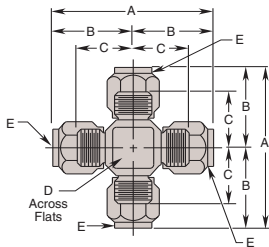


ACCESSORIES

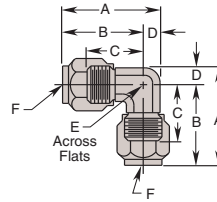
FITTINGS	PRESSURE GAUGES
HYDRAULIC FLUID	ROTATING UNIONS
HOSES & TUBING	PRESSURE SWITCH
COUPLERS	REMOTE CONTROLS
MANIFOLDS	TEMP./LEVEL GAUGE
IN-LINE FILTERS	RESERVOIRS





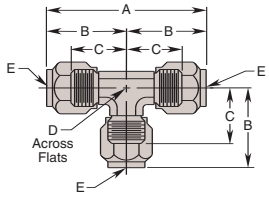
Cross
Compression Tube

Cat. No.	Dimensions (In Inches)				
	A	B	C	D	E Tube Size
15058	2.156	1.078	.750	.750	.250
17278	2.781	1.391	.953	.750	.375



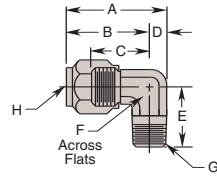
90° Male Elbow
Compression Tube

Cat. No.	Dimensions (In Inches)					
	A	B	C	D	E	F Tube Size
15059	1.297	1.078	.750	.219	.438	.250
250211	1.641	1.359	.922	.281	.562	.375



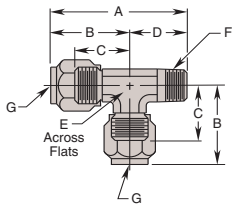
Union Tee
Compression Tube

Cat. No.	Dimensions (In Inches)				
	A	B	C	D	E Tube Size
15054	2.156	1.078	.750	.438	.250
10659	2.844	1.422	.984	.625	.375



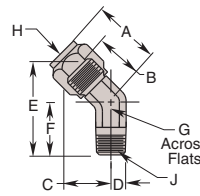
90° Male Elbow
Compression Tube to NPTF

Cat. No.	Dimensions (In Inches)							
	A	B	C	D	E	F	G Thread Size	H Tube Size
15052	1.297	1.078	.750	.219	.781	.438	1/8 NPTF	.250
205792	1.484	1.203	.875	.281	1.062	.562	1/4 NPTF	.250
10665	1.641	1.359	.922	.281	1.094	.562	1/4 NPTF	.375



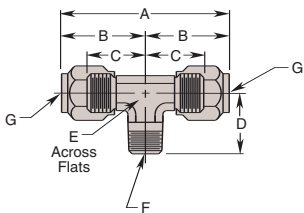
Male Run Tee
Compression Tube to NPTF

Cat. No.	Dimensions (In Inches)						
	A	B	C	D	E	F Thread Size	G Tube Size
15050	1.859	1.078	.750	.781	.438	1/8 NPTF	.250
205791	2.047	1.109	.781	.938	.500	1/4 NPTF	.250
10669	2.484	1.422	.984	1.062	.625	1/4 NPTF	.375



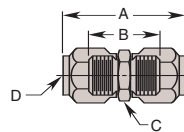
45° Male Elbow
Compression Tube to NPTF

Cat. No.	Dimensions (In Inches)									
	A	B	C	D	E	F	G	H Tube Size	J Thd. Size	
15053	.953	.625	.672	.281	1.359	.688	.562	.250	1/8 NPTF	
10655	1.234	.797	.828	.281	1.708	.875	.562	.375	1/4 NPTF	



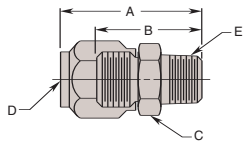
Male Branch Tee
Compression Tube to NPTF

Cat. No.	Dimensions (In Inches)						
	A	B	C	D	E	F Thread Size	G Tube Size
15055	2.156	1.078	.750	.781	.438	1/8 NPTF	.250
205790	2.219	1.109	.781	.938	.500	1/4 NPTF	.250
10670	2.844	1.422	.984	1.062	.625	1/4 NPTF	.375



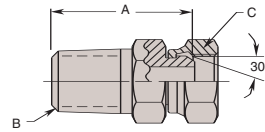
Male Union
Compression Tube

Cat. No.	Dimensions (In Inches)			
	A	B	C Hex.	D Tube Size
15060	1.562	.906	.500	.250
250212	1.875	1.000	.625	.375



Male Connector
Compression Tube to NPTF

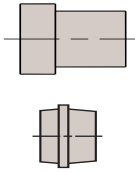
Cat. No.	Dimensions (In Inches)				
	A	B	C Hex.	D Tube Size	E Thread Size
15061	1.281	.953	.500	.250	1/8 NPTF
205793	1.484	1.156	.625	.250	1/4 NPTF
10661	1.641	1.203	.625	.375	1/4 NPTF



Swivel Adapter

Caution - The female swivel end is a straight pipe thread (NPSM) with a 30° seat. All male pipe fittings that are used with these female swivel adapters must have an internal 30° seat to seal properly.

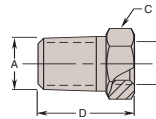
Cat. No.	Dimensions (In Inches)		
	A	B Thread Size	C Thread Size
15069	1.030	1/4 NPTF	1/8 NPSM
11310	1.260	1/4 NPTF	1/4 NPSM



Tube Sleeve

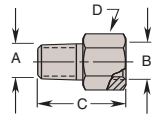
Cat. No.	A Tube Size	Fitting Style
13031	.250	Compression
10430	.375	

NOTE: Hytec tube sleeves may not be compatible with other tubing materials and grades.



Reducer
NPTF

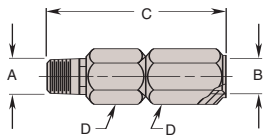
Cat. No.	Dimensions (In Inches)			
	A Thread Size	B Thread Size	C Hex.	D
13269	1/4 NPTF	1/8 NPTF	.625	.781



Adapter
NPTF

Cat. No.	Dimensions (In Inches)			
	A Thread Size	B Thread Size	C	D Hex.
15235	1/8 NPTF	1/4 NPTF	1.140	.750
*252128	1/4 NPTF	7/16 20UNF SAE-4	1.310	.688

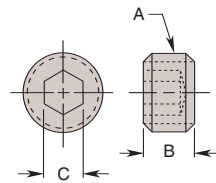
* Use with 216437 Metering Valve to control flow in 1/4 NPTF actuators.



Check Valve

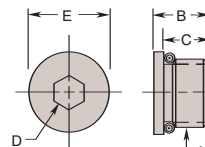
Cat. No.	Dimensions (In Inches)			
	A Thread Size	B Thread Size	C	D Hex.
206330	1/4 NPTF	1/4 NPTF	2.250	.750

NOTE: Cracking pressure - 5 psi max.



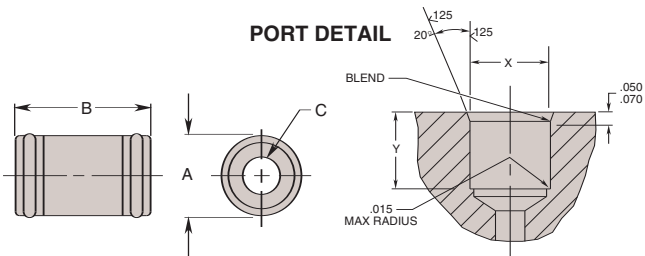
Plug
NPTF

Cat. No.	PLUGS - NPTF		
	Dimensions (In Inches)		
	A Thread Size	B	C Hex.
15499	1/8 NPTF	.242	.188
10479	1/4 NPTF	.437	.250
16232	3/8 NPTF	.400	.312



Plug
SAE O-Ring

Cat. No.	PLUGS - SAE O-RING				
	Dimensions (In Inches)				
	A Thread Size	B	C	D Hex.	E Dia.
250883	7/16-20UNF SAE-4	.450	.360	.188	.563



Connector Bushing

Cat. No.	Dimensions (In Inches)				
	Bushings		Port		
	A Dia.	B	C Dia.	X Dia.	Y
*100169	.500	.844	.234	.500 .503	.515 .535

NOTE: * Box of Ten Connector Bushings.

