Telescoping RHS

	Female	(outer)		Nominal	Clearance	Mal	e(inner)	Fen	ale(outer)		Nominal	Clearance	Male	e(inner)		Fema	le(outer)		Nominal	Clearance	Male	linner
m	d	b	t	top	side	d	b	d	b	t	top	side	d	b	(m	 m	b	t	top	side	d	b
	0.0							00	00	2 5	7.0		75	75	7	 5	50	1.6	60	11.0	65	25
	3 U	UAK		ULLU	VV SEU		12	89	89 89	3.5 5.0	7.0 4.0	7.0 4.0	75 75	75 75	7	ว 5	50 50	1.0 2.0	0.0 6 0	11.0 11.0	65 65	3C 3C
1	13	13	1.8		No S	Section		89	89	6.0	2.0	2.0	75	75	, 7	5	50	2.0	5.0	10.0	65	35
1	15	15	1.8		Ava	ailable		90	90	2.0	11 0	11.0	75	75	7	5	50	3.0	4.0	9.0	65	35
_	20	20	1.6	10	10	15	15	90	90	2.5	10.0	10.0	75	75	7	5	50	4.0	2.0	7.0	65	35
	20	20	1.0	1.0	1.0	10	15	100	100	2.0	6.0	6.0	90	90	7	5	50	5.0	0.0	5.0	65	35
2	25	25	1.6	1.8	1.8	20	20	100	100	2.5	5.0	5.0	90	90	7	5	50	6.0	13.0	13.0	50	25
2	25	25	2.0	1.0	1.0	20	20	100	100	3.0	4.0	4.0	90	90	10	חר	50	16	21.8	21.8	75	25
2	25	25	2.5	0.0	0.0	20	20	100	100	4.0	2.0	2.0	90	90	10	ט חר	50	2.0	21.0	21.0	75	20
3	30	30	1.6	1.8	1.8	25	25	100	100	5.0	0.0	0.0	90	90	10	00	50	2.5	20.0	20.0	75	25
3	30	30	2.0	1.0	1.0	25	25	100	100	6.0	13.0	13.0	75	75	10	00	50	3.0	19.0	19.0	75	25
_	יר	25	1.0	1.0	1.0	20	20	100	100	9.0	7.0	7.0	75	75	10)0	50	3.5	18.0	18.0	75	25
	50 DE	30 25	1.0	1.ŏ	1.8	3U 20	30	125	125	4 0	17 0	17 0	100	100	10)0	50	4.0	17.0	17.0	75	25
2)))	20	2.U 2.5	1.0	1.0	20 20	20	125	125	5.0	15.0	15.0	100	100	10	00	50	5.0	15.0	15.0	75	25
	35	35	2.0 3.0	0.0 4 0	0.0 4 0	30 25	30 25	125	125	6.0	13.0	13.0	100	100	10)0	50	6.0	13.0	13.0	75	25
		00	0.0	+.U	4.0	20	20	125	125	9.0	7.0	7.0	100	100	10	חר	50	16	31.8	11.8	65	٦٢
Z	10	40	1.6	1.8	1.8	35	35	150	150	E O	1E 0	1E 0	105	125	10	וו חר	50 50	2.0	31.0	11.0	65	35
2	10	40	2.0	1.0	1.0	35	35	100	150	0.C	10.0	10.0	120	125	10	ט חח	50	2.0	30.0	10.0	65	35
	10	40	2.5	0.0	0.0	35	35	150	150	0.0 Q N	13.0	13.0 7.0	120	125	10)0	50	3.0	29.0	9.0	65	35
	1U	40	3.0	4.0	4.0	30	30	100	100	5.0	7.0	7.0	IZJ	IZJ	10	00	50	3.5	28.0	8.0	65	35
	ŧU	40	4.0	Z.U	Z.U	30	30	200	200	5.0	40.0	40.0	150	150	10)0	50	4.0	27.0	7.0	65	35
Ę	50	50	1.6	6.8	6.8	40	40	200	200	6.0	38.0	38.0	150	150	10)0	50	5.0	25.0	5.0	65	35
5	50	50	2.0	6.0	6.0	40	40	200	200	9.0	32.0	32.0	150	150	10)0	50	6.0	23.0	3.0	65	35
5	50	50	2.5	5.0	5.0	40	40	250	250	6.0	38.0	38.0	200	200	10	25	75	2.0	21 በ	21 በ	100	50
5	50	50	3.0	4.0	4.0	40	40	250	250	9.0	32.0	32.0	200	200	12	25	75	2.0	21.0	20.0	100	50
5	50	50	4.0	2.0	2.0	40	40	REC.	TANGI	ΙΔ	в ноі		ሪደບቷ	IUNG	12	25	75	3.0	19.0	19.0	100	50
-5	50	50	5.0	0.0	0.0	40	40	ILU				LUV			12	25	75	4.0	17.0	17.0	100	50
E	65	65	1.6	11.8	11.8	50	50	50	20	1.6		NI (·		12	25	75	5.0	15.0	15.0	100	50
E	65	65	2.0	11.0	11.0	50	50	50	20	2.0		No 3	Section		12	25	75	6.0	13.0	13.0	100	50
E	65	65	2.5	10.0	10.0	50	50	50	20	2.5		Ava	liable		10	50	100	10	17.0	17.0	125	75
E	65	65	3.0	9.0	9.0	50	50	00	20	J.U					15	50	100	4.0 5 0	17.0 15.0	17.0 15.0	125	70
E	65	65	4.0	7.0	7.0	50	50	50	25	1.6					10	50 50	100	6.0	13.0	13.0	125	75
E	65	65	5.0	5.0	5.0	50	50	50	25	2.0		No S	Section		15	50	100	9.0	7.0	7.0	125	75
	jb	65	6.0	3.0	3.0	50	50	50	25	2.5		Ava	ilable				100	0.0	7.0	7.0	120	
7	75	75	2.0	6.0	6.0	65	65	50	25	3.0					20	JÜ	100	4.0	42.0	42.0	150	50
7	75	75	2.5	5.0	5.0	65	65	65	35	2.0	11.0	6.0	50	25	20	JU	100	5.0	40.0	40.0	150	50
7	75	75	3.0	4.0	4.0	65	65	65	35	2.5	10.0	5.0	50	25	20	UU UU	100	0.0 0.0	30.U 22.0	30.U 22.0	100	בר בר
7	75	75	3.5	3.0	3.0	65	65	65	35	3.0	9.0	4.0	50	25		JU	100	ອ.ບ	JZ.U	JZ.U	100	ວເ
7	75	75	4.0	2.0	2.0	65	65	65	35	4.0	7.0	2.0	50	25	25	50	150	5.0	40.0	40.0	200	10
7	75	75	5.0	0.0	0.0	65	65	75	25	16	21 Q	1 9	50	20	25	50	150	6.0	38.0	38.0	200	10
7	75	75	6.0	13.0	13.0	50	50	75	25	1.0 2 N	∠1.0 21.0	1.0	50	20	25	50	150	9.0	32.0	32.0	200	10
								75	25	2.5	20.0	0.0	50	20								

