ALUMINIUM ALLOYS SPECIALISTS



METALCO EXTRUSIONS GLOBAL LLP

Erstwhile METAL EXTRUSIONS

info@metalcoglobal.comwww.metalcoglobal.com





CERTIFICATE

Certificate Number: 298007 This is to certify that

METAL EXTRUSIONS No A-17, 1st Cross, 10th Main, 3rd Stage Peenya Industrial Area, Yeshwanthpur Hobli, Nallakadarnahalli, Bangalore – 560058.

has implemented and maintains a Quality Management System for its

MAIN SCOPE:

STOCKING AND DISTRIBUTION OF ALUMINIUM ALLOY PLATES, SHEETS, COILS, BARS, RODS AND VARIOUS FORMS OF EXTRUSIONS, CUT TO CUSTOMER SPECIFIED SIZES FOR DEFENCE AND AEROSPACE APPLICATIONS.

Certification structure: Multi site

Through an audit, performed in accordance with the requirements of AS 9104/1 issued 2012-01, and including the implementation, meets the requirements of the standard:

AS 9120B

(Based on and including ISO 9001:2015)

Quality Management Systems – Requirements for Aviation, Space and Defence Distributors

The file that forms the basis of this certificate: 298007

Date of Initial Certification: September 17, 2020Date of Current Revision: November 15, 2023Certification Expiry Date: September 15, 2026

K.G.Gay

K.G. Garg

Chairman & Chief Executive



Accredited Office: NVT Quality Certification International LLP, Bangalore, India Marketing Office : NVT Quality Certification International, Milpitas, CA, USA

NVT Quality Certification International LLP is accredited by ANAB under ICOP scheme and recognized by IAQG.

Note: Please verify current validity of certificate from NVT Quality Certification International LLP at nvt@nvtquality.com.



METALCO EXTRUSIONS GLOBAL LLP Aluminium Alloys specialist

(ERSTWHILE METAL EXTRUSIONS)

IMPORTER | EXPORTER | WHOLESALERS



PRODUCTS

- ALUMINIUM SHEETS, PLATES & COILS
- ALUMINIUM ALLOY EXTRUSIONS & DRAWNS
- ALUMINIUM FOR AEROSPACE & DEFENCE
- CUT TO SIZE AVAILABLE (BANDSAW CUTTING)

STOCKIST OF: AA1050, 1100, 2024, 2014, 2017, 3003, 5052, 5083, 5754, 6061, 6063, 6351, 6082, 7075, 7050

Email info@metalcoglobal.com rolling@metalcoglobal.com



COMPANY PROFILE

INTRODUCTION :

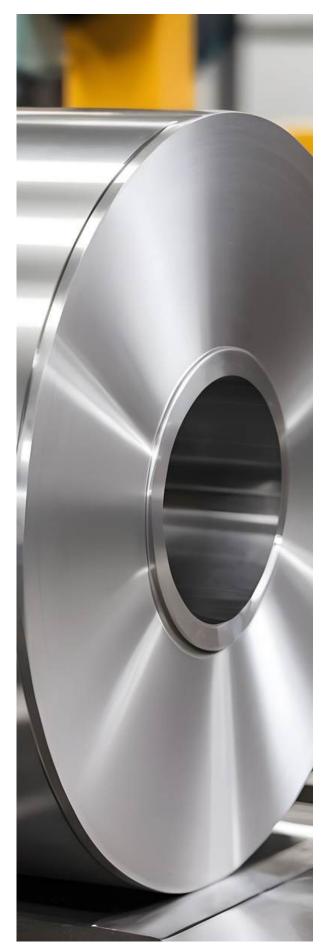
Metalco Extrusions Global LLP – Aluminium Alloys Specialist is a leading certified aluminium alloy stockist company located in Bangalore & Chennai that caters to the Aerospace and Defence sectors. With a well-trained team, we are equipped to meet client's expectations ensuring a quality supply of raw materials. Our products range from raw materials to finished parts.

SPECIALIZATION:

With a strong local presence in the Aerospace segment of India, we ensure excellent liaison with customers and subcontractors to meet their specific requirements. Our USP is the supply of material cut to size and machined exactly as per the need, which sets us apart in this segment. This helps in instant processing with zero wastage.

MACHINERY:

Machines with the capacity of cutting blocks up to 600 mm in Height, 1600 mm in Width, and 4000 mm in length are virtually burrfree. Our strategic alliance with leading mills across the globe to source material with assured quality and continuous supply to meet our customers' timely requirements.



ALUMINIUM ALLOYS SPECIALIST



35 YEARS OF UNDEFEATED SUCCESS

PRODUCT & STOCK DETAILS:

We stock the below materials in both rolled forms of sheets, plates, coils, and extrusions in Bars, Rods, Squares, and various special dies customized to the client's requirements.

SI. NO.	Metal I	Grade
1	MAGNESIUM & SILICON-BASED ALUMINIUM ALLOYS	6061, 6082, 6351, 6101 in tempers of T6, T651, and T6511 conditions
2	ZINC-BASED ALUMINIUM ALLOYS	7075, 7050 in tempers of T6, and T651 conditions
3	MAGNESIUM BASED ALUMINIUM ALLOYS	5052, 5754, 5083, in hardness of H32, H34, H38, H22, and H111 conditions
4	COPPER-BASED ALUMINIUM ALLOYS	2017, 2014, 2024 in tempers of T4, T351, T6, and T651 conditions
5	99% PURE BASED ALUMINIUM ALLOYS	1100, 1050,1060 in hardness of H14, H15, and H22 conditions

Supply Capabilities:

Our major supplier is KUMZ (KAMENSK URALSKY METALLURGICAL WORKS). Additionally, we also import from mills in Korea, China, Taiwan, Europe, and the US to fulfill the demands in the aerospace & defence segment.

Warehouse Detail:

Our warehouse comprises 6 units spread across Bangalore and Chennai with a stocking capacity of 800 Plus tons. With tactical locations and better connectivity with the national highway of the units, we ensure a timely logistic supply of products.

VISION

The company wants to achieve maximum customer satisfaction and goodwill in the market by serving its customers in the best way possible.

MISSION

To focus on market expansion and to gain maximum market share.

EXPANDING HORIZONS ONE EXPORT AT A TIME



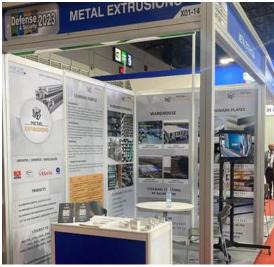
We are Excited to announce that we have expanded our services to include import and export operations in the UAE, Bahrain, Oman, Qatar, Thailand, Indonesia, Malaysia, Sri Lanka, and Bangladesh.

We continue to explore new territories and broaden our reach!

EXHIBITIONS

Attended by Metalco Extrusions Global LLP







DEFEXP022 INDIA

• October 18 2022

RAW MAT INDIA 2022

 Nation Prime Resources Expo 14-16 September 2022

IMS 2022

• BIEC, 19-24 June

AERO INDIA

The Runway to a Billion Opportunities 13 Feb
2023

IREE 2023

• Pragati Maidan, New Delhi 12-14 October 2023

DUBAI AIRSHOW 2023

• DWC, November 2023

DEFENCE AND SECURITY 2023

 IMPACT, Muang Thong Thani, Thailand 6-9 November 2023

MSME DEFENCE

 24th - 26th Feb 2024 Pune International Exhibition

ELASIA INTERNATIONAL EXHIBITION 2024

 May 2024 at Bangalore International Exhibition Centre

And Even more to come

TABLE - 1WROUGHT ALLOYS : NEAR EQUIVALENT DESIGNATIONS

IND	AIA	U.S.A.	BRITAIN	CANADA	GERMANY	RUSSIA	I.S.O.	FRENCH
NEW I.S.	OLD I.S.	(A.A.)	(B.S.)	CANADA	(DIN)	ROODIA	1.0.0.	ND
19501	1E	1050(E.C)	1E	C 1S	E-AI 99.5	(m)		-
19500	1B	1050	1B	1S	A-99.5		AI-99.5	1050A
24345	H15	2014	H15	B265	AL-CU-SI	AK		27.0
24534	H14	2017	H14	17S/16S	2	D1	AI-Cu-4Mg Si	
-		2024	-	24S	Al-Cu.Mg2	-	AI-Cu-4Mg 1	2024
31000	N3	3003	N3	3S	Al-Mn	A-Mn	Al-Mn 1	3003
52000	N4	5052	N4	M57S	Al-Mg.2	A-Mg	Al-Mg-2.5	5051
53000	N5	5086	N5	54S	5.	A-Mg-3	Al-Mg-4	10
54300	N8	5083	N8	D54S	Al-Mg-4.5 Mn	1	Al-Mg-4.5 Mn	5083
65032	H20	6061	H20	65S	Al-Mg-Si Cu	1	Al-Mg-1Si Cu	140
63400	H9	6063	H9	50S	Al-Mg-Si 0.5		Al-Mg Si	-
64430	H30	6351	H30	B51S	Al-Mg-Si 1	AV	Al-Si-1 Mg	6081
64423	H11	6066	H11	C62S	-	-		-
62400	1	6005	-	C51S	-	-	-	
63401	91E	6101	91E	D50S	E.Al.Mg.Si 0.5	14	(A2)	120
64401	34	6201		(ini)	-	(m)		
74530		7039	0.00	D74S	Al-Zn-Mg.1	(H)	-	3004
. 	-	7075	DTD 5124	75S	Al-Zn-Mg Cu 1.5	-	Al-Zn 6 Mg Cu	7075

