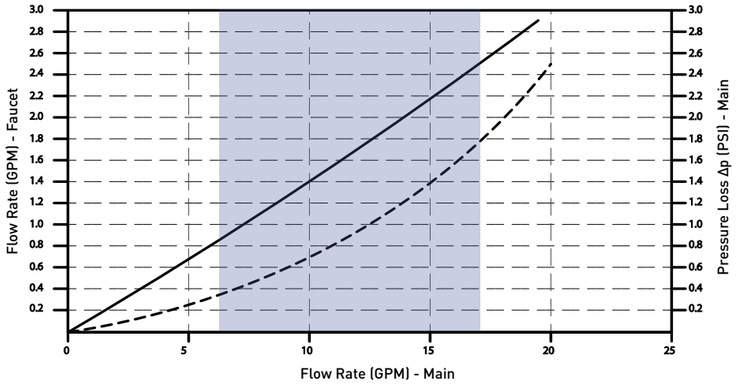


⑧ Wall mount with hose barb at mounting level



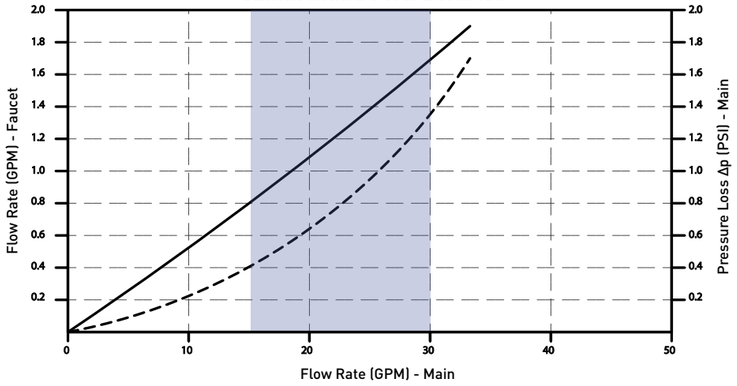
Flow/Pressure Characteristics

25mm Inline Flow Diverter



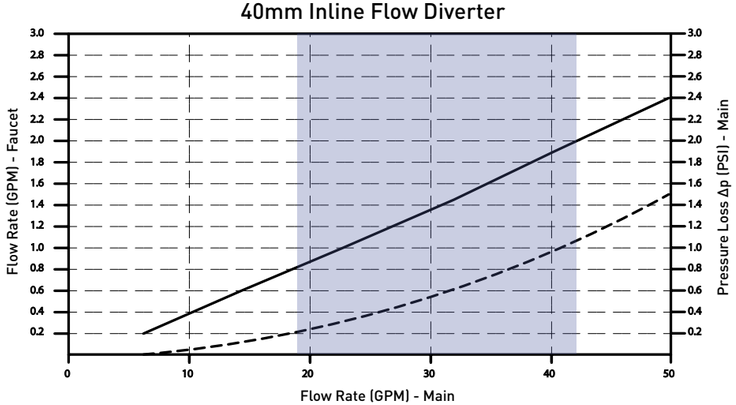
System should be designed to operate within shaded area for best performance

32mm Inline Flow Diverter



Faucet pressure rated @ 92 psi

40mm Inline Flow Diverter



LEGEND

Flow rate through faucet

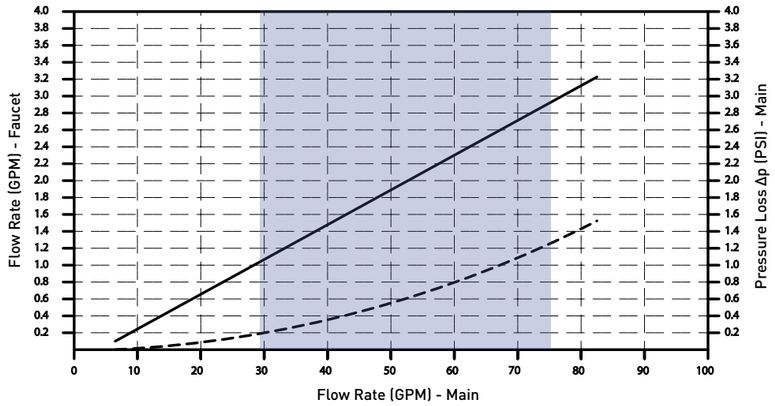
Pressure drop through main

Suggested opperating range

†Note: Maximum recommended distance between sink and IFD is 50 ft. – Approximately 1% loss of flow through faucet for every one foot of tubing run (maximum 50')

