

Product Tips and Features

Headers & Junctions

Header & Junction blocks are used to provide distribution or connection points in a fluid power piping system. Headers provide a common through port for multiple inlet or outlet ports at each station to be neatly connected together. Junctions offer termination points to join individual lines in order to change direction or combine/split flow with other lines at each station. In both cases they provide support to the piping system.

- 1. Standard materials are Aluminum, Ductile Iron, and Steel. Other materials including Stainless Steel, Brass and Nylon are optionally available.
- 2. Special Finishes including Black Oxide, Electroless Nickel Plating or Anodizing are optionally available.
- 3. UNC mounting bolt kits are supplied as standard.
- 4. Top & Side mounting is standard.
- 5. Internal galleries are equal to or greater than the nominal port connection in order to minimize pressure drops and fluid velocities.
- 6. No variation in design layout for each Model regardless of Port Code.
- 7. Both Headers & Junctions are offered in odd and even number of stations up to 10. Contact factory for models with more stations.
- 8. Headers are offered in 0°, 90° and 180° configurations as standard. Special orders can be placed for the 270° configurations.
- 9. Junctions are offered in 90°, 180° and 270° configurations as standard.
- 10. Models with smaller ports than shown are available as non-standards. Contact factory for part numbers.
- 11. Optional spacing between ports available upon request. Contact factory for part numbers.
- 12. Optional port sizes and types such as Metric, BSPP and SAE Flanges Code 61 or 62 are available on request. Contact factory for part numbers.
- 13. Some models of Twin Headers and Junctions are available as a special. Contact factory for part numbers.





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Headers & Junctions

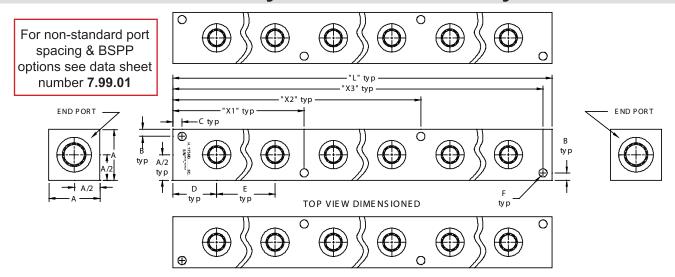
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Headers - Layout & Part Number System

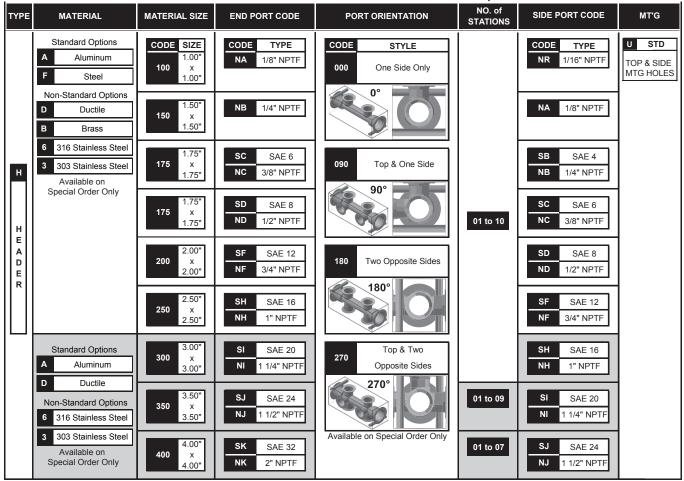


To order a standard product, select one CODE from each Column. Port sizes are linked to material size and must be selected from the same row for standard product.

STANDARD EXAMPLE Aluminum Header with SAE 8 End Ports and SAE 6 Ports Out Top & One Side: HA175SD090**SCU

To special order a non-standard port combination, select any port code above the stock material size row.