TABLE - 2 WROUGHT ALLOYS : GUIDE TO SELECTION

Alloy	Temper	Resistance to Corrosion	Workability (Cold)	Machinability	Brazeability	Weldability	Commonly available forms	Indications of use
EC/1050, 1060 (1B) (19501) (19500) (19600)	F, O	A	A	D	A	A	Flats, Rods, Tubes & Other Section	Electric conductors, cable shealthing, impact- extruded products, pressing utilities of anodizing quality, pen caps, piping etc.
1100 (1C) (19000)	F, O	A	A	D	A	A	Flats, Rods, Tubes & Other Section	Packaging lightly stresses and decorative assemblies in architecture and transport, equipment for chemcial, food and brewing industries.
2014 (H 15) (24345)	T4 T6	c c	C D	B B	D D	сс	Rods & Bars Rods & Bars	Highly stressed component of all types in aircraft, ordnance and general engineering.
2017 (H 14) (24534)	T4	с	с	В	D	С	Rods & Bars	Highly stressed part in aircraft and other structure, screw machine products.
2024	T4	с	с	в	D	с	Rods & Bars	Load cell, highly stressed component of all types in aircraft ordnance and general engieering.
4043 (N 21) (43000)	F, O	A	A	D	A	A	Rods & Other Section	Welding wire, architectural applications.
5005 (52000A)	O, F	A	A	D	в	A	Flats, Rods, Other Section	Structures exposed to marine attractive anodized finish, architectural, electrical conductors etc.
5052 (N 4)	O, F	A	A	D	с	A	Flats, Rods, Tubes & Other Section	Structures exposed to marine atmosphere, aircraft parts, wire rope ferrules, rivet stock.
5086 (N 5) (53000)	O, F	A	А	D	D	A	Flats, Rods & Other Section	Ship building and other marine applications, rivets, coinage etc.
5056 (N 6) (55000)	O, F	А	А	D	D	A	Rods	Zips, Welding Rods and Rivets.
6061 (H 20) (65032)	O, F T4 T6	A A A	A C D	D C C	A A A	A A A	Rods,Flats Tubes & Other Section	Heavy-duty structures, building hardware, sections for bus building, truck and rail coach, fumiture, rivets etc.
6063 (H9)	O, F T4 T6 T5	A A A A	A B C C	D C C C	A A A A	A A A A	Rods,Flats Tubes & Other Section	Building hardware, architectural section with good surface finish, medium strength fumiture and anodized sections.

TABLE - 2 WROUGHT ALLOYS : GUIDE TO SELECTION

Alloy	Temper	Resistance to Corrosion	Workability (Cold)	Machinability	Brazeability	Weldability	Commonly available forms	Indications of use
6066 (22450)	O, F T4 T6	B B B	B C C	D B B	A A A	A A A	Rods & other soild sections	For welded structures, textile parts, heavy duty machine parts.
6101 (91 E) (63401)	T4 T6	A A	B B	с с	A A	A	Rods, Flats, Tubes & other sections	High strength electrical busba sections.
6201 (64401)	T4	A	A	с	A	A	Redraw Rod	Overhead conductors, ACAR and AAAC
6351 (H 30) (6430)	O, F T4 T6	A A A	A C D	D C C	A A A	A A A	Rods, Flats,Tubes & other sections	Structural and general engineering items such as rail & road transport vehicles, bridges, cranes, roof trusses, rivets etc.
7039 (D74S) (74530)	O, F T4 T6	A A A	A C D	D C C	A A A	A A A	Flats,Tubes, Rods & other sections	Defence structures like mobile bridges etc. Tread and chequered plates, Excellent welding property with no loss of strength in welded zone.
7075 (DTD5124)	O, F T4 T6	A A A	A A D	A A A	A A A	A A A	Rods	Highly stressed structural applications

Notes :

- 1. Relative ratings for corrosion, workability and machinability in decreasing order of merit A, B, C and D.
- 2. Weldability & brazeability ratings A, B, C and D are relative ratings defined as follows:
 - A. Generally weldable by the commercial procedure & methods.
 - B. Weldable with special technique.
 - C. Limited weldability due to crack sensitivity or loss in corrosion resistance and mechanical properties.
 - D. Generally not weldable.
- 3. Availability of other forms subject to special enquiries and methods.

TABLE - 3 WROUGHT ALLOYS: CHEMICAL COMPOSITION LIMITS (PERCENT)

Alloy (ISS)	New	Equivalent alloy (AA) U.S.A		oper	8	gnesium		icon	Iron		gnesium	*Other (Total)	Remarks
Old		0.5.A	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Min.	Max.	Max.	
1 C	19000	1100		0.10	10 C			0.5	0.6		0.1	0.1	Aluminium 99.0% Min
1 B	19500	1050		0.05	÷ .:	*		0.25	0.4		0.05	0.1	Aluminium 99.5% Min
1 E	19501	ž.	•	0.04	2			0.15	0.35	1	0.03	0.1	Aluminium 99.5% Min
2	19600	1060		0.05	<u>.</u>	25	2	0.25	0.35	1.00	0.03	0.1	Aluminium 99.6% Min
H 15	24345	2014	3.8	5.0	0.2	0.8	0.5	1.2	0.7	0.3	1.2	0.5	2
H 14	24534	2017	3.5	4.7	0.4	1.2	0.2	0.7	0.7	0.4	1.2	0.5	*
		2024	3.8	4.9	1.2	1.8	-	0.5	0.5	0.3	0.9	0.15	Zn 0.25
N 3	91000	3003		0.1	8	0.1	- 22	0.6	0.7	1.0	1.5	0.4	
		4032	0.8	1.3	0.8	1.3	2	13.5	0.6	2	0.2	0.15	Ni 0.8 - 1.3
N 4	52000	5052		0.1	1.7	2.6	2	0.6	0.5	2	0.5	0.4	Cr + Mn = 0.5
M 5	53000	5086		0.1	2.8	4.0	-	0.6	0.5	2	0.5	0.4	Cr + Mn = 0.5
N 8	54300	5083		0.1	4.0	4.9	2	0.4	0.7	0.5	1	0.4	Chromium up to 0.25
H 20	65032	2	0.15	0.4	0.7	1.2	0.4	0.8	0.7	0.2	0.8	0.4	**Cr = 0.15 - 0.35
	-	6061	0.15	0.4	0.8	1.2	0.4	0.8	0.7	-	0.15	0.4	Chromium 0.04 to 0.35
Н9	63400	6063	· • •	0.1	0.4	0.9	0.3	0.7	0.6	23	0.3	0.4	
	×	6066	0.7	1.2	0.8	1.4	0.9	1.8	0.7	0.6	1.1	0.4	
2	64423		0.5	1.0	0.5	1.3	0.7	1.3	0.8		1	640	1. 1.
9 1E	63401	6101		0.05	0.4	0.9	0.3	0.7	0.5		0.03	0.1	17
H 30	64430	6351		0.1	0.4	1.2	0.6	1.3	0.6	0.4	1.0	0.3	
		6082		0.1	0.6	1.2	0.7	1.3	0.5	0.4	1.0	0.3	Chromium up to 0.25
	74530	7039		0.2	1.0	1.5	-	0.4	0.7	0.2	0.7	0.4	Zinc 4.0 - 5.0 %
	2	7075	1.2	2.0	2.1	2.9	2	0.5	0.5	2	0.3	0.2	Zinc (5.1 - 6.1)% & Chromium(0.18-0.28) %

* Titanium and/or other grain refining elements

** Either Mn or Cr shall be present

TABLE - 4WROUGHT ALLOYS : MECHANICAL PROPERTIES

Alloy AA Old (ISS)	Temper		Tensile Kg/mm²	0.2% Proof Stress	Elongation
New (ISS)		Min.	Max.	Kg/mm ²	50mm GL
2014 [H15 [24345]	T4[W] T6 [WP]	39 49	-	24.0 43.0	10 6
2017 [H14] [24534]	T4[W]	39	-	24.0	10
2024 [H9]	T4	40.5		26.5	12
6063 [H9] [63400]	T4[W] T6 [WP]	14 19	-	8.0 15.5	14 7
6061 [H20] [65032]	M T4[W] T6 [WP]	11.2 19 28.5		5.1 11.5 24.0	12 14 7
6351 [H30] [64430]	M T4[W] T6 [WP]	11.2 19 31.5	~	8.2 12.0 27.5	12 14 7
6066	M T4[W] T6 [WP]	11.0 28 35	-	- 17.5 31.5	12 14 7
6101 [91E] [63401]	T4[W] T6 [WP]	14 20.5	-	8.0 17.0	12 10
6201 [64401]	T4[W] T8 [WDP]	16 32		7.0	14 3
7039 [74530]	T4[W] T6 [WP]	28 31.5	-	23.5 26.5	9 7
7075	T6 [WP]	54		46.5	6

Properties indicated herein are typical properties and are given for information only. However properties of all the profiles in specific alloy shall be as per I. S. Specification.

