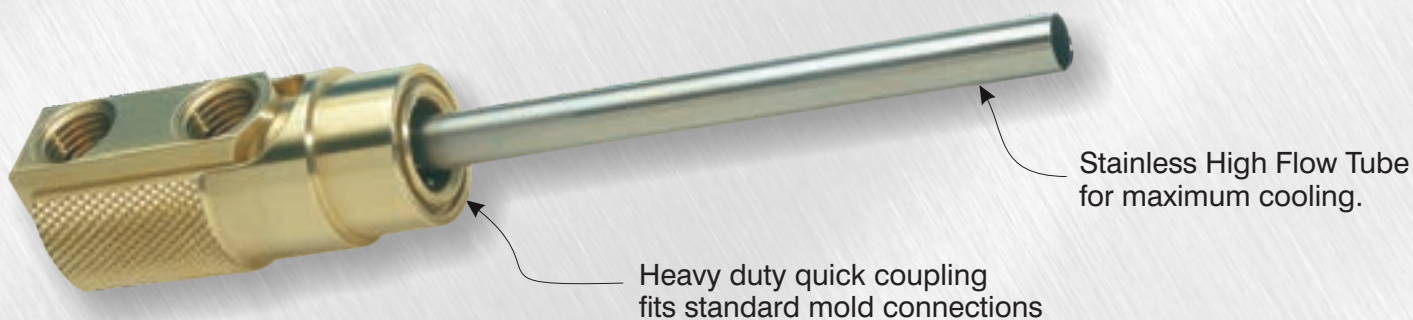
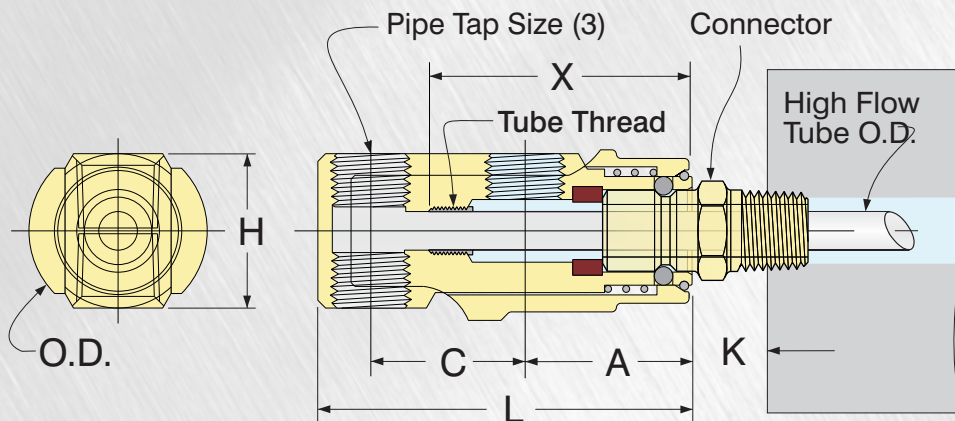


# Quick-Coupler Type Cascade Assemblies



- Can be installed and removed without disconnecting coolant lines.
- Viton Seals standard.
- High flow design provides maximum cooling rates.
- 12" High Flow Stainless tube, and Brass Pipe Plug included.



Catalog Number	Pipe Tap Size (NPT)	Connector Series	Tube Thread	High Flow Tube Included	L	C	A	H	End of Tube Ref. X	O.D.	Stock Item
SC186N	1/8	200	1/4-28	HF187T-12	1.937	1 1/16	3 1/32	1 3/16	1.45	7/8	•
SC181N					2.250	1	3 1/32	1 3/16	1.54	7/8	•
SC146N-4	1/4	300	5/16-24	HF250T-12	2.187	1 1/16	1 5/32	1	1.63	1 1/8	•
SC141N-4					2.500	1	1 5/32	1	1.70	1 1/8	•
SC121N-4	1/4	500	1/2 -20	HF437T-12	3.125	1 1/4	1 3/8	1 1/4	2.20	1 3/8	•
SC121N-6	3/8				3.125	1 1/4	1 3/8	1 1/4	2.20	1 3/8	•

See tube specifications on page 10.

Catalog Number	Connector	K Min.
SC186N	251	.32
SC181N	252	.43
	253	.49
	351*	.34
SC146N-4	352	.42
SC141N-4	353	.45
	354	.57
SC121N-4	553**	.55
SC121N-6	554	.54
	556	.57

\* Uses High Flow Tube JHF187T-  
\*\* Uses High Flow Tube JHF375T-

# Quick-Coupler Type Cascade Heads Only

- Aids in quick and efficient assembly and disassembly of cooling circuit.
- Heavy duty all brass and stainless steel construction.
- Dimensions are same as above for corresponding catalog number.
- Brass Pipe Plug Included.