Connector
NPTF

Cat. No.	Dimensions (In Inches)				
	A Thread Size	B Thread Size	C Hex.	D Dia.	E
12740	¼ NPTF	¼ NPTF	.750	.730	1.125

Male Branch Tee
Compression Tube to O.R.B.

Cat. No.	Dimensions (In Inches)						
	A	B	C	D	E	F Thread Size	G Tube Size
250689	2.156	1.078	.750	1.047	.438	7/16-20 UNF SAE-4	.250

Metering Valve
NPTF to O.R.B.

Cat. No.	Dimensions (In Inches)					
	A Thread Size	B Thread Size	C Hex.	D	E	F
216437	7/16-20UNF SAE-4	¼ NPTF	.750	.700	.435	.075

NOTE: Orifice size - .013/.017 dia.

90° Swivel Adapter

Caution - The female swivel end is a straight pipe thread (NPSM) with a 30° seat. All male pipe fittings that are used with these female swivel adapters must have an internal 30° seat to seal properly.

Cat. No.	Dimensions (In Inches)			
	A Thread Size	B Thread Size	C	D
250692	7/16-20 UNF SAE-4	¼ NPSM	1.120	.970

Male Connector
O.R.B. to Compression Tube

Cat. No.	Dimensions (In Inches)					
	A Thread Size	B	C	D Hex.	E	F Tube Size
250685	7/16-20 UNF SAE-4	1.203	.875	.562	.359	.250
250686	9/16-18 UNF SAE-6	1.453	1.016	.812	.391	.375

Male Adapter
O.R.B. to NPTF

Cat. No.	Dimensions (In Inches)				
	A Thread Size	B Thread Size	C	D Hex.	E
210312	7/16-20 UNF SAE-4	¼ NPTF	1.062	.750	.710

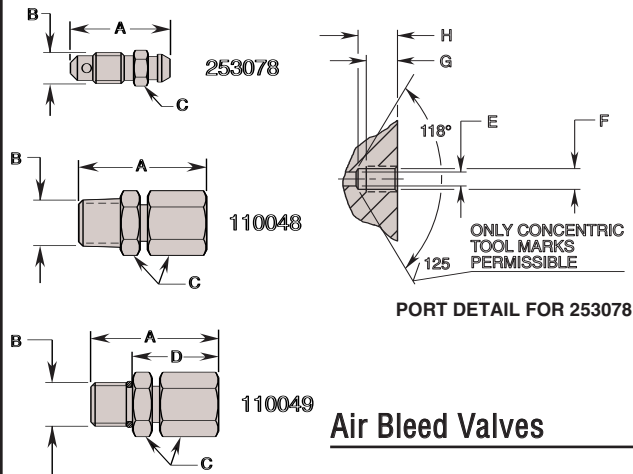
90° Male Elbow
Compression Tube to O.R.B.

Cat. No.	Dimensions (In Inches)								
	A	B	C	D	E	F	G	H Thread Size	J Tube Size
250687	1.297	1.078	.219	.750	1.266	1.078	.438	7/16-20 UNF SAE-4	.250
250688	1.625	1.344	.281	.906	1.516	1.250	.562	9/16-18 UNF SAE-6	.375

Swivel Adapter

Caution - The female swivel end is a straight pipe thread (NPSM) with a 30° seat. All male pipe fittings that are used with these female swivel adapters must have an internal 30° seat to seal properly.

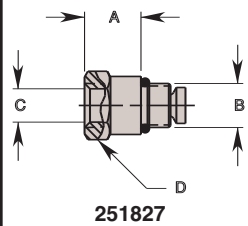
Cat. No.	Dimensions (In Inches)			
	A Thread Size	B Thread Size	C	D
250690	7/16-20 UNF SAE-4	¼ NPSM	1.320	.865



PORT DETAIL FOR 253078

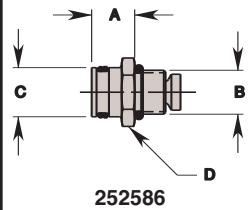
Air Bleed Valves

Cat. No.	Dimensions (In Inches)							
	A	B Thread Size	C Hex	D	E Dia. Max.	F Thread Size	G Min.	H
253078	1.000	1/16-24UNF	.312	-	.177	1/16-24UNF	.350	.450 .510
110048	1.630	1/4 NPTF	.562	-	-	-	-	-
110049	1.440	1/16-20UNF SAE-4	.562	1.080	-	-	-	-



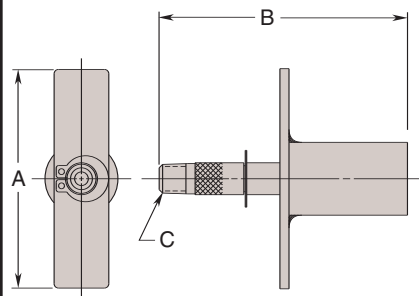
251827

Accumulator Metering Valves



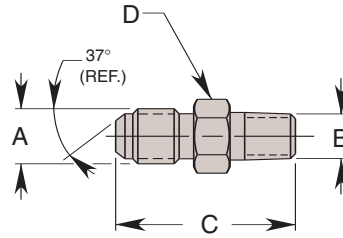
252586

Cat. No.	Dimensions (In Inches)				
	A	B Thd. Size	C		D Hex
			Thd. Dia.	Dia.	
251827	.698	-	1/4 NPT	-	.750
252586	.544	1/16-18 UNF	-	.624 .622	-



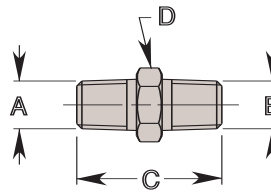
Accumulator Charging Tool

Cat. No.	Dimension (In Inches)		
	A	B	C Thread Size
500149	3.000	3.400	1/8 NPTF



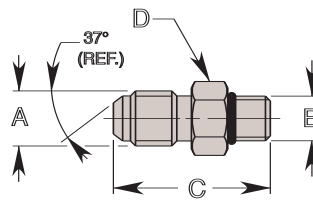
Straight
37° Flared Tube to NPTF

Cat. No.	Dimensions (In Inches)				
	A Thd. Size	B Thd. Size	C	D Hex	Tube Dia.
11628	1/16-18 UNF	1/8 NPTF	1.430	.750	.375
253019	1/16-20 UNF	1/8 NPTF	1.220	.500	.250
253076	-	1/8 NPTF	1.420	.562	-
253174	1/16-18 UNF	-	1.430	.625	.375



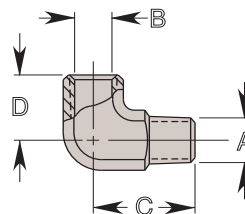
Straight
NPTF

Cat. No.	Dimensions (In Inches)			
	A Thd. Size	B Thd. Size	C	D Hex
10672	1/4 NPTF	1/4 NPTF	1.450	.625
11421	1/8 NPTF	1/8 NPTF	1.060	.437
12328	3/8 NPTF	1/4 NPTF	1.360	.750
16691	1/4 NPTF	1/8 NPTF	1.234	.593
215373	1/8 NPTF	1/16 NPTF	1.010	.438



Straight
37° Flared Tube to O.R.B.