ALUMINIUM ALLOYS SPECIALIST

TABLE - 5WROUGHT ALLOYS : TYPICAL TENSILE PROPERTIES AT VARIOUS TEMPERATURES (KG/MM²)

	-					Temp	.°C				
Alloy & Tempet	Tensile Strength	B	elow zero			s		A	bove Zero		~
		-200	-80	-25	25	100	150	200	250	300	350
1100M	Ultimate	17.5	10.5	10.0	9.0	7.0	5.5	4.0	3.0	2.0	1.5
(19000)	Yield	4.2	3.9	3.5	3.5	3.2	3.0	2.4	2.0	1.4	1.1
2014 T6*	Ultimate	59.0	52.0	50.5	49	44.0	28.0	11.0	6.0	4.5	3.0
(24345)	Yield	50.0	45.5	43.5	42	40.0	24.5	9.0	5.0	3.5	2.5
2017 T4	Ultimate	56.0	45.5	45.0	43.5	40.0	28.0	11.0	6.5	4.0	3.0
(24534)	Yield	37.0	29.5	29.0	28.0	27.5	21.0	9.0	5.0	3.5	2.5
3003M	Ultimate	23.0	14.0	12.0	11.0	9.0	7.5	6.0	4.0	3.0	2.0
(31000)	Yield	6.0	5.0	4.5	4.0	4.0	3.5	3.0	2.5	1.7	1.3
5052M	Ultimate	31.0	20.5	19.5	19.5	19.0	16.0	4.0	8.5	5.0	3.5
(52000)	Yield	11.0	9.0	9.0	9.0	9.0	9.0	7.5	5.0	4.0	2.0
5086M	Ultimate	38.5	27.5	26.5	26.5	26.5	20.5	15.5	12.0	7.5	4.0
(53000)	Yield	17.0	15.0	15.0	15.0	15.0	13.5	12.0	7.5	5.0	3.0
6061 T4	Ultimate	35.0	26.5	25.0	24.5	-	21.0	13.5	5.0	3.0	2.0
(65032)	Yield	19.5	15.5	15.5	14.5		14.5	10.5	3.8	1.8	1.5
6061 T6	Ultimate	49.0	34.5	33.0	31.5	29.5	24.0	13.5	5.0	3.2	2.1
	Yield	33.0	29.5	28.5	28.0	26.5	21.5	10.5	3.5	1.9	1.3
6063 T4	Ultimate	26.0	20.5	19.5	15.5	-	15.5	6.5	3.5	2.1	1.8
(63400)	Yield	12.0	12.0	10.5	9.0		9.0	4.5	2.8	1.8	1.4
6063 T6	Ultimate	33.0	26.5	25.0	24.5	21.5	14.5	6.5	3.0	2.5	1.6
	Yield	25.0	23.0	22.5	21.5	19.5	14.0	4.5	2.5	1.8	1.4

TABLE - 6

WROUGHT ALUMINIUM & ALUMINIUM ALLOYS: MECHANICAL AND ELECTRICAL PROPERTIES

	Alloy	Temper Designation	Tensile Strength Min.	0.2 Percent Proof Strees Min.	Percent Elongation on 5.65 JSa Min.	Electrical Conductivity at 20°C, Min	Maximum Electrical Resistivity at 20°C	Thickness	Inside bend radius Min	Coeff. of thermal Expansion	Themal Conductivity
AA	IS		Мра	Мра		%IACS	ohm mm/mm²	mm		per °C at 20°C typical	CGS at 25°C typical
1050 6101	19501	M	60 140	- 80	25 12	60.00	0.02874	upto 12	1 x thickness	23.8×10 ⁻⁶	0.56
6101	63401	WP (range 1)	170	135	12	56.50	0.03052	3.00 to 9.50	1 x thickness	23.4×10-6	0.52
6101	11.000	WP (range 2)	200	170	10	55.00	0.03135	3.00 to 9.50	2 x thickness	23.4×10-6	0.52
6201	-	T81	-	-	2008	52.50	0.3283	0.0000000000000000000000000000000000000	235 x 10-6	0.50	

Notes :

 $1MPa=1N/mm^2 = 0.102 \text{ kg/mm}^2$

Properties in M temper are only typical values and are given for information only.

If required the cross-section shall be calculated from the mass and length of a straight test piece taking density 2.705 for grade 19501 and 2.700 for grade 63401

ALUMINIUM ALLOYS SPECIALIST

INDEX

SI. No.	DESCRIPTION	Pg. No.
1.	FLAT BARS	15
2.	HEXAGONAL BARS	17
3.	ROUND BARS	18
4.	SQUARE BARS	19
5.	ROUND TUBES	20
6.	SQUARE TUBES	23
7.	CHANNELS	24
8.	EQUAL ANGLES	27
9.	UNEQUAL ANGLES	28
10.	SHEETS & COILS	29
11.	PLATES	30
12.	EXTRUSIONS	31
13.	MACHINE	32
14.	WAREHOUSE	33

