Key Locations & Sales Network

Nalwa Special Steel Limited

Registered Office:
DMS 648, DLF Tower, Najafgarh Road,
Moti Nagar, New Delhi – 110015, India
Email: info@nalwa.com

Plant Address:
RAIGARH
Nalwa Special Steel Limited
Gharghoda Road, P.B. No 7, Taraimal, Raigarh,
Chhattisgarh – 496001, India

Sales & Marketing
Nalwa Special Steel Limited
Gharghoda Road, P.B. No 7, Taraimal, Raigarh,
Chhattisgarh – 496001, India
Email: sales@nalwa.com
Contact Number: 07762-244700/07, 9893496457

HOLLOW SECTION STEEL SOLUTIONS

RECTANGULAR HOLLOW SECTION (RHS)

SQUARE HOLLOW SECTION (SHS)

THE CONTENTS

CHAIRMAN'S MESSAGE

The steel industry has always been characterised by its ever changing nature. This has shaped our industry and the world at large, compelling organisations to demonstrate innovation, agility and resilience to survive and thrive. Only companies with scale, sustainability, and growth are likely to survive the ever growing complexity of the industry. Amongst the leading steel players in India, our Company has successfully navigated through the challenges and has emerged stronger and better than before.

This has been possible because we define ourselves by our resolve to innovate, introduce new products, our ability to set new standards for enriching lives, and our relentless adherence to our cherished value system.

As the Indian economy progresses to become one of the world's largest and fastest growing economies, we are resolute in our commitment to help build the nation of our dreams. Our commitment to the nation extends beyond the expansion of its steel- making facilities. Our Company is actively implementing holistic sustainable social development projects in the communities located in the vicinity of its plants and beyond resulting in enhancing their Human Development Index (HDI).

As India re-emerges as one of the fastest growing major economies in the world, steel is set to play a significant role in its growth story. Infrastructure will continue to act as an economic multiplier for India. As our Company forges ahead, I firmly believe that we are at the right place at the right time with the right elements.

COMPANY SNAPSHOT

Company Name	Nalwa Special Steel Limited (NSSL)
Incorporation Date	May 31, 2022
Industry	Iron & Steel (Tubes and Pipes)
Registered Office	DSM-648, DLF Towers, Shivaji Marg, Najafgarh Road, Delhi-110015
Plant Address	Taraimal, Ghargoda Road, Raigarh, Chhattisgarh - 496001

OUR MISSION, VISION AND VALUES

MISSION

Building Nations, Empowering Communities

VISION

An ever-flourishing company focused on nation building, value creation and sustainable development.

VALUES

- Extreme Ownership
- Better Than Before
- Respect For People
- Sustainability

NALWA SPECIAL STEEL LIMITED

INTRODUCTION

M/s Nalwa Special Steel Limited "NSSL" was originally incorporated as a private limited company in May 2022 as Surya Meditech Limited. The Company is engaged in manufacturing steel hollow sections. NSSL is a 100% subsidiary of Nalwa Steel & Power Limited.

Company Name	Nalwa Special Steel Limited (NSSL)
Incorporation Date	May 31, 2022
Industry	Iron & Steel
Products	Square Hollow Sections (SHS) & Rectangular Hollow Sections (RHS)
Capacity	0.6 MTpa
Registered Office	DSM-648, DLF Towers, Shivaji Marg, Najafgarh Road, Delhi-110015
Plant Address	Taraimal, Ghargoda Road, Raigarh, Chhattisgarh - 496001
Corporate Office Address	Jindal Centre, Plot 2, Sector 32, Gurugram – 122011
Email	info@nalwa.com

TUBE MILL – STRUCTURALS SECTIONS

TECHNOLOGY

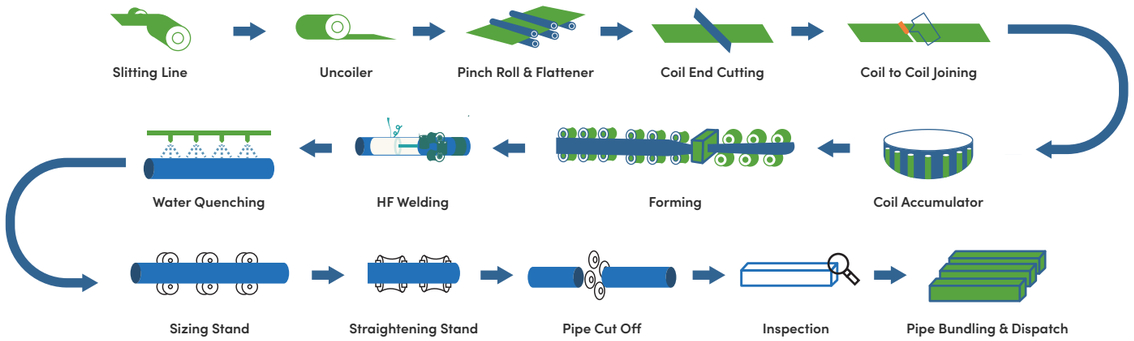
In NSSL, the production of Hollow Sections is through Direct Forming Technology (DFT) in its 6,00,000 TPA capacity Hollow section Mill.

The DFT system brings undisputed advantages in terms of flexibility, production capability and cost reduction. This innovation enables the possibility to produce any size. Included in the mill range without roll change resulting in extreme reduction in set up time.

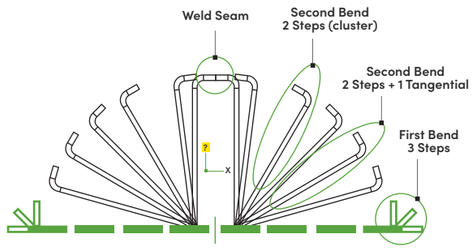
Advantages of Direct Forming Technology (DFT):

- Precise dimensional tolerance with assured corner radius control.
- Uniformity of dimensions across the length and lot.
- Superior surface finish.
- Higher customisation and flexibility.
- Shorter lead time.

PROCESS FLOWS



PROCESS OF PIPE FORMATION



Design of Section Pipe

WHY HOLLOW SECTIONS?

Steel hollow sections are the most versatile and efficient form for construction and mechanical applications.

Many of the strongest and most impressive structures in the world today would not have been possible without hollow sections.

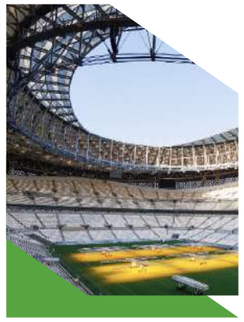
Advantages of hollow sections are:

- Hollow sections are inherently strong and efficient.
- Hollow sections give superior strength to-weight ratio than those using comparable steel, concrete or timber products.
- Hollow sections offer greater resistance to bending and twisting than solid steel sections of similar size.
- Hollow sections can be cut, welded, and shaped into different configurations.
- These comes in wide variety and customized forms and dimensions.
- Hollow sections are more environment friendly as its uses lesser resources and are also reusable as well recyclable.

BENEFITS & APPLICATIONS

The application of Hollow Section are:

Shopping Malls



Stadiums

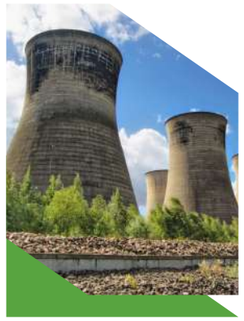
Railway Station /Bus Stand

Industrial Sheds

Airport Terminals

Trucks and bus body manufacturing

Material Racks



Power Plants

And other infrastructural projects

HIGH STRENGTH STEEL & CHEMICAL COMPOSITION

CHEMICAL & MECHANICAL PROPERTIES

IS 2062.2011(Clauses 5, 8.1, 8.2, 10.3, 10.3.1, 11.3.1, 12.2)

Grade Designation	Ladle Analysis, Percent Max					Carbon Equivlent (CE), Max	Tensile Strength R_Min Mpa	Yield stress	Percentage Elongation A, min at Gauge Length L=5.65
	C	Mn	S	P	Si				
E 250	0.22	1.50	0.045	0.045	0.45	0.41	410	250	23
E 300	0.20	1.50	0.045	0.045	0.45	0.44	440	300	22
E 350	0.20	1.55	0.045	0.045	0.45	0.47	490	350	22
E 410	0.20	1.60	0.045	0.045	0.45	0.50	540	410	20