Catalog Number	Tube Thread Size	Standard High Flow Tube No.	Alternate High Flow Tube	Stock Item
SC186H	1/4-28	HF187T-	JHF125T-	•
SC181H				•
SC146H-4	5/16-24	HF250T-	JHF187T-	•
SC141H-4				•
SC121H-4	1/2 -20	HF437T-	JHF375T-	•
SC121H-6				•

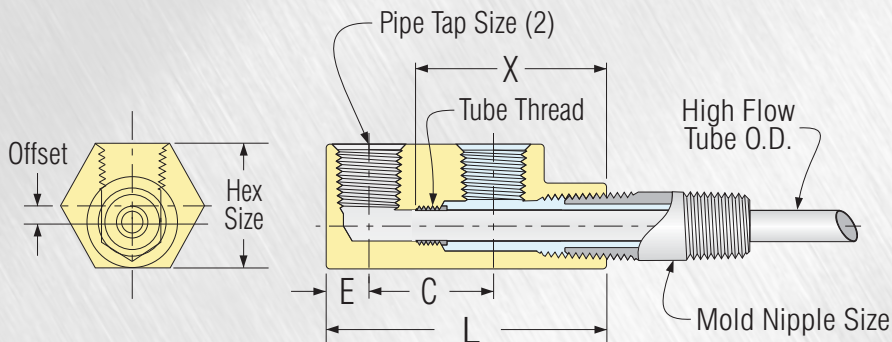
Order tubes for these heads on page 10.

# High Flow Cascade Assemblies



Increased inlet areas produce higher flow rates.

If cooling rates are limiting cycle times, or connection leakage is a problem, the High Flow Cascade is the answer.



- 35%-65% higher flow rates than standard Nipple Type Cascades.

- Offset design provides more sealing threads without pipe interference.

- Assemblies include brass head, 12" High Flow Stainless tube, and 2" long galvanized pipe nipple.

Catalog Number	Mold Nipple Size (NPT)	Pipe Tap Size (NPT)	Tube Thread Size	High Flow Tube Included (12" OAL)	Hex Size	Offset	E	C	L	Tube End Ref. X	Stock Item
HF16N	1/16	1/16	10-32	HF125T-12	5/8	3/32	1/4	1/2	1 1/4	.88	•
HF186N	1/8	1/8	1/4-28	HF187T-12	3/4	3/32	5/16	1 1/16	1 3/8	1.14	•
HF181N	1/8	1/8	1/4-28	HF187T-12	3/4	3/32	5/16	1	1 15/16	1.15	•
HF146N-4	1/4	1/4	5/16-24	HF250T-12	1	5/32	1 1/32	1 1/16	1 7/8	1.30	•
HF141N-4	1/4	1/4	5/16-24	HF250T-12	1	5/32	1 1/32	1	2 3/16	1.55	•
HF381N-4	3/8	1/4	7/16-20	HF375T-12	1 1/8	1/8	1 1/32	1	2 1/4	1.64	•
HF121N-4	1/2	1/4	1/2-20	HF437T-12	1 3/8	1/8	3/8	1	2 3/8	1.77	•

See tube specifications on page 10.

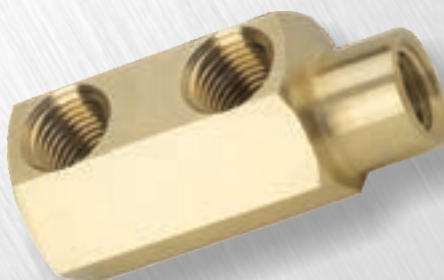
## High Flow Cascade Heads Only

- All dimensions same as above for corresponding catalog number.

- High Flow Cascade Heads are available in special pipe tap and tube combinations.

- Order Adjustable Hex Nipples, or other pipe nipples on pages 24-25.

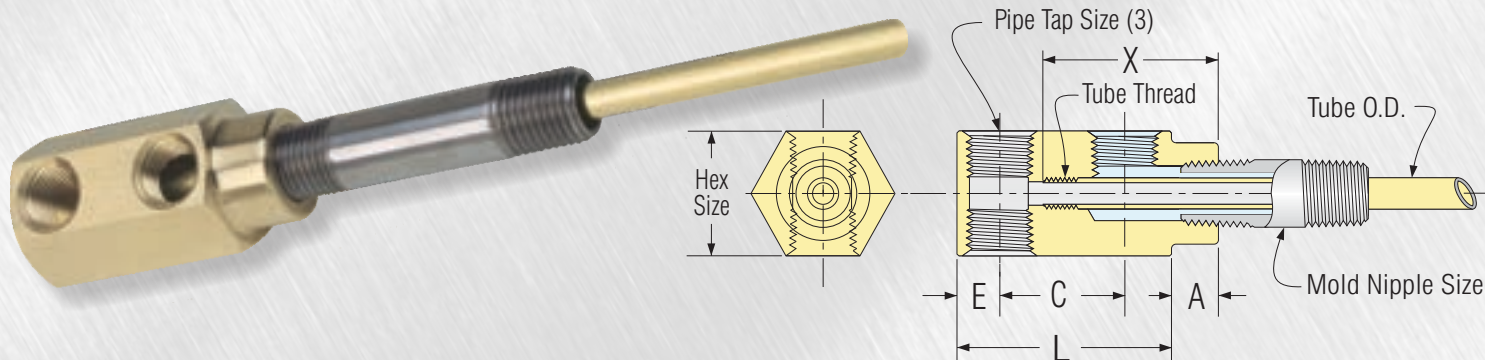
- Select tubes on page 10.