					SL.	Cashian	2 S		Weight	SL. No.	Section No.	А	в	Weigh kg/m
					No.	Section No.	A	в	kg/m	108	10120	33.50	12.00	1.08
1					50	10129	22.00	2.00	0.118	109	10539	34.00	15,00	1.37
m					51	10547	22.00	4.00	0.237	110	10348	34.92	3.18	0.29
					52	10408	22.35	2.81	0.169	111	10211	35.00	2.96	0.279
	-	A		-	53	10091	23.00	2.50	0.155	112	10397	35.00	5.00	0.472
					55	10095	25.00	1.00	0.068	113	10243	36.00	2.65	0.25
_					56	10116	25.00	1.50	0.101	115	10477	38.00	1.50	0.15
SL.	Section No.	A	в	Weight kg/m	57	10281	25.00	2.80	0.189	116	10126	38.00	2.00	0.205
No.	10546	6.40	5.90	0.102	58	10010	25.00	3.00	0.203	117	10190	38.00	3.00	0.308
2	10171	8.00	2.00	0.043	59 60	10178	25.00	5.00	0.337	118	10029	38.00	3.20	0.328
3	10318	8.50	8.00	0.183	61	10270	25.00	6.50	0.439	120	10101	38.00	16.00	1.643
4	10277	10.00	8.00	0.216	62	10107	25.00	8.00	0.540	121	10336	38.00	20.00	2.052
5	10351	11.50	6.35	0.197	63	10506	25.00	10.00	0.675	122	10020	38.10	3.18	0.32
5	10001	12.00	2.00	0.065	64	10197	25.00	15.00	1.013	123	10410	38.10	3.18	0.32
8	10061	12.00	4.00	0.130	65	10222	25.00	16.00	1.080	124	10421 10033	38.10	3.81	0.392
9	10110	12.50	6.00	0.202	67	10080	25.40	2.30	0.158	125	10033	38.10	4.78	0.49
10	10036	12.70	5.00	0.171	68	10012	25.40	2.95	0.202	127	10021	38.10	6.35	0.653
11	S6088	12.70	6.40	0.219	69	10013	25.40	3.18	0.218	128	10088	38.10	9.52	0.979
12	10369 \$6290	12.70	8.50	0.291	70	10411	25.40	3.18	0.218	129	10104	38.10	12.70	1.306
14	10153	15.00	2.00	0.081	71	10034 10014	25.40	4.00	0.274	130	10559	38.10	19.05	2.613
1.5	10452	15.00	2.00	0.081	73	10152	25.40	9.52	0.652	132	10199	38.10	31.75	3.226
16	10087	15.00	3.00	0.122	74	10102	25.40	12.75	0.874	133	10140	40.00	1.60	0.17
17	10144	15.00	8.00	0.324	75	10391	25.40	15.88	1.089	134	10031	40.00	3.00	0.324
18	10103	15.00	8.55	0.346	76	10191	25.40	19.05	1.304	135	10047	40.00	4.00	0.432
20	10135	16.95	4.15	0.190	77	10101 10094	25.45	4.78	0.328	136	10048	40.00	5.00	0.540
21	10220	17.00	4.00	0.183	79	10528	27.00	18.00	1.312	138	10165	40.00	6.50	0.702
22	S4833	17.00	4.15	0.190	80	10396	27.00	24.00	1.749	139	10148	40.00	8.00	0.864
23	10160	17.50	1.80	0.085	81	10273	28.00	15.00	1.134	140	10057	40.00	10.00	1.080
24	10122	18.00	1.55	0.075	82	10530	29.00	20.00	1.566	141	10083	40.00	12.00	1.290
26	S5415	18.00	3.00	0.145	84	10166	30.00	2.00	0.162	142	10093	40.00	15.00	1.620
27	10288	18,75	4.00	0.202	85	10189	30.00	3.00	0.243	144	10137	40.00	20.00	2.160
28	10279	19.00	1.82	0.093	86	10015	30.00	5.00	0.405	145	10529	40.00	32.00	3,458
29	10003	19.00	5.00	0.257	87	10550	30.00	6.00	0.486	146	10359	40.00	33.00	3.564
30	10035	19.00	9.50	0.487	88	10142	30.00	8.00	0.648	147	10459	41.50	4.00	0.448
32	10123	19.05	2.25	0.116	90	10441	30.00	13.00	1.053	148	10022	42.00	6.00	0.680
33	10004	19.05	2.95	0.152	91	10274	30.00	15.00	1.215	150	10302	42.00	27.00	3.06
34	10005	19.05	3.18	0.163	92	10195	30.00	20.00	1.620	151	10555	42.50	2.80	0.323
35	10006	19.05	4.78	0.246	93	10017	30.18	3.96	0.322	152	10358	43.00	2.00	0.232
37	S6189	19.05	14.50	0.327	94 95	10079 10018	31.75 31.75	2.30	0.197	153 154	10373	44.00	16.00	1.900
38	10280	19.60	1.10	0.058	96	10347	31.75	3.18	0.272	154	10366	44.45	3.18	0.382
39	10118	20.00	1.60	0.086	97	10077	31.75	4.78	0.410	156	10068	44.45	19.05	2.280
40	10365	20.00	2.10	0.113	98	10019	31.75	6.35	0.544	157	10218	44.45	25.40	3.048
41 42	10008	20.00	3.00	0.162	99	10086	31.75	9.52	0.816	158	10380	45.00	6.00	0.729
42	10065	20.00	5.00	0.215	100	10524 10258	31.75 31.75	12,70	1.088	159	10162	45.00	25.00	3.03
44	10106	20.00	6.00	0.324	101	10238	31.75	19.05	1.633	160	12146 S6179	45.00	32.00	3.888
45	10009	20.00	8.00	0.432	103	10193	31.75	25.40	2.177	162	10067	47.00	2.00	0.254
46	10138	20.00	10.00	0.540	104	10409	31.85	3.18	0.273	163	10538	47.30	7.20	0.919
47	10302	20.00	15.00	0.810	105		32.00	6.00	0.518	164	10143	50.00	3.00	0.405
48	10535	21.00	18.00	1.020		10227 10504	32.00	10.00	0.864	165	10030	50.00	4.00	0.540
L		02100	10100		107	10304	32.00	12.00	1.030	166	10072	50.00	5.00	0.675

						FLA	I B	ARS						
SL.	Section			Weight	SL.	Section			Weight	SL.	Section			Weight
No.	No.	A	В	kg/m	No.	No.	A	В	kg/m	No.	No.	A	В	kg/m
167	10069	50.00	6.00	0.810	226	+	70.00	3.18	0.601	285	10486	100.00	1.50	0.450
168	10251	50.00	6.50	0.877	227	10552	70.00	6,00	1.134	286	-	100.00	6.00	1.620
169	10100	50.00	8.00	1.080	228		70.00	12.00	2.268	287	10376	100.00	8.00	2.160
171	10232	50.00	12.00	1.619	230	-	70.00	30.00	5.670	289	10045	100.00	12.00	3.240
172	10113	50.00	13.70	1.850	231	10482	70.00	40.00	7.560	290	10082	100.00	12.50	3.375
173	10145	50.00	15.00	2.025	232	10206	72.00	52.00	10.109	291	10055	100.00	15.00	4.050
174	10286	50.00	20.00	2.700	233		73.00	2.70	0.532	292	10096	100.00	20.00	5.400
175	10379	50.00	30.00	4.050	234		75.00	3.00	0.607	293	-	100.00	25.00	6.750
176	10510 10024	50.80	3.18	D.436	235		75.00	5.00	1.013	294	10324	100.00	30.00	8.100
178	10024	50.80	9.52	0.870	236	10382	75.00	8.00	1.215	295	10186	100.00	70.00	13.500
179	10038	50.80	12.70	1.742	238	-	75.00	10.00	2.025	297	10158	100.00	80.00	21.600
180	10071	50.80	15.88	2.178	239	-	75.00	12,00	2.430	298	10305	100,30	16.00	4.333
181	10200	50.80	19.05	2,613	240	10111	75.00	12.50	2.531	299	10028	101.60	6.35	1.742
182	10217	50.80	25.40	3.483	241	10540	75.00	27.00	5.467	300	10349	101.60	3.18	0.872
183	10475	50.80	32.00	4.389	242		76.00	15.00	3.078	301	10046	101.60	12.70	3.484
184	10467 10259	50.80	38.10	5.225	243		76.20	6.35 9.52	1.306	302	10534 10215	101.60	19.05	5.225
186	10259	50.80	44.45	6.334	244		76.20	12.70	2.613	303	10215	101.60	25.40	6.967
187	10527	52.00	42.00	5.896	246	the second s	76.20	16.00	3.291	305		101.60	32.00	8.778
188	10256	54.00	3.30	0.481	247	10204	76.20	19.05	3.919	306	10470	101.60	40.00	10.972
189	10541	54.00	45.00	6.561	248	S6274	76.00	20.00	4.104	307	10262	101.60	50.80	13.935
190	S6105	55.00	8.00	1.188	249	-	76.20	25.40	5.225	308	10561	101.60	38.10	10.451
191	10173	55.00	35.00	5.198	250	10205	76.20	31.75	6.532	309	10361	101.60	76.20	20.903
192	10201	57.15	12.70	1.960	251	10315	76.20	38,10	7.838	310	10304	102.00	36.00	9.914
193 194	10487 10293	59.00	21.00	3.345	252		76.20	50.80	10.451	311	10276	102.00	82.00	22.583
195	10312	59.95	3.33	0.539	254	10287	80.00	4.00	0.864	313	10406	103.00	43.00	11.958
196	10053	60.00	6.00	0.972	255		80.00	5.00	1.080	314	10309	103.00	53.00	14.739
197	10039	60.00	10.00	1.620	256	10049	80.00	6.00	1.296	315	10363	103.00	63.00	17.520
198	10505	60.00	15.00	2.430	257	10054	80.00	8.00	1.728	316	-	103.50	6.80	1.899
199	10196	60.00	20.00	3.240	258		80.00	10.00	2.160	317	10423	105.00	5.00	1.417
200	10156 10480	60.00	30.00	4.860	259		80.00	12.00	2.592	318		105.00	15,00	4.253
201	10480	60.30	32.00	5.210	261	10261	80.00	20.00	3.240	320	10090	110.00	12.00	3.564
203	10389	63.00	8.00	1.360	262	-	80.00	25.00	5.400	321	10169	110.00	30.00	8.910
204	10390	63.00	12.00	2,041	263	-	80.00	30.00	6.480	322		112.00	60.00	18.144
205	10184	63.00	38.00	6.464	264	10130	80.00	70.00	15.120	323	10496	114.30	9.53	2.941
206	10325	63.50	4.76	0.816	265	10489	82,00	2.00	0.442	324	10239	115.00	3.30	1.025
207	10025	63.50	6.35	1.089	266		85.00	32.00	7.344	325	10127	115.00	25.00	7.762
208	10073	63.50 63.50	9.52	1.632	267	10133	85.00	65.00	14.918	326		115.00	60.00	18.630
209	and the second se	63.50	12.70	2.177	269	and the second se	85.00	34.92	8.082	327	the second s	118.00		13.267 9.876
211	10202	63.50	19.05	3.266	270	-	86.00	2.00	0.464	329	-			1.296
212	10192	63.50	22.22	3.810	271	-	87.00	9.00	2.114	330			6.00	1.944
213	10194	63.50	25.40	4.355	272	-	88.00	45.00	10.692	331	10394		-	2.592
214	10260	63.50	31.75	5.443	273		88.90	25.40	6.096	332	-	120.00	10.00	3.240
215	10203	63.50	44.45	7.621	274		88.90	38.10	9.145	333		120.00	25.00	8.100
216	10268	63.50 64.00	50.80	8.709	275	_	88.90	76.20	18.290	334		120.00	69.00 80.00	22.356
218	10413	64.00	34.00	5.875	270		89.20	44.50	10.753	335		120.00	95.00	30.780
219	10368	64.50	4.00	0.696	278	the second designed and the second designed as the second designed a	90.00	12.00	2.916	337		121.00	12.00	3.920
220	10131	65.00	50.00	8.775	279		90.00	25.00	6.075	338		122.00	12.70	4.183
221	10098	66.00	9.00	1.604	280		90.00	30.00	7.290	339			17.00	5.600
222	10295	66.50	14.20	2.550	281	-	91,00	8,00	1.965	340		122.00	38.10	12.550
223	10551	69.85	31.75	5.988	282		95.00	4.00	1.026	341	-	123.00	2.90	0.963
224	10216	69.85	50.80	9.580	283		95.00	5.00	1.282	342	-	123.00	15.00	4.981
225	10343	69.90	64.00	12.078	284	10415	98.00	7.80	2.064	343	10445	125.00	6.00	2.025

