



SNAP IT® ENGINEERED TUBE PLUGS

*Superior Sealing Under Pressure™



Snap It tube plugs offer increased safety when plugging heat exchanger, boiler & condenser tubes. Installed properly, these plugs stop leaks without welding or causing damage to the tubes or tube sheets. Our complete line of plugging equipment includes tube preparation and installation tools to properly install in either near or far end applications. Tube Plugging has never been easier or faster.

Snap It Features, Benefits and Safety Rewards:

- Consistent, controlled installation with predictable holding forces
- No welding is required, thus eliminating sparks or open flames
- Design greatly reduces risk of plugs turning into dangerous projectiles, especially during removal
- No need to remove the Rear Head Cover when “through the tube plugging” is performed
- Installation time per plug is only a few minutes resulting in labor cost savings of up to 80+% while greatly reducing downtime
- Eliminates the possibility of damage to tube sheets and tube sheet ligaments from welding or overdriving a tapered plug
- Provides a leak free helium seal to 1×10^{-9} c/sec or greater
- Plug design significantly decreases reloading times when used to plug tubular reactors and ability to not hinder the catalyst loading systems
- Installation and removal equipment can be purchased or rented
- Each plug covers a range of tube diameters and is available in numerous materials
- All tooling is fully compatible for installation and removal of similar mechanical tube plugs
- Can be used to plug tube sheet directly when tube is not present
- Ideally suited to plug tubes through headers in air cooled exchangers
- Meets ASME PCC-2 - 2018 recommendations
- 24/7-365 manufacturing availability and technical support

When Ordering Specify:

- Tube ID (or OD and BWG/Wall Thickness - Snap It Jr only)
- Material
- Maximum Temperature & Pressure
- Type of Tube or Tube Sheet Joint (Rolled, Welded, Etc.)
- # of Brush Kits Needed
- Tooling Needed
- Quantity
- Delivery Date

Snap It Plugs should always be installed within the rolled section of the tubesheet. If the tubes are not rolled into the tubesheet, consult USA Industries (800-456-8721) before proceeding. Remove scale and pitting with USA Industries' Snap It Brushes prior to installation. Any weld droop should be removed prior to plug installation.

WARNING: Never stand in front of any installed plug under pressure. Plugs ejected under pressure can cause serious bodily injury.



Rated holding pressures of 1,000 PSID

Rated holding pressures up to 7,000 PSID

SR. PLUG SIZES		PSID	
0.400	→	0.680	= 7000
0.700	→	0.960	= 4500
0.980	→	2.000	= 2000



Available in the following materials:

(S) Stainless Steel (C) Carbon Steel (B) Brass (J) 70/30 CuNi
(K) 90/10 CuNi (Y) Chrome/Moly (H) Hastelloy (I) Inconel (N) Incoloy
(M) Monel (N200) Nickel 200 (T) Titanium (Z) Zirconium
Other materials available upon request

For more information on USA Industries products, contact us at (713) 941-3797 or go to www.USAIindustries.com



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SNAP IT® JR SPECS & ACCESSORIES