CHEMICAL & MECHANICAL PROPERTIES

IS 10784.2004 Table 1 & 3 (Clauses 7.1, 7.2, 8.3, & 9.2.4)

Grade	Ladle Analysis, Percent Max				Carbon Equivlent (CE), Max	Tensile Strength Min, Mpa	Yield stress Min, Mpa	Percentage Elongation A, min at Gauge Length √s, 5.65
	C	Mn	S	P				
1	0.10	0.50	0.040	0.040	-	290	170	30
2	0.12	0.60	0.040	0.040	-	330	210	28
3	0.16	1.20	0.040	0.040	-	410	240	25
4	0.20	1.30	0.040	0.040	0.45	430	275	20
5	0.25	1.30	0.040	0.040	0.45	490	310	15

TENSILE PROPERTIES OF STEELS TUBES FOR STRUCTURAL PURPOSE

IS 1161:2014, TABLE 2, (Clauses 3.1 and 11.2)

S.NO	Grade	Tensile Strength Min Mpa	Yield Strength Min Mpa	Elongation on Gauge Length 5.65 √5, Min Percent
1	YST 210	330	210	20
2	YST 240	410	240	17
3	YST 310	450	310	14
4	YST 355	490	355	10

TENSILE PROPERTIES OF STEELS TUBES SECTIONS

IS 4923:2017, TABLE 4, (Clauses 19.2)

S.NO	Grade	Tensile Strength Min Mpa	Yield Strength Min Mpa	Elongation Min Percent
1	YST 210	330	210	20
2	YST 240	410	240	15
3	YST 310	450	310	14
4	YST 355	490	355	10

ALLOWABLE STRESS VALUE (IN MPA) AND DIMENSIONAL TOLERANCE

IS 4923:2017, TABLE 4, (Clauses 19.2)

S.NO	Grade	Tensile Strength Min Mpa	Yield Strength Min Mpa	Elongation Min Percent	DIMENSIONAL TOLERANCE					
					Outside Dimensional	Thickness	Squareness	Corner radious	Weight Individual Lengths	Weight On Lot of 10 MT
1	YST 210	330	210	20	+/- with a minimum of +/-0.50 min	±7.5%	90 deg. +/-2 deg	3t Max	10%-8%	± 7%
2	YST 240	410	240	15						
3	YST 310	450	310	10						
4	YST 355	490	355	10						
* Customised sections can also be manufactured.										

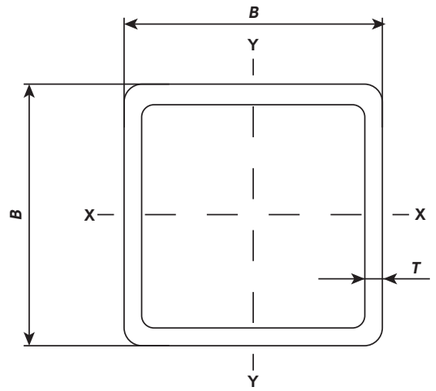
Advantages of using high strength steel:

- Less dead weight.
- Higher overall saving due to less material, transportation, and fabrication cost.
- Better aesthetics.
- More usable area.
- Increase load carrying capacity.

PRODUCT RANGE:

SQUARE HOLLOW SECTION (SHS)

Dimenions	150mm X 150mm to 600mm X 600mm
Thickness	4mm to 22mm



Square Hollow Sections (SHS) are characterized by their profile, their length, and their quality.
NSSL manufactures Square Hollow Sections in various configurations.

SQUARE HOLLOW SECTION (SHS) SIZE CHART

SQUARE SECTION TUBE(300X300-600X600) Up to YST - 355MPa																		
Thickness (mm) → Section ↓	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
150X150	■	■	■	■	■	■	■	■	■										
200X200	■	■	■	■	■	■	■	■	■	■									
220X220	■	■	■	■	■	■	■	■	■	■									
250X250	■	■	■	■	■	■	■	■	■	■	■								
280X280		■	■	■	■	■	■	■	■	■	■								
300X300		■	■	■	■	■	■	■	■	■	■	■							
300X300		■	■	■	■	■	■	■	■	■	■	■							
320X320		■	■	■	■	■	■	■	■	■	■	■	■						
350X350		■	■	■	■	■	■	■	■	■	■	■	■	■					
380X380		■	■	■	■	■	■	■	■	■	■	■	■	■	■				
400X400		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
450X450		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
480X480		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
500X500		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
558.5X558.5			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
580X580			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
600X600			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

SQUARE SECTION TUBE (300X300-600X600) Upto YST - 550MPa																		
Thickness (mm) → Section ↓	4	5	6	7	8	9	10	11	12	13	13.5	14	14.5	15	16	17	18	20	22
150X150	■	■	■	■	■	■	■												
200X200	■	■	■	■	■	■	■	■	■										
220X220	■	■	■	■	■	■	■	■	■										
250X250	■	■	■	■	■	■	■	■	■										
280X280		■	■	■	■	■	■	■	■	■									
300X300		■	■	■	■	■	■	■	■	■	■	■							
300X300		■	■	■	■	■	■	■	■	■	■	■							
320X320		■	■	■	■	■	■	■	■	■	■	■	■						
350X350		■	■	■	■	■	■	■	■	■	■	■	■	■					
380X380		■	■	■	■	■	■	■	■	■	■	■	■	■	■				
400X400		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
450X450		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
480X480		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
500X500		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
558.5X558.5			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
580X580			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
600X600			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