Cat. No.	Dimensions (In Inches)				
	A Thd. Size	B Thd. Size	C	D Hex	Tube Dia.
253020	1/16-20 UNF	1/16-20 UNF SAE-4	1.230	.562	.250
253021	1/16-18 UNF	1/16-18 UNF SAE-6	1.300	.687	.375



90° Elbow Adapter
NPTF

Cat. No.	Dimensions (In Inches)			
	A Thd. Size	B Thd. Size	C	D
10617	1/8 NPTF	1/8 NPTF	1.090	.880
13229	1/8 NPTF	1/8 NPTF	.780	.660
13864	1/8 NPTF	1/8 NPTF	-	.880

90° Male Elbow
37° Flared Tube

Cat. No.	Dimensions (In Inches)		
	A Thd. Size	B	Tube Dia.
253007	1/16-20 UNF	.890	.250
253008	3/16-18 UNF	1.060	.375

Female Tee
NPTF

Cat. No.	Dimensions (In Inches)	
	A Thd. Size	B
252998	1/4 NPTF	.890

90° Male Elbow
37° Flared Tube to NPTF

Cat. No.	Dimensions (In Inches)				
	A Thd. Size	B Thd. Size	C	D	Tube Dia.
253009	1/16-20 UNF	1/4 NPTF	1.060	1.090	.250
253010	3/16-18 UNF	3/8 NPTF	1.140	1.220	.375
253175	1/16-20 UNF	1/8 NPTF	.890	.780	.250

Male Run Tee
37° Flared Tube to NPTF

Cat. No.	Dimensions (In Inches)				
	A Thd. Size	B Thd. Size	C	D	Tube Dia.
253022	1/16-20 UNF	1/8 NPTF	.890	.780	.250
253023		1/4 NPTF	1.060	1.090	
253025	3/16-18 UNF	3/8 NPTF	1.140	1.220	.375
253026		1/2 NPTF	1.140	1.220	

90° Male Elbow
37° Flared Tube to O.R.B.

Cat. No.	Dimensions (In Inches)					
	A Thd. Size	B Thd. Size	C	D	E Hex.	Tube Dia.
250605	1/16-20 UNF	3/16-20 UNF SAE-4	.890	1.030	.562	.250
253011	3/16-18 UNF	1/8-18 UNF SAE-6	1.060	1.250	.687	.375
253012		3/16-16 UNF SAE-8	1.140	1.450	.875	
253013		1/4-14 UNF SAE-10	1.230	1.700	1.000	

Male Run Tee
37° Flared Tube to O.R.B.

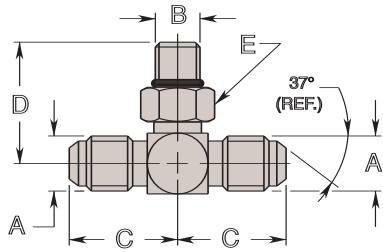
Cat. No.	Dimensions (In Inches)					
	A Thd. Size	B Thd. Size	C	D	E Hex.	Tube Dia.
253024	1/16-20 UNF	3/16-20 UNF SAE-4	.890	1.030	.562	.250
253027	3/16-18 UNF	1/8-18 UNF SAE-6	1.060	1.250	.687	.375

Male Tee
37° Flared Tube

Cat. No.	Dimensions (In Inches)		
	A Thd. Size	B	Tube Dia.
252996	1/16-20 UNF	.890	.250
252997	3/16-18 UNF	1.060	.375

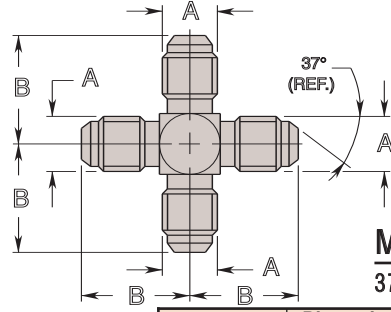
Male Branch Tee
37° Flared Tube to NPTF

Cat. No.	Dimensions (In Inches)				
	A Thd. Size	B Thd. Size	C	D	Tube Dia.
253028	1/16-20 UNF	1/8 NPTF	.890	.780	.250
253030	3/16-18 UNF	1/4 NPTF	1.060	1.090	.375



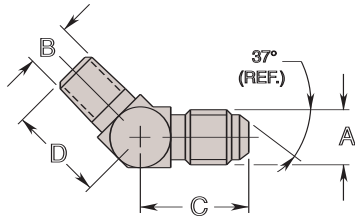
Male Branch Tee
37° Flared Tube to O.R.B.

Cat. No.	Dimensions (In Inches)					
	A Thd. Size	B Thd. Size	C	D	E Hex.	Tube Dia.
253029	1/16-20 UNF	1/16-20 UNF SAE-4	.890	1.030	.562	.250
253031	1/16-18 UNF	1/16-18 UNF SAE-6	1.060	1.250	.687	.375



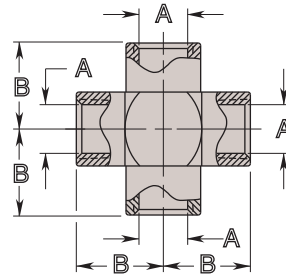
Male Cross
37° Flared Tube

Cat. No.	Dimensions (In Inches)		
	A Thd. Size	B	Tube Dia.
252999	1/16-20 UNF	.890	.250
253000	1/16-18 UNF	1.060	.375



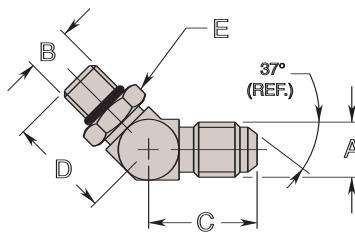
Male 45° Elbow
37° Flared Tube to NPTF

Cat. No.	Dimensions (In Inches)				
	A Thd. Size	B Thd. Size	C	D	Tube Dia.
253014	1/16-20 UNF	1/4 NPTF	.820	.860	.250
253016	1/16-18 UNF	1/4 NPTF	.840	.860	.375
253017	1/16-18 UNF	3/8 NPTF	.880	.950	.375



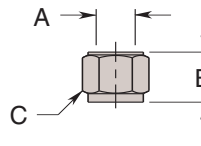
Female Cross
NPTF

Cat. No.	Dimensions (In Inches)	
	A Thd. Size	B
253001	1/4 NPTF	.890



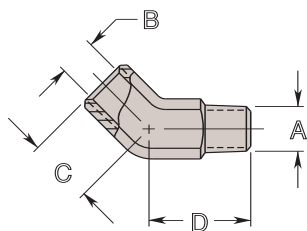
Male 45° Elbow
37° Flared Tube to O.R.B.

Cat. No.	Dimensions (In Inches)					
	A Thd. Size	B Thd. Size	C	D	E Hex.	Tube Dia.
253015	1/16-20 UNF	1/16-20 UNF SAE-4	.720	1.050	.562	.250
253018	1/16-18 UNF	1/16-18 UNF SAE-6	.830	1.180	.687	.375



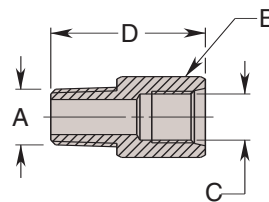
Nut
37° Flared Tube

Cat. No.	Dimensions (In Inches)			
	A Thd. Size	B	C Hex.	Tube Dia.
253032	1/16-20 UNF	.610	.562	.250
253033	1/16-18 UNF	.720	.687	.375



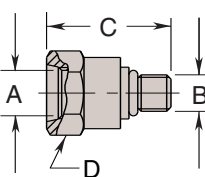
45° Elbow Adapter
NPTF

Cat. No.	Dimensions (In Inches)			
	A Thd. Size	B Thd. Size	C	D
19121	1/4 NPTF	1/4 NPTF	.470	.720
10645	1/4 NPTF	1/4 NPTF	.630	1.050



Straight
BSPF to O.R.B.

Cat. No.	Dimensions (In Inches)			
	A Thd. Size	B Hex.	C	D
253288	1/4 BSPF	.750	1/16-20 UNF SAE-4	1.250



Straight
O.R.B.

Cat. No.	Dimensions (In Inches)			
	A Thd. Size	B Thd. Size	C	D Hex.
351816	1/16-20 UNF SAE-4	1/16-24 UNC SAE-2	1.065	.625



Hydraulic Fluid

For dependable performance of cylinders, clamps, valves, and pumps, these high-grade hydraulic fluids contain anti-rust, anti-foam, and anti-sludge additives. They provide maximum film protection lubricity, maximum heat transfer, and a wide operating temperature range.