Plug #	Plug Range - Tube ID In(mm)	Pin Length In(mm)	Brush Kit	Positioner	Pull Rod	Channel Head Pull Rod
JR-471-"m"	0.472-0.515 (11.99-13.08)	1.63 (41.4)	JRA-471 ^{†*}	PP-471	I	CHPRA-"X"-I
JR-491-"m"	0.492-0.540 (12.50-13.72)	1.67 (42.4)	JRA-491 ^{†*}	PP-491		
JR-512-"m"	0.513-0.562 (13.03-14.27)	1.59 (40.3)	JRA-512 ^{†*}	PP-512		
JR-524-"m"	0.525-0.585 (13.34-14.86)	1.28 (32.5)	JRA-524 ^{†*}	PP-524		
JR-555-"m"	0.556-0.616 (14.12-15.65)	1.40 (35.6)	JRA-555 ^{†*}	PP-555		
JR-584-"m"	0.585-0.649 (14.86-16.48)	1.32 (35.5)	JRA-584 ^{†*}	PP-584	II	CHPRA-"X"-II
JR-621-"m"	0.622-0.689 (15.80-17.50)	1.57 (39.9)	JRA-621 ^{†*}	PP-621		
JR-649-"m"	0.650-0.713 (16.51-18.11)	1.32 (35.5)	JRA-649 ^{†*}	PP-649		
JR-670-"m"	0.671-0.740 (17.04-18.80)	1.66 (42.2)	JRA-670 ^{†*}	PP-670		
JR-712-"m"	0.713-0.777 (18.11-19.74)	1.32 (35.5)	JRA-712 ^{†*}	PP-712		
JR-735-"m"	0.736-0.810 (18.69-20.57)	1.68 (42.7)	JRA-735 ^{†*}	PP-735		
JR-774-"m"	0.775-0.838 (19.69-21.29)	1.32 (35.5)	JRA-774 ^{†*}	PP-774	III	CHPRA-"X"-III
JR-804-"m"	0.805-0.890 (20.45-22.61)	1.7 (43.2)	JRA-804 ^{†*}	PP-804		
JR-837-"m"	0.838-0.902 (21.29-22.91)	1.32 (35.5)	JRA-837 ^{†*}	PP-837		
JR-853-"m"	0.854-0.949 (21.69-24.10)	1.72 (43.7)	JRA-853 ^{†*}	PP-853		
JR-899-"m"	0.900-0.963 (22.86-24.46)	1.32 (35.5)	JRA-899 ^{†*}	PP-899		
JR-919-"m"	0.920-1.019 (23.37-25.88)	1.76 (44.7)	JRA-919 ^{†*}	PP-919		
JR-962-"m"	0.963-1.027 (24.46-26.09)	1.32 (35.5)	JRA-962 ^{†*}	PP-962		
JR-979-"m"	0.980-1.079 (24.89-27.41)	1.82 (46.2)	JRA-979 ^{†*}	PP-979		
JR-1024-"m"	1.025-1.088 (26.04-27.64)	1.32 (35.5)	JRA-1024 ^{†*}	PP-1024		
JR-1054-"m"	1.055-1.156 (26.80-29.31)	1.90 (48.3)	JRA-1054 ^{†*}	PP-1054		
JR-1087-"m"	1.088-1.152 (27.65-29.26)	1.32 (35.5)	JRA-1087 ^{†*}	PP-1087		
JR-1103-"m"	1.104-1.203 (28.04-30.56)	1.90 (48.3)	JRA-1103 ^{†*}	PP-1103		
JR-1149-"m"	1.150-1.213 (29.21-30.81)	1.32 (35.5)	JRA-1149 ^{†*}	PP-1149		
JR-1171-"m"	1.172-1.270 (29.77-32.26)	2.00 (50.8)	JRA-1171 ^{†*}	PP-1171		
JR-1212-"m"	1.213-1.336 (30.81-33.93)	2.00 (50.8)	JRA-1212 ^{†*}	PP-1212		

Notes:

- "m" - Substitute the suffix "m" with the following material code: C - carbon steel, S - 316 stainless, B - brass, Y - Cr/Moly, M - monel, K - 90/10 CuNi, J - 70/30 CuNi. Other Materials Available.
- "X" - For Brass, Copper, or Copper Nickel tubes add the Suffix -LD to the Brush Kit. Tube Preparation Brushes are required for use with Snap It™ Jr Plugs.
- "X" - Channel Head Pull Rod Assemblies are available in 2', 4', or 6' lengths. Insert the appropriate # for the length required. For Through the Tube Applications, Extension Assemblies (See page 7T) are available in 2', 4', or 6' lengths. Specify the total # of each size needed for your application.



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SNAP IT® SR SPECS & ACCESSORIES