SQUARE HOLLOW SECTION (SHS) IS 4923-2017/ EN10219-1:2006/ ASTM A-500										
Sizes	Area	Weight	Moment of Inertia	Radius of Gyration	Elastic Modulus	Plastic Modulus	Torsion		Superfacial Area / mtr length	Nominal Length / Ton
	A	M	I	R	Z	S	J	C	As	
	cm²	kg/m	cm⁴	cm	cm³	cm³	cm⁴	cm³	m2/m	m
150 X 150 X 4	22.9	18.0	808.4	5.94	108	125	1265	162	0.586	55.5
150 X 150 X 4.5	25.7	20.1	897.2	5.91	120	139	1411	180	0.585	49.6
150 X 150 X 5	28.4	22.3	983.3	5.89	131	153	1554	197	0.583	44.9
150 X 150 X 6	33.6	26.4	1148.0	5.84	153	180	1833	230	0.579	37.9
150 X 150 X 8	43.8	34.4	1447.9	5.75	193	230	2357	230	0.573	29.1
150 X 150 X 10	53.4	41.9	1710.6	5.66	228	276	2838	343	0.566	23.8
150 X 150 X 12	62.5	49.1	1938.5	5.57	258	317	3274	390	0.559	20.4
175 X 175 X 4	26.9	21.2	1303.8	6.96	149	172	2028	224	0.686	47.3
175 X 175 X 4.5	30.2	23.7	1449.9	6.93	166	192	2265	249	0.685	42.2
175 X 175 X 5	33.4	26.2	1592.3	6.91	182	211	2498	273	0.683	38.2
175 X 175 X 6	39.6	31.1	1866.5	6.86	213	249	2954	320	0.679	32.1
175 X 175 X 8	51.8	40.7	2373.6	6.77	271	321	3822	408	0.673	24.6
175 X 175 X 10	63.4	49.8	2828.2	6.68	323	387	4630	486	0.666	20.1
175 X 175 X 12	74.5	58.5	3233.2	6.59	370	447	5378	556	0.659	17.1
180 X 180 X 4	27.7	21.8	1422.5	7.16	158	182	2210	237	0.706	45.9
180 X 180 X 4.5	31.1	24.4	1582.3	7.14	176	203	2469	264	0.705	41.0
180 X 180 X 5	34.4	27.0	1738.3	7.11	193	224	2724	290	0.703	37.1
180 X 180 X 6	40.8	32.1	2039.0	7.07	227	264	3223	340	0.699	31.2
180 X 180 X 8	53.4	41.9	2596.6	6.97	289	341	4173	433	0.693	23.9
180 X 180 X 10	65.4	51.4	3098.3	6.88	344	411	5060	518	0.686	19.5
180 X 180 X 12	76.9	60.4	3547.0	6.79	394	476	5884	593	0.679	16.6
200 X 200 X 4	30.9	24.3	1969.0	7.98	197	226	3049	295	0.786	41.2
200 X 200 X 4.5	34.7	27.2	2192.7	7.95	219	253	3408	329	0.785	36.7
200 X 200 X 5	38.4	30.1	2411.7	7.93	241	279	3763	362	0.783	33.2
200 X 200 X 6	45.6	35.8	2835.5	7.88	284	330	4459	426	0.779	27.9
200 X 200 X 8	59.8	46.9	3628.2	7.79	363	426	5792	545	0.773	21.3
200 X 200 X 10	73.4	57.6	4350.3	7.70	435	517	7048	654	0.766	17.3
200 X 200 X 12	86.5	67.9	5005.3	7.61	501	601	8226	753	0.759	14.7
200 X 200 X 13	92.9	72.9	5308.6	7.56	531	641	8786	799	0.755	13.7
220 X 220 X 4	34.1	26.8	2640.1	8.79	240	275	4076	360	0.866	37.3
220 X 220 X 4.5	38.3	30.0	2942.9	8.77	268	308	4560	401	0.865	33.3
220 X 220 X 5	42.4	33.2	3239.8	8.75	295	340	5038	442	0.863	30.1
220 X 220 X 6	50.4	39.6	3816.4	8.70	347	402	5976	521	0.859	25.3
220 X 220 X 8	66.2	52.0	4902.2	8.61	446	522	7784	669	0.853	19.2
220 X 220 X 10	81.4	63.9	5901.2	8.51	536	634	9498	806	0.846	15.6
220 X 220 X 12	96.1	75.5	6817.1	8.42	620	740	11118	932	0.839	13.3
220 X 220 X 13	103.3	81.1	7245.0	8.38	659	790	11892	991	0.835	12.3
225 X 225 X 4	34.9	27.4	2828.8	9.00	251	288	4365	377	0.886	36.5
225 X 225 X 4.5	39.2	30.7	3153.9	8.97	280	322	4883	421	0.885	32.5
225 X 225 X 5	43.4	34.0	3472.9	8.95	309	356	5396	463	0.883	29.4
225 X 225 X 6	51.6	40.5	4092.7	8.90	364	421	6403	546	0.879	24.7
225 X 225 X 8	67.8	53.2	5261.6	8.81	468	547	8344	702	0.873	18.8
225 X 225 X 10	83.4	65.5	6339.4	8.72	563	665	10188	846	0.866	15.3
225 X 225 X 12	98.5	77.3	7329.7	8.62	652	777	11933	979	0.859	12.9
225 X 225 X 13	105.9	83.1	7793.3	8.58	693	830	12769	1042	0.855	12.0
250 X 250 X 4	38.9	30.6	3908.3	10.02	313	358	6014	469	0.986	32.7
250 X 250 X 4.5	43.7	34.3	4361.5	9.99	349	400	6732	523	0.985	29.2
250 X 250 X 5	48.4	38.0	4807.1	9.97	385	442	7443	577	0.983	26.3
250 X 250 X 6	57.6	45.2	5675.5	9.92	454	524	8843	681	0.979	22.1
250 X 250 X 8	75.8	59.5	7323.9	9.83	586	683	11552	879	0.973	16.8
250 X 250 X 10	93.4	73.3	8857.9	9.74	709	833	14141	1064	0.966	13.6
250 X 250 X 12	110.5	86.8	10281.6	9.64	823	975	16610	1236	0.959	11.5
250 X 250 X 13	118.9	93.3	10953.5	9.60	876	1043	17798	1317	0.955	10.7
250 X 250 X 14	127.1	99.8	11599.4	9.55	928	1109	18957	1395	0.952	10.0
250 X 250 X 15	135.2	106.1	12219.9	9.51	978	1173	20084	1471	0.948	9.4
280 X 280 X 5	54.4	42.7	6812.4	11.20	487	558	10513	730	1.103	23.4
280 X 280 X 6	64.8	50.9	8057.5	11.15	576	663	12504	863	1.099	19.6
280 X 280 X 8	85.4	67.0	10435.1	11.05	745	865	16373	1118	1.093	14.9
280 X 280 X 10	105.4	82.8	12667.0	10.96	905	1058	20092	1358	1.086	12.1
280 X 280 X 12	124.9	98.1	14757.7	10.87	1054	1243	23660	1583	1.079	10.2

SQUARE HOLLOW SECTION (SHS) IS 4923-2017/ EN10219-1:2006/ ASTM A-500										
Sizes	Area	Weight	Moment of Inertia	Radius of Gyration	Elastic Modulus	Plastic Modulus	Torsion		Superfacial Area / mtr length	Nominal Length / Ton
	A	M	I	R	Z	S	J	C	As	
	cm²	kg/m	cm⁴	cm	cm³	cm³	cm⁴	cm³	m2/m	m
280 X 280 X 13	134.5	105.6	15751.7	10.82	1125	1331	25388	1690	1.075	9.5
280 X 280 X 14	143.9	113.0	16712.1	10.78	1194	1418	27077	1794	1.072	8.9
280 X 280 X 15	153.2	120.3	17639.7	10.73	1260	1502	28728	1894	1.068	8.3
300 X 300 X 5	58.4	45.8	8419.3	12.01	561	643	12968	842	1.183	21.8
300 X 300 X 6	69.6	54.7	9967.9	11.96	665	764	15434	997	1.179	18.3
300 X 300 X 8	91.8	72.1	12935.0	11.87	862	999	20236	1294	1.173	13.9
300 X 300 X 10	113.4	89.0	15733.2	11.78	1049	1224	24866	1574	1.166	11.2
300 X 300 X 12	134.5	105.6	18367.7	11.68	1225	1439	29323	1839	1.159	9.5
300 X 300 X 13	144.9	113.7	19625.1	11.64	1308	1543	31486	1965	1.155	8.8
300 X 300 X 14	155.1	121.8	20843.5	11.59	1390	1645	33606	2088	1.152	8.2
300 X 300 X 15	165.2	129.7	22023.4	11.55	1468	1744	35682	2207	1.148	7.7
300 X 300 X 16	175.2	137.5	23165.6	11.50	1544	1841	37714	2322	1.145	7.3
300 X 300 X 17	185.0	145.2	24270.6	11.45	1618	1935	39702	2433	1.142	6.9
300 X 300 X 18	194.7	152.8	25339.1	11.41	1689	2028	41647	2541	1.138	6.5
320 X 320 X 5	62.4	48.9	10261.0	12.83	641	734	15779	962	1.263	20.4
320 X 320 X 6	74.4	58.4	12158.7	12.78	760	873	18789	1140	1.259	17.1
320 X 320 X 8	98.2	77.1	15805.4	12.69	988	1142	24663	1482	1.253	13.0
320 X 320 X 10	121.4	95.3	19258.4	12.59	1204	1401	30341	1806	1.246	10.5
320 X 320 X 12	144.1	113.1	22523.2	12.50	1408	1650	35822	2113	1.239	8.8
320 X 320 X 13	155.3	121.9	24086.8	12.45	1505	1770	38489	2261	1.235	8.2
320 X 320 X 14	166.3	130.6	25605.3	12.41	1600	1888	41106	2404	1.232	7.7
320 X 320 X 15	177.2	139.1	27079.6	12.36	1692	2004	43674	2543	1.228	7.2
320 X 320 X 16	188.0	147.6	28510.2	12.32	1782	2117	46192	2678	1.225	6.8
320 X 320 X 17	198.6	155.9	29897.8	12.27	1869	2227	48660	2809	1.222	6.4
320 X 320 X 18	209.1	164.1	31243.1	12.22	1953	2335	51078	2936	1.218	6.1
320 X 320 X 19	219.5	172.3	32546.7	12.18	2034	2440	53446	3060	1.215	5.8
320 X 320 X 20	229.7	180.3	33809.3	12.13	2113	2543	55763	3180	1.211	5.5
380 X 380 X 5	74.4	58.4	17354.3	15.28	913	1043	26583	1370	1.503	17.1
380 X 380 X 6	88.8	69.7	20605.5	15.23	1085	1241	31695	1627	1.499	14.3
380 X 380 X 8	117.4	92.2	26895.3	15.14	1416	1630	41712	2123	1.493	10.9
380 X 380 X 10	145.4	114.2	32906.9	15.04	1732	2006	51453	2599	1.486	8.8
380 X 380 X 12	172.9	135.8	38647.0	14.95	2034	2369	60918	3053	1.479	7.4
380 X 380 X 13	186.5	146.4	41417.3	14.90	2180	2546	65546	3272	1.475	6.8
380 X 380 X 14	199.9	156.9	44122.2	14.86	2322	2720	70105	3486	1.472	6.4
380 X 380 X 15	213.2	167.4	46762.5	14.81	2461	2891	74595	3696	1.468	6.0
380 X 380 X 16	226.4	177.7	49339.0	14.76	2597	3059	79015	3900	1.465	5.6
380 X 380 X 17	239.4	187.9	51852.4	14.72	2729	3224	83364	4100	1.462	5.3
380 X 380 X 18	252.3	198.1	54303.7	14.67	2858	3385	87644	4294	1.458	5.0
380 X 380 X 19	265.1	208.1	56693.6	14.62	2984	3544	91854	4484	1.455	4.8
380 X 380 X 20	277.7	218.0	59022.9	14.58	3106	3700	95993	4670	1.451	4.6
400 X 400 X 5	78.4	61.5	20294.8	16.09	1015	1157	31055	1522	1.583	16.3
400 X 400 X 6	93.6	73.5	24109.9	16.05	1205	1379	37039	1808	1.579	13.6
400 X 400 X 8	123.8	97.2	31503.5	15.95	1575	1812	48778	2363	1.573	10.3
400 X 400 X 10	153.4	120.4	38587.4	15.86	1929	2231	60213	2895	1.566	8.3
400 X 400 X 12	182.5	143.3	45368.7	15.77	2268	2637	71341	3404	1.559	7.0
400 X 400 X 14	211.1	165.7	51854.2	15.67	2593	3031	82162	3892	1.552	6.0
400 X 400 X 15	225.2	176.8	54988.3	15.63	2749	3222	87457	4128	1.548	5.7