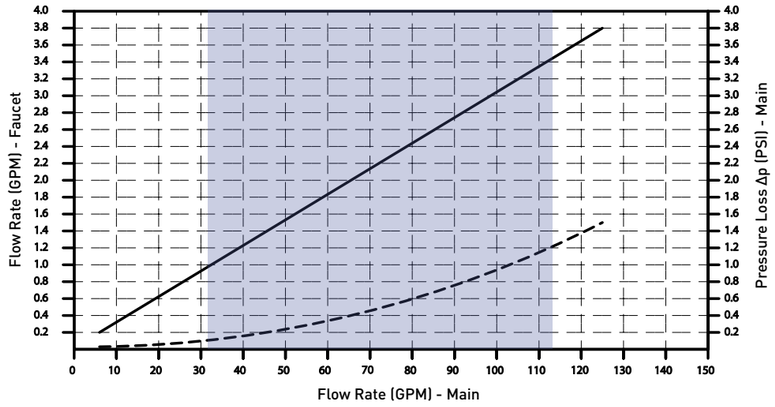
Flow/Pressure Characteristics

50mm Inline Flow Diverter



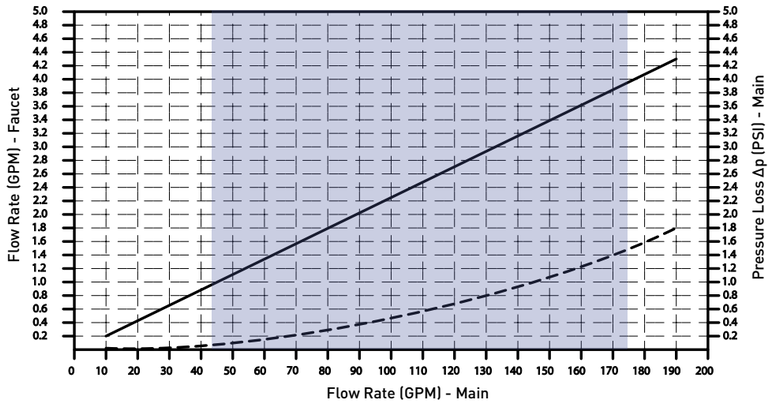
System should be designed to operate within shaded area for best performance