Hytec's "environmentally friendly" hydraulic fluid is a biodegradable, non-toxic formulation which can withstand severe operating conditions and provide excellent anti-wear properties.

The "Flame-Out" fire resistant fluid has been approved by United States Mine Safety Health Administration under Referral Register Title 30, Part 35. All fire resistant fluids will burn if heat source is extreme, eg.: hot slabs, molten steel, etc. They will not, however, propagate the flame and are self-

extinguishing in the absence of an ignition source.

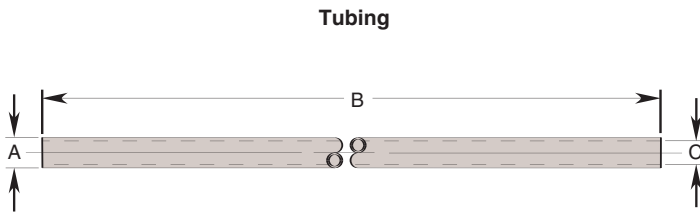
The use of the fire resistant fluid does not require changing the seals in any Hytec equipment as it would when using other types of fire resistant fluids. The standard fluid need only be drained from the complete system and replaced with fire resistant hydraulic fluid.

Tubing

Hytec's low carbon steel tubing conforms to SAE J525. Hytec fittings may not be compatible with other tubing materials and grades (eg. stainless steel). **DO NOT SUBSTITUTE.** Hytec tubing may not be compatible with other fittings. **DO NOT SUBSTITUTE.**

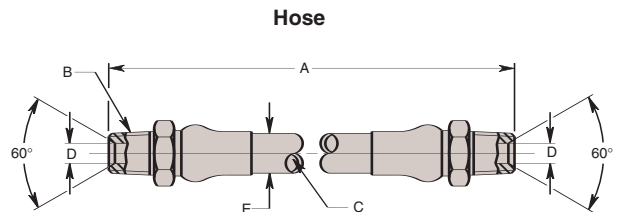
Hoses

Hytec thermoplastic hose conforms to SAE 100R8 specifications.



TUBING			
Cat. No.	Dimensions (In Inches)		
	A Dia.	B (Ft.)	C Dia.
100290	.250	50	.180
9190	.375		.245

*NOTE: Comes in 10 5-ft. pieces. 5,000 psi max.



HOSES					
Cat. No.	Dimensions (In Inches)				
	A (ft.)	B Thd. Size	C Inside Dia.	D Thru Dia.	E Outside Dia.
100281	1	1/4 NPTF	.250	.141	.620
100282	2				
100283	3				
100285	5				
100286	10				
100287	15				

NOTE: 4 in. min. bend radius. 5,000 psi max.

HYDRAULIC FLUID													
Cat. No.	Description	Size	Qty.	Grade (ASTM)	Specific Gravity @60°F	Color (ASTM)	Flash Point (°F)	Fire Point (°F)	Pour Point (°F)	Viscosity		Viscosity Index (Min.)	Foam Test (ASTM)
										SUS @ 100°F	SUS @ 210°F		
9636	Hydraulic Oil	1 Quart	1	215	.875	2.0	400	430	-30	215	48	100	Pass
9636-12			12										
9637		1 Gallon	1										
9637-4			4										
9638		2½ Gal.	1										
9638-2			2										
9639	Flame-Out fire resistant hydraulic fluid	1 Gallon	1	220	.910	Light Amber	500	550	-15	200	55	140	
9639-4			4										
9645	"Environmentally Friendly" hydraulic fluid	2½ Gal.	1	—	.922	2.0	432	—	-22	183	53	213	—
9646													

Hydraulic Fluid, Hoses & Tubing



Hytec offers both an economical standard poppet type coupler and labor-saving push-to-connect flat face coupler. Both styles are rated at 5,000 psi that has ¼" NPTF connections.

The standard coupler is recommended for lower cycle applications where two hand connections and slight spillage after disconnection is acceptable.

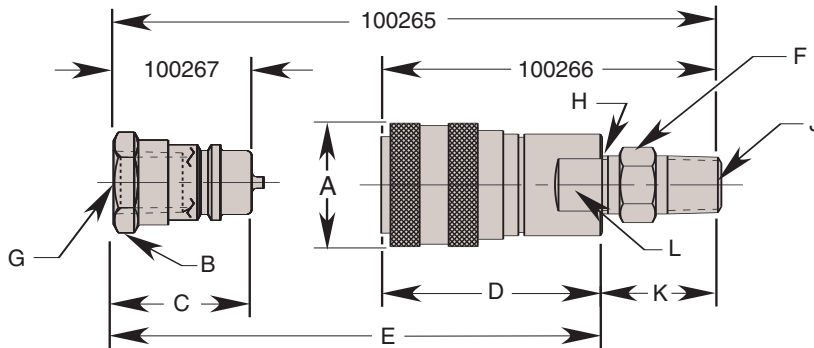
The push-to-connect coupler is easier to connect and keep clean, making it ideal for use in high cycle applications like pallet coupling. (This coupler is found on our manual pallet valve.) The flat face design eliminates the waste and mess associated with other types of hydraulic couplers. The

coupler collar is lockable, making it even more secure in moving applications.

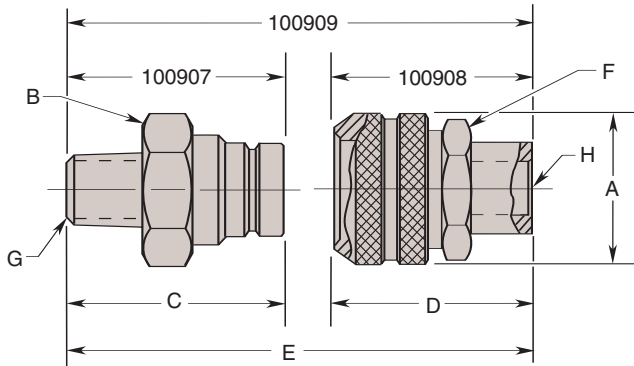
Features:

- Standard and push-to-connect versions
- ¼" NPTF connections
- 5,000 psi max. operating pressures

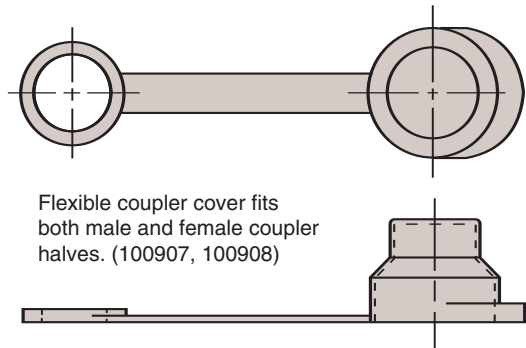
Standard



Push-to-connect



Coupler Cover - 251779



Flexible coupler cover fits both male and female coupler halves. (100907, 100908)

Cat. No.	Dimensions (In Inches)										
	A Dia.	B Hex.	C	D	(E Coupled)	F Hex.	G Thread Size	H Thread Size	J Thread Size	K	L Flats
100265	1.062	.750	1.190	1.900	2.400	.625	¼ NPTF	¼ NPTF	¼ NPTF	1.062	.750
100266				-	-		-				
100267	-	-	-	-	-	-	¼ NPTF	-	-	-	-
100907	-	1.000	1.720	-	-	-	¼ NPTF	-	-	-	-
100908	1.060	-	-	1.790	-	1.00	-	¼ NPTF	-	-	-
100909		1.000	1.720	2.970	-						



