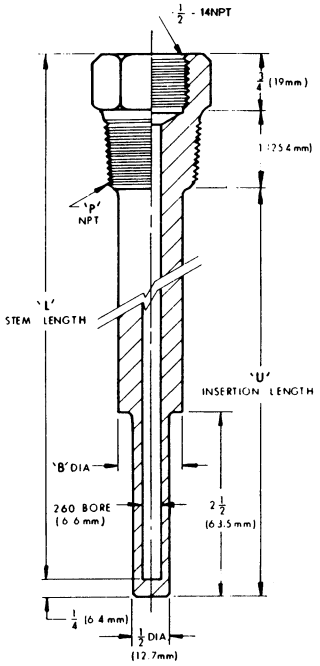
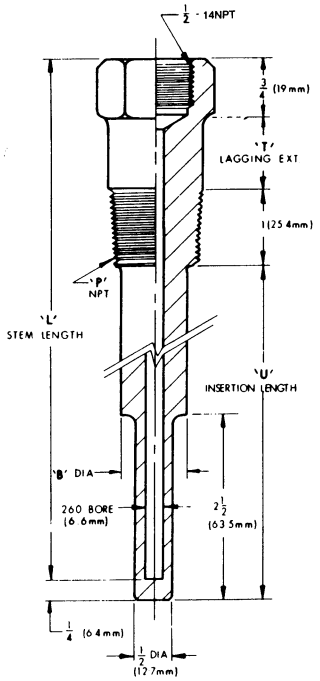
Thermowells & Protection Tubes

.260 Bore – Standard Stepped



Process Connection 'P'	Part #	Stem Length 'L'		Insertion Length 'U'		'B' Diameter		Overall Length O.A.L.	
		in	mm	in	mm	in	mm	in	mm
½ -14-NPT	TW01A08-2.5	2½	64	1	25	-	-	2¾	70
	TW01A08-04	4	102	2½	64	-	-	4¼	108
	TW01A08-06	6	152	4½	114	5/8	16	6¼	159
	TW01A08-7.5	7½	191	6	152	"	"	7¾	196
	TW01A08-09	9	229	7½	191	"	"	9¼	235
	TW01A08-12	12	305	10½	267	"	"	12¼	311
	TW01A08-15	15	381	13½	343	"	"	15¼	387
	TW01A08-18	18	457	16½	419	"	"	18¼	464
	TW01A08-21	21	533	19½	495	"	"	21¼	540
	TW01A08-24	24	610	22½	572	"	"	24¼	616
¾ -14-NPT	TW01A12-2.5	2½	64		25	-	-	2¾	70
	TW01A12-04	4	102	2½	64	-	-	4¼	108
	TW01A12-06	6	152	4½	114	¾	19	6¼	159
	TW01A12-7.5	7½	191	6	152	"	"	7¾	196
	TW01A12-09	9	229	7½	191	"	"	9¼	235
	TW01A12-12	12	305	10½	267	"	"	12¼	311
	TW01A12-15	15	381	13½	343	"	"	15¼	387
	TW01A12-18	18	457	16½	419	"	"	18¼	464
	TW01A12-21	21	533	19½	495	"	"	21¼	540
	TW01A12-24	24	610	22½	572	"	"	24¼	616
1-11½ -NPT	TW01A16-2.5	2½	64	1	25	-	-	2¾	70
	TW01A16-04	4	102	2½	64	-	-	4¼	108
	TW01A16-06	6	152	4½	114	7/8	22	6¼	159
	TW01A16-7.5	7½	191	6	152	"	"	7¾	196
	TW01A16-09	9	229	7½	191	"	"	9¼	235
	TW01A16-12	12	305	10½	267	"	"	12¼	311
	TW01A16-15	15	381	13½	343	"	"	15¼	387
	TW01A16-18	18	457	16½	419	"	"	18¼	464
	TW01A16-21	21	533	19½	495	"	"	21¼	540
	TW01A16-24	24	610	22½	572	"	"	24¼	616

*Note: 1 1/8 HEX solid bar stock used for ½ NPT & ¾ NPT process connection. 1 3/8 HEX solid bar stock used for 1" NPT process connection. Plug & Chain available upon request (optional).