63mm Inline Flow Diverter



Faucet pressure rated @ 92 psi

75mm Inline Flow Diverter



LEGEND

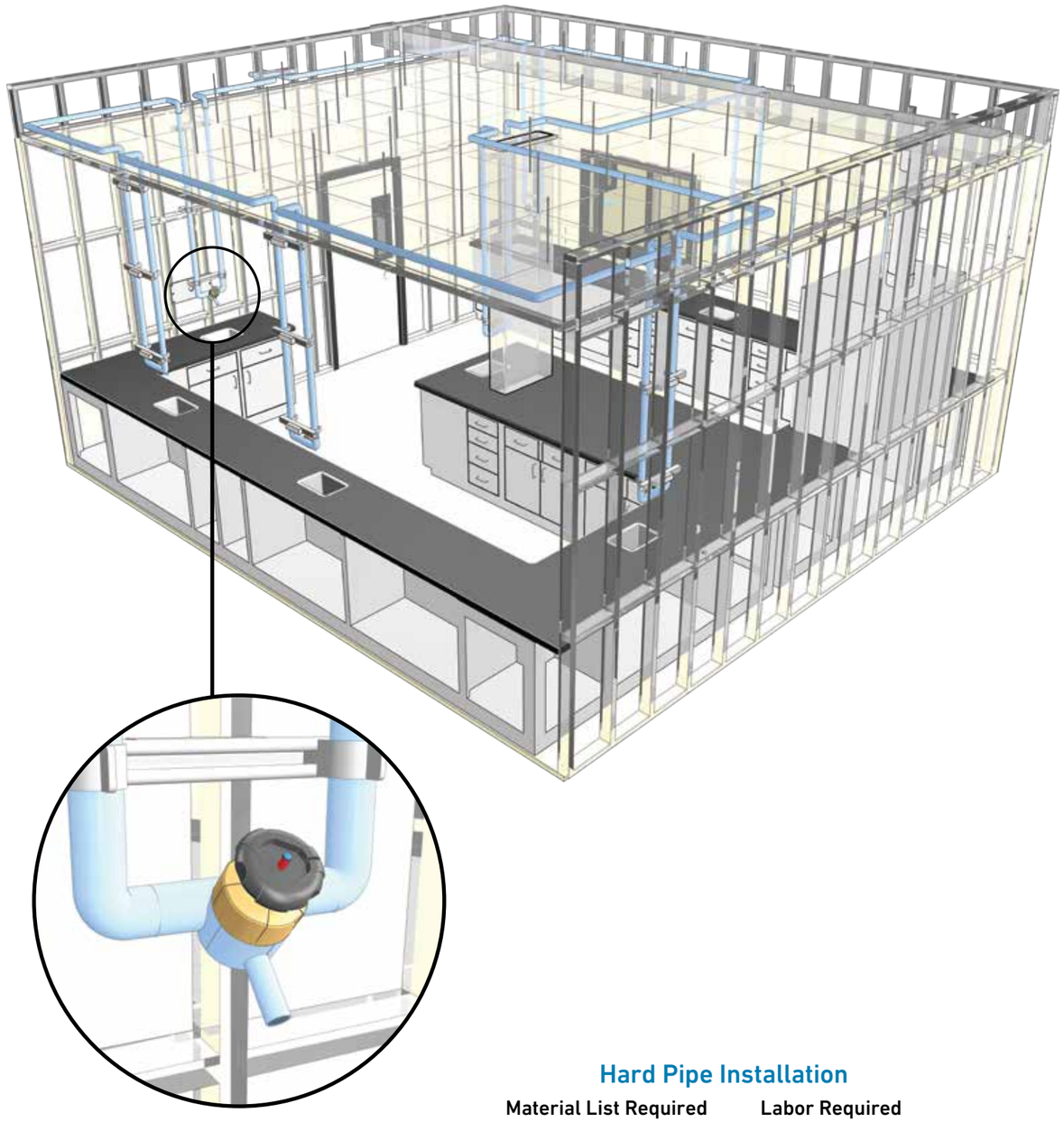
Flow rate through faucet

Pressure drop through main

Suggested opperating range

†Note: Maximum recommended distance between sink and IFD is 50 ft. – Approximately 1% loss of flow through faucet for every one foot of tubing run (maximum 50')

Traditional Loop Installation Method vs Shorter Loop Pipe with Flexible Tubes and IFDs