9614

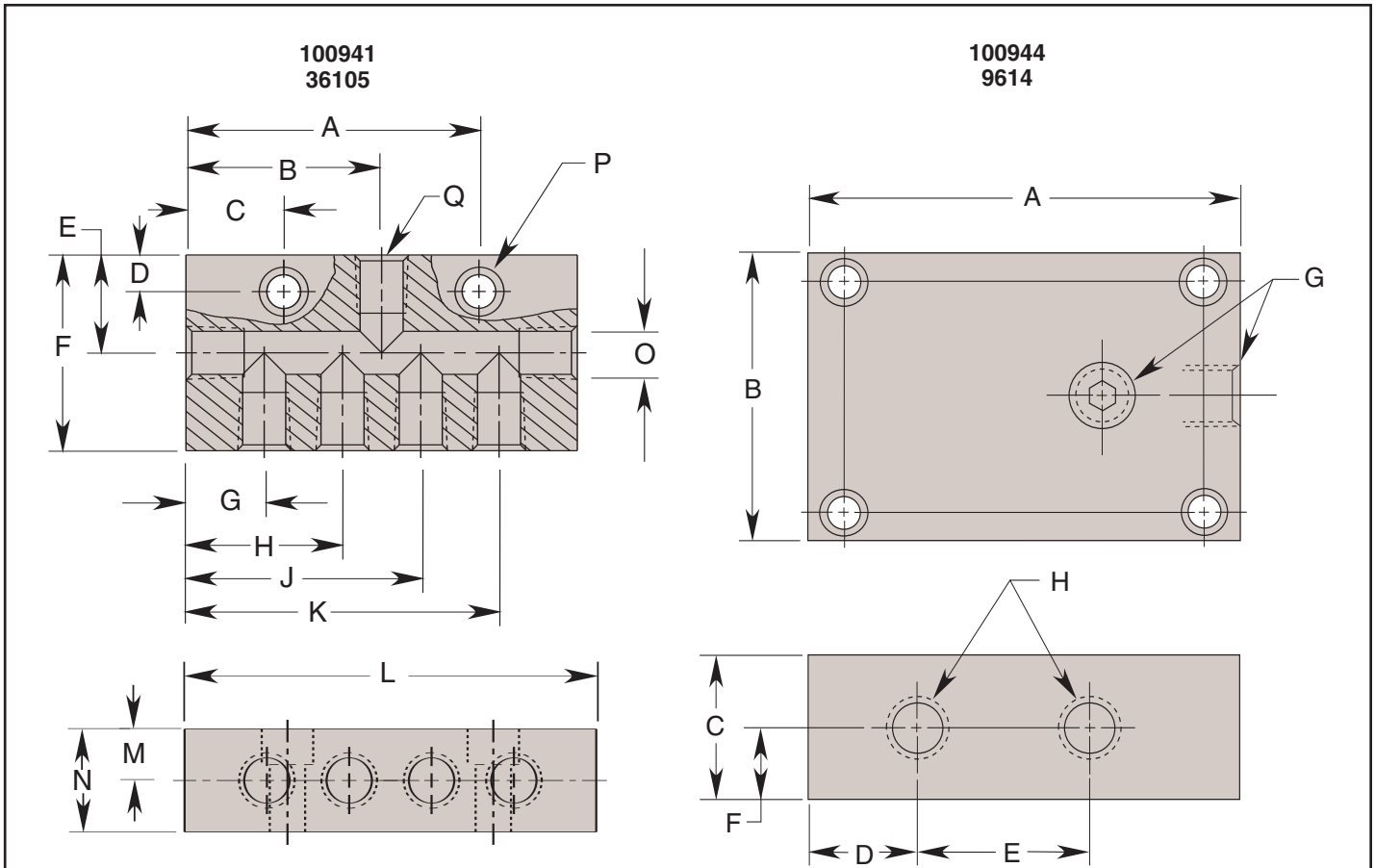
The 9614 manifold assembly comes as standard equipment on Hytec pumps No. 100186, 100280, 100190, 100200, 100174, 100220 and 100211. It provides the connection points for pressure and return lines as well as a gauge and/or pressure switch. These pumps are designed to have this manifold removed and directly replaced by our number 9504 pump-mounted control valve.

Use this manifold to convert these pumps back to manifold outlet, remote mounted valve applications. Includes manifold, reservoir return tube, mounting hardware and two 1/4" NPT plugs. The 100944 is available for making SAE O-ring connections.

Manifold 36105 is ideal for connecting

multiple actuators to a single pressure source. Used with conventional 1/4" NPT fittings, the seven ports are internally connected with large diameter passages to reduce restriction. The ports on any of the four sides can be plugged if not used. Two mounting holes are provided in the manifold to secure it to the fixture or machine tool. Since there are no ports in the top or bottom mounting faces, multiple manifolds can be stacked to save space.

Manifold 100941 shares the same features but provides SAE O-ring ports.



Cat. No.	Dimension (In Inches)							
	A	B	C	D	E	F	G Thread Size	H Thread Size
9614	3.750	2.500	1.250	.938	1.500	.750	1/4 NPTF	1/4 NPTF
100944								9/16-18 UNF SAE-6

Cat. No.	Dimensions (In Inches)															
	A	B	C	D	E	F	G	H	J	K	L	M	N	O Thread Size (6 places)	P Dia.	Q Thread Size
36105														1/4 NPTF		1/4 NPTF
100941	3.000	2.000	1.000	.375	1.000	2.000	.800	1.600	2.400	3.200	4.000	.500	1.000	7/16-20 UNF SAE-4	.344	9/16-18 UNF SAE-6



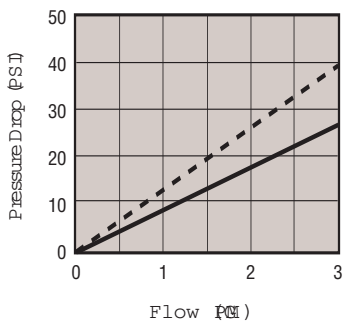
No. 100845 - This high pressure filter is intended for use in systems where there is flow in only one direction such as pressure or return lines between the power source and control valve. This in-line filter has a removable/replaceable sintered bronze element. The element is accessible without removing the filter body from the installation.

No. 100857, 100919 - These high pressure, non-bypass, in-line filters are suitable for both unidirectional and bi-directional circuits. This allows the filter to be installed in single acting or double acting circuits downstream from the control valve where the fluid flows in both directions. It's specially reinforced, stainless steel mesh filter element

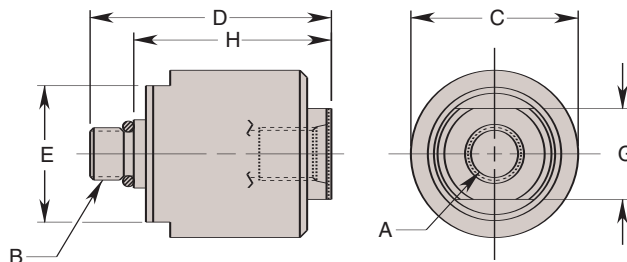
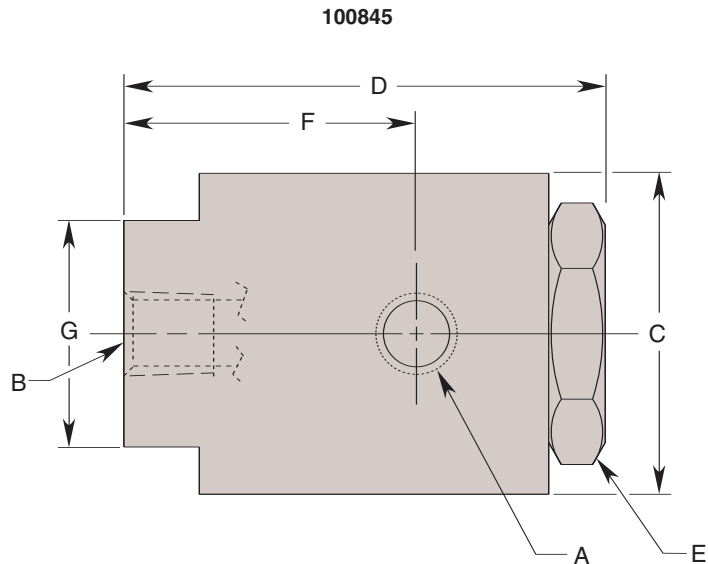
resists fatigue from pressure spikes. Both are ideal for use in pallet coupling circuits to protect components from contaminants introduced at the couplers. The No. 100857 is ideally suited for Hytec's No. 100223 manual pallet valve. Simply remove the coupler from the pallet valve and install this filter between the valve and coupler.