NON-STANDARD EXAMPLE Ductile Header with SAE 6 End Ports and SAE 6 Ports Out Top & One Side: HD175SC090**SCU



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Phone: 1 (



Header Dimensional Data

1.00" HEADER

		С		E		
1.00	0.16	0.31	1.00	1.25	0.20	

Mounting Kit includes:

2 or 4 SHCS 10-24 UNC x 1.50" Long

1.50" HEADER

HEADER								
Α	В	С	D	E	F			
1.50	0.25	0.31	1.13	1.38	0.27			

Mounting Kit includes:

2 or 4 SHCS 1/4"-20 UNC x 2.00" Long

1.75" HEADER - STANDARD FLOW

TEADER OTHER							
Α	В	С	D	E	F		
1.75	0.25	0.31	1.06	1.75	0.27		

Mounting Kit includes:

2 or 4 SHCS 1/4"-20 UNC x 2.25" Long

1.75" HEADER - HIGH FLOW

Α	В	С	D	E	F	
1.75	0.25	0.31	1.50	2.00	0.27	

Mounting Kit includes: 2 or 4 SHCS 1/4"-20 UNC x 2.25" Long

2.00" HEADER

Α	В	С	D	E	F	
2.00	0.25	0.31	1.50	2.38	0.27	

Mounting Kit includes:

2 or 4 SHCS 1/4"-20 UNC x 2.50" Long

2.50" HEADER

Α	В	С	D	E	F	
2.50	0.28	0.38	1.81	3.25	0.34	

Mounting Kit includes:

2 or 4 SHCS 5/16"-18 UNC x 3.00" Long

3.00" HEADER

Α	В	С	D	E	F	
3.00	0.34	0.38	2.00	3.75	0.41	

Mounting Kit includes:

2 or 4 SHCS 3/8"-16 UNC x 3.75" Long

3.50" HEADER

	/					
Α	A B C		D	E	F	
3.50	0.41	0.50	2.25	4.00	0.53	

Mounting Kit includes:

2 or 4 SHCS 1/2"-13 UNC x 4.50" Long

4.00" HEADER

Α	В	С	D	E	F	
4.00	0.41	2.00	4.00	5.00	0.53	

Mounting Kit includes:

2 or 4 SHCS 1/2"-13 UNC x 5.00" Long

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	2.00	3.25	4.50	5.75	7.00	8.25	9.50	10.75	12.00	13.25
X1	*	*	*	*	2.88	2.88	2.88	4.13	4.13	4.13
X2	*	*	*	*	4.13	5.38	6.63	6.63	7.88	9.13
X3	1.38	2.63	3.88	5.13	6.38	7.63	8.88	10.13	11.38	12.63

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	2.25	3.63	5.00	6.38	7.75	9.13	10.50	11.88	13.25	14.63
X1	*	*	*	*	3.19	3.19	3.19	4.56	4.56	4.56
X2	*	*	*	*	4.56	5.94	7.31	7.31	8.69	10.06
X3	1.94	3.31	4.69	6.06	7.44	8.81	10.19	11.56	12.94	14.31

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	2.13	3.88	5.63	7.38	9.13	10.88	12.63	14.38	16.13	17.88
X1	*	*	*	*	3.69	3.69	3.69	5.44	5.44	5.44
X2	*	*	*	*	5.44	7.19	8.94	8.94	10.69	12.44
X3	1.81	3.56	5.31	7.06	8.81	10.56	12.31	14.06	15.81	17.56

	No. of Stations	1	2	3	4	5	6	7	8	9	10
1	Dim. "L"	3.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00
1	X1	*	*	*	*	4.50					6.50
1	X2	*	*	*	*	6.50	8.50	10.50	10.50	12.50	14.50
1	X3	2.69	4.69	6.69	8.69	10.69	12.69	14.69	16.69	18.69	20.69

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	3.00	5.38	7.75	10.13	12.50	14.88	17.25	19.63	22.00	24.38
X1	*	*	*	*	5.06	5.06	5.06	7.44	7.44	7.44
X2	*	*	*	*	7.44	9.81	12.19	12.19	14.56	16.94
X3	2.69	5.06	7.44	9.81	12.19	14.56	16.94	19.31	21.69	24.06

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	3.63	6.88	10.13	13.38	16.63	19.88	23.13	26.38	29.63	32.88
X1	*	*	*	*	6.69	6.69	6.69	9.94	9.94	9.94
X2	*	*	*	*	9.94	13.19	16.44	16.44	19.69	22.94
X3	3.25	6.50	9.75	13.00	16.25	19.50	22.75	26.00	29.25	32.50

