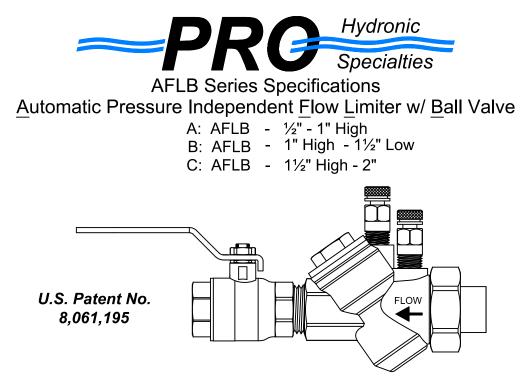
						DDC	Нус	Ironic			
		A	Autom	atic	: Bala	PRG ancing 2-Way K	Sperit - A2S	<i>cialtie</i> SH Su	<i>s</i> bmittal		
				Moc 		Suppled By Others			Model HSS	2 • R	-
	#	Size	Conne	ction	Туре	3	③ Model Al w/ PT & A	J V			
Runout	1						Hoses are	sized sa	me as RUNOUT.]	
Coil	2						Hose	Length	End Connection		
TCV	3		Ν	ИРТ			Return /				COIL
Servic	es pro	ovided fo	r additior	nal fe	e:		Supply				
Extended	Comp	onents	Ye	s	No		If the union PROHS w		nection is selected, t the appropriate		
Factory M	ounte	ed TCV	Ye	s	No		tailpiece for				
Stainless	s Stee	el Trim	Ye	s	No					2	
Factory Mounted Hoses Yes No					No	(1)			Model HSS		
Bag N Tag Yes No						Model IV					
* 3/8" Coil			in SWT (w/ PT & C)			L

** ProPress fittings supplied for additional fee.

PRODUCT DESCRIPTION: The Automatic Balancing Valve Kit is a packaged and partially preassembled grouping of components required to complete installation of a terminal unit. Temperature control valves, piping, and coils are supplied "by others". Mounting and testing of the customer supplied TCV is available at an additional charge.

QUANTITY	GPM	TA	AGGING	SINFORMATION		
JOB NAME		REPRESEN	ITATIVE	Ξ		
ENGINEER		REF/PO#		•	DATE	
CONTRACT	OR	SUBMITTE	D BY		DATE	

PRO Hydronic Specialties, L.L.C. www.prohydronicspecialties.com



PRODUCT DESCRIPTION: The AFLB is an Automatic Pressure Independent Flow Limiting device, male ended by union with a brass ball valve attached, rated at 600 WOG / CWP @ 250° F. The AFLB is supplied with a stainless steel flow limiting cartridge that can be removed for cartridge exchange, if necessary. The AFLB comes standard with two pressure/temperature ports and a hanging identification tag. The ball valve end, or run-out side, is available in FNPT or SWT. The union side connections available include MNPT, FNPT, SWT, and a variety of reductions.

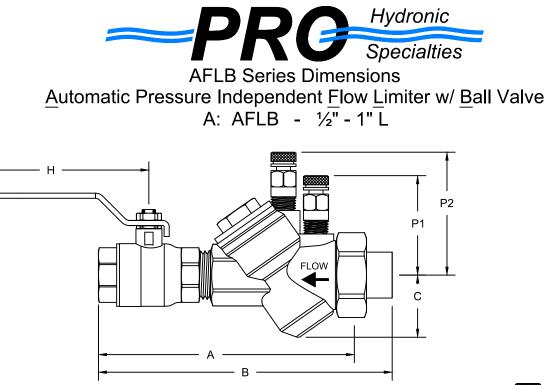
		STA	NDA		/ATE	RIAL	SPE	CIFI	CATI	ONS							ST	AND	ARD	OPE	RATI	NG S	SPEC	IFICA		٧S	
Body O-Ring			Forged Brass ASTM B283-06 or Cast Brass ASTM B763-08/ EPDM									8A	Control Range:					2 psi - 60+ psi									
•	e, Packing Nut		Brass ASTM B124-09, B228-06, or B763-08A									Ac	cura	cy:				:	±5%								
Union Nu	-					B455										Ma	ax Wo	orking) Pre	ssure	:		600 V	vog	/ CW	P/P	
Flow Cart Diaphrag	0		ASTM A582 Type 303 Stainless Steel									Ma	ax Or	erati	na Te	mne	rature	<u>.</u>	40°F	to 25	50°F						
Spring PT Port		EPDM Max Operating Temperature: 40°F to 250°F 302 Stainless Steel Start-Up Head Loss: 5 Feet of H ₂ O																									
Ball Valve Stem Ball Ball Seat, Handle	all Valve Forged Brass ASTM B283-06 tem Brass ASTM B124-09 - Blow-Out Proof all Chrome Plated Brass all Seat, Packing Gland Teflon									giv res	/en v	vithou s the	ut ob right	ligati to m	on oi ake c	r wai chang	rranty jes in	/. T desi	assis he C gn, m lity.	ompa	any						
							FLOW RATES (GPM) * CONTROL RANGE 2 - 60+ PSID **																				
	/alve Size A B C D E F G H I J K L M N							Ν	0	Ρ	Q	R	S	Т	U	V	w	Χ	Y	Z							
А	1⁄2" - 1" L	.33 .50 .75 1 1.25 1.5 1.75 2 2.25 2.5 2.75 3 3.5 4							4	4.5	5	5.5	6	6.5	7	7.5	8	9	10	11	12						
B 1'	" H - 1½" L	5	5 5.5 6 6.5 7 8 9 10 12 13 14 15 16 18							18	20	22	24	26	28	30	32	34	36	38	40	42					
C 1	1½" H - 2"	15	15 20 25 30 35 40 45 50 55 60 65 70 75 80							80	85	90	95	100	110	120	130	140	150	160	170	180					