Features

- 5,000 psi maximum operating pressure
- Low pressure drop
- Removable/replaceable elements



Performance
 - - - Filter No. 100857, 100919
 — Filter No. 100845
 Test Fluid: Hytec Hydraulic Oil
 @ 100° F (215 SUS)



Cat. No.	Specifications		Dimensions (In Inches)								
	Filtration Nominal/Absolute	Max. Operating Pressure (PSI)	A Inlet Port	B Outlet Port	C Dia.	D	E		F	G Flats	H
							Hex	Flats			
100845	10/- Micron	—	¼ NPTF	¼ NPTF	2.125	3.188	1.500	—	1.938	1.500	—
100857	10/25 Micron	5,000			1.380	2.100	—	1.125	—	.750	1.630
100919			⅜-20 UNF SAE-4	⅜-20 UNF SAE-4							

Pressure Gauges



Hytec offers standard hydraulic pressure gauges for monitoring system pressure. All have English and metric scales for convenience.

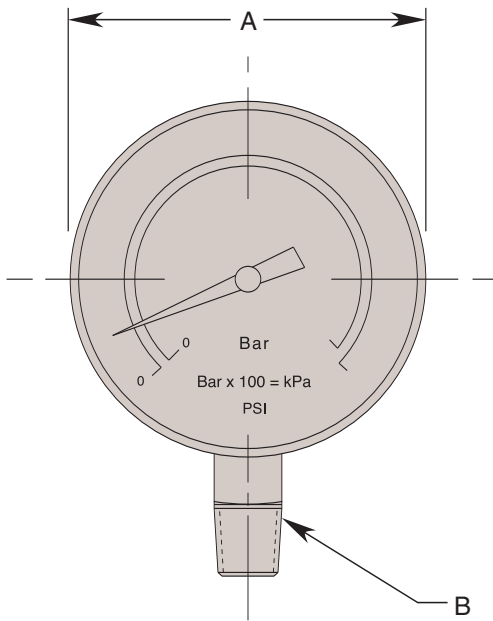
Liquid-filled gauges are recommended for high cycle or pulsating applications because the liquid tends to dampen vibration which protects the meter movement and calms "needle quiver." Dry gauges are recommended for applications where fast needle reaction is essential.

All gauges have built-in snubbers. In applications where pressure spikes are present, further snubbing may be necessary for the dry gauge.

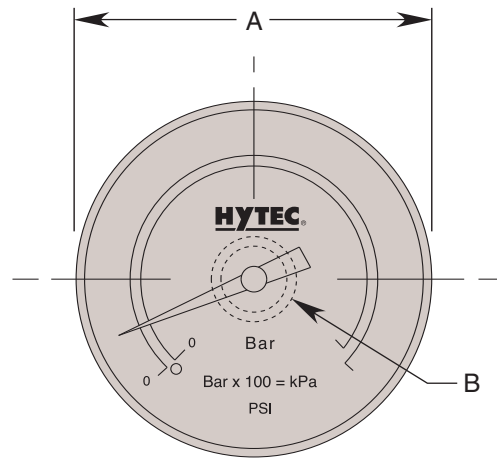
Features:

- Dual scales
- Liquid-filled or dry
- ¼" NPT brass connection, bottom and ⅜" NPT back mount

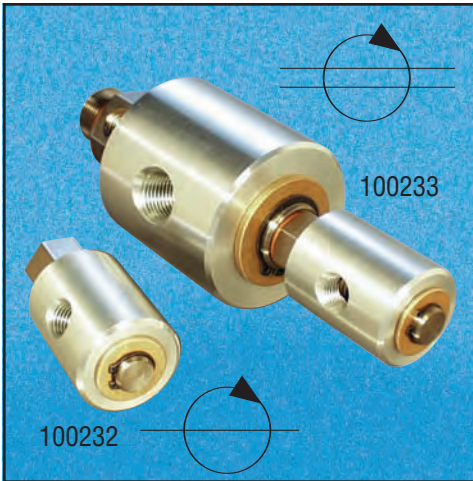
100236, 100238 & 100878



100917



Cat. No.	Specifications					Dimensions (In Inches)	
	Scale	Range	Graduations	Case	ANSI Accuracy	A	B
100236	PSI	0-6,000	100 PSI	Liquid Filled	1.6%	2.625	¼ NPT
	Bar	0-400	10 Bar				
100238	PSI	0-5,000	100 PSI	Dry	2%	2.640	
	kPa	0-35,000	1,000 kPa				
100878	PSI	0-2,000	50 PSI	Liquid Filled	1.6%	1.770	⅜ NPT Back Mount
	Bar	0-140	2 Bar				
100917	PSI	0-6,000	1,000 PSI	Liquid Filled	1.6%	1.770	⅜ NPT Back Mount
	Bar	0-400	100 Bar				



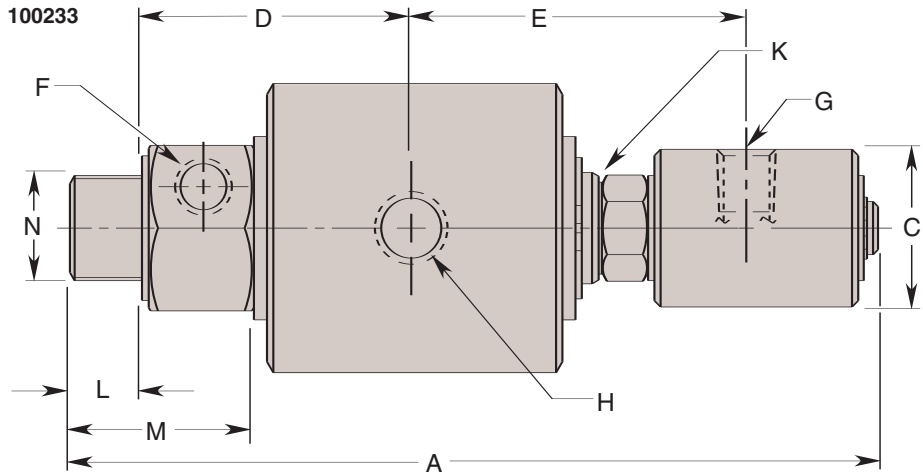
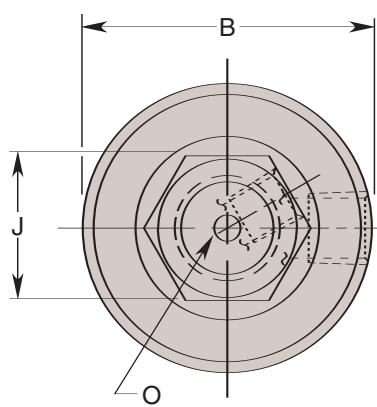
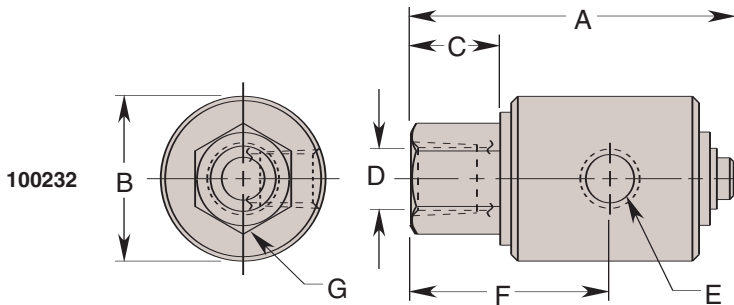
Rotating unions allow hydraulic or air power sources to be continuously connected in rotating applications allowing the use of constant pressure hydraulic workholding on lathes, boring machines, rotary transfer tables, etc. The single circuit union is used for single-acting systems. The dual circuit version is necessary for double-acting systems or for two separate single-acting circuits. The unique design of the dual circuit union eliminates the possibility of inter-passage leakage so different fluids can be used in each circuit without danger of intermixing.