Catalog Number	Tube Thread Size	Standard High Flow Tube No.	Alternate High Flow Tube No.	Stock Item
HF16H	10-32	HF125T-	JHF093T-	•
HF186H	1/4-28	HF187T-	JHF125T-	•
HF181H	1/4-28	HF187T-	JHF125T-	•
HF146H-4	5/16-24	HF250T-	JHF187T-	•
HF141H-4	5/16-24	HF250T-	JHF187T-	•
HF381H-4	7/16-20	HF375T-	JHF312T-	•
HF121H-4	1/2-20	HF437T-	JHF375T-	•

Order tubes for these heads on page 10.

# Nipple Type Cascade Assemblies



- Assemblies include brass head, 12" Brass Tube, 2" long galvanized pipe nipple, and brass pipe plug.
- Solid brass heads are precision machined for accurate assembly.
- Cascade Assemblies are available in special pipe tap and tube combinations.

Catalog Number	Pipe Tap Size (NPT)	Mold Nipple (NPT)	Tube O.D.	Brass Tube Included	Hex Size	E	C	A	L	Tube End Ref. X	Stock Item
16N	1/16				3/4	7/32	1/2	9/32	15/16	.90	•
186N	1/8	1/8	3/16	187T-12	7/8	21/64	11/16	9/32	111/32	1.06	•
181N	1/8				7/8	21/64	1	9/32	121/32	1.18	•
146N	1/8				1	21/64	11/16	7/32	111/32	1.05	•
146N-4	1/4	1/4	1/4	250T-12	1	21/64	11/16	7/32	111/32	1.08	•
141N	1/8				1	21/64	1	7/16	121/32	1.44	•
141N-4	1/4				1	21/64	1	7/16	121/32	1.44	•
381N	1/8	3/8	5/16	312T-12	1	11/32	1	13/32	111/16	1.44	•
381N-4	1/4				1	11/32	1	13/32	111/16	1.44	•
121N-4	1/4	1/2	7/16	437T-12	1 1/4	13/32	1	9/16	113/16	1.80	•
341N-4	3/8	3/4	5/8	625T-12	1 1/2	1/2	1 1/4	3/4	2 1/4	2.20	•

## Nipple Type Cascade Heads (for Brass Tubes)

- For use with Standard Brass Tubes
- All dimensions same as above for corresponding catalog number.
- Use Brass Tubes or alternate High Flow Stainless Tubes on page 11.



Catalog Number	Tube Thread Size	Standard Brass Tube	Alternate High Flow Tubes	Stock Item
16H				•
186H	10-32	187T-	HF125T-JHF093T-	•
181H				•
146H				•
146H-4	1/4-28	250T-	HF187T-JHF125T-	•
141H				•
141H-4				•
381H	5/16-24	312T-	HF250T-JHF187T-	•
381H-4				•
121H-4	7/16-20	437T-	HF375T-JHF312T-	•
341H-4	5/8-18	625T-	—	•

Order tubes for these heads on page 10-11.

## Nipple Type Cascade Heads (for High Flow Tubes)

- Nipple Type Heads for use with HIGH FLOW STAINLESS TUBES
- All dimensions same as above except for tube thread size.
- Use High Flow Stainless Tubes on page 10.



*Increase Flow up to 60%*

Catalog Number	Tube Thread Size	Standard Tube	Alternate Tube	Stock Item
16H-HFT				•
186H-HFT	1/4-28	HF187T-	JHF125T-	•
181H-HFT				•
146H-HFT				•
146H-4-HFT	5/16-24	HF250T-	JHF187T-	•
141H-HFT				•
141H-4-HFT				•
381H-HFT	3/8-24	HF312T-	JHF250T-	•
381H-4-HFT				•
121H-4-HFT	1/2-20	HF437T-	JHF375T-	•

Order tubes for these heads on page 10.