All dimensions in mm. BAR -02

н	FXAGO	NAL I	RARS		ROUN	ID ROI	DS	SL.	Section		Weigh
	unnoo		JARO		-	~		No.	No.	ØA	kg/n
	1	1	-		1		T	45	11116	14.00	0.41
			I		1			46	11022	14.30	0.43
	6		4				ØA	47	11012	14.50	0.44
	1	/				1		48	11085	15.00	0.47
					1	/		49	11066	15.30	0.49
						/		50	11083	15.60	0.51
SL.	Section		Weight					51	11129	15.70	0.52
No.	No.	A	kg/m	Contraction of the second s	Section	ØA	Weight	52	11013	15.88	0.53
1	11851	5.00	0.058	No.	No.		kg/m	53	11025	16.00	0.54
2	11892	5.90	0.081	1	11041	4.00	0.034	54	11133	16.25	0.56
3	11852	7.00	0.115	2	11042	5.00	0.053	55	11079	16.70	0.59
4	11871	8.00	0.150	3	11047	6.00	0.076	56	11135	17.00	0.61
5	11853	9.00	0.189	4	11001	6.35	0.086	57	11026	17.50	0.64
6	11854	9.52	0.212	5	11044	6.40	0.087	58	11206	17.70	0.66
7	11897	10.00	0.234	6	11139	7.00	0.104	59	11023	18.00	0.68
8	11855	11.00	0.283	7	11059	7.20	0.110	60	11096	18.30	0.71
9	11872	12.00	0.337	8	S6463	7.35	0.115	61	11217	18.60	0.73
0	11856	12.70	0.377	9	11081	7.65	0.124	62	11113	19.00	0.76
1	11881	13.00	0.395	10	11002	7.94	0.134	63	11014	19.05	0.77
2	11887	13.85	0.449	11	11029	8.00	0.136	64	11168	19.70	0.82
3	11857	14.00	0.458	12	S6251	8.20	0.143	65	11033	20.00	0.84
	11864	16.00	0.599	13	11043	8.26	0.145	66	11219	20.63	0.90
_	11876	16.85	0.664	14	11003	8.50	0.153	67	11015	21.00	0.93
2	11858	17.00	0.675	15	11184	8.76	0.163	68	11130	21.50	0.98
<u></u>	11870	18.00	0.758	16	11068	8.85	0.166	69	11030	22.00	1.02
_	11874	18.85	0.831	17	11185	8.97	0.171	70	11021	22.20	1.04
2	11869	18.90	0.835	18	11004 11186	9.00	0.172	71	11117	23.00	1.12
)	11866	19.10	0.853	20	11067	9.08	0.175	72	11112	24.00	1.27
1	S6175	20.00	0.935	20	11187	9.10	0.179	74	11034	25.00	1.32
2	11867	22.00	1.132	22	11046	9.30	0.183	74	11034	25.40	1.30
3	11878	22.10	1.142	23	11188	9.40	0.187	76	11137	25.50	1.37
4	11890	22.25	1.157	24	11005	9.52	0.192	77	11024	25.80	1.41
5	11896	22.30	the second s	25	11189	9.53	0.193	78	11040	26.30	1.40
7	11873 11862	23.85	1.330	26	11069	9.66	0.198	79	11036	27.00	1.54
3	11859	25.00	1.461	27	11190	9.67	0.198	80	11165	27.80	1.63
)	11893	25.40	1.508	28	11106	9.80	0.203	81	11031	28.00	1.60
)	11875	26.85	1.686		11191	9.92	0.209	82	11091		1.73
	11868	27.00	1.705	30	11006	10.00	0.212	83	11035	30.00	1,90
: :	11889	27.15	1.723	31	11192	10.63	0.240	84	11150	30.40	1.96
1	11865	29.00	1.966	32	11070	10.80	0.247	85	11132	30.90	2.02
1	11891	30.19	2.131	33	11007	11.00	0.257	86	11218	31.75	2.13
5	11884	30.50	2.175	34	11193	11.13	0.263	87	11027	31.80	2.14
5	S5769	31.50	2.320	35	11128	11.20	0.266	88	11028	32.00	2.17
7	11860	32.00	2.394	36	11194	11.35	0.273	89	11198	32.00	2.17
3	11895	34.90	2.848	37	11071	11.53	0.282	90	11199	32.00	2.17
9	11879	36.00	3.030	38	11195	11.60	0.285	91	11162	32.40	2.22
)	11886	37.50	3.288	39	11082	11.70	0.290	92	11077	33.00	2.30
1	11885	38.10	3.394	40	11008	12.00	0.305	93	11173	33.50	2.38
2	11880	41.00	3.930	41	11209	12.30	0.321	94	11045	34.92	2.58
3	11883	41.27	3.984	42	11009	12.70	0.342	95	11103	35.60	2.68
ł	11894	46.00	4.948	43	11010	13,00	0.358	96	11084	36.00	2.74
5	11863	50.00	5.846	44	11011	13.50	0.386	97	11174	36.70	2,85

er L			Weight	[OF	Carab Ja		Waight	204	11131	203.00 87.	301
SL. S No.	ection No.	ØA	kg/m	SL. No.	Section No.	ØA	Weight kg/m	204	11159		
98	11147	37.50	2.982	151	11115	82.55	14.450	206			
99	11032	38.00	3.062	152	11092	85.00	15.321	207	11138		
100	11017	38.10	3.078	153	11122	88.90	16.759	208	11156	215.90 98.	846
101	11167	38,50	3.143	154	11062	90.00	17.176	209	11171		
	11065	39.00	3.225	155	11163	91.00	17.560	210			
	11202	39.70	3.342	156	11123	95.25	19.239	211	11145		_
	11018 11149	40.00	3.393	157	11176 11080	97.00	19.952	212	11161		
	11048	42.00	3.741	159	11052	101.60	21.890	214	11203		
	11175	42.86	3.895	160	11148	105.00	23.379	215	11146		-
108	11020	43.00	3.920	161	11093	107.95	24.711	216	11157	260.35 143.	73
	S5888	44.00	4.105	162	11074	110.00	25.659	217	11177		_
	11037	44.45	4.190	163	11183		25.940	218	-		
	11056	44.70	4.237	164	11181	111.40	26.316	219	11158		-
	11086 11172	45.00	4.294	165	11141	114.30	27.704	220			_
	11215	46.80	4.645	167	11035	117.00		221	1 00440	200.00 172.	. <u>2</u> .4
	11136	48.10	4.906	168	11207	118.00					
116	11180	48.50	4.988	169	11039	120.00	30.536	1			
	11210	48.50	4.988	170	11124	120.65	30,868	1			
	11019	50.00	5.301	171	11055		33.134	1			
	11038	50.80	5.472	172	11127	127.00	34.203	1			
	11049 11057	51.75 53.50	5.679	173	11089	130.00	35.838	1			
	11169	53.98	6.179	174	11220	133.35	37.709	1			
	11205	54.00	6.184	176	11099		38.647	1			
	11073	55.00	6.415	177	11178	139.50		1			
125	11060	56.00	6.650	178	11075	140.00	41.563	1			
	11090	57.15	6.926	179	11104	143.00	43.364	1			
	11076	60.00	7.634	180	11208	145.00	44.585	1			
	11164 11216	60.32 61.20	7.716	181	11101 11196	146.00	45.202	1			
	11210	62.60	8.310	182	11196	148.00	47.713	1			
	11050	63.50	8.550	184	11179		48.672	1			
	11088	65.00	8.959	185	11197	151.60	48.736	1			
133	11126	65.40	9.070	186	11125	152.40	49.252	1			
	11151	66.68	9.429	187	11097	153.00		1			
	111111	68.20	9.863	188		a statement of the stat	50.947	1			
	11102 11118	68.30 69.20	9.892	189	11182		51.606	1			
	11118	69.20	10.155	190	11144	-		1			
	11087	70.00	10.390	192	11109	-		1			
	11063	71.00	10.690	193	11100	170.00	61.285	1			
	11105	72.00	10.993	194	11153	171.45					
	11166	73.00	11.301	195	11214	171.45		1			
	11204	73.66	11.506	196	11134	175.00	and the second se	1			
	11094	75.00	11.928	197	11154 11058	177.80					
	11051 S5738	77.00	12.312	198	11058	180.00		1			
	11120	79.40	13.369	200	11098	190.00		1			
	11061	80.00	13.571	201	11140	190.50	76.956	1			
149	11221	80.00	13.572	202	11213		80,635	1			
150	11212	81.00	13.913	203	11108	200.00	84.823				