For maximum seal life, combined conditions of both maximum pressure and maximum rpm should be avoided.

Rotors are plated for wear and corrosion resistance. Both versions use a low torque, balanced seal design.

Features:

- Single and dual circuit designs
- Range 28 in. hg. to 3,000 psi max.
- 250 rpm max.
- Balanced seal design
- Low torque



Cat. No.	Specifications				Dimension (In Inches)						
	Circuits	†Max. Press. (PSI)		†Max. Speed (RPM)	A	B Dia.	C	D Thread Size	E Thread Size	F	G Hex.
		Air	Hyd.								
100232	1	150	3,000	250	2.938	1.500	.812	3/8 NPTF	1/4 NPTF	1.812	.875

NOTE: † Operation at maximum pressure combined with maximum speed should be avoided.

Cat. No.	Specifications				Dimension (In Inches)													
	Circuits	†Max. Press. (PSI)		†Max. Speed (RPM)	A	B Dia.	C Dia.	D	E	F Port (Circuit A)	G Port (Circuit B)	H Port (Circuit A)	J Hex.	K Hex.	L	M	N Thread Size (Circuit B)	O Dia.
		Air	Hyd.															
*100233	2	150	3,000	250	7.688	2.750	1.500	2.562	3.188	1/4 NPTF	1/4 NPTF	3/8 NPTF	1.375	.875	.688	1.875	1-14 UNS	.250

NOTE: * For optimum performance, high pressure should be thru inner passage.
 † Operation at maximum pressure combined with maximum speed should be avoided.

Pressure Switch



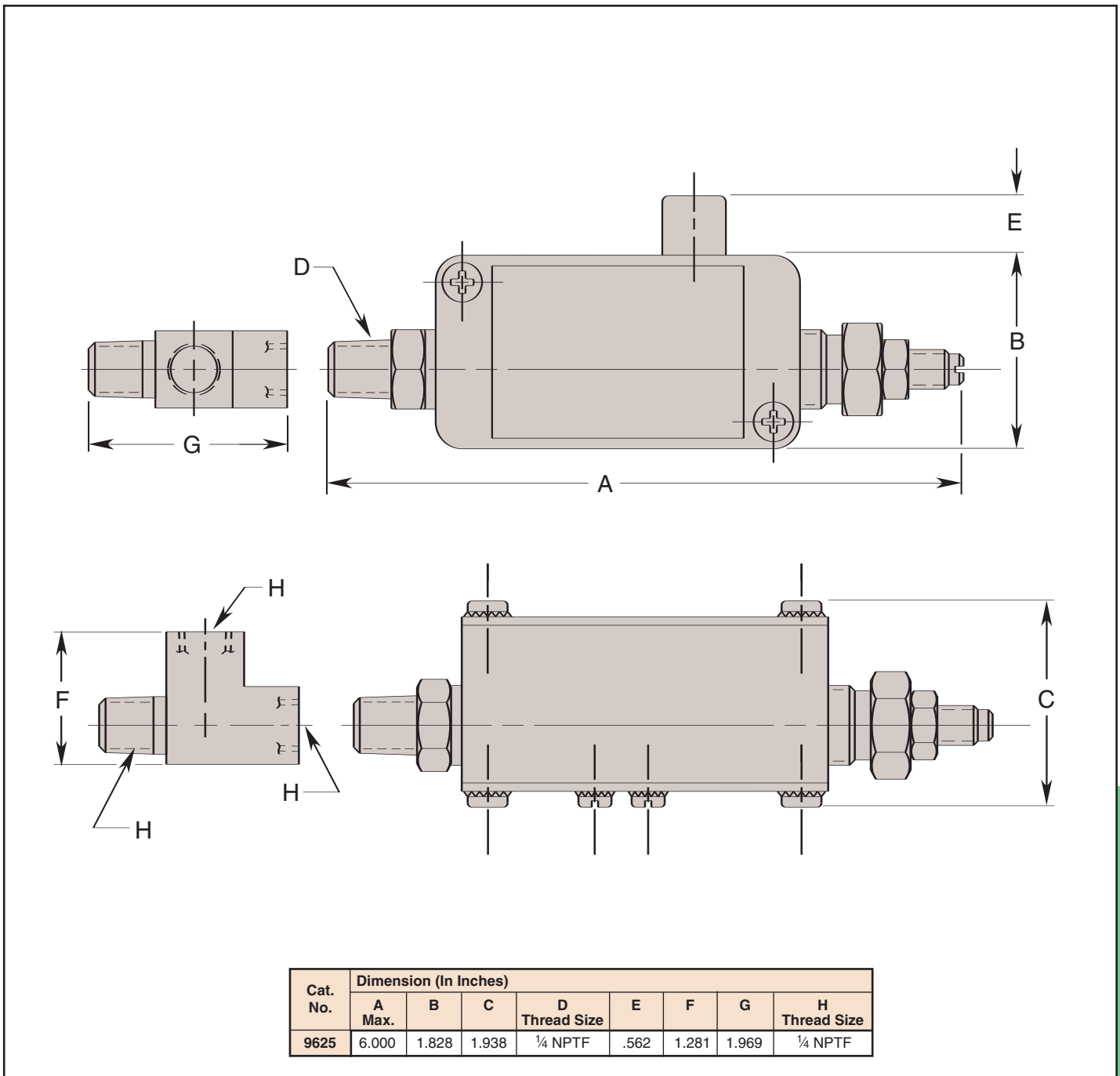
This hydraulic pressure switch is used to either control or monitor system pressure. To control system pressure the switch can be electrically wired into a pump's power circuit. At lower pressures, the switch is closed, causing the pump to run. When the pressure reaches the switch setting, the switch contacts open, stopping the pump. When system demands cause the pressure to drop 300 psi, the contacts will again close to start the pump. This switch is included with all Hytec electric pumps.

When used to monitor system pressure, the switch can be used to signal a warning light or other alarm, or can be interfaced with

a machine tool to shut down a process if pressure falls below the switch setting. Includes ¼" NPT tee for connecting to hydraulic circuit, and two feet of 18 AWG cable.

Features:

- Pressure range: 1,000 to 5,000 psi
- Differential: 200-600 psi, non-adjustable
- Contacts are normally closed – can be converted to normally open
- Contact rating: 250 VAC max.; 5 amps max.
- UL recognized
- Contacts are CSA approved

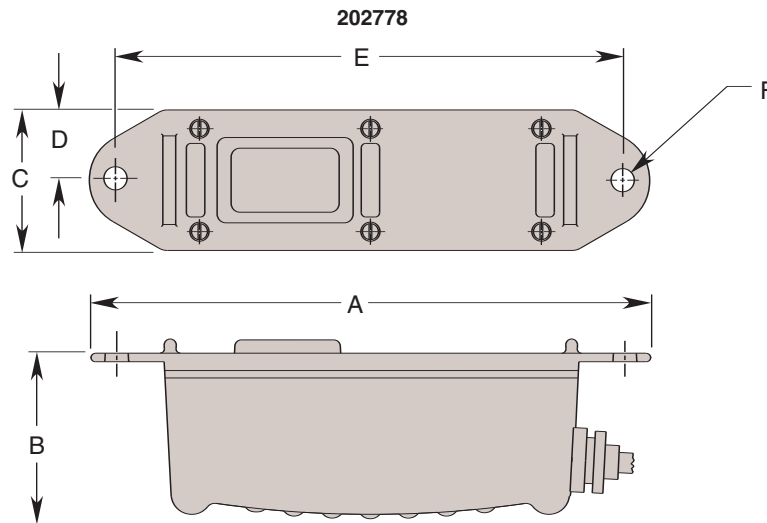




Remote Hand Switch No. 202778
 Ideal for use with the 9612 control valve.
 Includes 10 feet of 18 AWG 3-wire cable, and

a sealed, CSA approved, single-pole double-throw momentary rocker switch in a glass reinforced thermoplastic enclosure.