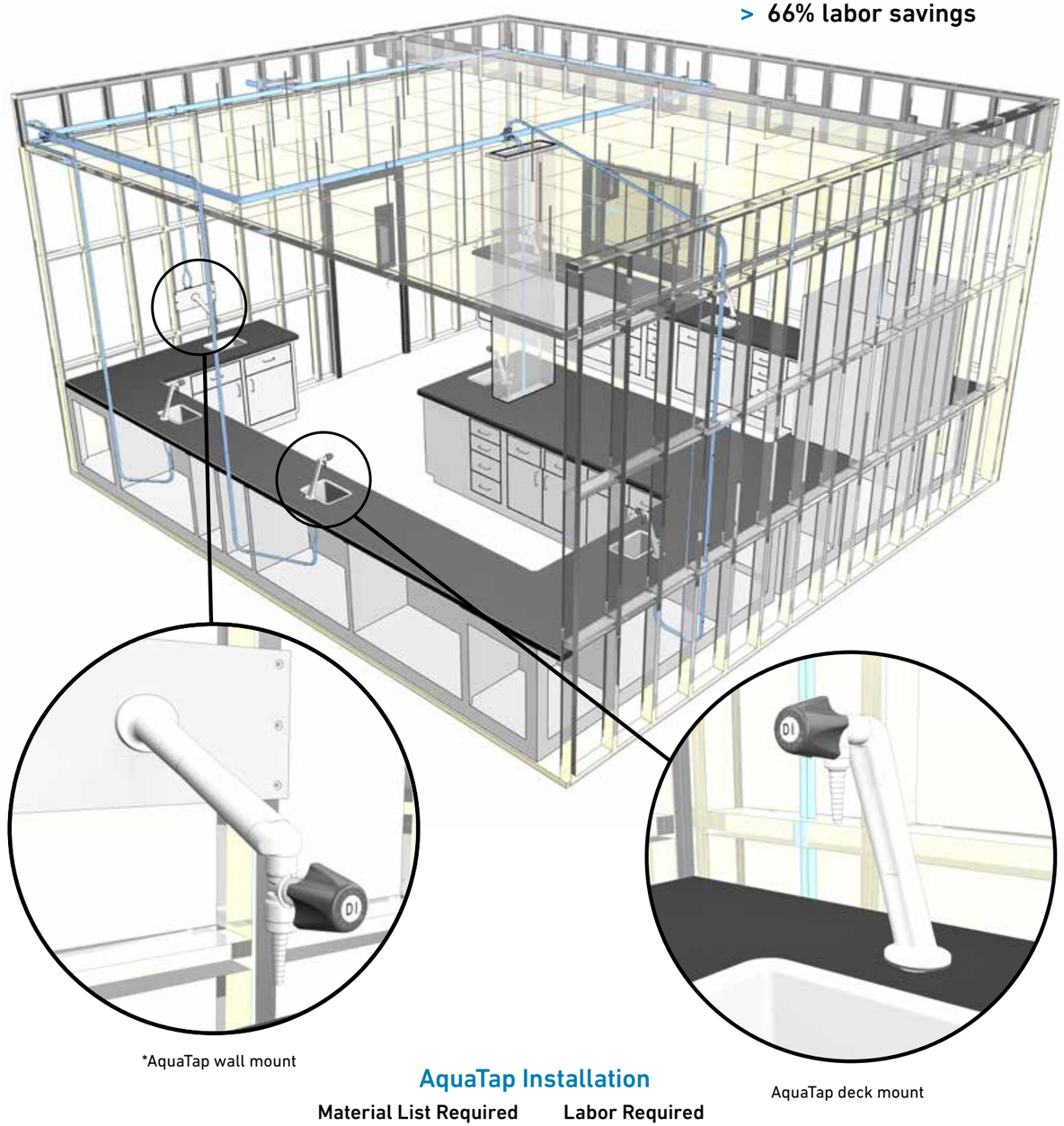


Rigid pipe installation method

Hard Pipe Installation

Material List Required		Labor Required	
240	ft pipe	100	welds
50	90° elbows		
7	Zero Static Valves		

- > 32% material savings
- > 66% labor savings



*AquaTap wall mount

AquaTap deck mount

AquaTap Installation

Material List Required		Labor Required	
90	ft pipe	20	welds
4	IFDs	28	flares
6	90° elbows		
7	AquaTaps		
200	ft tubing		

*Wall mount version with black handle coming soon.

Inline flow diverters are designed only to be used as part of the AquaTap faucet system and are not sold separately.