Custom flow rates can be calibrated at the factory for an additional charge.

Unless confirmed as special, flow rates will default to standard flow rate.

PRODUCT SPECIFICATIONS:

- The Automatic Flow Limiter with Ball Valve (AFLB) shall have flow measurement capability
- The AFLB shall have a static orifice to control flow
- The AFLB Cartridge shall be permanently marked with the letter that corresponds to the factory preset GPM
- All flow cartridge wear surfaces shall be stainless steel
- The AFLB shall have a 2 PSID start up rating
- The AFLB Cartridge shall have a large operational differential range
- The AFLB Cartridge shall provide continual flow at differential pressures above design limits
- The AFLB Cartridge shall be removable for cleaning or exchange if required



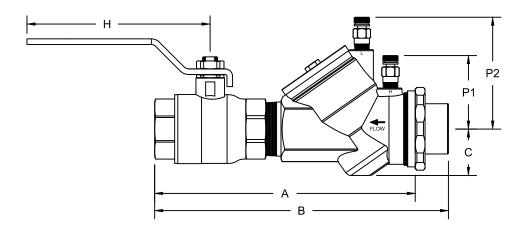
BALL VALVE SIZE AND TYPE	А	TAIL PIECE	В	WEIGHT (lbs)	С	Н	P1	P2	W
1⁄2" SWT	5.7	- M 1⁄2" - F - S	7.3 6.4 6.4	1.8 1.8 1.7	1.3	3.7	2.3	2.8	1.7
½" FPT	5.4	- M 1⁄2" - F - S	7.0 6.0 6.0	1.8 1.8 1.7	1.3	3.7	2.3	2.8	1.7
³⁄₄" SWT	6.6	- M ½" - F - S	8.1 7.3 7.3	2.4 2.4 2.4	1.4	3.8	2.0	2.6	1.8
		- M ¾" - F - S	8.3 7.2 7.2	2.5 2.4 2.4					
3/" FPT	6.1	- M ½" - F - S	7.5 7.2 6.8	2.4 2.5 2.4	1.4	3.8	2.0	2.6	1.8
74 11 1	0.1	- M ¾" - F - S	7.8 7.0 6.8	2.5 2.4 2.4	1.4		2.0	2.0	1.0
1" SWT	7.3	¹ / ₂ " - M _{3/4} " - M - S	9.5 9.5 8.2	3.5 3.5 3.3	1.2	5.0	2.0	2,5	2.1
1 3001	7.5	- M 1" - F - S	9.5 8.5 8.5	3.6 3.4 3.3	1.2	5.0	2.0	2.0	2.1
1" FPT	6.7	¹ / ₂ " - M ³ / ₄ " - M - S	8.7 8.7 7.5	3.5 3.5 3.3	1.2	5.0	2.0	25	2.1
	6.7	- M 1" - F - S	8.7 7.6 7.6	3.6 3.4 3.3	1.2	5.0	2.0	2.5	2.1



Note: Dimensions listed above do not include ProPress or any other special fittings or adapters. All dimensions, weights, and materials are subject to minor variations. Consult with factory for confirmation of dimensions and material specifications. Sweat size listed is nominal and will differ from the actual, measurable size.