NOTE: The electric solenoid remote control requires an electrical impulse to activate or release the Booster-Pac clamp control valve. The Booster-Pac will not lose clamping pressure in the event electrical power is lost. If electric power is lost while in the clamp position, pressure can be released manually.



Cat. No.	Dimension (In Inches)					
	A	B	C	D	E	F Dia.
202778	7.630	2.460	1.930	.965	6.880	.315



Fluid Level/Temperature Gauge No. 350431

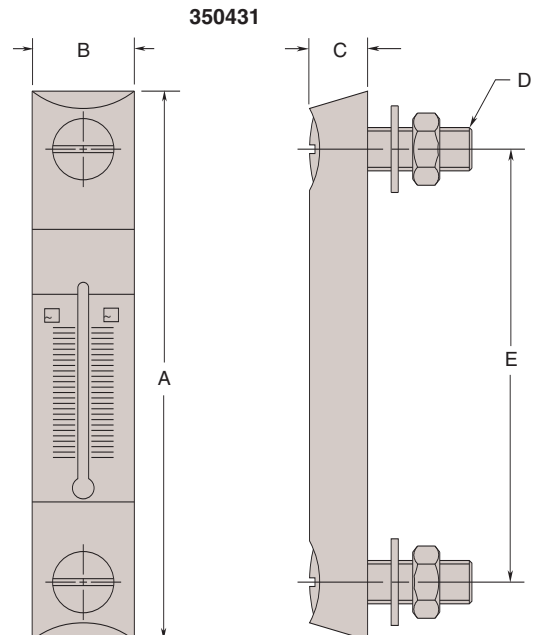
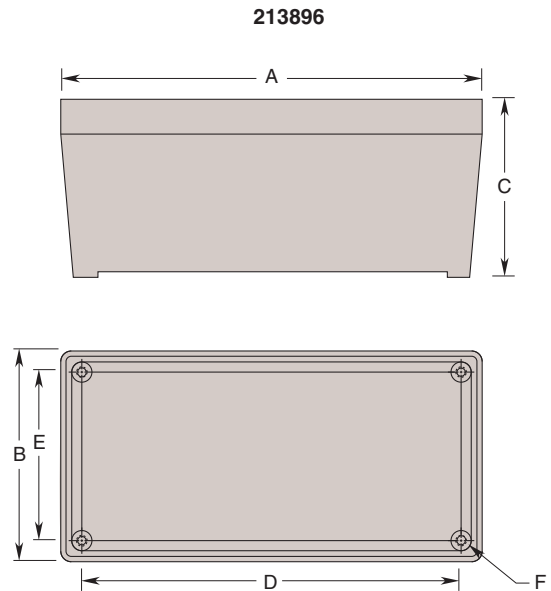
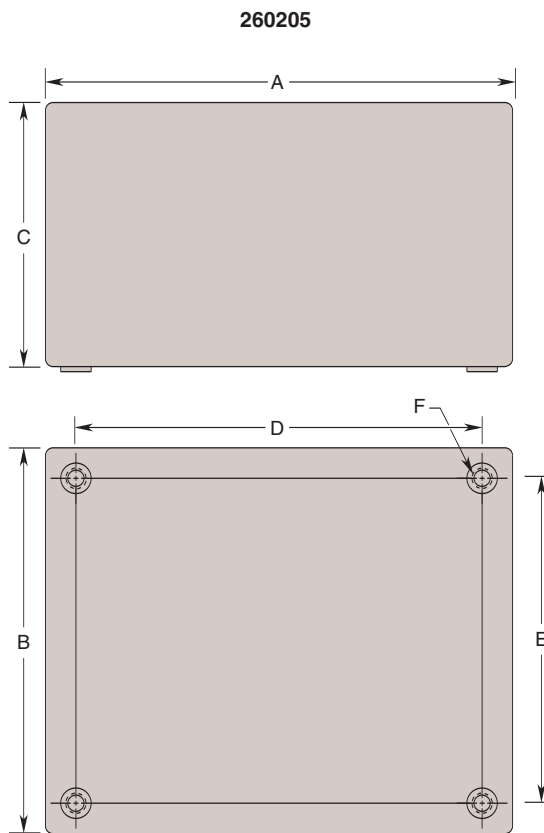
This combination fluid level/temperature gauge allows you to visually check the level of the hydraulic fluid in your Hytec pump without opening the fill port. Its large 1 1/4" wide, 6 3/8" high viewing area lets you see the fluid level from a distance. Built into the gauge is a dual scale thermometer that reads 32–212°F and 0–100°C. To mount, simply drill two 1/2" diameter holes in the reservoir and attach the gauge. This gauge is designed for use on pumps with 2.5 gal. and 5.7 gal. metal reservoirs as well as 2 gal. polyethylene reservoirs.

Reservoir Conversion Kit No. 260205

Includes 2.5 gallon (375 cu. in. usable) metal reservoir with a gasket and all the hardware needed to replace the plastic reservoir on pump Nos. 100178, 100179, 100178-230, 100179-230, 100922 and 100200.

Reservoir Conversion Kit No. 213896

Includes 107 cu. in. (102 cu. in. usable) metal reservoir, plus gasket and fasteners needed to replace the plastic reservoir on pump Nos. 100280, 100190, 100180, 58219, 100921, 100918, 100174, 100191 and 100920.



Cat. No.	Dimension (In Inches)						
	A	B	C	D	E	F Thread	
						Size	Depth
260205	11.500	9.500	6.585	10.000	8.000	*.212 dia.	.600
213896	10.000	5.000	4.225	9.000	4.000	1/2-20 UNF	.600

NOTE: * Use 1/4-20 UNC self-tapping screw.

Cat. No.	Dimension (In Inches)				
	A	B	C	D Thread Size	E
350431	6.340	1.180	.670	M12 x 1.75	5.000



What is the biggest fear you have about hydraulic pallet systems? For most operators, it is that you'll transfer a pallet into a machining center only to find that the hydraulic clamping system has failed to operate. Or worse yet, slowly lost pressure while it was waiting in the pallet pool.

Pressure monitoring systems for hydraulic fixtures have always been a good idea. Until now, however, the systems were complex, high maintenance, took up space and were very expensive.

Hytec has introduced a new small, simple contact, pallet pressure monitoring system that eliminates the need for batteries on the pallet! The system consists of three parts: a pressure switch, a transmitter and a receiver.

On the pallet, the pressure switch is connected to the transmitter. At the workstation or in the machine, the receiver is connected to your machine's controller or cell PLC.

When the transmitter is in close proximity to the receiver, it inductively powers the on-pallet electrical system. No batteries are required! The transmitter sends a signal to the receiver indicating that the pallet is pressurized to above the minimum pressure set by the pressure switch.

Powered by your 24VDC PLC, you can program machine shut-down, pallet rejection or simply warn your operator should system pressure fall below the pressure switch setting.

A typical system for pallet pressure monitoring requires one receiver for each location where pressure is being monitored. Each

pallet requires one transmitter and one pressure switch.

The system can be used to monitor pressure as the transmitter on the pallet passes near the receiver as it travels into the machining center. In applications where the receiver can be mounted in the machine where the pallet is fixed or where the receiver can follow the pallet, constant, non-contact monitoring is possible.

The transmitter and receiver pair can be used with any number of switches in series to monitor multiple pressures or positions. (Switches must be designed for low amperage applications.) Additional switches might be used to monitor workpiece position or ensure that mechanical fixture elements have actuated. This system is also capable of powering one, non-contact proximity sensor, either with or without pressure switches. Contact Hytec for additional application information.

ORDERING INFORMATION

110137 - Receiver: Consists of a receiver with 6.5 ft. of cable, mounting bracket and two M18 jam nuts. 24VDC, Load current capacity - 100mA max. Maximum transmission sensing distance .157 in. PNP current sourcing, normally open.

110138 - Transmitter: Consists of transmitter with 3.3 ft. of cable, mounting bracket and two M18 jam nuts.

110143 - Pressure Switch: 1000-5000 psi max. Normally open 1/8 NPT.



- Simple
- No Batteries
- Low Cost
- No Maintenance
- Small
- Non-Contact