Tie-in Components (B)

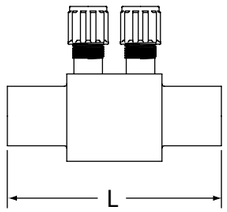
Inline Flow Diverter (shipped with nuts and tube blankoffs for pressure testing. Max. pressure 120 psi.)

IR Plus®/BCF® Plus Fusion

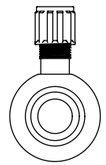
mm	Ports**	PN	SYGEF® PVDF	PROGEF® Standard	PROGEF® Natural PP	L mm
25	1/1	10	175 530 123	167 530 123	168 530 123	180
32	1/1	10	175 530 124	167 530 124	168 530 124	180
40	1/1	10	175 530 125	167 530 125	168 530 125	180
50	1/1	10	175 530 126	167 530 126	168 530 126	180
63	1/1	10	175 530 127	167 530 127	168 530 127	180
75	1/1	10	175 530 128	167 530 128	168 530 128	180
32	2/2	10	175 530 144	167 530 144	168 530 144	180
40	2/2	10	175 530 145	167 530 145	168 530 145	180
50	2/2	10	175 530 146	167 530 146	168 530 146	180
63	2/2	10	175 530 147	167 530 147	168 530 147	180
75	2/2	10	175 530 148	167 530 148	168 530 148	180
32	3/3	10	175 530 164	167 530 164	168 530 164	180
40	3/3	10	175 530 165	167 530 165	168 530 165	180
50	3/3	10	175 530 166	167 530 166	168 530 166	180
63	3/3	10	175 530 167	167 530 167	168 530 167	180
75	3/3	10	175 530 168	167 530 168	168 530 168	180

**(Inlet/Outlet)

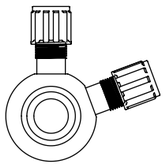
Other dimension available upon request



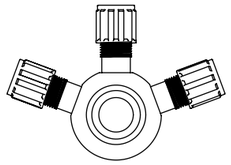
Inline Flow Diverter with IR Butt/BCF® Plus Connection



1/1 Port (Inlet/Outlet)



2/2 Port (Inlet/Outlet)



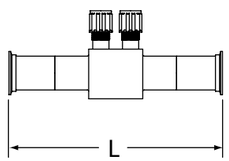
3/3 Port (Inlet/Outlet)

Inline Flow Diverter (shipped with nuts and tube blankoffs for pressure testing. Max. pressure 120 psi.)

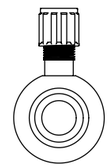
Sanitary Tri-Clamp

Sanitary (inch)	Ports**	PN	SYGEF® PVDF	PROGEF® Standard	PROGEF® Natural PP	L mm
1½	1/1	10	175 530 225	167 530 225	168 530 225	294
2	1/1	10	175 530 226	167 530 226	168 530 226	316
2½	1/1	10	175 530 227	167 530 227	168 530 227	314
1½	2/2	10	175 530 245	167 530 245	168 530 245	294
2	2/2	10	175 530 246	167 530 246	168 530 246	316
2½	2/2	10	175 530 247	167 530 247	168 530 247	314
1½	3/3	10	175 530 265	167 530 265	168 530 265	294
2	3/3	10	175 530 266	167 530 266	168 530 266	316
2½	3/3	10	175 530 267	167 530 267	168 530 267	314

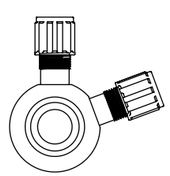
**(Inlet/Outlet)



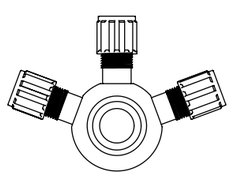
Inline with sanitary Tri-Clamp Connections Flow Diverter



1/1 Port (Inlet/Outlet)



2/2 Port (Inlet/Outlet)

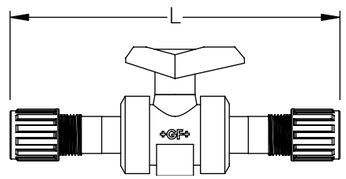


3/3 Port (Inlet/Outlet)