SR Kit Part No.	Plug Range - Tube ID Inches (mm)	Brush Kit	Positioner	Plug Positioner	Pull Rod Assembly	Channel Head Pull Rod		
SR-400-"m"	0.401-0.420 (10.16-10.68)	SRA-400- ¹⁹ 611	PP-400	PP 400-440	I	CHPRA-"X"-I		
SR-420-"m"	0.421-0.440 (10.69-11.19)	SRA-420- ¹⁹ 611	PP-420					
SR-440-"m"	0.441-0.460 (11.20-11.70)	SRA-440- ¹⁹ 611	PP-440					
SR-460-"m"	0.461-0.480 (11.71-12.21)	SRA-460- ¹⁹ 611	PP-460	PP 460-500				
SR-480-"m"	0.481-0.500 (12.22-12.72)	SRA-480- ¹⁹ 611	PP-480					
SR-500-"m"	0.501-0.520 (12.73-13.22)	SRA-500- ¹⁹ 611	PP-500					
SR-520-"m"	0.521-0.540 (13.23-13.73)	SRA-520- ¹⁹ 611	PP-520	PP 520-580				
SR-540-"m"	0.541-0.560 (13.74-14.24)	SRA-540- ¹⁹ 611	PP-540					
SR-560-"m"	0.561-0.580 (14.25-14.75)	SRA-560- ¹⁹ 611	PP-560					
SR-580-"m"	0.581-0.600 (14.76-15.26)	SRA-580- ¹⁹ 611	PP-580					
SR-600-"m"	0.601-0.620 (15.27-15.76)	SRA-600- ¹⁹ 611	PP-600	PP 600-680	II	CHPRA-"X"-II		
SR-620-"m"	0.621-0.640 (15.77-16.27)	SRA-620- ¹⁹ 611	PP-620					
SR-640-"m"	0.641-0.660 (16.28-16.78)	SRA-640- ¹⁹ 611	PP-640					
SR-660-"m"	0.661-0.680 (16.79-17.27)	SRA-660- ¹⁹ 611	PP-660					
SR-680-"m"	0.681-0.700 (17.28-17.79)	SRA-680- ¹⁹ 611	PP-680					
SR-700-"m"	0.701-0.720 (17.80-18.30)	SRA-700- ¹⁹ 611	PP-700	PP 700-780				
SR-720-"m"	0.721-0.740 (18.31-18.81)	SRA-720- ¹⁹ 611	PP-720					
SR-740-"m"	0.741-0.760 (18.82-19.32)	SRA-740- ¹⁹ 611	PP-740					
SR-760-"m"	0.761-0.780 (19.33-19.83)	SRA-760- ¹⁹ 611	PP-760					
SR-780-"m"	0.781-0.800 (19.84-20.34)	SRA-780- ¹⁹ 611	PP-780					
SR-800-"m"	0.801-0.820 (20.35-20.84)	SRA-800- ¹⁹ 611	PP-800	PP 800-860				
SR-820-"m"	0.821-0.840 (20.85-21.35)	SRA-820- ¹⁹ 611	PP-820					
SR-840-"m"	0.841-0.860 (21.36-21.86)	SRA-840- ¹⁹ 611	PP-840					
SR-860-"m"	0.861-0.880 (21.87-22.37)	SRA-860- ¹⁹ 611	PP-860					
SR-880-"m"	0.881-0.900 (22.38-22.87)	SRA-880- ¹⁹ 611	PP-880	PP 880-960			III	CHPRA-"X"-III
SR-900-"m"	0.901-0.920 (22.88-23.38)	SRA-900- ¹⁹ 611	PP-900					
SR-920-"m"	0.921-0.940 (23.39-23.87)	SRA-920- ¹⁹ 611	PP-920					
SR-940-"m"	0.941-0.960 (23.88-24.40)	SRA-940- ¹⁹ 611	PP-940					
SR-960-"m"	0.961-0.980 (24.41-24.89)	SRA-960- ¹⁹ 611	PP-960					
SR-980-"m"	0.981-1.000 (24.90-25.40)	SRA-980- ¹⁹ 611	PP-980	PP 980-1060				
SR-1000-"m"	1.001-1.020 (25.41-25.91)	SRA-1000- ¹⁹ 611	PP-1000					
SR-1020-"m"	1.021-1.040 (25.92-26.42)	SRA-1020- ¹⁹ 611	PP-1020					
SR-1040-"m"	1.041-1.060 (26.43-26.92)	SRA-1040- ¹⁹ 611	PP-1040					
SR-1060-"m"	1.061-1.080 (26.93-27.43)	SRA-1060- ¹⁹ 611	PP-1060					
SR-1080-"m"	1.081-1.100 (27.44-27.94)	SRA-1080- ¹⁹ 611	PP-1080	PP 1080-1160				
SR-1100-"m"	1.101-1.120 (27.95-28.45)	SRA-1100- ¹⁹ 611	PP-1100					
SR-1120-"m"	1.121-1.140 (28.46-28.96)	SRA-1120- ¹⁹ 611	PP-1120					
SR-1140-"m"	1.141-1.160 (28.97-29.46)	SRA-1140- ¹⁹ 611	PP-1140					
SR-1160-"m"	1.161-1.180 (29.47-29.97)	SRA-1160- ¹⁹ 611	PP-1160					

Notes:

Standard Sr Kit includes 10 plugs, 1 Brush and 1 Go/No Go Gauge. However, plugs and items can be ordered individually - Consult factory for more information.

"m" - Substitute the suffix "m" with the following material code: C - carbon steel, S - 316 stainless, B - brass, Y - Cr/Moly, M - monel, K - 90/10 CuNi, J - 70/30 CuNi. Other Materials Available.

"*" Brush and Go/No Go Gauge furnished with every 10 plugs.

"X" Channel Head Pull Rod Assemblies (See Page 7T) are available in 2', 4', or 6' lengths. Insert the appropriate # for the length required.