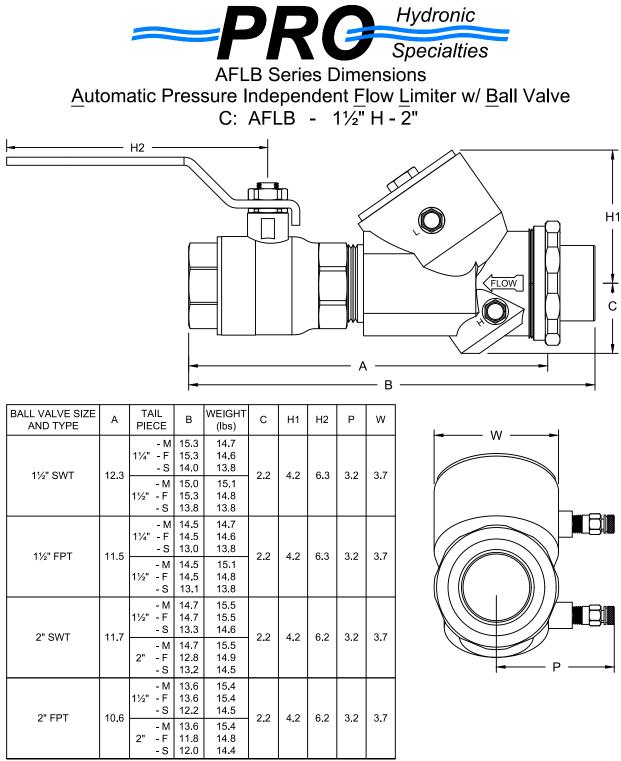
AFLB Series Dimensions <u>A</u>utomatic Pressure Independent <u>F</u>low <u>L</u>imiter w/ <u>B</u>all Valve B: AFLB - 1" H - 1½" L



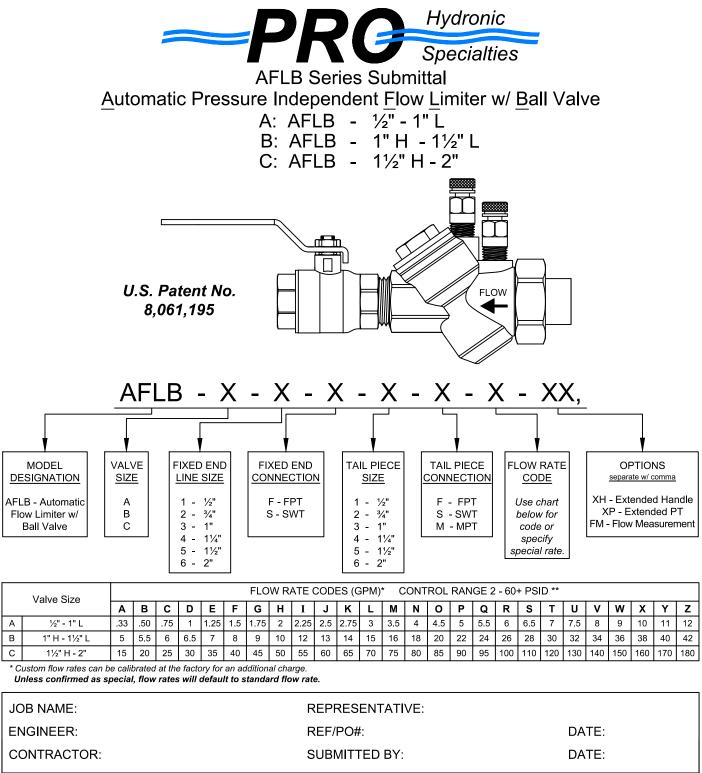
BALL VALVE SIZE AND TYPE	А	TAIL PIECE	В	WEIGHT (lbs)	С	Н	P1	P2	w
1" SWT	8.6	- M 1" - F - S	10.6 9.5 9.5	5.3 5.2 5.1	1.4	5.0	2.3	2.6	3.9
1" FPT	8.0	- M 1" - F - S	10.0 8.8 9.0	5.3 5.2 5.1	1.4	5.0	2.3	2.6	3.9
1¼" SWT	0.1	- M 1" - F - S	11.0 11.1 10.5	6.2 6.3 5.9	1.4	5.0	2,3	2.6	3.9
174 SWI	9.1	- M 1¼" - F - S	11.1 10.1 10.2	6.3 6.0 5.9	1.4	5.0	2.3	2.0	5.9
1¼" FPT	8.3	- M 1" - F - S	10.3 9.3 9.6	6.2 6.0 5.9	1.4	5.0	2.3	2.6	3.9
1/4 FF1	0.0	- M 1¼" - F - S	10.3 9.0 9.5	6.3 5.8 5.9	1.4 5	5.0	2.5	2.0	3.9
	0.4	- M 1¼" - F - S	11.9 11.9 10.9	6.5 6.6 5.9			0.5	2.4	2.0
1½" SWT	9.4	- M 1½" - F - S	11.9 10.6 10.6	6.4 6.1 5.9	1.4	6.3	2.5	3.4	3.2
	0.0	- M 1¼" - F - S	11.0 11.0 10.0	6.4 6.5 5.8		<u> </u>	0.5	2.4	2.0
1½" FPT	9.0	- M 1½" - F - S	11.0 9.7 9.7	6.3 6.0 5.8	- 1.4	6.3	2.5	3.4	3.2