$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	UARE BARS		
S. Section 8A Weight 89/m No. No. $Solution 1000 (Stresson 10000 (Stresson 100000 (Stresson 100000 (Stresson 10000 (Stresson 100000 (Str$		r.	No. No. Image: Weight and the second
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1 11723	3 5.00 0.068	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			
$ \begin{array}{c} 6 \\ 11704 \\ 10.00 \\ 7 \\ 11748 \\ 11.5 \\ 0 \\ 0 \\ 11722 \\ 12.00 \\ 0 \\ 0 \\ 13 \\ 11705 \\ 12.00 \\ 0 \\ 0 \\ 13 \\ 11705 \\ 12.00 \\ 0 \\ 14 \\ 11708 \\ 1170 \\ 15.88 \\ 0 \\ 14 \\ 11708 \\ 1170 \\ 1170 \\ 15.80 \\ 0 \\ 14 \\ 11708 \\ 1170 \\ 1170 \\ 25.50 \\ 1.756 \\ 17 \\ 11726 \\ 30.00 \\ 2.430 \\ 11711 \\ 25.50 \\ 1.756 \\ 17 \\ 11722 \\ 30.00 \\ 2.430 \\ 11712 \\ 30.00 \\ 2.430 \\ 11712 \\ 32.00 \\ 2.2 \\ 11713 \\ 35.00 \\ 2.3 \\ 11724 \\ 42.00 \\ 4.445 \\ 5.334 \\ 2.5 \\ 11725 \\ 45.00 \\ 5.88 \\ 10.0 \\ 1.223 \\ 11744 \\ 42.00 \\ 4.455 \\ 5.334 \\ 2.5 \\ 11725 \\ 45.00 \\ 5.88 \\ 10.0 \\ 1.223 \\ 11733 \\ 35.00 \\ 11727 \\ 60.00 \\ 9.720 \\ 33 \\ 11746 \\ 65.00 \\ 11.407 \\ 31 \\ 11724 \\ 63.00 \\ 11727 \\ 60.00 \\ 9.720 \\ 33 \\ 11746 \\ 65.00 \\ 11.407 \\ 31 \\ 11724 \\ 63.00 \\ 10.716 \\ 32 \\ 11733 \\ 65.50 \\ 11.407 \\ 33 \\ 11746 \\ 72.00 \\ 11727 \\ 10.00 \\ 1.20 \\ 11722 \\ 15.240 \\ 1.50 \\ 1.228 \\ 11740 \\ 1.228 \\ 10.00 \\ 1.223 \\ 1.223 \\ 1.20 \\ $			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	and the state of t		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	the second se	the second s	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	state and a local division of the second divi		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
1511710 25.00 1.688 1611719 25.50 1.756 1711726 30.00 2.430 1811716 31.75 2.722 19 11721 32.00 2.765 20 11732 35.00 3.308 21 11713 38.10 3.920 22 11717 40.00 4.520 23 11744 42.00 4.752 24 11740 44.45 5.334 25 11725 45.00 5.467 26 11714 50.00 6.750 27 11733 50.80 6.967 28 11749 53.00 7.584 29 11743 54.00 7.873 30 11727 60.00 9.720 31 11746 65.00 11.407 32 11739 63.50 10.887 33 11746 65.00 11.407 34 11711 67.00 13.290 35 11712 69.85 13.173 36 11750 70.00 13.290 37 11736 72.00 13.296 38 11718 76.25 15.698 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 86.902 21.338 43 11747 100.002 27.000		the second se	
161171925.501.756171172630.002.430181171631.752.722191172132.002.765201173235.003.308211171338.103.920221171740.004.320231174442.004.762241174044.455.334251172545.005.467261171450.806.967271173350.806.967281174953.007.584291174354.007.873301172760.009.720311174665.0011.407321173963.5010.887331174665.0011.407341171269.8513.173361175070.0013.230371173672.00013.2996381171876.2515.698391174579.0016.850401172080.0017.280411173483.0018.600421174288.9021.3384311747100.0027.000		and a second	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			SQUARE BARS WITH RADIUS
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	and the second se		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	and the second se		
25 11725 45.00 5.467 26 11714 50.00 6.750 27 11733 50.80 6.967 28 11749 53.00 7.584 29 11743 54.00 7.873 30 11727 60.00 9.720 31 11724 63.00 10.716 32 11739 63.50 10.887 33 11746 65.00 11.407 34 11741 67.00 12.120 35 11712 69.85 13.173 36 11750 70.00 13.230 37 11736 72.00 13.996 38 11718 76.25 15.698 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11742 88.90 21.338 43 11747 100.00 27.000			
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	the second s		R
27 11733 50.80 6.967 28 11749 53.00 7.584 29 11743 54.00 7.873 30 11727 60.00 9.720 31 11724 63.00 10.716 32 11739 63.50 10.887 33 11746 65.00 11.407 34 11741 67.00 12.120 35 11712 69.85 13.173 36 11750 70.00 13.230 37 11736 72.00 13.996 38 11718 76.25 15.698 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 88.90 21.338 43 11747 100.00 27.000	and the second		~
28 11749 53.00 7.584 29 11743 54.00 7.873 30 11727 60.00 9.720 31 11724 63.00 10.716 32 11739 63.50 10.887 33 11746 65.00 11.407 34 11712 69.85 13.173 36 11750 70.00 13.230 37 11736 72.00 13.996 38 11718 76.25 15.698 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 88.90 21.338 43 11747 100.00 27.000			
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			NO. NO. Kg/m
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			
32 11739 63.50 10.887 33 11746 65.00 11.407 34 11741 67.00 12.120 35 11712 69.85 13.173 36 11750 70.00 13.230 37 11736 72.00 13.996 38 11718 76.25 15.698 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11742 88.90 21.338 43 11747 100.00 27.000			
33 11740 03.00 11.407 34 11741 67.00 12.120 35 11712 69.85 13.173 36 11750 70.00 13.230 37 11736 72.00 13.996 38 11718 76.25 15.698 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 88.90 21.338 43 11747 100.00 27.000	and the second se	and the second	
34 11741 07.00 12.120 35 11712 69.85 13.173 36 11750 70.00 13.230 37 11736 72.00 13.996 38 11718 76.25 15.698 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 88.90 21.338 43 11747 100.00 27.000	the second se		
33 11712 09.03 13.173 36 11750 70.00 13.230 37 11736 72.00 13.996 38 11718 76.25 15.698 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 88.90 21.338 43 11747 100.00 27.000			
37 11736 72.00 13.996 38 11718 76.25 15.698 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 88.90 21.338 43 11747 100.00 27.000	the second se		
38 11718 76.23 13.038 39 11745 79.00 16.850 40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 88.90 21.338 43 11747 100.00 27.000			
30 11733 75.00 101030 40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 88.90 21.338 43 11747 100.00 27.000	and the second se		
40 11720 80.00 17.280 41 11734 83.00 18.600 42 11742 88.90 21.338 43 11747 100.00 27.000			
42 11742 88.90 21.338 43 11747 100.00 27.000			12 12203 110.00 1.00 00.115
43 11747 100.00 27.000			
	A Property of the local division of the		
	and the second		