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	4.00	7.75	11.50	15.25	19.00	22.75	26.50	30.25	34.00	37.75
X1	*	*	*	*	7.63	7.63	7.63	11.38	11.38	11.38
X2	*	*	*	*	11.38	15.13	18.88	18.88	22.63	26.38
X3	3.63	7.38	11.13	14.88	18.63	22.38	26.13	29.88	33.63	37.38

No. of Stations	1	2	3	4	5	6	7	8	9
Dim. "L"	4.50	8.50	12.50	16.50	20.50	24.50	28.50	32.50	36.50
X1	*	*	*	*					12.25
X2	*	*	*	*	12.25	16.25	20.25	20.25	24.25
X3	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	36.00

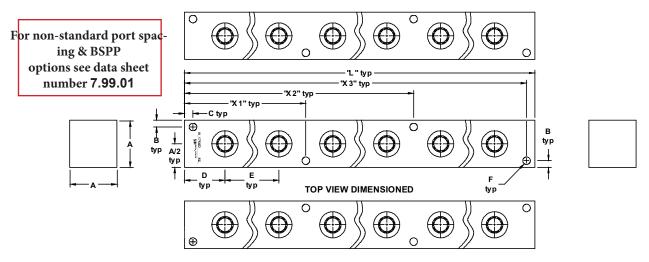
No. of Stations		2	3	4	5	6	7
Dim. "L"	8.00	13.00	18.00				38.00
X1	*	*	*	*	11.50	11.50	11.50
X2	*	*	*				26.50
X3	6.00	11.00	16.00	21.00	26.00	31.00	36.00

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Junctions - Layout & Part Number System

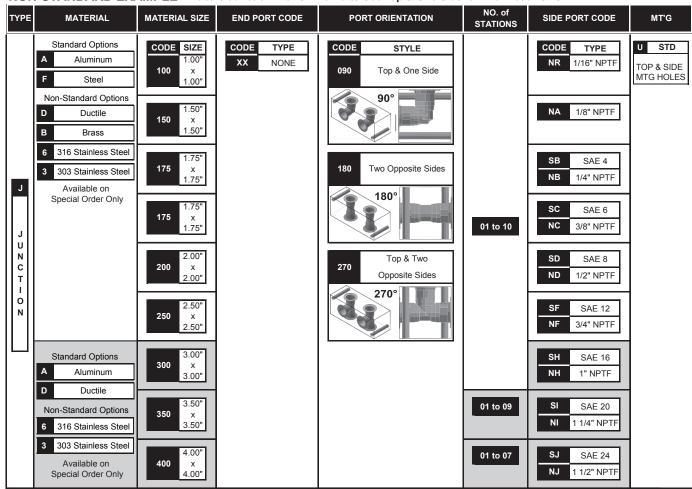


To order a standard product, select one CODE from each Column. Port sizes are linked to material size and must be selected from the same row for standard product.

STANDARD EXAMPLE Ductile Junction with SAE 16 Ports Out Top & Two Opposite Sides: JD300XX270**SHU

To special order a non-standard port code, select any port code above the stock material size row.

NON-STANDARD EXAMPLE Ductile Junction with SAE 6 Ports Out Top & One Side: JD175XX090**SCU

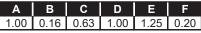


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Junction Dimensional Data

1.00" JUNCTION



Mounting Kit includes:

2 or 4 SHCS 10-24 UNC x 1.50" Long

1.50" JUNCTION

Α	В	С	D	E	F
1.50	0.25	0.31	1.13	1.38	0.27

Mounting Kit includes:

2 or 4 SHCS 1/4"-20 UNC x 2.00" Long

1.75" JUNCTION - STANDARD FLOW

1.75 0.25 0.31 1.06 1.75 0.27	Α	В	_	D	E	
	1.75	0.25	0.31	1.06	1.75	0.27

Mounting Kit includes:

2 or 4 SHCS 1/4"-20 UNC x 2.25" Long

1.75" JUNCTION - HIGH FLOW

Α	В	С	D	Е	F
1.75	0.25	0.31	1.50	2.00	0.27

Mounting Kit includes:

2 or 4 SHCS 1/4"-20 UNC x 2.25" Long

2.00" JUNCTION

Α	В	С	D	E	F
2.00	0.25	0.31	1.50	2.38	0.27

Mounting Kit includes:

2 or 4 SHCS 1/4"-20 UNC x 2.50" Long

2.50" JUNCTION

Α	В	С	D	E	F
2.50	0.28	0.38	1.81	3.25	0.34

Mounting Kit includes:

2 or 4 SHCS 5/16"-18 UNC x 3.00" Long

3.00" JUNCTION

	В		D	_	F
3.00	0.34	0.38	2.00	3.75	0.41

Mounting Kit includes:

2 or 4 SHCS 3/8"-16 UNC x 3.75" Long

3.50" JUNCTION

		С		E	_
3.50	0.41	0.50	2.25	4.00	0.53

Mounting Kit includes:

2 or 4 SHCS 1/2"-13 UNC x 4.50" Long

4.00" IUNCTION

7.00	JUI	ACTION			
Α	В	С	D	E	F
4.00	0.41	0.50	2.50	5.00	0.53

Mounting Kit includes:

2 or 4 SHCS 1/2"-13 UNC x 5.00" Long

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	2.00	3.25	4.50	5.75	7.00	8.25	9.50	10.75	12.00	13.25
X1	*	*	*	*	2.88	2.88	2.88	4.13	4.13	4.13
X2	*	*	*	*	4.13	5.38	6.63	6.63	7.88	9.13
X3	1.38	2.63	3.88	5.13	6.38	7.63	8.88	10.13	11.38	12.63

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	2.25	3.63	5.00	6.38	7.75	9.13	10.50	11.88	13.25	14.63
X1	*	*	*	*	3.19	3.19	3.19	4.56	4.56	4.56
X2	*	*	*	*	4.56	5.94	7.31	7.31	8.69	10.06
X3	1.94	3.31	4.69	6.06	7.44	8.81	10.19	11.56	12.94	14.31

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	2.13	3.88	5.63	7.38	9.13	10.88	12.63	14.38	16.13	17.88
X1	*	*	*	*	3.69	3.69	3.69	5.44	5.44	5.44
X2	*	*	*	*	5.44	7.19	8.94	8.94	10.69	12.44
X3	1.81	3.56	5.31	7.06	8.81	10.56	12.31	14.06	15.81	17.56

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	3.00	5.00	7.00	9.00	11.00	13.00	15.00	17.00	19.00	21.00
X1	*	*	*	*	4.50	4.50	4.50	6.50	6.50	6.50
X2	*	*	*	*	6.50	8.50	10.50	10.50	12.50	14.50
X3	2.69	4.69	6.69	8.69	10.69	12.69	14.69	16.69	18.69	20.69

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	3.00	5.38	7.75	10.13	12.50	14.88	17.25	19.63	22.00	24.38
X1	*	*	*	*	5.06	5.06	5.06	7.44	7.44	7.44
X2	*	*	*	*	7.44	9.81	12.19	12.19	14.56	16.94
X3	2.69	5.06	7.44	9.81	12.19	14.56	16.94	19.31	21.69	24.06

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	3.63	6.88	10.13	13.38	16.63	19.88	23.13	26.38	29.63	32.88
X1	*	*	*	*	6.69	6.69	6.69	9.94	9.94	9.94
X2	*	*	*	*	9.94	13.19	16.44	16.44	19.69	22.94
X3	3.25	6.50	9.75	13.00	16.25	19.50	22.75	26.00	29.25	32.50

No. of Stations	1				5			8		
Dim. "L"	4.00	7.75	11.50					30.25		
X1	*	*	*	*	7.63	7.63	7.63	11.38	11.38	11.38
X2	*	*	*					18.88		
X3	3.63	7.38	11.13	14.88	18.63	22.38	26.13	29.88	33.63	37.38

No. of Stations	1		_	4	_	6	7	8	9
Dim. "L"	4.50	8.50	12.50	16.50	20.50	24.50	28.50	32.50	36.50
X1	*	*	*	*	8.25	8.25	8.25	12.25	12.25
X2	*	*	*						24.25
X3	4.00	8.00	12.00	16.00	20.00	24.00	28.00	32.00	36.00