Note: Dimensions listed above do not include ProPress or any other special fittings or adapters. All dimensions, weights, and materials are subject to minor variations. Consult with factory for confirmation of dimensions and material specifications. Sweat size listed is nominal and will differ from the actual, measurable size.



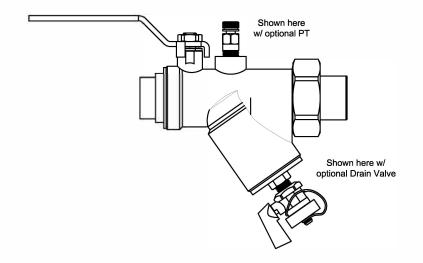
Note: Dimensions listed above do not include ProPress or any other special fittings or adapters. All dimensions, weights, and materials are subject to minor variations. Consult with factory for confirmation of dimensions and material specifications. Sweat size listed is nominal and will differ from the actual, measurable size.



PART # (See table above)	TAGGING/JOB INFORMATION	GPM	QUANTITY



IVS Series Specifications Integral Ball Valve/Wye Strainer/Union



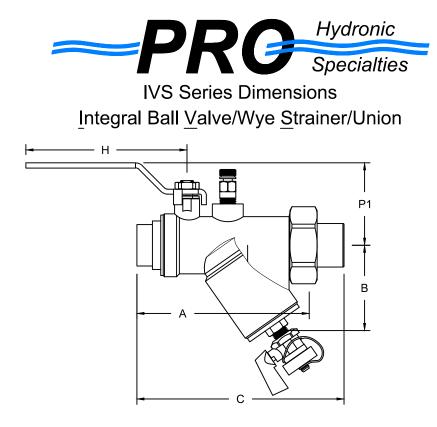
PRODUCT DESCRIPTION: The IVS is an integral ball valve, wye-strainer and union. The IVS uses a full-port ball valve for positive shut-off and offers two (2) predrilled ¼" taps for accessories to be installed. The strainer has a 20-mesh stainless steel screen to aid in debris removal. The strainer cap has a ¼" tap for a hose-end drain valve. The ball valve has a PTFE packing gland, brass packing nut, and blow-out proof double o-ring stem seal. The fixed end connections may be FNPT or SWT. The union side connections Include MNPT, FNPT, SWT, and a variety of reductions.

Body O-RingForged Brass ASTM B283-06, or cast Brass ASTM B763-08A EPDMTail PieceBrass ASTM B124-09, B228-06, or B763-08aUnion NutBrass ASTM B455PT SealEPDM Dual Durometer CoreHandleChrome Plated SteelStemBrass ASTM B124-09 - Blow-Out ProofBallChrome Plated Brass - Full PortBall SeatTeflonPacking GlandTeflonPacking NutBrass ASTM B124-09, B228-06, or B763-08a		STANDARD MATERIAL SPECIFICATIONS	PORT LOCATIONS
Maximum Working Pressure: 600 WOG / CWP Maximum Operating Temperature: 40° F to 250° F	O-Ring Tail Piece Union Nut PT Seal Handle Stem Ball Ball Seat Packing Gland Packing Nut	EPDM Brass ASTM B124-09, B228-06, or B763-08a Brass ASTM B455 EPDM Dual Durometer Core Chrome Plated Steel Brass ASTM B124-09 - Blow-Out Proof Chrome Plated Brass - Full Port Teflon Teflon Brass ASTM B124-09, B228-06, or B763-08a STANDARD OPERATING SPECIFICATIONS num Working Pressure: 600 WOG / CWP	

Specification information is provided to assist and is given without obligation or warranty. The Company reserves the right to make changes in design, materials, and/or specifications without notice or liability.