Process Connection 'P'	Part #	Stem Length 'L'		Insertion Length 'U'		Lagging Extension 'T'		'B' Diameter		Overall Length O.A.L.	
		in	mm	in	mm	in	mm	in	mm	in	mm
½ -14-NPT	TW11A08-06	6	152	2½	64	2	51	-	-	6¼	159
	TW11A08-7.5	7½	191	3	76	3	66	5/8	16	7¾	196
	TW11A08-09	9	229	4½	114	"	76	"	"	9¼	235
	TW11A08-12	12	305	7½	191	"	"	"	"	12¼	311
	TW11A08-15	15	381	10½	267	"	"	"	"	15¼	387
	TW11A08-18	18	457	13½	343	"	"	"	"	18¼	464
	TW11A08-21	21	533	16½	419	"	"	"	"	21¼	540
	TW11A08-24	24	610	19½	495	"	"	"	"	24¼	616
¾ -14-NPT	TW11A12-06	6	152	2½	64	2	51	-	-	6¼	159
	TW11A12-7.5	7½	191	3	76	3	66	¾	19	7¾	196
	TW11A12-09	9	229	4½	114	"	76	"	"	9¼	235
	TW11A12-12	12	305	7½	191	"	"	"	"	12¼	311
	TW11A12-15	15	381	10½	267	"	"	"	"	15¼	387
	TW11A12-18	18	457	13½	343	"	"	"	"	18¼	464
	TW11A12-21	21	533	16½	419	"	"	"	"	21¼	540
	TW11A12-24	24	610	19½	495	"	"	"	"	24¼	616
1-11½ -NPT	TW11A16-06	6	152	2½	64	2	51	-	-	6¼	159
	TW11A16-7.5	7½	191	3	76	3	66	7/8	22	7¾	196
	TW11A16-09	9	229	4½	114	"	76	"	"	9¼	235
	TW11A16-12	12	305	7½	191	"	"	"	"	12¼	311
	TW11A16-15	15	381	10½	267	"	"	"	"	15¼	387
	TW11A16-18	18	457	13½	343	"	"	"	"	18¼	464
	TW11A16-21	21	533	16½	419	"	"	"	"	21¼	540
	TW11A16-24	24	610	19½	495	"	"	"	"	24¼	616

*Note: Lagging Extensions above are standard. If required Lagging Extension not shown above please specify. Plug & Chain available upon request (optional).
Machine Lagging (optional).

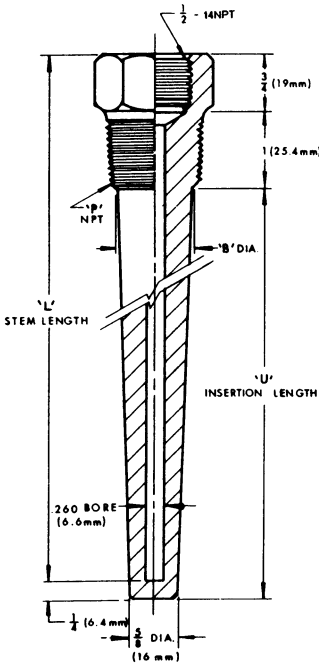
To order: Part number + material + options.

Common Material Codes: A=Brass D=Carbon Steel H=304SS K=310SS L=316SS P=Inconel 600 R=Monel T=Titanium U=Hastalloy C

Toll Free: (800) 567-8686 Tel: 905 477-2133 Fax: (905) 477-4219 Website: www.alphacontrols.com