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SNAP IT® SIZING CHART FOR ROLLED TUBES JR. MODEL

	TUBE GAUGE		TUBE O.D.*					
	BWG	WALL TKNS	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"
Rolled I.D.	8				.578	.703	.953	1.203
Near End	8				555-M	670-M	919-M	1171-M
Far End	8				524-M	649-M	899-M	1171-M
Rolled I.D.	9	0.148		.484	.609	.734	.984	1.234
Near End	9	0.148		471-M	584-M	712-M	979-M	1212-M
Far End	9	0.148		471-M	555-M	670-M	919-M	1171-M
Rolled I.D.	10	0.134		.509	.634	.759	1.009	1.259
Near End	10	0.134		491-M	621-M	735-M	979-M	1212-M
Far End	10	0.134		471-M	584-M	712-M	962-M	1171-M
Rolled I.D.	11	0.12		.534	.659	.784	1.034	1.284
Near End	11	0.12		524-M	649-M	774-M	1024-M	1212-M
Far End	11	0.12		491-M	621-M	735-M	979-M	1212-M
Rolled I.D.	12	0.109		.554	.679	.804	1.054	1.304
Near End	12	0.109		524-M	670-M	774-M	1024-M	1212-M
Far End	12	0.109		512-M	621-M	735-M	979-M	1212-M
Rolled I.D.	13	0.095		.579	.704	.829	1.079	1.329
Near End	13	0.095		555-M	670-M	804-M	1054-M	1212-M
Far End	13	0.095		524-M	649-M	774-M	1024-M	1212-M
Rolled I.D.	14	0.083	.476	.601	.726	.851	1.101	
Near End	14	0.083	471-M	584-M	712-M	837-M	1087-M	
Far End	14	0.083		555-M	670-M	804-M	1054-M	
Rolled I.D.	15	0.072	.495	.620	.745	.870	1.120	
Near End	15	0.072	491-M	584-M	735-M	853-M	1103-M	
Far End	15	0.072	471-M	584-M	712-M	837-M	1054-M	
Rolled I.D.	16	0.065	.508	.633	.758	.883	1.133	
Near End	16	0.065	491-M	621-M	735-M	853-M	1103-M	
Far End	16	0.065	471-M	584-M	712-M	837	1054-M	
Rolled I.D.	17	0.058	.521	.646	.771	.896	1.146	
Near End	17	0.058	512-M	621-M	735-M	853-M	1103-M	
Far End	17	0.058	491-M	584-M	735-M	853-M	1103-M	
Rolled I.D.	18	0.049	.537	.662	.770	.912	1.162	
Near End	18	0.049	524-M	649-M	774-M	899-M	1149-M	
Far End	18	0.049	491-M	621-M	735-M	853-M	1103-M	
Rolled I.D.	19	0.042	.549	.674	.799	.924	1.174	
Near End	19	0.042	524-M	649-M	774-M	899-M	1149-M	
Far End	19	0.042	512-M	621-M	735-M	853-M	1149-M	
Rolled I.D.	20	0.035	.562	.687	.812	.937	1.187	
Near End	20	0.035	524-M	649-M	774-M	899-M	1149-M	
Far End	20	0.035	524-M	649-M	774-M	853-M	1149-M	
Rolled I.D.	21	0.032	.567	.692	.817	.942	1.192	
Near End	21	0.032	555-M	670-M	804-M	919-M	1171-M	
Far End	21	0.032	524-M	649-M	774-M	853-M	1149-M	
Rolled I.D.	22	0.028	.575	.700	.825	.950	1.200	
Near End	22	0.028	555-M	670-M	804-M	919-M	1171-M	
Far End	22	0.028	524-M	649-M	774-M	919-M	1171-M	
Rolled I.D.	23	0.025	.580	.705	.830	.955	1.205	
Near End	23	0.025	555-M	670-M	804-M	919-M	1171-M	
Far End	23	0.025	555-M	670-M	804-M	919-M	1171-M	
Rolled I.D.	24	0.022	.585	.710	.835	.960	1.210	
Near End	24	0.022	555-M	670-M	804-M	919-M	1171-M	
Far End	24	0.022	555-M	670-M	804-M	899-M	1171-M	

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Substitute the suffix "M" with the following material code:

C = Carbon Steel
B = Brass
S = 316 SS
J = 70/30 CuNi
K = 90/10 CuNi
Y = Chrome/Moly
M = Monel
I = Inconel
N = Nickel 200
T = Titanium
H = Hastelloy
Z = Zirconium

Near End = Plugging front end of tube sheet

Far End = "Through the tube," plugging rear end of tube sheet

NOTES:

- 1) Tube ID's often vary between inlet & outlet due to corrosion and/or erosion, this chart and recommended tube sizes are to be used as Reference only.
- 2) Tube Preparation Brushes are required for use with all Snap It Plugs.

* Larger sizes available upon request



All tube inner diameters listed above are based upon a 10% wall reduction

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