PRODUCT SPECIFICATIONS:

- Device shall have a full port isolation valve
- Device shall have a 20 mesh accessible strainer sleeve
- Device shall have a blow down for debris removal
- Device shall have a functional by-pass
- The strainer screen shall have a minimum 8:1 ratio of total area against the internal pipe diameter

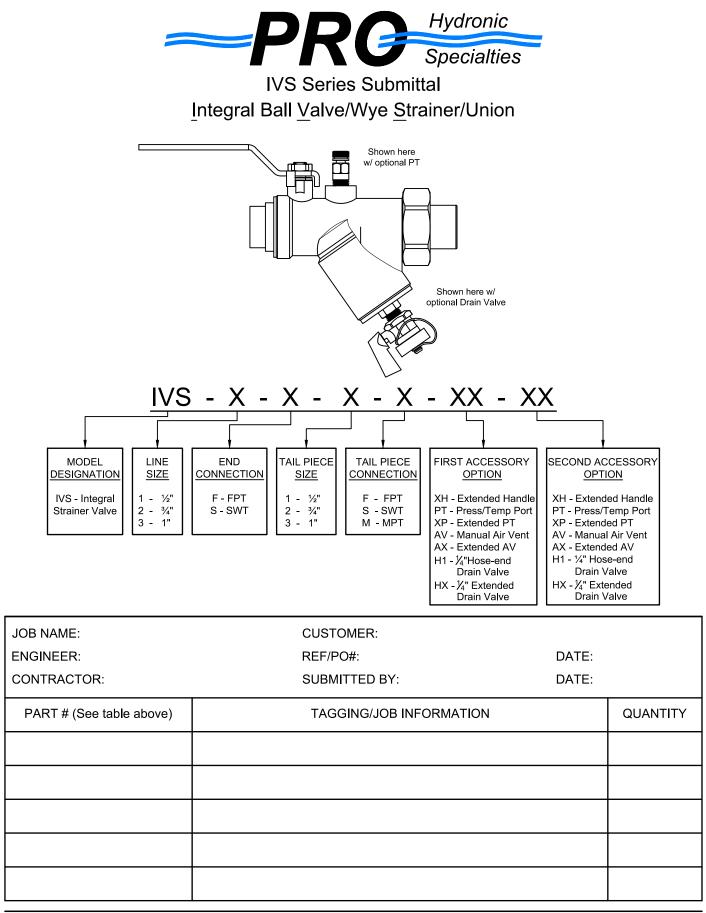


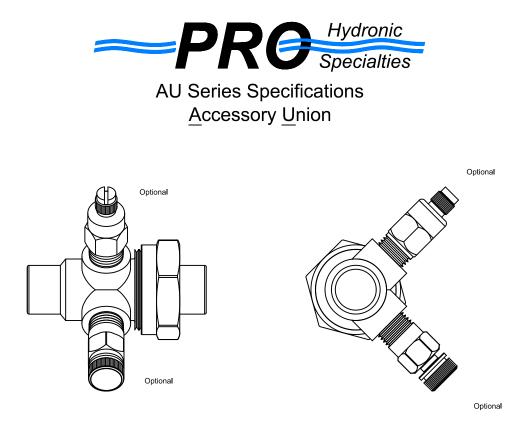
Model	Size	A	В	Н	P1	* R
IVS1-SWT	1/2"	4.0	2.0	4.2	2.0	21:1
IVS2-SWT	3⁄4"	4.6	2.3	4.2	2.2	11:1
IVS3-SWT	1"	5.8	2.7	4.2	2.3	11:1
IVS1-FPT	1/2"	3.7	2.0	4.2	2.0	21:1
IVS2-FPT	3⁄4"	4.1	2.3	4.2	2 <u>.</u> 2	11:1
IVS3-FPT	1"	5.0	2.7	4.2	2.3	11:1

Note: Dimensions above do not include ProPress or any other special fittings or adapters. All dimensions, weights, and materials are subject to minor variations. Consult with factory for confirmation of dimensions, weights, and material specifications.