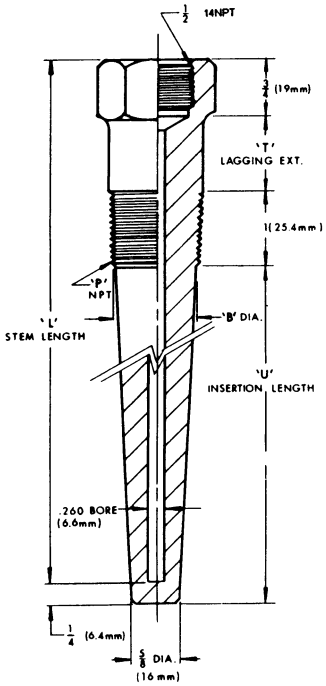
CONTRÔLES ET INSTRUMENTATION
ALPHA
CONTROLS AND INSTRUMENTATION

.260 Bore – Standard Tapered



Process Connection 'P'	Part #	Stem Length 'L'		Insertion Length 'U'		'B' Diameter		Overall Length O.A.L.	
		in	mm	in	mm	in	mm	in	mm
¾ -14-NPT	TW03A12-04	4	102	2½	64	⅞	22	4¼	108
	TW03A12-06	6	152	4½	114	"	"	6¼	159
	TW03A12-7.5	7½	191	6	152	"	"	7¾	196
	TW03A12-09	9	229	7½	191	"	"	9¼	235
	TW03A12-12	12	305	10½	267	"	"	12¼	311
	TW03A12-15	15	381	13½	343	"	"	15¼	387
	TW03A12-18	18	457	16½	419	"	"	18¼	464
	TW03A12-21	21	533	19½	495	"	"	21¼	540
	TW03A12-24	24	610	22½	572	"	"	24¼	616
1-11½ -NPT	TW03A16-04	4	102	2½	64	1 1/16	27	4¼	108
	TW03A16-06	6	152	4½	114	"	"	6¼	159
	TW03A16-7.5	7½	191	6	152	"	"	7¾	196
	TW03A16-09	9	229	7½	191	"	"	9¼	235
	TW03A16-12	12	305	10½	267	"	"	12¼	311
	TW03A16-15	15	381	13½	343	"	"	15¼	387
	TW03A16-18	18	457	16½	419	"	"	18¼	464
	TW03A16-21	21	533	19½	495	"	"	21¼	540
	TW03A16-24	24	610	22½	572	"	"	24¼	616

*Note: 1 1/8 HEX solid bar stock used for ¾-14 NPT process connection. 1 3/8 HEX solid bar stock used for 1 - 11½ NPT process connection. Tapered stem thermowells should be used in high fluid velocity situations! Velocity calculations upon request. Plug & Chain available upon request (optional).



Process Connection 'P'	Part #	Stem Length 'L'		Insertion Length 'U'		Lagging Extension 'T'		'B' Diameter		Overall Length O.A.L.	
		in	mm	in	mm	in	mm	in	mm	in	mm
¾ -14-NPT	TW13A12-06	6	152	2½	64	2	51	⅞	22	6¼	159
	TW13A12-7.5	7½	191	3	76	3	76	"	"	7¾	196
	TW13A12-09	9	229	6	152	"	"	"	"	9¼	235
	TW13A12-12	12	305	7½	191	"	"	"	"	12¼	311
	TW13A12-15	15	381	10½	267	"	"	"	"	15¼	387
	TW13A12-18	18	457	13½	343	"	"	"	"	18¼	464
	TW13A12-21	21	533	16½	419	"	"	"	"	21¼	540
	TW13A12-24	24	610	19½	495	"	"	"	"	24¼	616
1-11½ -NPT	TW13A16-06	6	152	2½	64	2	51	1 1/16	27	6¼	159
	TW13A16-7.5	7½	191	3	76	3	76	"	"	7¾	196
	TW13A16-09	9	229	6	152	"	"	"	"	9¼	235
	TW13A16-12	12	305	7½	191	"	"	"	"	12¼	311
	TW13A16-15	15	381	10½	267	"	"	"	"	15¼	387
	TW13A16-18	18	457	13½	343	"	"	"	"	18¼	464
	TW13A16-21	21	533	16½	419	"	"	"	"	21¼	540
	TW13A16-24	24	610	19½	495	"	"	"	"	24¼	616

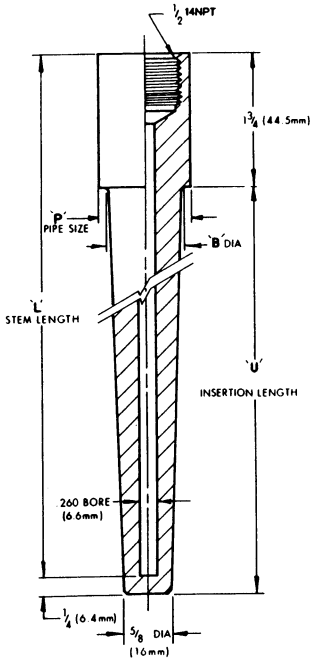
*Note: Lagging Extensions above are standard. If required Lagging Extension not shown above please specify. Plug & Chain available upon request (optional).
Machine Lagging (optional). Velocity calculations upon request.