					F	ROU	ND T	UB	-5					
	1	-	8.		SL. No.	Section No.	ØA	в	Weight kg/m	SL. No.		ØA	в	Weight kg/m
			1		51	13130	12.00	0.91	0.086	109		19.05	1.20	0.182
	VØ	-			52	13130	12.00	1.00	0.093	110	-	19.05	1.30	0.195
	Si 1				53	13462	12.00	3.00	0.229	111		19.05	1.63	0.241
			/		54	13004	12.70	0.86	0.086	113		19.05	1.70	0.249
	1	-			55	13005	12.70	1.19	0.116	113	3 13460	19.05	2.00	0.289
_					56	\$5757	12.70	1.40	0.134	11.	-	19.05	2.50	0.351
2012/01/01	Section	ØA	в	Weight	57	13006	12.70	1.63	0.153	115	the second s	19.05	3.18	0.428
No.	No.	5.00	1 20	kg/m	58	13007	12.70	2.03	0.184	11		19.50	1.50	0.229
1	13422	5.60	1.20	0.045	59 60	13058 13608	12.70	2.20	0.196	11		19.60	2.30	0.337
3	13125	6.20	1.20	0.050	61	13263	13.00	1.00	0.102	110		19.60	3.05	0.428
4	13630	6.35	1.22	0.053	62	13126	13.00	1.85	0.175	120		19.80	6.20	0.715
5	13176	6.35	1.50	0.062	63	13664	14.00	0.87	0.097	12		20.00	1.00	0.161
6	13245	6.35	2.07	0.075	64	13234	14.00	1.55	0.164	12:		20.00	1.25	0.199
7	13576	7.25	1.42	0.070	65	13237	14.00	3.10	0.287	123	-	20.00	1.50	0.235
8	13118	7,40	1.50	0.075	66	13067	14.50	1.22	0.137	12.	-	20.00	1.63	0.254
9	13286	7.75	1.00	0.057	67	13211	15.00	0.54	0.066	125		20.00	3.15	0.450
10	13481	7.80	1.00	0.058	68	13182	15.00	0.60	0.073	120		21.00	5.10	0.688
11	13255 13355	8.00	1.00	0.059	69 70	13685 13008	15.00	2.00	0.119	12		21.10	3.00	0.460
13	13036	8.00	1.20	0.072	71	13267	15.00	4.75	0.413	129		21.10	2.55	0.403
14	13063	8.00	1.50	0.083	72	13228	15.20	0.72	0.088	130		21.40	4.80	0.676
15	13445	8.00	2.00	0.102	73	13465	15.40	3.20	0.331	13		21.50	2.50	0.403
16	13692	8.10	0.50	0.032	74	13621	15.50	2.35	0.262	132	2 13168	21.70	3.10	0.489
17	13149	8.30	1.45	0.084	75	13727	15.50	4.25	0.406	13	3 13262	22.00	0.55	0.099
18	13670	8.46	0.68	0.045	76	S5470	15.70	3.50	0.362	134		22.00	0.75	0.135
19	13602	8.60	0.80	0.053	77	13009	15.88	0.92	0.117	13	_	22.00	0.85	0.152
20	13265	8.80	2.65	0.138	78	13212	15.88	0.96	0.121	130	-	22.00	1.00	0.178
21	13208 13329	9.00	0.53	0.038	79	13010	15.88	1.22	0.152	13		22.00	1.20	0.212
23	13326	9.20	0.78	0.056	81	13459	15.88	2.00	0.235	13		22.00	1.60	0.220
24	13284	9.35	0.55	0.041	82	13012	15.88	2.38	0.272	140		22.00	4.10	0.623
25	13209	9.35	0.64	0.048	83	13274	16.00	1.00	0.127	141	13589	22.00	5.00	0.721
26	13553	9.35	0.65	0.048	84	13691	16.00	1.60	0.195	142	13019	22.22	0.88	0.159
27	13163	9.50	1.35	0.093	85	13070	16.00	2.20	0.257	143		22.22	1.20	0.214
28	13144	9.52	0.78	0.058	86	13124	16.00	2.75	0.309	14		22.22	1.60	0.280
29	13003	9.52	0.92	0.067	87	\$5733	16.00	3.50	0.371	145		22.23	1.00	0.180
30	13210 13303	9.52	1.00	0.073	88	13334 13232	16.90	2.45	0.300	14	_	22.30	1.60	0.281
32	13001	9.52	1.22	0.086	90	13169	17.00	2.60	0.318	148	-	23.40	1.00	0.190
33	13002	9.52	1.63	0.109	91	13071	17.10	2.10	0.267	149	-	23,70	2.85	0.504
34	13536	9.70	1.40	0.099	92	13157	18.00	0.60	0.089	150	13337	23.90	3.65	0.626
35	13647	9.75	2.13	0.138	93	13492	18.00	1.30	0.184	15.		24.00	0.84	0.165
36	13394	10.00	0.80	0.062	94	13132	18.00	1.63	0.226	152		24.00	1.25	0.241
37	13524	10.00	0.82	0.064	95	13185	18.00	2.00	0.271	15.		24.00	1.63	0.309
38 39	13097 13093	10.00	1.00	0.076	96	13579 13213	18.50	0.47	0.072	15		24.00	2.75	0.496
40	13436	10.00	0.51	0.108	98	13612	18.50	0.51	0.078	15	-	25.00	1.00	0.204
41	13381	10.50	1.70	0.127	99	13183	18.50	0.60	0.091	15		25.00	1.50	0.299
42	13159	10.80	1.40	0.112	100	13146	18.50	0.72	0.108	158		25.00	1.50	0.299
43	13578	11.00	0.42	0.038	101	13643	18.50	1.00	0.148	159	3 13470	25.00	1.50	0.299
44	13207	11.00	0.48	0.043	102	13673	18.60	1.15	0.170	160	-	25,00	2.00	0.390
45	13488	11.00	3.00	0.204	103	13165	19.00	1.15	0.174	16:		25.00	2.00	0.390
46	13396	11.10	1.00	0.086	104	13335	19.00	2.65	0.367	16;	_	25.00	2.50	0.477
47	13277 13231	11.11	1.60 0.48	0.129	105	13257 13013	19.05	0.82	0.127	16.		25.00	4.00	0.713
48	13231	12.00	0.45	0.047	105	13013	19.05	0.92	0.141	16		25.00	5.00	1.015
50	13145	12.00	0.72	0.068	108	13014	19.05	1.12	0.171	16		25.40	0.83	0.173
and the			Constant Contraction										0400000578	10000070033