# Hex-Key Cascade Assemblies

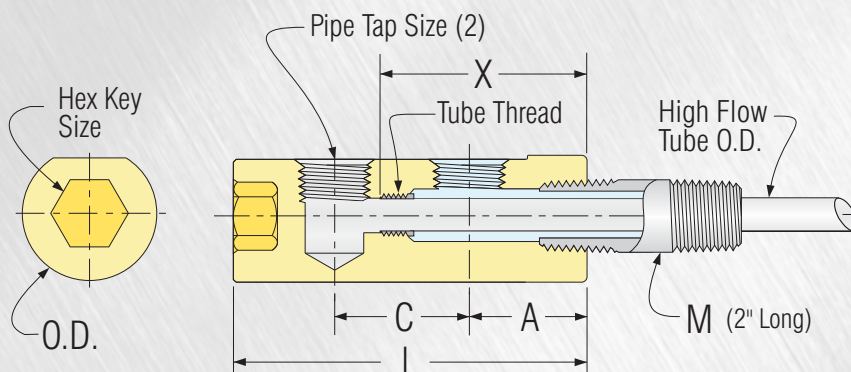
Heavy duty hex socket provides positive, easy installation and removal.



High Flow Tube Provides maximum flow rates

**HexKey** Cascades are round, and install with an Allen wrench. They may be installed with minimal clearance where space is limited.

- High flow design provides maximum cooling rates.
- Easy to install and remove.
- Assemblies include brass head, 12" High Flow Stainless tube, and 2" long stainless pipe nipple.



Catalog Number	Pipe Tap Size (NPT)	Mold Nipple (NPT) M	Tube Thread Size	High Flow Tube Included	L	C	A	Hex Key Size	Nominal Clearance Drill	Actual O.D.	Tube End Ref. X	Stock Item
E16N	1/16	1/16	10-32	HF125T-12	1.625	9/16	1/2	5/16	5/8	.610	.89	•
E16N-2	1/16				1.687	9/16	9/16	3/8	3/4	.735	.98	•
E186N	1/8	1/8	1/4-28	HF187T-12	1.875	11/16	9/16	3/8	7/8	.860	1.00	•
E181N	1/8				2.187	1	9/16	3/8	7/8	.860	1.20	•
E146N	1/8				2.187	11/16	13/16	1/2	1	.985	1.32	•
E146N-4	1/4				2.312	11/16	7/8	1/2	1	.985	1.38	•
E141N	1/8	1/4	5/16-24	HF250T-12	2.500	1	13/16	1/2	1	.985	1.33	•
E141N-4	1/4				2.625	1	7/8	1/2	1	.985	1.48	•
E381N-4	1/4	3/8	3/8-24	HF312T-12	2.625	1	7/8	1/2	1	.985	1.56	•
E121N-4	1/4	1/2	7/16-20	HF375T-12	2.812	1	1	1/2	1 1/4	1.235	1.73	•

See tube specifications on page 10.

## Hex-Key Cascade Heads Only

- Dimensions for these heads are shown above for corresponding catalog number.
- **HexKey** Cascade Heads use High Flow Stainless Tubes shown on page 10.
- Order Adjustable Brass Hex Nipples, or other pipe nipples on pages 24-25.



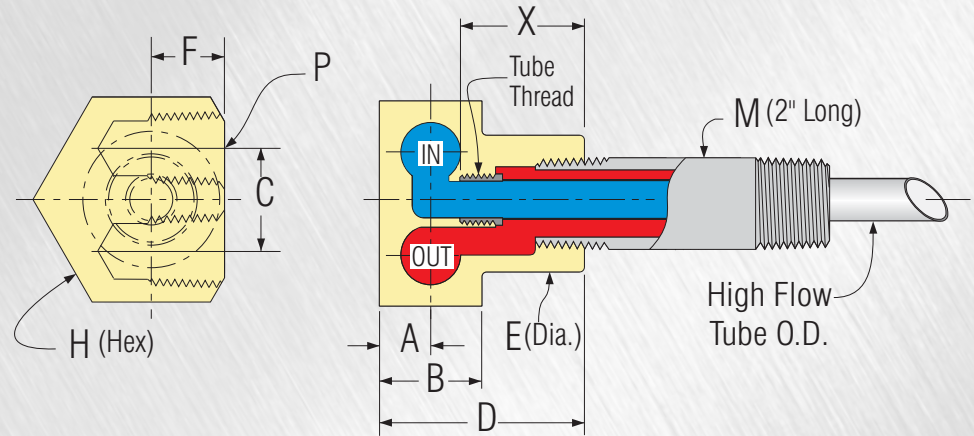
Catalog Number	Tube Thread Size	Standard High Flow Tube No.	Alternate High Flow Tube No.	Stock Item
E16H	10-32	HF125T-	JHF093T-	•
E16H-2				•
E186H	1/4-28	HF187T-	JHF125T-	•
E181H				•
E146H				•
E146H-4	5/16-24	HF250T-	JHF187T-	•
E141H				•
E141H-4				•
E381H-4	3/8-24	HF312T-	JHF250T-	•
E121H-4	7/16-20	HF375T-	JHF312T-	•

Order tubes for these heads on page 10.