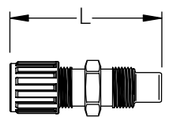
Tubing Interconnect Components (B)

⅝" Flare × ⅝" Flare Adapters

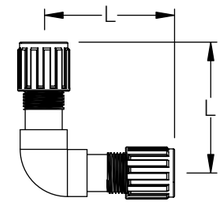
Description	SYGEF® PVDF	PROGEF® Natural PP	L mm
Isolation Ball Valve	175 530 032	168 530 032	214
Straight Coupler	175 530 011	175 530 011	75
90° Elbow	175 530 012		85



Isolation Ball Valve
Capable of direct connection as isolator to the faucet



Spare Straight Coupler
For direct connection to faucet tubing
(one set included with each faucet)



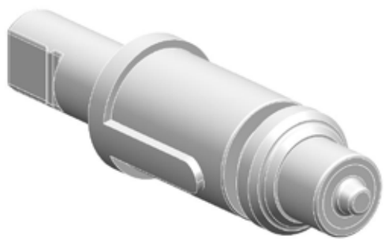
90° Elbow
For tight space constraints

⅝" Compression Fittings (Not recommended in concealed areas)

Description	PVDF	Natural PP	
⅝" Tube × ⅝" Tube Straight Coupler	175 530 013	168 530 013	
⅝" Tube × ⅝" Tube 90° Elbow	175 530 014	168 530 014	
⅝" Tube × ½" MNPT Tee	175 530 015	168 530 015	
⅝" Tube × ½" NPT Male Adapter	175 530 016	168 530 016	
⅝" Tube × ½" NPT Female Adapter	175 530 017	168 530 017	

Rebuild Kit

150 530 512



Accessories

Barb Outlet
150 530 203

ADA Handle
150 530 202

Aerator Outlet
150 530 204

Accessories (B)

Description	Part Number
⅜" dia x .065 wall PFA Tubing (Plain)	178 530 001
⅜" dia x .065 wall PE Tubing (Plain)	193 530 001
90° Bend Tube Protector	150 530 002
Tube Clip	150 530 003
⅜" Flare Nut	175 530 010
⅜" Tube Blankoff	193 530 010

Tools (D)

Description	Toolkit ID#	Part Number
Heater Plate	1	790 105 096
Heater Plate Protector	2	799 530 001
⅜" Flare-Heater Bushing	3	799 530 155
Flare Mandrel	4	799 530 156
Tubing Hex Jaw Pliers	5	799 530 157
Tube Cutter (KTS 125)	6	799 530 158

Tool Box Kit- 799 530 200

Description	Toolkit ID#	Part Number
Heater Plate	1	790 105 096
Heater Plate Protector	2	799 530 001
⅜" Flare - Heater Bushing	3	799 530 155
Flare Mandrel	4	799 530 156
Tubing Hex Jaw Pliers	5	799 530 157
Tube Cutter (KTS 125)	6	799 530 158
Tool Box	7	799 530 159

Installation Requirement Guide

Single Configuration: (1) Sink / (1) IFD

Description	Quantity Required	Notes
Faucet	1	Wall or Deck Mount
Inline Flow Diverter (IFD)	1	1 Inlet / 1 Outlet Configuration
Couplers	2	
Tubing*	†Distance from Sink (×2) +10%	
Tubing Example:	Faucet 1: 15 ft from IFD 15 ft × (2) = 30 ft +10% = 33 ft of tubing required	

Double Configuration: (2) Sink / (1) IFD

Description	Quantity Required	Notes
Faucet	2	Wall or Deck Mount
Inline Flow Diverter (IFD)	1	2 Inlet / 2 Outlet Configuration
Couplers	4	
Tubing*	†Distance from Sinks (×2) +10%	
Tubing Example:	Faucet 1: 8 ft from IFD / Faucet 2 : 2 ft from IFD 8 + 2 = 10 ft × (2) = 20 ft +10% = 22 ft of tubing required	