* R = Ratio of screen surface area to cross-sectional pipe diameter

Size	Tail Piece		С	Weight	Size	Tail Piece		с	Weight
		- M	5.5 1.8				- M	5.2	1.6
1⁄2" SWT	1/2"	- F	4.6	1.5	½" FPT	1/2"	- F	4.3	1.5
		- S	4.6	1.5			- S	4.3	1.5
		- M	6.1	2.0			- M	5.6	2.1
	1/2"	- F	5.7	2.1		1/2"	- F	5.1	2.2
3∕4" SWT	_	- S	5.2	2.0	¾" FPT		- S	4.7	2.0
74 5001		- M	6.2	6.2 2.1			- M	5.7	2.1
	¾"	- F	5.3	2.0		3⁄4"	- F	4.8	2.0
		- S	5.5	2.0			- S	4.8	2.0
	1/2"	- M	7.8	3.0		1/2"	- M	7.0	2.9
	3⁄4"	- M	7.8	3.0		3⁄4"	- M	7.0	2.9
1" SWT	74	- S	6.6	2.7	1" FPT	74	- S	5.8	2.6
		- M	7.7	3.0	IFPI		- M	7.0	2.9
	1"	- F	6.7	2.8		1"	- F	6.0	2.7
		- S	6.7	2.7			- S	6.0	2.7





Product Description: The AU brass accessory union provides for component isolation. Port section contains two ¼" ports that come predrilled from the factory and are positioned 90° apart. The union side incorporates an o-ring for maximum sealing protection. Accessory union comes standard with ¼" plugs installed in the ports. Union side and port side connections available in NPTM, NPTF, and SWT. Rated at 600 WOG @ -22°F to 325°F.

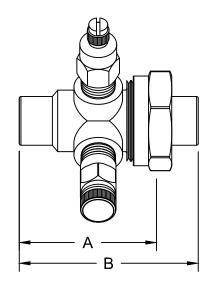
STANDARD MATERIAL SPECIFICATIONS									
Accessory UnionForged Brass ASTM B283-06O-RingEPDMTail PieceBrass ASTM B124-09, B228-06, or B763-08/									
Specification information is provided to assist and is given without obligation or warranty. The Company reserves the right to make changes in design, materials, and/or specifications without notice or liability.									

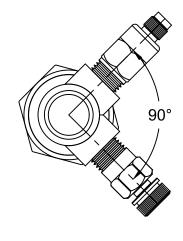
PRODUCT SPECIFICATIONS:

- 1/4" ports shall be located 90° distal on a rotational axis
- Integrated ports shall provide functionality for numerous options



AU Series Dimensions Accessory Union



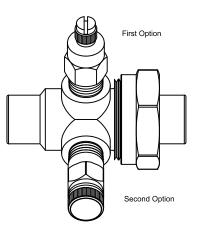


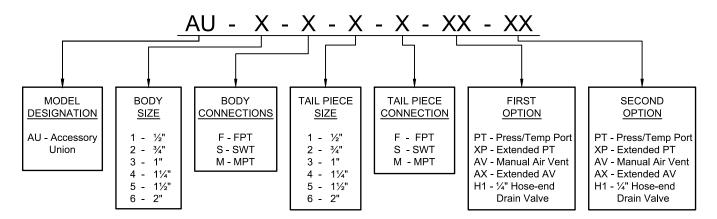
MODEL	SIZE	А			LENGT	"H "B" / W	/EIGHT O	F <i>PR</i> O-A	U AND TA	AIL PIECE	E CONNE	CTION		
AU1M AU1S AU1F	1⁄2"	2.7 2.1 2.0	½" M 4.2 3.7 3.6	lbs 0.6 0.5 0.6	1⁄2" S 3.3 2.8 2.7	lbs 0.6 0.4 0.5	¹ / ₂ " F 3.3 2.8 2.7	lbs 0.6 0.5 0.5						
AU2M AU2S AU2F	3⁄4"	2.5 2.1 2.1	½" M 4.0 3.7 3.6	lbs 0.7 0.6 0.7	1½" S 3.2 2.9 2.8	lbs 0.6 0.5 0.6	1⁄2" F 3.6 3.3 3.2	lbs 0.8 0.6 0.8	3⁄4" M 4.2 3.8 3.8	lbs 0.7 0.6 0.7	3⁄4" S 3.2 2.9 2.8	lbs 0.6 0.5 0.6	³ ⁄4" F 3.3 2.9 2.9	lbs 0.7 0.6 0.7
AU3M AU3S AU3F	1"	2.6 2.4 2.1	¹ ⁄2" M 4.6 4.5 4.1	lbs 1.1 1.0 1.0	3⁄4" M 4.6 4.5 4.1	lbs 1.1 1.0 1.1	³ ⁄₄" S 3.4 3.3 3.0	lbs 0.9 0.7 0.8	1" M 4.6 4.5 4.1	lbs 1.2 1.0 1.1	1" S 3.6 3.5 3.3	lbs 0.9 0.8 0.9	1" F 3.5 3.4 3.1	lbs 1.0 0.8 0.9
AU4M AU4S AU4F	1¼"	3.0 3.0 2.3	½" M 4.7 4.7 4.1	lbs 1.7 1.5 1.6	³ ⁄4" M 5.0 4.9 4.3	lbs 1.8 1.7 1.8	1" M 5.0 4.9 4.3	lbs 1.9 1.7 1.8	11¼" M 5.0 5.0 4.4	lbs 1.9 1.8 1.9	1¼" S 4.1 4.1 3.4	lbs 1.5 1.4 1.5	1¼" F 4.0 4.0 3.3	lbs 1.6 1.5 1.6
AU5M AU5S AU5F	1½"	3.0 3.0 2.7	³ ⁄₄" M 4.9 4.9 4.6	lbs 2.3 2.2 2.3	1" M 5.5 5.5 5.1	lbs 2.6 2.6 2.7	1¼" M 5.5 5.5 5.1	lbs 2.7 2.6 2.7	1½" M 5.5 5.5 5.1	lbs 2.5 2.5 2.6	1½" S 4.2 4.2 3.9	lbs 2.1 2.0 2.2	1½" F 4.3 4.2 3.9	lbs 2.3 2.2 2.3
AU6M		3.4	1" M 6.2	lbs 4,3	1¼" M 6,2	lbs 4.0	1½" M 6,2	lbs 4.0	2" M 6.2	lbs 4.1	2" S 4.8	lbs 3.1	2" F 4.6	lbs 3,4