# Compact Cascade Assemblies



Compact Cascades provide maximum cooling rates with improved design and High Flow Tubes.



- In/Out connections are positioned sideways for mounting in tight spaces or thin mold plates.
- Assemblies include brass head, 12" High Flow Stainless tube, and 2" long galvanized pipe nipple.

Catalog Number	Mold Nipple (NPT) M	In/Out Pipe (NPT) P	High Flow Tube Included	Tube Thread Size	Hex Size H	A	B	C	D	E	F	Tube End Ref. X	Stock Item
ET1816	1/8	1/16	HF187T-	1/4-28	15/16	7/32	7/16	1/2	1	5/8	.330	.60	•
ET1418	1/4	1/8	HF250T-	5/16-24	1 1/4	5/16	5/8	1 1/16	1 1/4	3/4	.410	.82	•
ET1414	1/4	1/4			1 1/2	3/8	3/4	3/4	1 1/2	7/8	.540	.90	•
ET3814	3/8	1/4	HF312T-	3/8-24	1 1/2	3/8	3/4	3/4	1 1/2	1	.540	.92	•
ET1214	1/2	1/4	HF375T-	7/16-20	1 3/4	3/8	3/4	1	1 3/4	1 3/16	.540	1.13	•
ET3438	3/4	3/8	HF500T-	9/16-18	2	7/16	7/8	1 1/8	1 7/8	1 3/8	.625	1.21	•

See tube specifications on page 10.

# Compact Cascade Heads Only

- All dimensions same as above for corresponding catalog number.
- Order Adjustable Hex Nipples, or other pipe nipples on pages 24-25.
- Order High Flow Tubes on page 10.

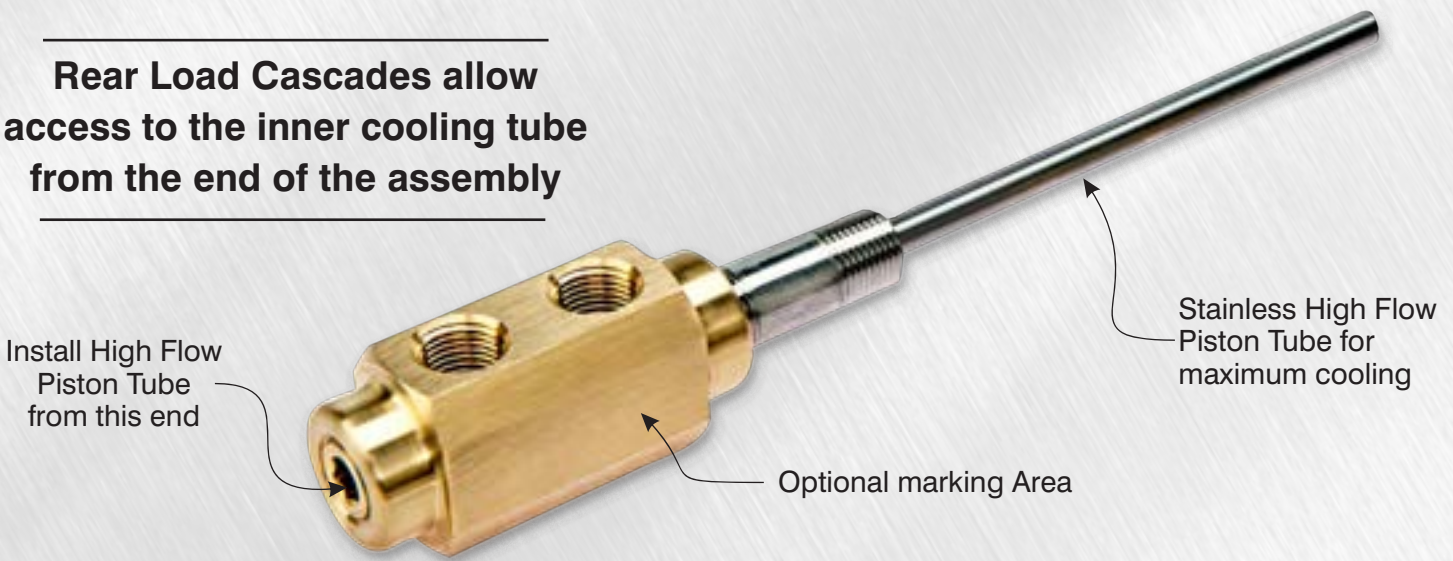


Catalog Number	Mold Nipple (NPT) M	In/Out Pipe (NPT) P	Tube Thread Size	Standard High Flow Tube No.	Alternate High Flow Tube No.	Stock Item
ET1816H	1/8	1/16	1/4-28	HF187T-	JHF125T-	•
ET1418H	1/4	1/8		HF250T-	JHF187T-	•
ET1414H	1/4	1/4	5/16-24	HF250T-	JHF187T-	•
ET3814H	3/8	1/4	3/8-24	HF312T-	JHF250T-	•
ET1214H	1/2	1/4	7/16-20	HF375T-	JHF312T-	•
ET3438H	3/4	3/8	9/16-18	HF500T-	JHF437T-	•