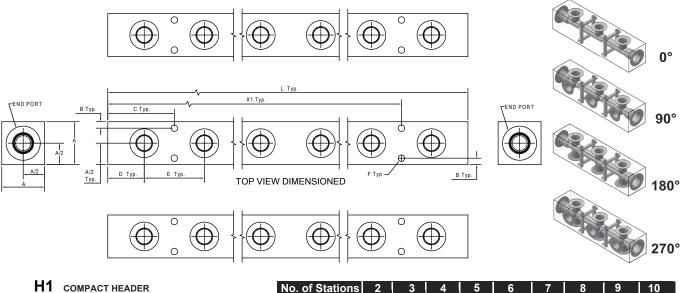
No. of Stations	1	2	3	4	5	6	7
Dim. "L"	5.00	10.00	15.00	20.00	25.00	30.00	35.00
X1	*	*	*	*	10.00	10.00	10.00
X2	*	*	*	*	15.00	20.00	25.00
X3	4.50	9.50	14.50	19.50	24.50	29.50	34.50

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Compact Headers - Layout & Part Number System



H1 COMPACT HEADER									
Α	В	С	D	Е	F				
0.88	0.14	0.69	0.38	0.63	0.13				

H2 COMPACT HEADER										
Α	В	С	D	E	F					
1.00	0.15	0.88	0.50	0.75	0.16					

H3 COMPACT HEADER										
Α	В	С	D	E	F					
1.25	0.18	1.06	0.63	0.88	0.19					

	H4 COMPACT HEADER									
ı	Α	В	С	D	E	F				
ı	1.25	0.18	1.94	1.06	1.75	0.19				

No. of Stations	2	3	4	5	6	7	8	9	10
Dim. "L"	1.38	2.00	2.63	3.25	3.88	4.50	5.13	5.75	6.38
X1	N/A	1.31	1.94	2.56	3.19	3.81	4.44	5.06	5.69
No. of Stations	2	3	4	5	6	7	8	9	10
Dim. "L"	1.75	2.50	3.25	4.00	4.75	5.50	6.25	7.00	7.75
X1	N/A	1.63	2.38	3.13	3.88	4.63	5.38	6.13	6.88
No. of Stations	2	3	4	5	6	7	8	9	10
Dim. "L"	2.13	3.00	3.88	4.75	5.63	6.50	7.38	8.25	9.13
X1	N/A	1.94	2.81	3.69	4.56	5.44	6.31	7.19	8.06
No. of Stations	2	3	4	5	6	7	8	9	10
Dim. "L"	3.88	5.63	7.38	9.13	10.88	12.63	14.38	16.13	17.88
X1	N/A	3.69	5.44	7.19	8.94	10.69	12.44	14.19	15.94

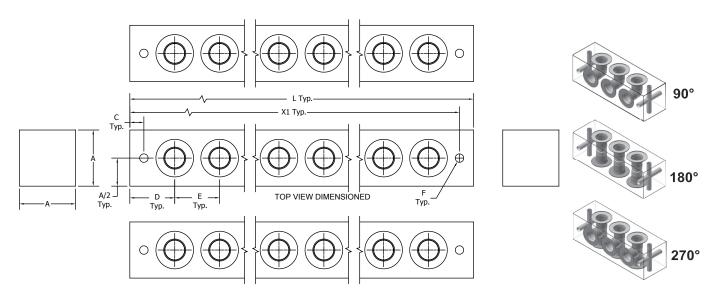
EXAMPLE Steel Compact Header with SAE 6 End Ports and SAE 4 Ports Out Two Opposite Sides: H4F125SC180**SE

	TYPE	MATERIAL	MATERIAL SIZE	END PORT CODE	PORT ORIENTATION	NO. of STATIONS	SIDE PORT CODE
C O M P	CODE H1	Standard Options B Brass F Steel	CODE SIZE 088	CODE TYPE NA 1/8" NPTF	CODE STYLE 000 0° One Side Only		CODE TYPE NR 1/16" NPTF
A C T	H2	A Aluminum Non-Standard Options	1.00" x 1.00"	NB 1/4" NPTF	90° Top & One Side	02 to 10	NA 1/8" NPTF
H E A D	Н3	6 316 Stainless Steel Available on	1.25" 125 x 1.25"	NC 3/8" NPTF	180° Two Opposite Sides		NB 1/4" NPTF
E R S	H4	Special Order Only		SC SAE 6 NC 3/8" NPTF	270° Top & Two Opposite Sides Available on Special Order Only		SB SAE 4 NB 1/4" NPTF