To order: Part number + material + options.

Common Material Codes: A=Brass D=Carbon Steel H=304SS K=310SS L=316SS P=Inconel 600 R=Monel T=Titanium U=Hastalloy C

Toll Free: (800) 567-8686 Tel: 905 477-2133 Fax: (905) 477-4219 Website: www.alphacontrols.com

.260 Bore – Socket Weld



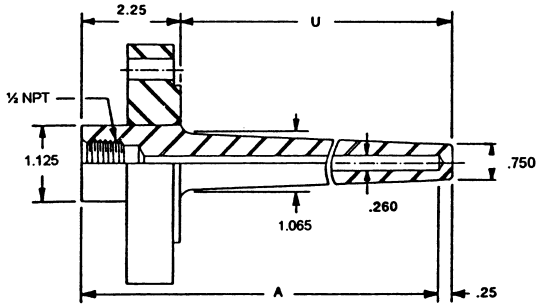
Process Connection 'P'	Part #	Stem Length 'L'		Insertion Length 'U'		'B' Diameter		Overall Length O.A.L.	
		in	mm	in	mm	in	mm	in	mm
¾" Pipe (1.050" DIA) (27mm)	TW23A83-04	4	102	2½	64	⅞	22	4¼	108
	TW23A83-06	6	152	4½	114	"	"	6¼	159
	TW23A83-09	9	229	7½	191	"	"	9¼	235
	TW23A83-12	12	305	10½	267	"	"	12¼	311
	TW23A83-15	15	381	13½	343	"	"	15¼	387
	TW23A83-18	18	457	16½	419	"	"	18¼	464
	TW23A83-21	21	533	19½	495	"	"	21¼	540
	TW23A83-24	24	610	22½	572	"	"	24¼	616
1" Pipe (1.315" DIA) (33mm)	TW23A84-04	4	102	2½	64	1 1/16	27	4¼	108
	TW23A84-06	6	152	4½	114	"	"	6¼	159
	TW23A84-09	9	229	7½	191	"	"	9¼	235
	TW23A84-12	12	305	10½	267	"	"	12¼	311
	TW23A84-15	15	381	13½	343	"	"	15¼	387
	TW23A84-18	18	457	16½	419	"	"	18¼	464
	TW23A84-21	21	533	19½	495	"	"	21¼	540
	TW23A84-24	24	610	22½	572	"	"	24¼	616

*NOTE: Plug & Chain available upon request (optional).

To order: Part number + material + options.

Common Material Codes: A=Brass D=Carbon Steel H=304SS K=310SS L=316SS P=Inconel 600 R=Monel T=Titanium U=Hastalloy

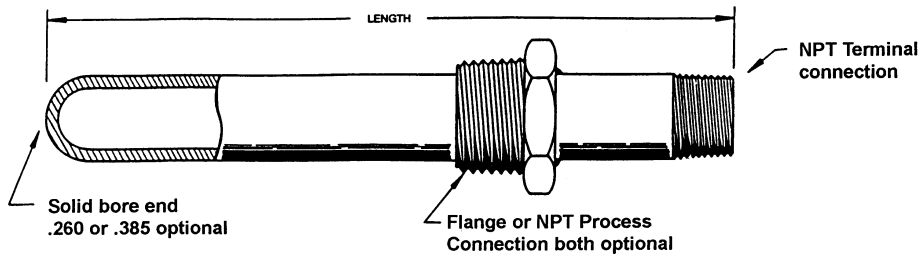
Flanged Thermowell For 1/4" & 3/8" Diameter Elements



To order: Part number + material + options.

Common Material Codes: A=Brass D=Carbon Steel H=304SS K=310SS L=316SS P=Inconel 600 R=Monel T=Titanium U=Hastalloy C

Metal Protection Tube



Another form of a thermowell is the metal protection tube. Metal protection tubes are made from pipe of SP 40, 80, or 160 according to the strength requirements of the application. Pipe diameters are usually from 1/4" to 1". Pipe thermowells are generally less expensive than drilled barstock styles and are used in applications where pressure and velocity are low enough that the stronger drilled barstock types are not required or where long lengths are needed. Mounting is achieved by a flange or threaded bushing welded to the pipe.

Toll Free: (800) 567-8686 Tel: 905 477-2133 Fax: (905) 477-4219 Website: www.alphacontrols.com