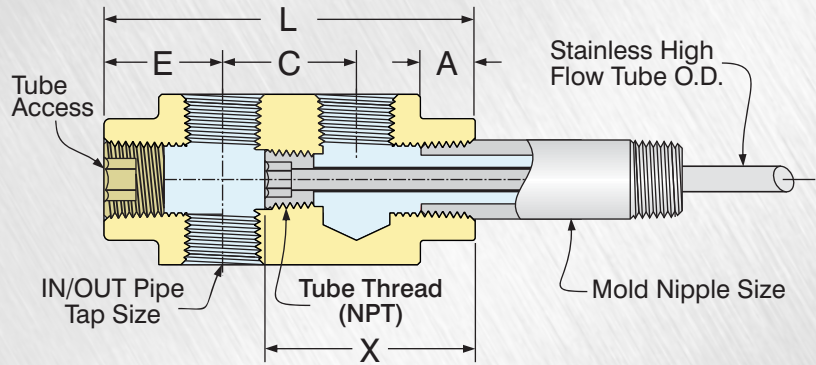
Order tubes for these heads on page 10.

# Rear Load Nipple Type Cascade Assemblies

Rear Load Cascades allow access to the inner cooling tube from the end of the assembly



- Positive adjustment of inner tube at assembly
- High flow design for maximum cooling rates.
- 12" High Flow Stainless tube, 2" long Stainless Pipe Nipple, and 2 Brass Pipe Plugs included.



Catalog Number	IN/OUT Pipe Tap Size (NPT)	Mold Nipple Size (NPT)	High Flow Tube Included	High Flow Tube O.D.	Tube Thread (NPT)	End of Tube Ref. X	Hex Size	E	C	A	L	Tube Access Size (NPT)	Stock Item
16N-RL	1/16					.937	3/4	.500	5/8	9/32	1.625	1/8	•
186N-RL	1/8	1/8	PT16-187-12	3/16	1/16	1.080	7/8	.609	1 1/16	9/32	1.906	1/8	•
181N-RL	1/8					1.393	7/8	.609	1	9/32	2.218	1/8	•
141N-4-RL	1/4	1/4	PT18-250-12	1/4	1/8	1.437	1	.781	1	7/16	2.562	1/4	•
381N-4-RL	1/4	3/8	PT14-312-12	5/16	1/4	1.500	1	.781	1	7/16	2.562	3/8	•

\*Choose from standard tubes below

## Rear Load Heads Only

- Dimensions are same as above for corresponding catalog number.
- 2 Brass Pipe Plugs Included.



Head Only Catalog Number	Piston Tube No.	Tube Thread (NPT)	Tube O.D.	Tube I.D.	— Overall Length "L" —				
					12"	24"	36"	48"	Lengths to 10 ft.
16H-RL 186H-RL 181H-RL	PT16-072-	1/16 NPT	.072	.060	•	•	•	•	•
	PT16-093-		.090	.076	•	•	•	•	•
	PT16-125-		.125	.109	•	•	•	•	•
	PT16-187-		.187	.167	•	•	•	•	•
141H-4-RL	PT18-125-	1/8 NPT	.125	.109	•	•	•	•	•
	PT18-187-		.187	.167	•	•	•	•	•
	PT18-250-		.250	.230	•	•	•	•	•
381H-4-RL	PT14-187-	1/4 NPT	.187	.167	•	•	•	•	•
	PT14-250-		.250	.230	•	•	•	•	•
	PT14-312-		.312	.288	•	•	•	•	•

# Rear Load Quick-Coupler Cascade Assemblies

Rear Load Cascades allow access to the inner cooling tube, even while the assembly is installed