SQUARE HOLLOW SECTION (SHS) IS 4923-2017/ EN10219-1:2006/ ASTM A-500										
Sizes	Area	Weight	Moment of Inertia	Radius of Gyration	Elastic Modulus	Plastic Modulus	Torsion		Superfacial Area / mtr length	Nominal Length / Ton
	A	M	I	R	Z	S	J	C	As	
	cm²	kg/m	cm⁴	cm	cm³	cm³	cm⁴	cm³	m2/m	m
400 X 400 X 16	239.2	187.7	58050.9	15.58	2903	3411	92675	4358	1.545	5.3
400 X 400 X 17	253.0	198.6	61043.1	15.53	3052	3597	97816	4584	1.542	5.0
400 X 400 X 18	266.7	209.4	63965.6	15.49	3198	3779	102879	4804	1.538	4.8
400 X 400 X 19	280.3	220.0	66819.2	15.44	3341	3958	107865	5020	1.535	4.5
400 X 400 X 20	293.7	230.6	69604.9	15.39	3480	4134	112772	5230	1.531	4.3
400 X 400 X 22	320.2	251.3	74975.5	15.30	3749	4476	122354	5637	1.524	4.0
450 X 450 X 5	88.4	69.4	29057.9	18.13	1291	1471	44367	1937	1.783	14.4
450 X 450 X 6	105.6	82.9	34559.5	18.09	1536	1754	52953	2304	1.779	12.1
450 X 450 X 8	139.8	109.7	45260.8	17.99	2012	2308	69837	3017	1.773	9.1
450 X 450 X 10	173.4	136.1	55566.2	17.90	2470	2847	86334	3705	1.766	7.3
450 X 450 X 12	206.5	162.1	65483.7	17.81	2910	3371	102445	4367	1.759	6.2
450 X 450 X 13	222.9	175.0	70299.3	17.76	3124	3628	110356	4688	1.755	5.7
450 X 450 X 14	239.1	187.7	75021.0	17.71	3334	3881	118169	5004	1.752	5.3
450 X 450 X 15	255.2	200.3	79649.5	17.67	3540	4131	125885	5313	1.748	5.0
450 X 450 X 16	271.2	212.9	84186.0	17.62	3742	4376	133503	5617	1.745	4.7
450 X 450 X 17	287.0	225.3	88631.3	17.57	3939	4618	141024	5914	1.742	4.4
450 X 450 X 18	302.7	237.6	92986.4	17.53	4133	4857	148448	6206	1.738	4.2
450 X 450 X 19	318.3	249.8	97252.2	17.48	4322	5092	155773	6492	1.735	4.0
450 X 450 X 20	333.7	262.0	101429.8	17.43	4508	5323	163001	6772	1.731	3.8
450 X 450 X 22	364.2	285.9	109523.8	17.34	4868	5775	177161	7315	1.724	3.5
480 X 480 X 5	94.4	74.1	35364.0	19.36	1473	1677	53936	2210	1.903	13.5
480 X 480 X 6	112.8	88.6	42083.3	19.31	1753	2000	64397	2630	1.899	11.3
480 X 480 X 8	149.4	117.3	55177.0	19.22	2299	2634	84989	3448	1.893	8.5
480 X 480 X 10	185.4	145.6	67818.0	19.12	2826	3253	105143	4239	1.886	6.9
480 X 480 X 12	220.9	173.4	80014.9	19.03	3334	3855	124857	5002	1.879	5.8
480 X 480 X 13	238.5	187.2	85949.3	18.98	3581	4150	134549	5373	1.875	5.3
480 X 480 X 14	255.9	200.9	91775.9	18.94	3824	4442	144131	5738	1.872	5.0
480 X 480 X 15	273.2	214.5	97495.5	18.89	4062	4729	153602	6096	1.868	4.7
480 X 480 X 16	290.4	227.9	103109.4	18.84	4296	5013	162963	6448	1.865	4.4
480 X 480 X 17	307.4	241.3	108618.4	18.80	4526	5293	172212	6794	1.862	4.1
480 X 480 X 18	324.3	254.6	114023.7	18.75	4751	5568	181351	7133	1.858	3.9
480 X 480 X 19	341.1	267.7	119326.1	18.70	4972	5840	190379	7466	1.855	3.7
480 X 480 X 20	357.7	280.8	124526.9	18.66	5189	6109	199295	7792	1.851	3.6
480 X 480 X 22	390.6	306.6	134627.2	18.57	5609	6634	216794	8427	1.844	3.3
500 X 500 X 5	98.4	77.2	40038.0	20.18	1602	1822	61025	2402	1.983	13.0
500 X 500 X 6	117.6	92.3	47661.6	20.13	1906	2173	72875	2859	1.979	10.8
500 X 500 X 8	155.8	122.3	62533.5	20.03	2501	2864	96219	3752	1.973	8.2
500 X 500 X 10	193.4	151.8	76912.8	19.94	3077	3538	119088	4615	1.966	6.6
500 X 500 X 12	230.5	181.0	90808.3	19.85	3632	4196	141480	5449	1.959	5.5
500 X 500 X 13	248.9	195.4	97577.3	19.80	3903	4518	152497	5856	1.955	5.1
500 X 500 X 14	267.1	209.7	104228.6	19.75	4169	4837	163395	6256	1.952	4.8
500 X 500 X 15	285.2	223.9	110763.4	19.71	4431	5151	174172	6649	1.948	4.5
500 X 500 X 16	303.2	238.0	117182.6	19.66	4687	5461	184830	7035	1.945	4.2
500 X 500 X 17	321.0	252.0	123487.4	19.61	4939	5768	195367	7414	1.942	4.0
500 X 500 X 18	338.7	265.9	129678.9	19.57	5187	6070	205784	7787	1.938	3.8
500 X 500 X 19	356.3	279.7	135758.0	19.52	5430	6368	216081	8153	1.935	3.6
500 X 500 X 20	373.7	293.4	141725.9	19.47	5669	6662	226257	8513	1.931	3.4
500 X 500 X 22	408.2	320.4	153332.2	19.38	6133	7239	246247	9213	1.924	3.1
558.5 X 558.5 X 6	131.7	103.4	66760.5	22.52	2391	2722	101874	3585	2.213	9.7
558.5 X 558.5 X 8	174.5	137.0	87741.8	22.42	3142	3591	134651	4712	2.207	7.3
558.5 X 558.5 X 10	216.8	170.2	108103.8	22.33	3871	4442	166835	5806	2.200	5.9
558.5 X 558.5 X 12	258.6	203.0	127856.3	22.23	4579	5274	198426	6868	2.193	4.9
558.5 X 558.5 X 13	279.3	219.3	137507.1	22.19	4924	5683	213997	7387	2.189	4.6
558.5 X 558.5 X 14	299.9	235.4	147009.2	22.14	5264	6088	229420	7898	2.186	4.2
558.5 X 558.5 X 15	320.3	251.4	156363.8	22.09	5599	6488	244694	8401	2.182	4.0
558.5 X 558.5 X 16	340.6	267.4	165572.2	22.05	5929	6883	259819	8897	2.179	3.7
558.5 X 558.5 X 17	360.8	283.2	174635.6	22.00	6254	7274	274794	9385	2.176	3.5