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Compact Junctions - Layout & Part Number System



1.25" COMPACT JUNCTION
FOR 1/8" & 1/4" PORTING

FUR 1/0 & 1/4 FURTING									
Α	С	D	E	F					
1.25	0.31	1.00	1.00	0.28					

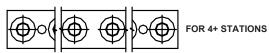
1.50" COMPACT JUNCTION FOR 3/8" PORTING

	- FOR 3/0 FORTING										
Α	С	D	E	F							
1.50	0.38	1.13	1.50	0.34							
	1.38	0.63									

SHADED AREA - DIMENSIONS FOR 4+ STATIONS

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00	11.00
X1	1.69	2.69	3.69	4.69	5.69	6.69	7.69	8.69	9.69	10.69

No. of Stations	1	2	3	4	5	6	7	8	9	10
Dim. "L"	2.25	3.75	5.25	5.75	7.25	8.75	10.25	11.75	13.25	14.75
X1	1.88	3.38	4.88	4.38	5.88	7.38	8.88	10.38	11.88	13.38



EXAMPLE:	Aluminum Compact Junction with SAE 4 Ports Out	Tan 9 Ana Cida: IC 1125 V V 100 ** CD
EAAIVIELE.	Aluminum Compaci Junction with SAE 4 Fons Out	TOD & CHE SIDE, JUA 123AAUSU SD

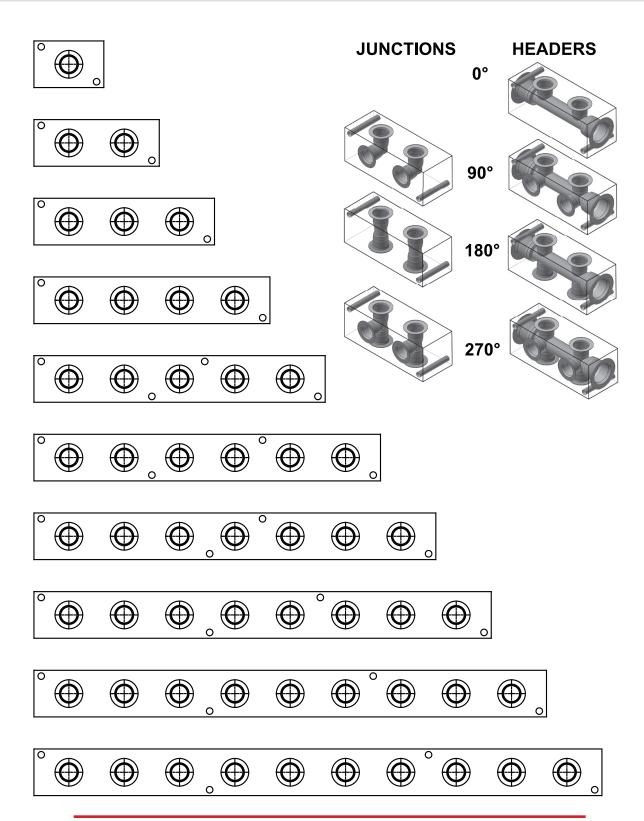
TYPE	MATERIAL	MATERIAL SIZE	END PORT CODE	PORT ORIENTATION	NO. of STATIONS	SIDE PORT CODE
JC COMPACT JUNCT-ON	Standard Options B Brass F Steel A Aluminum Non-Standard Options 3 303 Stainless Steel 4 304 Stainless Steel 6 316 Stainless Steel Available on Special Order Only	CODE SIZE 1.25" 1.25" 1.25" 1.50"	CODE TYPE XX NONE	Top & Opposite Sides 270 Top & Top & One Side 180 Two Opposite Sides 270 Top & Two Opposite Sides Available on Special Order Only	01 to 10	CODE TYPE NA 1/8" NPTF SB SAE 4 NB 1/4" NPTF SC SAE 6 NC 3/8" NPTF