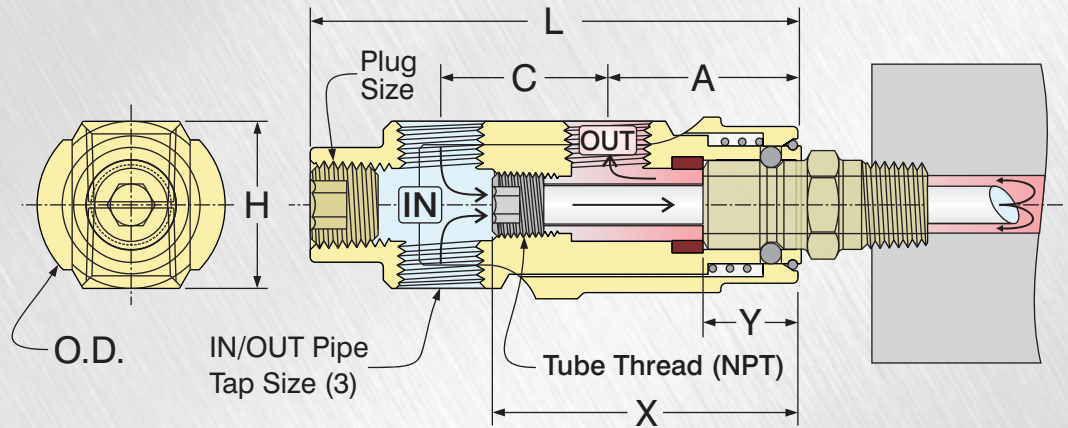
Install High Flow Piston Tube from this end

Mold Nipple Connection

Stainless High Flow Piston Tube for maximum cooling

Heavy duty quick coupling fits standard mold connections

- Can be installed and removed without disconnecting coolant lines.
- Easy adjustment of inner tube at assembly
- Viton Seals standard.
- High flow design provides maximum cooling rates.
- 12" High Flow Stainless tube, and Brass Pipe Plugs included.



Catalog Number	In/Out Pipe Size (NPT)	Connector Series	End of Connector Ref. Y	High Flow Tube Included (more options avail. below)	End of Tube Ref. X	Tube Thread (NPT)	L	C	A	H	O.D.	Plug Size (NPT)
SC186N-RL	1/8	200	.370	PT16-187-12*	1.45	1/16 NPT	2.187	1 1/16	3 1/32	1 3/16	7/8	1/8
SC181N-RL					1.54		2.500					
SC141N-4-RL	1/4	300	.590	PT18-250-12*	1.89	1/8 NPT	2.937	1	1 5/32	1	1 1/8	1/4
SC121N-4-RL	1/4	500	.730	PT38-437-12*	2.25	3/8 NPT	3.687	1 1/4	1 3/8	1 1/4	1 3/8	1/2
SC121N-6-RL	3/8											

See tube specifications on page 10.

\*Choose from any tube below

## Rear Load Heads Only

- Dimensions are same as above for corresponding catalog number.
- Brass Pipe Plugs Included.



Head Only Catalog Number	Choose High Flow Tube No.	Tube Thread (NPT)	Tube O.D.	Tube I.D.	— Overall Length "L" —				
					12"	24"	36"	48"	Lengths to 10 ft.
SC186H-RL SC181H-RL	PT16-072-	1/16 NPT	.072	.060	•	•	•	•	•
	PT16-093-		.090	.076	•	•	•	•	•
	PT16-125-		.125	.109	•	•	•	•	•
	PT16-187-		.187	.167	•	•	•	•	•
SC141H-4-RL	PT18-125-	1/8 NPT	.125	.109	•	•	•	•	•
	PT18-187-		.187	.167	•	•	•	•	•
	PT18-250-		.250	.230	•	•	•	•	•
SC121H-4-RL SC121H-6-RL	PT38-312-	3/8 NPT	.312	.288	•	•	•	•	•
	PT38-375-		.365	.340	•	•	•	•	•
	PT38-437-		.427	.397	•	•	•	•	•

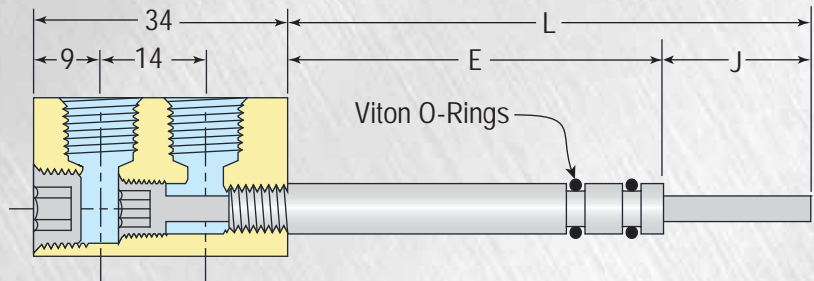
Order other tubes for these heads on page 10.