Note: Dimensions listed above do not include ProPress or any other special fittings or adapters. All dimensions, weights, and materials are subject to minor variations. Consult with factory for confirmation of dimensions, weights, and material specifications. Sweat size listed is nominal and will differ from the actual, measurable size.

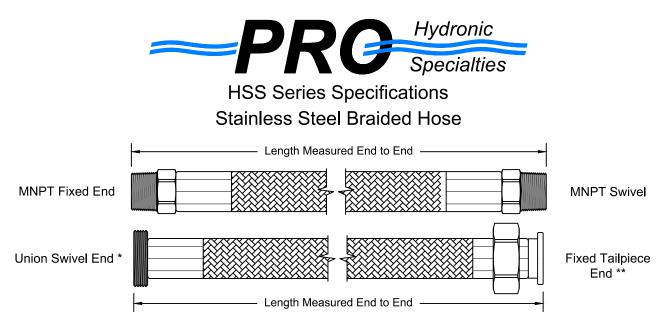


AU Series Submittal <u>A</u>ccessory <u>U</u>nion





JOB NAME: ENGINEER: CONTRACTOR:	REPRESENTATIVE: REF/PO#: SUBMITTED BY:	DATE: DATE:	
PART # (See table above)	TAGGING/JOB INFORMATION		QUANTITY



PRODUCT DESCRIPTION: The Model HSS is a stainless steel braided hose that is abrasion resistant. The HSS has a CPE inner tube with brass end connections and stainless steel ferrules for the $\frac{1}{2}$ " - 1" hose sizes, and an EPDM inner tube with stainless steel ferrules and plated steel end connections for the $\frac{1}{4}$ " - 2" hose sizes. The flexible hose eases installation and is designed to withstand high pressures and varying temperatures. The standard end connections are MNPT Fixed x MNPT Swivel for $\frac{1}{2}$ " to 2", and FNPT Swivel for $\frac{1}{2}$ " to 2". Other available end connection options are FNPT Swivel, Union Swivel *, and Fixed Tailpiece** and accessory union connections; available for the $\frac{1}{2}$ " to 2" hose sizes. The Model HSS is BUY AMERICAN COMPLIANT.

* The Swivel Union comes standard with an EPDM O-ring, tailpiece, and union nut which must be specified at the time of order. The swivel union easily converts line connection types and offers line size reductions. The tailpieces are available in FNPT, MNPT, and Sweat ends.

** The Fixed Tailpiece hose end connection is designed to connect directly to union ended coil kit components (AFLB, AFLD, AU, CBV, IBU, or IVY). The tailpiece end eliminates multiple connections.