Triple Configuration: (3) Sink / (1) IFD

Description	Quantity Required	Notes
Faucet	3	Wall or Deck Mount
Inline Flow Diverter (IFD)	1	3 Inlet / 3 Outlet Configuration
Couplers	6	
Tubing*	†Distance from Sinks (×2) +10%	
Tubing Example:	Faucet 1: 10 ft from IFD / Faucet 2: 6 ft from IFD / Faucet 3: 4 ft from IFD 10 + 6 + 4 = 20 ft × (2) = 40 ft +10% = 44 ft of tubing required	

*PE tubing for polypropylene main piping, or PFA tubing for PVDF main piping

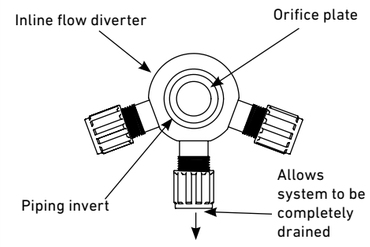
†**Note: Maximum recommended distance between sink and IFD is 50 ft. – Approximately 1% loss of flow through faucet for every one foot of tubing run (maximum 50')**

Bead and Crevice Free (BCF) Joining Installation Procedure

When the IFD is installed using the BCF Plus Fusion technology, special care must be taken: for most pipe sizes, the bladder for the BCF Plus fusion machine will not fit through the orifice plate of the IFD. Therefore, the following solutions are recommended to ensure ease of installation:

- Fuse a union or a sanitary adapter to one end of the IFD
- Use an alternative fusion method such as IR Plus or Socket Fusion on one end
- If the main is smaller than 63 mm, the IFD can be installed using one size smaller bladder (which can be pulled through the IFD). **Note**: Extra care is required to ensure tight fit-up, and facing is necessary.

Inline Flow Diverter Installed in Systems Requiring Complete Drainability



Whether installing 1/1, 2/2 or 3/3 port Inline Flow Diverters, one port pair must be installed at 90° to piping invert

Installation Recommendations to Ensure the System Drainability

If a single IFD is installed, the installer must ensure the supply/return connections to the Aquatap faucet are located at the invert of the piping system facing down. If a multiple pair IFD is installed, one of the supply/return connection point pairs must be located at the invert of the point facing down. This will allow for complete system drain ability without interference from the orifice plates within the IFDs.

GF Piping Systems

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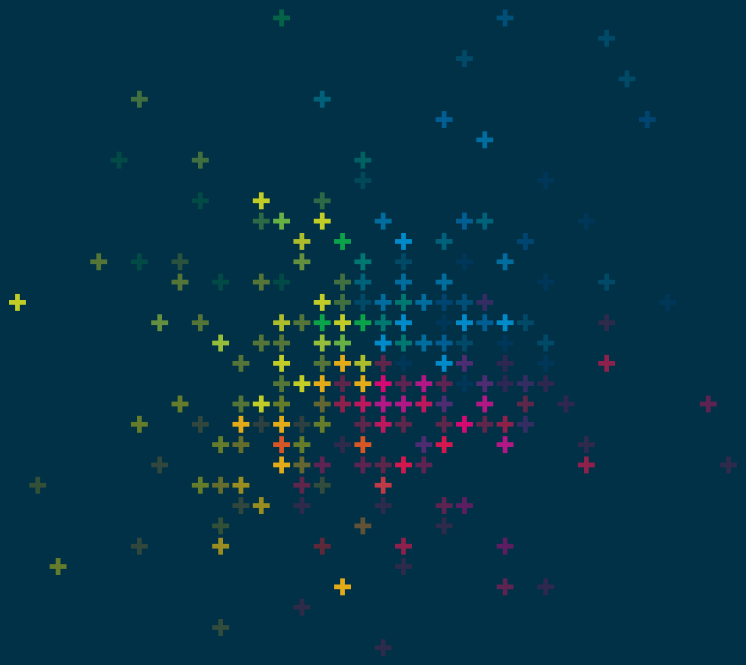

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