SQUARE HOLLOW SECTION (SHS) IS 4923-2017/ EN10219-1:2006/ ASTM A-500										
Sizes	Area	Weight	Moment of Inertia	Radius of Gyration	Elastic Modulus	Plastic Modulus	Torsion		Superfacial Area / mtr length	Nominal Length / Ton
	A	M	I	R	Z	S	J	C	As	
	cm²	kg/m	cm⁴	cm	cm³	cm³	cm⁴	cm³	m2/m	m
558.5 X 558.5 X 18	380.8	298.9	183555.2	21.95	6573	7661	289619	9865	2.172	3.3
558.5 X 558.5 X 19	400.7	314.6	192332.1	21.91	6887	8042	304294	10338	2.169	3.2
558.5 X 558.5 X 20	420.5	330.1	200967.6	21.86	7197	8420	318820	10803	2.165	3.0
558.5 X 558.5 X 22	459.7	360.8	217819.0	21.77	7800	9161	347419	11712	2.158	2.8
580 X 580 X 6	136.8	107.4	74890.6	23.39	2582	2939	114209	3873	2.299	9.3
580 X 580 X 8	181.4	142.4	98480.3	23.30	3396	3879	151004	5093	2.293	7.0
580 X 580 X 10	225.4	177.0	121400.5	23.21	4186	4800	187161	6279	2.286	5.7
580 X 580 X 12	268.9	211.1	143661.3	23.11	4954	5701	222678	7431	2.279	4.7
580 X 580 X 13	290.5	228.0	154547.7	23.07	5329	6145	240195	7994	2.275	4.4
580 X 580 X 14	311.9	244.9	165273.2	23.02	5699	6584	257552	8550	2.272	4.1
580 X 580 X 15	333.2	261.6	175838.9	22.97	6063	7018	274749	9097	2.268	3.8
580 X 580 X 16	354.4	278.2	186246.2	22.93	6422	7447	291784	9636	2.265	3.6
580 X 580 X 17	375.4	294.7	196496.2	22.88	6776	7872	308658	10167	2.262	3.4
580 X 580 X 18	396.3	311.1	206590.4	22.83	7124	8292	325371	10691	2.258	3.2
580 X 580 X 19	417.1	327.4	216529.8	22.79	7467	8707	341923	11206	2.255	3.1
580 X 580 X 20	437.7	343.6	226315.9	22.74	7804	9117	358312	11714	2.251	2.9
580 X 580 X 22	478.6	375.7	245432.6	22.65	8463	9924	390606	12706	2.244	2.7
600 X 600 X 6	141.6	111.2	83022.9	24.21	2767	3148	126541	4150	2.379	9.0
600 X 600 X 8	187.8	147.4	109225.2	24.12	3641	4157	167358	5460	2.373	6.8
600 X 600 X 10	233.4	183.2	134709.5	24.02	4490	5145	207492	6735	2.366	5.5
600 X 600 X 12	278.5	218.6	159486.4	23.93	5316	6114	246941	7974	2.359	4.6
600 X 600 X 13	300.9	236.2	171613.0	23.88	5720	6591	266408	8581	2.355	4.2
600 X 600 X 14	323.1	253.6	183566.7	23.84	6119	7063	285704	9179	2.352	3.9
600 X 600 X 15	345.2	271.0	195348.8	23.79	6512	7530	304827	9769	2.348	3.7
600 X 600 X 16	367.2	288.2	206960.7	23.74	6899	7992	323778	10351	2.345	3.5
600 X 600 X 17	389.0	305.4	218403.6	23.69	7280	8449	342557	10924	2.342	3.3
600 X 600 X 18	410.7	322.4	229678.9	23.65	7656	8901	361163	11489	2.338	3.1
600 X 600 X 19	432.3	339.3	240787.9	23.60	8026	9348	379597	12046	2.335	2.9
600 X 600 X 20	453.7	356.2	251731.9	23.56	8391	9791	397858	12594	2.331	2.8
600 X 600 X 22	496.2	389.5	273129.7	23.46	9104	10661	433860	13668	2.324	2.6

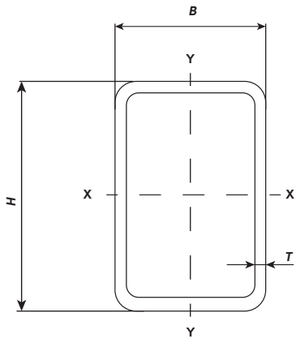
PRODUCT RANGE:

RECTANGULAR HOLLOW SECTION (RHS)

Dimenions Mill 1	Min 100mm X 200mm Max 150mm X 450mm
Dimenions Mill 2	Min 300mm X 350mm Max 400mm X 600mm

Thickness	4mm to 22mm

Length	4 to 14 M (Can Supply upto 24 M Length)

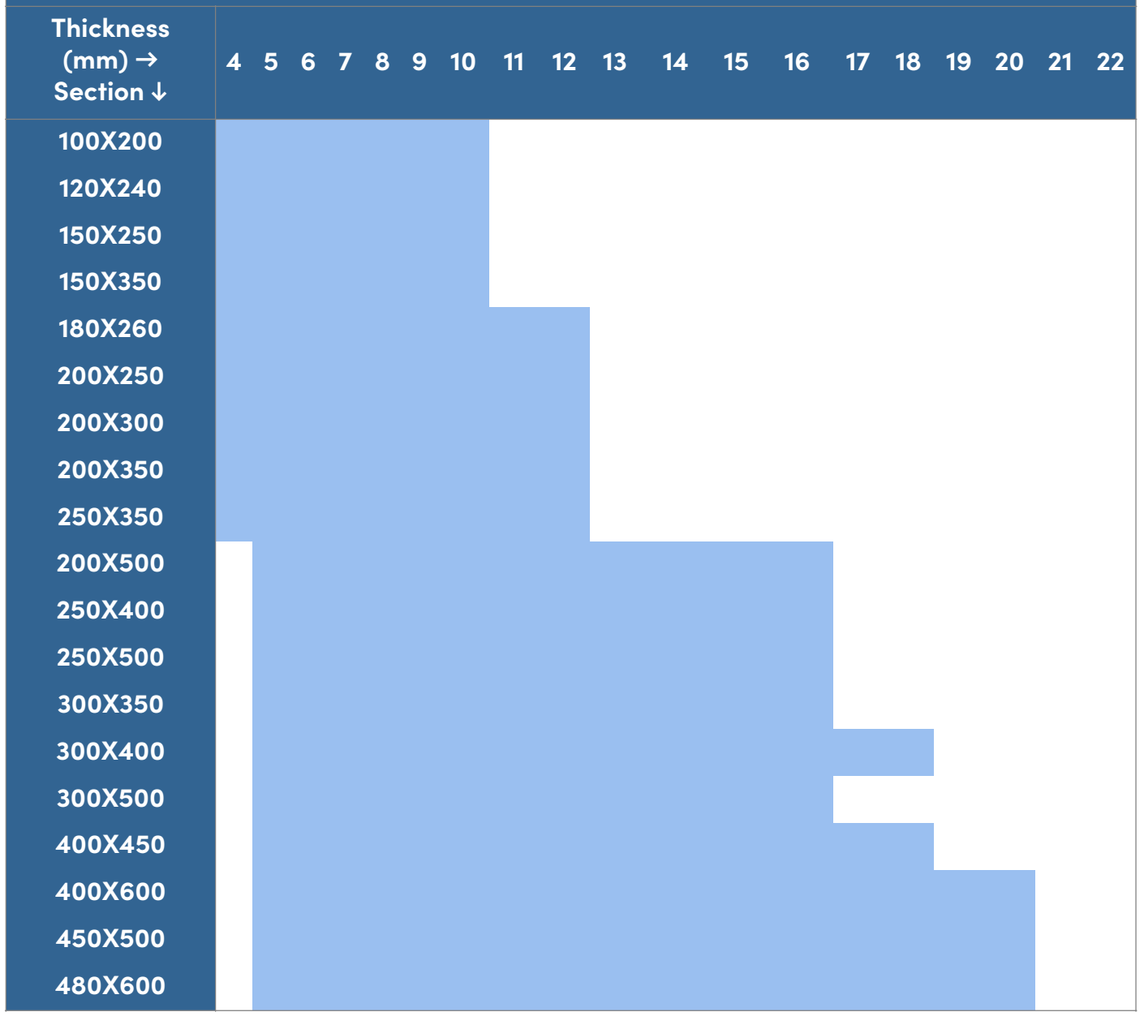


Rectangular Hollow Sections (RHS) are characterized by their profile, their length, and their quality. NSSL manufactures Square Hollow Sections in various configurations.