NOTE

RHS is not a precision tube and all dimensions shown in the chart, although in accordance with the specifications, may vary marginally within the tolerance bands permitted.

Sizes shown in bold print are sizes that provide a clearance of less than 2.0mm. The internal weld bead and variation in corner radii between sections will need to be considered when closer fits are indicated. Where telescoping over some length is desired, additional allowance may be needed for straightness. For tight fits it is recommended that some form of testing be carried out prior to committing material.

HOW TO USE THIS CHART

1. Select the appropriate table for the type of hollow section required. Select the size of female (or outside) member closest to your requirements for the left hand column.

2. Depending on the application select the clearance required between the two members. Members may need to slide freely

inside each other, or be locked with a pin, spot welded or fixed with wedges. This means, in some cases, a 'sloppy' fit may be suitable, while for others the tightest fit possible may be more appropriate.

3. Having selected the most suitable clearance for your application, take the appropriate size of the male (inner) section from the right hand column, eg:

Female Section	Clearance	Male Section
(outer)	mm	(inner)
75 x 75 x 3.0	4.0x4.0	65 x 65

Note that clearance is total available difference between member dimensions, not the gap on both sides.

4. Where two telescoping sections are being used, thickness should be similar and will be determined by normal structural requirements. If a third section is to be used, consideration of both clearance and thickness within the size list available may be required.



5. RHS has the obvious advantage that its shape prevents rotation of the sections. When pipe is used it may need to be fixed against twisting by welding or bolting.

6. Press Fit. For short pieces with no need for separation or sliding an interference fit can be achieved using the available ductility of the steel.