# Jet Cool Cascade Assemblies - O-Ring Type

CASCADES

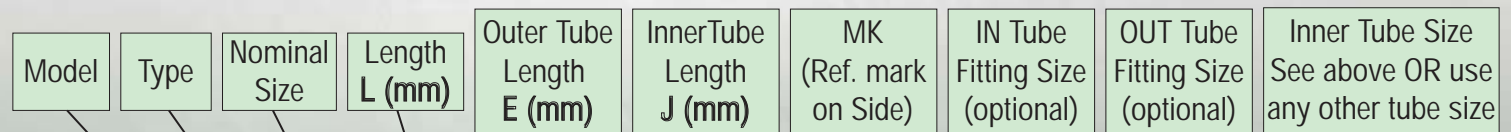


- 1/8-28 BSPT standard IN/OUT ports. Other port sizes available
- Specify L, E, and J lengths
- Other tube sizes available
- 4mm and 6mm tube fittings available (for BSPT ports)

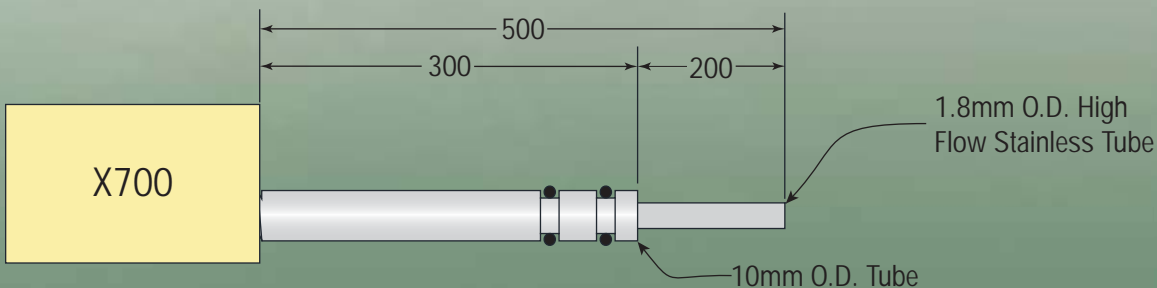


Model	Type	Nominal	Head	Outer Tube				Inner Tube	
			In/Out	O.D.	I.D.	O-Ring Used	O-Ring Diameter	Outer Diameter	Inner Diameter
JC	RO	06	Rc 1/8	6.0	3.0	S4	6.3	1.20	0.85
				1.80	1.35				
		08		8.0	4.0	S6	8.2	1.80	1.35
				2.30	1.80				
		10		10	5.0	P7	10.0	1.80	1.38
				2.30	1.80				
2.80	2.30								

## Part Number Example



JC-RO-10-L500-E300-J200-MKX700-4mmIN-6mmOUT-M1.8





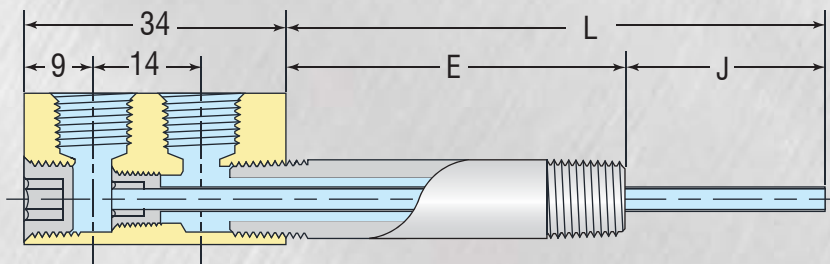
# Jet Cool Cascade Assemblies - Threaded Type

1/8" BSPT Ports

- 1/8-28 BSPT standard IN/OUT ports. Other port sizes available
- Specify L, E, and J lengths
- Other tube sizes available. Call for alternatives.

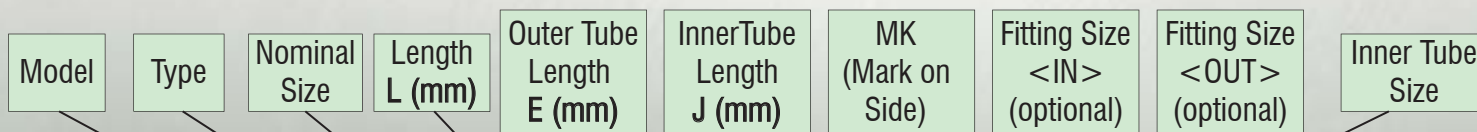
Stainless Steel Outer Tube

High Flow Stainless Tube



Model	Type	Nominal Size	Head IN/OUT threads	Mold Nipple Thread	Outer Tube		Inner Tube	
					O.D. (mm)	I.D. (mm)	O.D. (mm)	I.D. (mm)
JC	RM	04	Rc 1/8 (1/8" BSPT)	M4 x .75	4.0	2.0	1.20	0.85
				M6 x 1	6.0	3.0	1.20	0.85
		08		1/16" NPT	8.0	5.0	1.80	1.35
					2.30	1.80		
		10		1/8" NPT	10	7.0	1.80	1.38
					2.30	1.80		
					2.80	2.30		

## Part Number Example



JC-RM-10-L500-E300-J200-MKX700-M1.8