RECTANGULAR HOLLOW SECTION (RHS) SIZE CHART

RECTANGULAR SECTION TUBE (300X300-600X600) Upto YST- 350MPa Rectangle tube (H / W ≤ 2.5, H ≥ W)																		
Thickness (mm) → Section ↓	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**
100X200	■	■	■	■	■	■	■	■	■										
120X240	■	■	■	■	■	■	■	■	■										
150X250	■	■	■	■	■	■	■	■	■										
150X350	■	■	■	■	■	■	■	■	■										
180X260	■	■	■	■	■	■	■	■	■										
200X250	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
200X300	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
200X350	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
250X350	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
200X500			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
250X400			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
250X500			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
300X350			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
300X400			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
300X500			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
350X300			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
400X450			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
400X600			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
450X500			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
480X600			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

RECTANGULAR SECTION TUBE (300X300-600X600) Upto YST - 550MPa
Rectangle tube (H / W ≤ 2.5, H ≥ W)



RECTANGULAR HOLLOW SECTION (SHS) IS 4923-2017/ EN10219-1:2006/ ASTM A-500

Sizes	Area	Weight	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsion		Superficial Area / mtr length	Nominal Length / Ton
	A	kg/m	Ixx	Iyy	Rxx	Ryy	Zxx	Zyy	Sxx	Syy	J	C	As	
			cm⁴	cm⁴	cm	cm	cm³	cm³	cm³	cm³	cm⁴	cm³	m2/m	m
200 X 100 X 4	22.9	18.0	1200	380	7.2	4.1	120	76	148	90	985	142	0.586	55.5
200 X 100 X 5	28.4	22.3	1459	449	7.2	4.0	146	90	181	109	1206	172	0.583	44.9
200 X 100 X 6	33.6	26.4	1703	508	7.1	3.9	170	102	213	127	1417	200	0.579	37.9
200 X 100 X 8	43.8	34.4	2146	598	7.0	3.7	215	120	273	159	1808	251	0.573	29.1
200 X 100 X 10	53.4	41.9	2531	651	6.9	3.5	253	130	327	187	2158	294	0.566	23.8
200 X 100 X 12	62.5	49.1	2860	669	6.8	3.3	286	134	375	210	2467	331	0.559	20.4
240 X 120 X 4	27.7	21.8	2111	681	8.7	5.0	176	114	216	132	1726	208	0.706	45.9
240 X 120 X 5	34.4	27.0	2580	814	8.7	4.9	215	136	266	161	2121	254	0.703	37.1
240 X 120 X 6	40.8	32.1	3026	932	8.6	4.8	252	155	313	188	2501	297	0.699	31.2
240 X 120 X 8	53.4	41.9	3852	1125	8.5	4.6	321	187	404	239	3218	376	0.693	23.9
240 X 120 X 10	65.4	51.4	4592	1264	8.4	4.4	383	211	488	284	3876	447	0.686	19.5
240 X 120 X 12	76.9	60.4	5248	1350	8.3	4.2	437	225	565	323	4475	509	0.679	16.6
250 X 150 X 4	30.9	24.3	2697	1193	9.3	6.2	216	159	260	181	2665	275	0.786	41.2
250 X 150 X 5	38.4	30.1	3304	1444	9.3	6.1	264	193	320	222	3285	337	0.783	33.2
250 X 150 X 6	45.6	35.8	3886	1677	9.2	6.1	311	224	378	262	3886	396	0.779	27.9
250 X 150 X 8	59.8	46.9	4972	2088	9.1	5.9	398	278	489	335	5032	505	0.773	21.3
250 X 150 X 10	73.4	57.6	5960	2430	9.0	5.8	477	324	593	403	6104	604	0.766	17.3
250 X 150 X 12	86.5	67.9	6853	2706	8.9	5.6	548	361	689	464	7101	694	0.759	14.7
250 X 200 X 4	34.9	27.4	3302	2329	9.7	8.2	264	233	309	265	4254	372	0.886	36.5
250 X 200 X 5	43.4	34.0	4055	2850	9.7	8.1	324	285	381	326	5257	457	0.883	29.4
250 X 200 X 6	51.6	40.5	4779	3346	9.6	8.0	382	335	451	386	6237	538	0.879	24.7
250 X 200 X 8	67.8	53.2	6144	4268	9.5	7.9	492	427	586	499	8124	692	0.873	18.8
250 X 200 X 10	83.4	65.5	7401	5099	9.4	7.8	592	510	713	605	9914	834	0.866	15.3
250 X 200 X 12	98.5	77.3	8553	5841	9.3	7.7	684	584	832	704	11606	965	0.859	15.3
250 X 200 X 15	120.2	94.4	10093	6796	9.2	7.5	807	680	997	840	13960	1140	0.848	10.6
260 X 180 X 4	34.1	26.8	3358	1881	9.9	7.4	258	209	306	237	3801	347	0.866	37.3
260 X 180 X 5	42.4	33.2	4121	2293	9.9	7.4	317	255	377	291	4695	426	0.863	30.1
260 X 180 X 6	50.4	39.6	4856	2683	9.8	7.3	374	298	447	344	5566	501	0.859	25.3
260 X 180 X 8	66.2	52.0	6239	3395	9.7	7.2	480	377	580	444	7239	644	0.853	19.2
260 X 180 X 10	81.4	63.9	7510	4022	9.6	7.0	578	447	705	537	8820	774	0.846	15.6
260 X 180 X 12	96.1	75.5	8672	4565	9.5	6.9	667	507	822	623	10309	894	0.839	13.3
300 X 200 X 4	38.9	30.6	5073	2685	11.4	8.3	338	269	401	303	5527	449	0.986	32.7
300 X 200 X 5	48.4	38.0	6241	3281	11.4	8.2	416	328	496	373	6836	552	0.983	26.3
300 X 200 X 6	57.6	45.2	7370	3847	11.3	8.2	491	385	588	441	8115	651	0.979	22.1
300 X 200 X 8	75.8	59.5	9514	4893	11.2	8.0	634	489	765	572	10586	840	0.973	16.8
300 X 200 X 10	93.4	73.3	11507	5827	11.1	7.9	767	583	934	694	12939	1014	0.966	13.6
300 X 200 X 12	110.5	86.8	13355	6652	11.0	7.8	890	665	1093	808	15173	1177	0.959	11.5
300 X 200 X 15	135.2	106.1	15862	7692	10.8	7.5	1057	769	1316	964	18302	1397	0.948	9.4
350 X 150 X 4	38.9	30.6	6133	1558	12.5	6.3	350	208	434	238	4190	389	0.986	32.7
350 X 150 X 5	48.4	38.0	7544	1874	12.5	6.2	431	250	537	292	5169	477	0.983	26.3