Note: Sizes where clearance is shown as 0.0 will generally require press fit.



Felescoping CHS

	Female(ou Size	ter)	Male(inner) Size Minimum				
DN	Quality	d _o t	DN	d _o	MM		
15	Light Medium Heavy	21.3 x 2.0 2.6 3.2	- -	- - -	- - -		
20	Extra Light	26.9 x 2.0	15	21.3	0.4		
25	Extra Light Light Medium Heavy	33.7 x 2.0 2.6 3.2 4.0	20 20 15 15	26.9 26.9 21.3 21.3	1.6 0.4 4.8 3.2		
32	Extra Light Light Medium Heavy	42.4 x 2.0 2.6 3.2 4.0	25 25 25 20	33.7 33.7 33.7 26.9	3.5 2.3 1.1 6.3		
40	Extra Light Light Medium Heavy Extra Heavy	48.3 x 2.3 2.9 3.2 4.0 5.4	32 25 25 25 25 25	42.4 33.7 33.7 33.7 33.7 33.7	0.1 7.6 7.0 5.4 2.6		
50	Extra Light Light Medium Heavy Extra Heavy	60.3 x 2.3 2.9 3.6 4.5 5.4	40 40 40 40 40	48.3 48.3 48.3 48.3 48.3	6.4 5.2 3.8 2.0 0.2		

	Female(out Size	er)	Male(inner) Size Minimum			
DN	Quality	d _o t		DN	d _o	Liearance mm
65	Extra Light Galtube® Plus Light Medium Heavy Extra Heavy	76.1 x	2.3 2.6 3.2 3.6 4.5 5.9	50 50 50 50 50 50	60.3 60.3 60.3 60.3 60.3 60.3	9.8 9.2 8.0 7.2 5.4 2.6
80	Light Medium Heavy Extra Heavy	88.9 x	3.2 4.0 5.0 5.9	65 65 65 50	76.1 76.1 76.1 60.3	4.8 3.2 1.2 15.3
90	Extra Light Light Medium Heavy	101.6 x	2.6 3.2 4.0 5.0	80 80 80 80	88.9 88.9 88.9 88.9	5.6 4.4 2.8 0.8
100	Extra Light Light Medium Heavy	114.3 x	3.2 3.6 4.5 5.4	90 90 90 80	101.6 101.6 101.6 88.9	4.1 3.3 1.5 12.6
125	Extra Light Light Medium Heavy	139.7 x	3.0 3.5 5.0 5.4	100 100 100 100	114.3 114.3 114.3 114.3	16.9 15.9 12.9 12.1
150	Light Medium Heavy	165.1 x	3.5 5.0 5.4	125 125 125	139.7 139.7 139.7	15.4 12.4 11.6

NOTE

Clearance = (AS1163 Min $d_0 - 2t$) - (AS1163 Max d_0)

CHS is not a precision tube and all dimensions shown in the chart, although in accordance with the specifications, may vary marginally within the tolerance bands permitted.

Sizes shown in bold print are sizes that provide a clearance of less than 2.0mm. The internal weld bead will need to be considered when closer fits are indicated. Where telescoping over some length is desired, additional allowance may be needed for straightness. For tight fits it is recommended that some form of testing be carried out prior to committing material.

HOW TO USE THIS CHART

1. Select the size of female (or outer) member closest to your requirements from the left hand column.

2. Depending on the application select the $% \left({{\rm clearance required}} \right)$ between the two members. Members may need to slide freely



inside each other, or be locked with a pin, spot welded or fixed with wedges. This means, in some cases, a 'sloppy' fit may be suitable, while for others the tightest fit possible may be more appropriate. (See Note 6 Press Fit).

3. Having selected the most suitable clearance for your application, take the appropriate size of the male (inner) section from the centre column, eg:

Female Section	Male Section	Clearance
(outer)	(inner)	mm
76.1x5.9	60.3	2.6

Note that clearance is total available difference between member dimensions, not the gap on both sides.

4. Where two telescoping sections are being used, thickness should be similar and will be determined by normal structural requirements. If a third sections is the be used, consideration of both clearance and thickness within the size list available may be required.

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5. Pipe may need to be fixed against twisting by welding or bolting.

Press Fit. For short pieces with no need for separation or sliding an interference fit can be achieved using the available ductility of the steel.



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