PRODUCT SPECIFICATIONS			
Tube	CPE (Chlorinated Polyethylene) for 1/2" - 1" sizes - SAE J1019		
	EPDM (Ethylene Propylene Diene Monomer) for 11/4" - 2" sizes - SAE 20R1-D1		
Reinforcement	304L Stainless Steel braid cover meets UL-94 requirements		
Ferrules	Type 304L stainless Steel		
End Fittings	1⁄2" - 1" I.D Brass		
-	1¼" - 2" I.D Steel Plated		
End Connections	Fixed MNPT, FNPT, Swivel MNPT, Swivel FNPT (1/2"-2"), Swivel Union (1/2" - 2"), Fixed Tailpiece (1/2"-2")		
Temperature	-40°F to 257°F (-40°C to 125°C) NOTE HOSE IS NOT INTENDED FOR STEAM APPLICATIONS.		
Ratings			
	Fire Retardant Material (CPE)		
Ratings	Meets UL-94 Requirements Fire Retardant Material (CPE)		

Specification information is provided to assist and is given without obligation or warranty. The Company reserves the right to make changes in design, materials, and/or specifications without notice.

Size	Length	Working PSI	Bend Radius	** Cv
1⁄2"	12, 18, 24, 30, 36	500	5"	7
3⁄4"	12, 18, 24, 30, 36	500	7"	20
1"	12, 18, 24, 30, 36	500	10"	43
1¼"	12, 18, 24, 30, 36	200	12"	76
11⁄2"	12, 18, 24, 30, 36	200	15"	130
2"	12, 18, 24, 30, 36	200	20"	280

Length is measured End to End on all hose connection types.

** Cv listed in chart above is for a 24" length hose. The Cv is estimated and can vary according to installation.

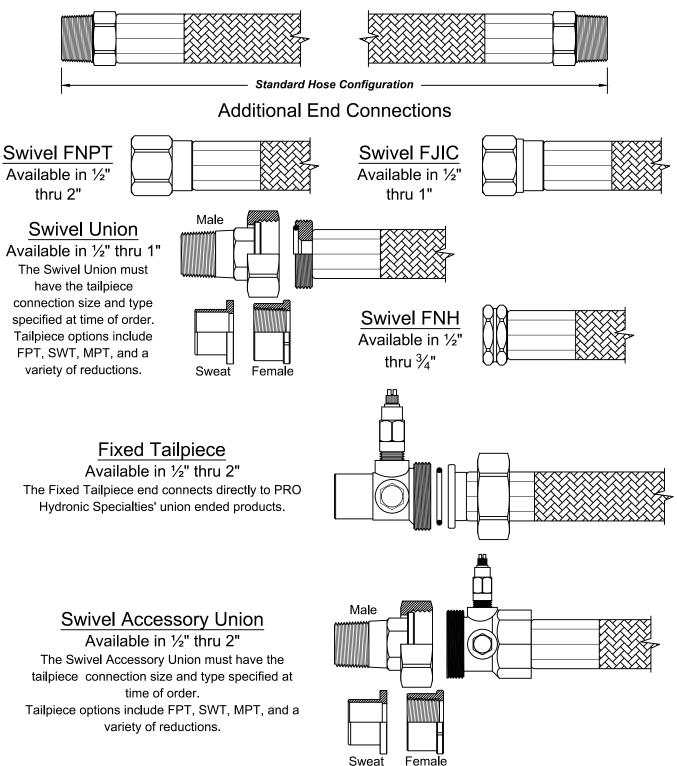


HSS Series Options

Stainless Steel Braided Hose

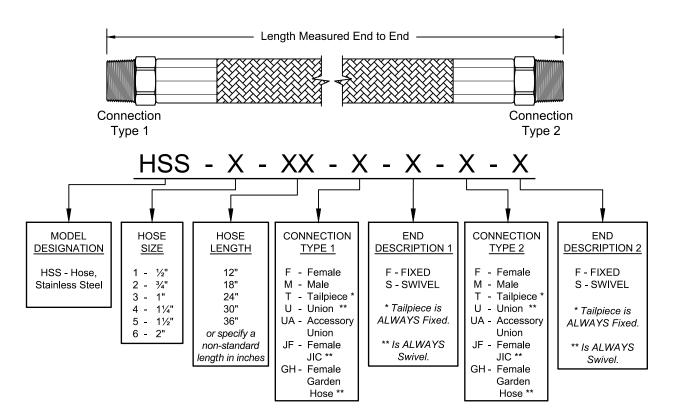


Swivel MNPT





Stainless Steel Braided Hose



When ordering, at least one hose end connection must be a swivel.

JOB NAME: ENGINEER:	REPRESENTATIVE: REF/PO#:	DATE:	
CONTRACTOR:	SUBMITTED BY:	DATE:	
PA	QUANTITY		
PRO Hydronic Specialties, L.L.C. Form Number:			

PRO Hydronic Specialties, L.L.C. www.prohydronic.com