RECTANGULAR HOLLOW SECTION (SHS) IS 4923-2017/ EN10219-1:2006/ ASTM A-500														
Sizes	Area	Weight	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsion		Superficial Area / mtr length	Nominal Length / Ton
	A	kg/m	Ixx	Iyy	Rxx	Ryy	Zxx	Zyy	Sxx	Syy	J	C	As	
			cm^4	cm^4	cm	cm	cm^3	cm^3	cm^3	cm^3	cm^4	cm^3	m2/m	m
350 X 150 X 6	57.6	45.2	8907	2161	12.4	6.1	509	288	636	343	6121	562	0.979	22.1
350 X 150 X 8	75.8	59.5	11491	2651	12.3	5.9	657	353	828	441	7942	720	0.973	16.8
350 X 150 X 10	93.4	73.3	13890	3030	12.2	5.7	794	404	1010	530	9653	866	0.966	13.6
350 X 150 X 12	110.5	86.8	16109	3303	12.1	5.5	921	440	1182	611	11256	999	0.959	11.5
350 X 200 X 4	42.9	33.7	7331	3036	13.1	8.4	419	304	504	341	6849	526	1.086	29.7
350 X 200 X 5	53.4	41.9	9032	3704	13.0	8.3	516	370	623	420	8475	647	1.083	23.9
350 X 200 X 6	63.6	50.0	10682	4337	13.0	8.3	610	434	739	497	10065	764	1.079	20.0
350 X 200 X 8	83.8	65.8	13831	5499	12.8	8.1	790	550	965	644	13142	987	1.073	15.2
350 X 200 X 10	103.4	81.2	16781	6524	12.7	7.9	959	652	1180	782	16078	1195	1.066	12.3
350 X 200 X 12	122.5	96.2	19538	7417	12.6	7.8	1116	742	1385	911	18874	1389	1.059	10.4
350 X 200 X 15	150.2	117.9	23320	8515	12.5	7.5	1333	852	1673	1088	22805	1654	1.048	8.5
350 X 250 X 4	46.9	36.9	8528	5056	13.5	10.4	487	404	573	454	9871	663	1.186	27.1
350 X 250 X 5	58.4	45.8	10520	6210	13.4	10.3	601	497	709	562	12234	817	1.183	21.8
350 X 250 X 6	69.6	54.7	12457	7320	13.4	10.3	712	586	843	666	14554	967	1.179	18.3
350 X 250 X 8	91.8	72.1	16170	9414	13.3	10.1	924	753	1102	868	19066	1254	1.173	13.9
350 X 250 X 10	113.4	89.0	19672	11342	13.2	10.0	1124	907	1350	1060	23409	1525	1.166	11.2
350 X 250 X 12	134.5	105.6	22967	13108	13.1	9.9	1312	1049	1588	1242	27580	1779	1.159	9.5
350 X 250 X 15	165.2	129.7	27532	15462	12.9	9.7	1573	1237	1924	1497	33515	2132	1.148	7.7
350 X 300 X 5	63.4	49.7	12008	9453	13.8	12.2	686	630	795	715	16339	987	1.283	20.1
350 X 300 X 6	75.6	59.4	14233	11186	13.7	12.2	813	746	946	850	19457	1170	1.279	16.8
350 X 300 X 8	99.8	78.3	18510	14498	13.6	12.1	1058	967	1238	1112	25542	1521	1.273	12.8
350 X 300 X 10	123.4	96.9	22563	17610	13.5	11.9	1289	1174	1520	1362	31425	1854	1.266	10.3
350 X 300 X 12	146.5	115.0	26396	20527	13.4	11.8	1508	1368	1790	1603	37106	2170	1.259	8.7
350 X 300 X 15	180.2	141.5	31743	24545	13.3	11.7	1814	1636	2176	1943	45247	2612	1.248	7.1
350 X 300 X 18	212.7	167.0	36622	28149	13.1	11.5	2093	1877	2537	2261	52928	3017	1.238	6.0
400 X 250 X 5	63.4	49.7	14440	6900	15.1	10.4	722	552	861	621	14773	937	1.283	20.1
400 X 250 X 6	75.6	59.4	17118	8127	15.0	10.4	856	650	1024	737	17580	1110	1.279	16.8
400 X 250 X 8	99.8	78.3	22269	10433	14.9	10.2	1113	835	1341	961	23047	1441	1.273	12.8
400 X 250 X 10	123.4	96.9	27151	12544	14.8	10.1	1358	1004	1646	1173	28317	1755	1.266	10.3
400 X 250 X 12	146.5	115.0	31771	14465	14.7	9.9	1589	1157	1939	1376	33389	2051	1.259	8.7
400 X 250 X 15	180.2	141.5	38218	17000	14.6	9.7	1911	1360	2356	1659	40625	2464	1.248	7.1
400 X 250 X 18	212.7	167.0	44103	19133	14.4	9.5	2205	1531	2747	1919	47414	2840	1.238	6.0
400 X 300 X 5	68.4	53.7	16391	10481	15.5	12.4	820	699	960	787	19853	1132	1.383	18.6
400 X 300 X 6	81.6	64.1	19447	12396	15.4	12.3	972	826	1142	936	23651	1342	1.379	15.6
400 X 300 X 8	107.8	84.6	25343	16051	15.3	12.2	1267	1070	1498	1224	31072	1748	1.373	11.8
400 X 300 X 10	133.4	104.7	30955	19475	15.2	12.1	1548	1298	1841	1501	38262	2135	1.366	9.5
400 X 300 X 12	158.5	124.4	36288	22673	15.1	12.0	1814	1512	2172	1766	45219	2502	1.359	8.0
400 X 300 X 15	195.2	153.2	43779	27059	15.0	11.8	2189	1804	2645	2142	55216	3018	1.348	6.5
400 X 300 X 18	230.7	181.1	50674	30964	14.8	11.6	2534	2064	3091	2494	64685	3494	1.338	5.5
400 X 300 X 20	253.7	199.2	54949	33309	14.7	11.5	2747	2221	3374	2714	70703	3790	1.331	5.0