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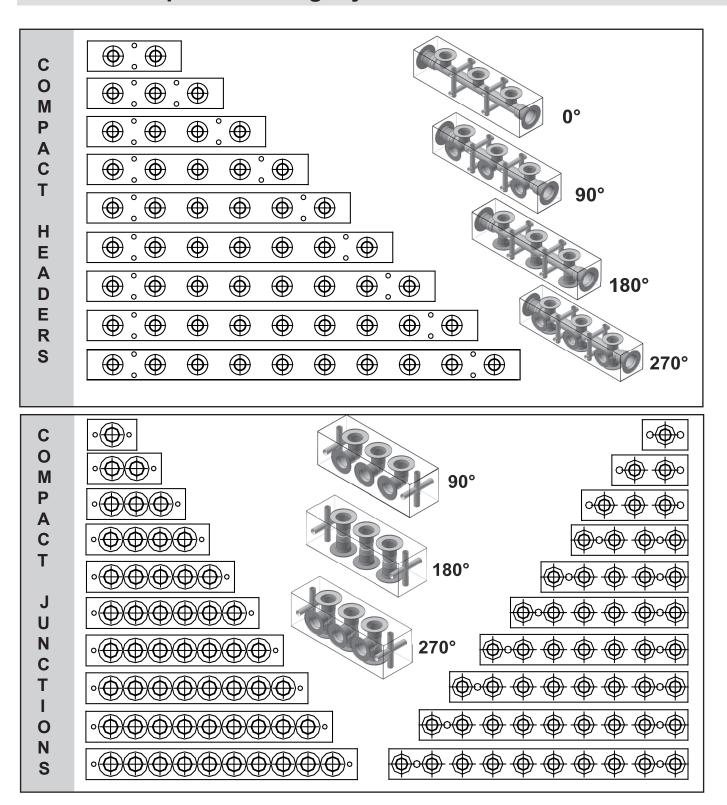
Typical Mounting Styles and Cross Sections



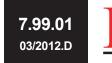




Compact Mounting Styles and Cross Sections







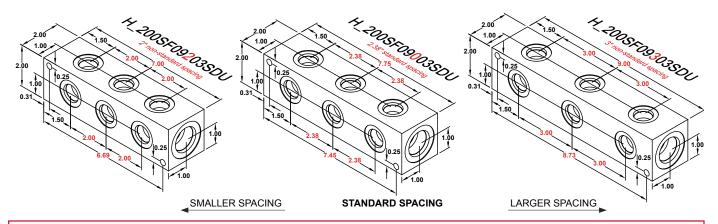


Non Standard Options & Ordering Information

Combinations may be subject to a minimum quantity or set-up charge.

How To Special Order Non-Standard Port Spacing (Dimension E)

- 1- Only whole inch values can be ordered, minimum spacing is limited by the port sizes.
- 2- Modify the third character in port orientation code with a value from 1-9. ie: 000 becomes 002 for 0 degree with 2" special spacing. ie: 180 becomes 184 for 180 degree with 4" special spacing. See complete examples below.



Note: All effected dimensions are shown above, in red.

BSPP Port Code Cross Reference

Replace the NPTF Code in the corresponding locations for either end port or side port.

Note: All BSPP configurations may not be possible, please consult the factory to confirm your part number.

CODE	TYPE
ВА	1/8" BSPP
ВВ	1/4" BSPP
ВС	3/8" BSPP
BD	1/2" BSPP
BF	3/4" BSPP
ВН	1" BSPP
ВІ	11/4" BSPP
BJ	11/2" BSPP
вк	2" BSPP

Non Standard Part Number Examples		
Ex:	HA175NC09005NBU - Standard NPTF Header HA175BC09005BBU - BSPP Header Version with 3/8" BSPP End Ports and 1/4" BSPP Side Ports	
Ex:	JF150XX18010NAU - Standard NPTF Junction JF150XX18010BAU - BSPP Junction Version with 1/8" BSPP Side Ports	
Ex:	HD300NI00008NAU - Non-Standard NPTF Header HD300BI00008BHU - BSPP Header Version with 11/4" BSPP End Ports and 1" BSPP Side Ports	

WE RESERVE THE RIGHT TO DISCONTINUE MODELS, OR CHANGE SPECIFICATIONS WITHOUT NOTICE OR INCURRING OBLIGATION