RECTANGULAR HOLLOW SECTION (SHS) IS 4923-2017/ EN10219-1:2006/ ASTM A-500														
Sizes	Area	Weight	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsion		Superficial Area / mtr length	Nominal Length / Ton
	A	kg/m	Ixx	Iyy	Rxx	Ryy	Zxx	Zyy	Sxx	Syy	J	C	As	
			cm^4	cm^4	cm	cm	cm^3	cm^3	cm^3	cm^3	cm^4	cm^3	m2/m	m
450 X 400 X 5	83.4	65.4	26579	22174	17.9	16.3	1181	1109	1360	1255	37053	1717	1.683	15.3
450 X 400 X 6	99.6	78.2	31596	26335	17.8	16.3	1404	1317	1620	1495	44207	2041	1.679	12.8
450 X 400 X 8	131.8	103.5	41338	34390	17.7	16.2	1837	1719	2131	1964	58258	2670	1.673	9.7
450 X 400 X 10	163.4	128.3	50696	42094	17.6	16.0	2253	2105	2627	2420	71966	3275	1.666	7.8
450 X 400 X 12	194.5	152.7	59676	49452	17.5	15.9	2652	2473	3109	2861	85329	3855	1.659	6.5
450 X 400 X 15	240.2	188.6	72453	59855	17.4	15.8	3220	2993	3804	3497	104725	4683	1.648	5.3
450 X 400 X 18	284.7	223.5	84415	69516	17.2	15.6	3752	3476	4468	4102	123339	5460	1.638	4.5
450 X 400 X 20	313.7	246.3	91949	75554	17.1	15.5	4087	3778	4893	4488	135313	5951	1.631	4.1
450 X 400 X 22	342.2	268.6	99136	81276	17.0	15.4	4406	4064	5304	4861	146936	6421	1.624	3.7
500 X 200 X 5	68.4	53.7	21656	4926	17.8	8.5	866	493	1079	562	13622	932	1.383	18.6
500 X 200 X 6	81.6	64.1	25690	5737	17.7	8.4	1028	574	1284	665	16188	1103	1.379	15.6
500 X 200 X 8	107.8	84.6	33467	7190	17.6	8.2	1339	719	1683	862	21160	1429	1.373	11.8
500 X 200 X 10	133.4	104.7	40860	8420	17.5	7.9	1634	842	2068	1048	25922	1737	1.366	9.5
500 X 200 X 12	158.5	124.4	47877	9432	17.4	7.7	1915	943	2439	1222	30473	2025	1.359	8.0
500 X 200 X 15	195.2	153.2	57712	10552	17.2	7.4	2308	1055	2969	1461	36905	2424	1.348	6.5
500 X 200 X 18	230.7	181.1	66735	11205	17.0	7.0	2669	1121	3467	1674	42866	2785	1.338	5.5
500 X 250 X 5	73.4	57.6	24719	8257	18.4	10.6	989	661	1203	740	20040	1177	1.483	17.4
500 X 250 X 6	87.6	68.8	29351	9706	18.3	10.5	1174	776	1432	879	23857	1395	1.479	14.5
500 X 250 X 8	115.8	90.9	38308	12408	18.2	10.4	1532	993	1880	1146	31301	1816	1.473	11.0
500 X 250 X 10	143.4	112.6	46863	14851	18.1	10.2	1875	1188	2313	1401	38491	2216	1.466	8.9
500 X 250 X 12	170.5	133.9	55023	17041	18.0	10.0	2201	1363	2732	1643	45427	2595	1.459	7.5
500 X 250 X 15	210.2	165.0	66535	19860	17.8	9.7	2661	1589	3332	1982	55353	3127	1.448	6.1
500 X 250 X 18	248.7	195.2	77194	22137	17.6	9.4	3088	1771	3901	2294	64705	3616	1.438	5.1
500 X 300 X 5	78.4	61.5	27782	12512	18.8	12.6	1111	834	1327	932	27202	1422	1.583	16.3
500 X 300 X 6	93.6	73.5	33012	14782	18.8	12.6	1320	985	1581	1108	32420	1688	1.579	13.6
500 X 300 X 8	123.8	97.2	43150	19094	18.7	12.4	1726	1273	2077	1450	42635	2203	1.573	10.3
500 X 300 X 10	153.4	120.4	52867	23107	18.6	12.3	2115	1540	2558	1778	52553	2695	1.566	8.3
500 X 300 X 12	182.5	143.3	62169	26827	18.5	12.1	2487	1788	3024	2093	62173	3165	1.559	7.0
500 X 300 X 15	225.2	176.8	75359	31869	18.3	11.9	3014	2125	3696	2541	76044	3830	1.548	5.7
500 X 300 X 18	266.7	209.4	87654	36282	18.1	11.7	3506	2419	4335	2959	89243	4448	1.538	4.8
500 X 300 X 20	293.7	230.6	95363	38883	18.0	11.5	3815	2592	4742	3222	97668	4835	1.531	4.3
500 X 450 X 5	93.4	73.3	36971	31453	19.9	18.4	1479	1398	1698	1580	51959	2157	1.883	13.6
500 X 450 X 6	111.6	87.6	43994	37401	19.9	18.3	1760	1662	2025	1884	62031	2566	1.879	11.4
500 X 450 X 8	147.8	116.0	57675	48959	19.8	18.2	2307	2176	2667	2480	81854	3364	1.873	8.6
500 X 450 X 10	183.4	144.0	70877	60074	19.7	18.1	2835	2670	3293	3061	101247	4135	1.866	6.9
500 X 450 X 12	218.5	171.5	83606	70754	19.6	18.0	3344	3145	3903	3625	120211	4878	1.859	5.8
500 X 450 X 15	270.2	212.1	101830	85970	19.4	17.8	4073	3821	4787	4442	147848	5943	1.848	4.7
500 X 450 X 18	320.7	251.7	119032	100245	19.3	17.7	4761	4455	5636	5225	174510	6951	1.838	4.0
500 X 450 X 20	353.7	277.7	129943	109248	19.2	17.6	5198	4855	6182	5727	191742	7592	1.831	3.6
500 X 450 X 22	386.2	303.1	140417	117849	19.1	17.5	5617	5238	6713	6215	208538	8209	1.824	3.3

RECTANGULAR HOLLOW SECTION (SHS) IS 4923-2017/ EN10219-1:2006/ ASTM A-500														
Sizes	Area	Weight	Moment of Inertia		Radius of Gyration		Elastic Modulus		Plastic Modulus		Torsion		Superficial Area / mtr length	Nominal Length / Ton
	A	kg/m	Ixx	Iyy	Rxx	Ryy	Zxx	Zyy	Sxx	Syy	J	C	As	
			cm^4	cm^4	cm	cm	cm^3	cm^3	cm^3	cm^3	cm^4	cm^3	m2/m	m
600 X 400 X 5	98.4	77.2	51942	27772	23.0	16.8	1731	1389	2041	1546	56145	2302	1.983	13.0
600 X 400 X 6	117.6	92.3	61843	32958	22.9	16.7	2061	1648	2435	1842	67024	2739	1.979	10.8
600 X 400 X 8	155.8	122.3	81166	42966	22.8	16.6	2706	2148	3209	2422	88432	3592	1.973	8.2
600 X 400 X 10	193.4	151.8	99857	52497	22.7	16.5	3329	2625	3965	2985	109372	4415	1.966	6.6
600 X 400 X 12	230.5	181.0	117924	61558	22.6	16.3	3931	3078	4703	3531	129844	5210	1.959	5.5
600 X 400 X 15	285.2	223.9	143872	74282	22.5	16.1	4796	3714	5775	4320	159670	6350	1.948	4.5
600 X 400 X 18	338.7	265.9	168463	85987	22.3	15.9	5615	4299	6806	5071	188436	7429	1.938	3.8
600 X 400 X 20	373.7	293.4	184116	93236	22.2	15.8	6137	4662	7471	5551	207023	8116	1.931	3.4
600 X 400 X 22	408.2	320.4	199185	100048	22.1	15.7	6640	5002	8118	6015	225136	8777	1.924	3.1
600 X 480 X 5	106.4	83.5	59023	41921	23.6	19.9	1967	1747	2279	1958	75086	2774	2.143	12.0
600 X 480 X 6	127.2	99.9	70312	49866	23.5	19.8	2344	2078	2720	2336	89692	3304	2.139	10.0
600 X 480 X 8	168.6	132.3	92382	65325	23.4	19.7	3079	2722	3588	3078	118489	4339	2.133	7.6
600 X 480 X 10	209.4	164.4	113782	80214	23.3	19.6	3793	3342	4437	3801	146735	5343	2.126	6.1
600 X 480 X 12	249.7	196.0	134522	94543	23.2	19.5	4484	3939	5267	4507	174428	6315	2.119	5.1
600 X 480 X 15	309.2	242.7	164410	115000	23.1	19.3	5480	4792	6477	5532	214928	7717	2.108	4.1
600 X 480 X 18	367.5	288.5	192859	134238	22.9	19.1	6429	5593	7644	6516	254177	9052	2.098	3.5
600 X 480 X 20	405.7	318.5	211038	146398	22.8	19.0	7035	6100	8399	7151	279647	9906	2.091	3.1
600 X 480 X 22	443.4	348.1	228599	158036	22.7	18.9	7620	6585	9135	7768	304557	10732	2.084	2.9

QUALITY CONTROL FACILITIES AT NSSL

- Fully equipped mechanical testing laboratory
- Universal Testing Machines [Load capacity: up to 1000KN]
- Spectrometer
- Charpy Impact Testing Machine
- Brinell cum Rockwell Hardness Tester
- Optical Microscope with Image Analyzer
- Profile check

Computerised Vickers Hardness Tester

Digital Motorised Rockwell Hardness Testing Machine

Image Analyser

Impact Testing Machine

Spectrometer

Universal Testing Machine

PACKING & MARKING

Packing: All the sections are supplied bare and either loose and/or in mill standard packing of maximum 5MT weight, each.

Marking: All above sections are supplied with details of size/ length/ steel grade/ heat number marked with indelible white paint on pieces and on the bundles, with bundle number additionally appearing on the bundle. Embossing on the sections are also done as per customer requirement.

ADVANTAGES OF STRUCTURAL SECTION FROM NSSL

- **Economy**
  Steel savings with parallel flange sections under bending as well as axial load conditions are appreciable when compared with tapered flange sections.

- **Excellent Durability**
  Due to clean steel quality, it is free from any harmful impurities and inclusions on account of in-house virgin raw material and state-of-art steel refining facilities.

- **Superior Weldability**
  Due to its chemical composition of pure steel and lower carbon equivalent.

- **Product Range**
  Widest range available lending more flexibility to designers and more cost-effective options to project owners.

- **Customized Length**
  Can be supplied in customized length which has helps in considerable amount of steel wastage reduction at consumer's end.

- **Multiple Grades**
  Wide range of high value grades available providing good opportunity for consumers to opt for rolled sections and avoid built up sections.