TUBE - 01

SL. No.	Sectior No.	ØA	в	Weight kg/m	SL. No.	Section No.	ØA	в	Weight kg/m	SL. No.	Section No.	ØA	в	Weight kg/m
167	13215	25,40	0.87	0.181	226	13458	31.80	4.50	1.042	285	S5648	38,80	9.52	2.365
168	13222	25.40	1.00	0.207	227	13707	31.90	5.10	1.159	286	13041	39.00	8.00	2.103
169	13305	25.40	1.06	0.219	228	13328	32.00	1.20	0.314	287	13606	39.00	9.00	2.290
170	13022	25.40	1.22	0.250	229	13248	32.00	1.60	0.412	288	13646	39.10	1.50	0.478
171	13306 13577	25.40	1.22	0.250	230	13100 13598	32.00	2.00	0.509	289	13340 \$5658	39.10	5.45	2.532
173	13023	25.40	1.60	0.323	232	13082	32.00	3.50	0.846	291	13480	40.00	1.20	0.395
174	13129	25.40	1.90	0.379	233	13066	32.00	4.00	0.950	2.92	13078	40.00	1.50	0.490
175	13090	25.40	3.20	0.603	234	13700	32.00	4.25	1.000	293	13048	40.00	2.00	0.645
176	13293	25.40	5.95	0.981	235	13375	32.00	4.50	1.050	294	13152	40.00	2.50	0.795
177	13444	25.91	4.63	0.836	236	13496 13581	32.00	8.00	1.629	295 296	13098 13134	40.00	3.00	0.941
179	13479	26.00	3.50	0.668	237	13640	32.00	4.86	1.129	290	13370	40.00	5.00	1.484
180	13683	26.00	6.50	1.075	239	13591	32.80	5.80	1.328	298	13507	40.00	7.00	1.959
181	13641	26.67	3.17	0.633	240	13137	33.00	3.50	0.875	299	13389	40.00	8.00	2.171
182	13186	27.00	2.50	0.520	241	13483	33.00	6.20	1.409	300	13276	40.00	11.00	2.705
183	13127	27.00	3.00	0.611	242	13044	33.00	6.25	1.418	301	\$5702	40.00	14.00	3.088
184 185	13109 13318	27.00	3.20	0.646	243	13570 13600	33.30	1.10	0.300	302	13504 13174	40.60	1.80	0.592
186	13338	27.20	3.95	0.779	249	13199	34.00	5.75	1.378	303	13416	41.80	4.56	1.440
187	13387	27.50	1.50	0.331	246	13447	34.00	8.75	1.874	305	13649	41.80	4.56	1.440
188	13360	28.00	1.00	0.229	247	13736	34.25	5.25	1.291	306	13089	42.00	2.00	0.679
189	13401	28.00	1.60	0.358	248	13730	34.64	1.44	0.406	307	13319	42.00	7.50	2.195
190	13110	28.00	3.00	0.636	249	13342	34.80	4.90	1.242	308	13584	42.00	8.25	2.362
191 192	13655 13038	28.00	3.00	0.636	250	13442 13393	35.00	1.20	0.344	309	13412 \$5909	42.00	4.75	2.975
192	13038	28.00	5.35	1.028	251	13202	35.00	4.50	1.164	311	13737	42.16	3.55	1.163
194	13315	28.00	9.50	1.491	253	13712	35.00	5.00	1.272	312	13419	42.16	4.85	1.535
195	13114	28.60	1.63	0.373	254	13316	35.00	7.00	1.663	313	13696	42.50	8.75	2.505
196	13081	28.60	3.30	0.708	255	13633	35.00	8.50	1.911	314	13661	42.55	4.90	1.565
197	13429	28.70	2.28	0.511	256	S4303	35.10	3.40	0.914	315	13564	42.70	9.35	2.645
198	13417	29.00	2.50	0.238	257	13585	35.20	4.50	1.172	316	55990	43.00	6.25	1.948
199	13235 13386	29.00	0.70	0.562	258	13706	35.40	4.90	1.268	317	13116 13601	43.00	7.00	2.137
201	13260	30.00	0.77	0.191	260	13446	35.90	4.95	1.300	319	13468	44.00	3.00	1.043
202	13382	30.00	1.00	0.246	261	13135	36.00	2.00	0.576	320	13194	44.00	10.00	2.884
203	13047	30.00	1.50	0.363	262	13103	36.00	4.00	1.085	321	13341	44.40	6.35	2.049
204	13264	30.00	2.00	0.475	263	13607	36.00	7.50	1.813	322	S5441	44.45	1.60	0.582
205	13379 13190	30.00	2.30	0.540	264	13443 13567	36.00	8.00	1.900	323	13077	45.00	2.50	0.901
206	13639	30.00	2.50	0.991	265	13250	36.10	3.00	0.468	324	13331	45.00	5.00	1.391
208	13101	30.00	5.25	1.102	267	S6192	37.00	4.00	1.120	326	13487	45.00	14.00	3.681
209	13171	30.00	6.65	1.318	268	13388	37.00	5.00	1.357	327	13565	45.20	10.30	3.049
210	13068	30.00	7.25	1.399	269	13083	37.50	4.25	1.198	328	13494	45.30	10.90	3.181
211	13024	30.10	1.22	0.299	270	13256	37.90	1.70	0.522	329	13505	45.70	1.80	0.670
212	13339 13628	30.20	4.20	0.926	271	13711 13411	38.00	1.00	0.314	330	13084 13136	46.00	5.00	1.738
213	13654	31.00	3.00	0.349	272	13091	38.00	2.00	0.375	332	13136	46.00	6.00	2.035
215	13111	31.00	3.50	0.816	274	13710	38.00	3.00	0.891	333	13298	48.00	4.00	1.492
216	13254	31.75	0.95	0.248	275	13323	38.00	5.90	1.606	334	13138	48.00	5.00	1.823
217	13229	31.75	1.05	0.273	276	13057	38.00	6.50	1.737	335	13056	48.00	8.75	2.913
218	13571	31.75	1.00	0.261	277	13385	38.00	6.75	1.789	336	13088	48.00	9.00	2.977
219	13530 13025	31.75 31.75	1.10	0.286	278	13367 13224	38.00	7.50	1.940	337	13512 13667	48.10	4.60	1.697
220	13025	31.75	1.22	0.316	280	13028	38.10	1.50	0.405	338	13667	48.10	4.75	1.670
222	13027	31.75	2.00	0.505	281	13029	38.10	2.00	0.612	340	13172	48.26	3.68	1.391
223	13094	31.75	3.18	0.771	282	13030	38.10	2.50	0.755	341	13420	48.26	5.08	1.861
224	\$5560	31.80	3.15	0.766	283	13099	38.10	7.55	1.956	342	13510	48.30	4.00	1.503
225	13599	31.80	3.20	0.776	284	13140	38.20	3.20	0.950	343	13588	48.41	4.47	1.666

						ROU	ND 1	UBI	ES					
SL.	Section		1	Weight	SL.	Section		1	Weight	SL.	Section			Weight
No.	No.	ØA	В	kg/m	No.		ØA	В	kg/m	No.	No.	ØA	В	kg/m
344	S4210	48.99	4.90	1.833	403	3 13175	65.00	1.00	0.542	462	13154	88.90	4.05	2.915
345	13597	49.90	10.75	3.570	404	1 S5660	65.00	6.00	3.003	463	13106	88.90	5.36	3.798
346	13271	50.00	1.50	0.617	403		66.00	6.00	3.053	464	13430	88.90	5.49	3.884
347	13467	50.00	2.00	0.814	401		66.20	3.05	1.633	465	13142	88.90	6.35	4.446
348	13064	50.00	2.50	1.007	40		69.35	3.18	1.782	466	13295	88.90	7.62	5.253
349 350	\$5559 13065	50.00	2.50	1.007	408		69.50	12.50	6.043	467	13617 13637	88.90	7.62	5.254
351	13065	50.00	5.00	1.198	40		70.00	4.00	2.239	469	13493	88.90	9.52	6.410
352	13327	50.00	6.00	2.239	411		70.00	5.00	2.757	470	\$6275	89.00	10.00	6.701
353	13371	50.00	7.50	2.704	412		70.00	15.00	6.998	471	13698	90.00	1.70	1.273
354	13583	50.00	10.00	3.393	413	3 13040	70.00	17.50	7.793	472	13613	90.00	2.50	1.856
355	13713	50.00	12.50	3.976	414	13614	70.00	25.00	9.543	473	13162	90.00	3.50	2.568
356	13131	50.20	3.10	1.238	413	5 13451	70.50	19.75	8.502	474	13074	90.00	4.00	2.918
357	13031	50.80	1.63	0.680	416		72.00	2.50	1.474	475	S5883	90.00	15.00	9.543
358	13506	50.80	1.80	0.748	41		72.00	12.00	6.107	476	13055	90.00	17.50	10.762
359	13032	50.80	2.03	0.840	418		73.00	9.00	4.886	477	13192	91.80	3.30	2.477
360	13033	50.80	2.50	1.024	419		73.03	5.16	2.970	478	13720 13611	92.00	10.00	6.955
361	13414 13282	50.80	3.00	2.400	420		75.00	3.00	1.832	479	13611	92.00	14.50	9.532
363	13232	51.00	6.00	2.290	421		75.00	18.00	8.702	481	56195	92.00	36.25	17.142
364	\$3923	51.80	3.65	1.491	423		76.00	2.50	1.559	482	13582	92.10	6.27	4.568
365	13042	52.00	7.00	2.672	424		76.00	7.00	4.096	483	13728	95.00	2.50	1.962
366	13037	52.00	9.50	3.425	423	3 13187	76.10	4.50	2.732	484	13500	95.25	12.70	8.893
367	13437	54.00	1.60	0.711	426	5 13225	76,20	1.30	0.825	485	13204	96.00	11.50	8.243
368	13672	54.00	8.75	3.358	427	13723	76.20	1.45	0.919	486	13179	96.00	19.50	12.653
369	13170	54.00	10.00	3.732	428		76.20	1.60	1.012	487	13320	96.50	5.00	3.880
370	13268	55.00	2.50	1.113	429		76.20	2.00	1,259	488	13198	96.50	10.00	7.337
371	13398	55.80	7.35	3.021	430		76.20	3.18	1.970	489	13592	96.50	25.00	15.162
372	13632 13556	56.00	5.50	2.356	431		76.20	6.35 9.50	3.762	490	13423 13258	98.00	4.00	3.189
373	13556	56.86	5.09	2.235	432		76.20	10.00	5.615	491	13258	98.00	26.00	15.878
375	13085	57.00	6.75	2.877	434		76.20	12.70	6.841	493	13095	100.00	3.20	2.627
376	13652	57.00	7.50	3.149	435		76.50	23.50	10.565	494	13242	100.00	4.00	3.257
377	13549	57.00	18.00	5.955	43	_	76.50	27.75	11.475	495	13540	100.00	5.00	4.029
378	13049	57.60	2.90	1.346	431	13471	78.18	4.00	2.517	496	13520	100.00	6.00	4.784
379	13682	57.80	16.90	5.863	438	3 13217	80.00	2.50	1.643	497	13252	100.00	8.00	6.243
380	13372	58,80	11.50	4.614	439	13569	80.00	3.00	1.959	498	13729	100.00	15,00	10,815
381	13062	59.50	4.50	2.099	44(80.00	4.00	2.579	499	13743	100.00	15.00	10.815
382	13075	60.00	2.00	0.984	441		80.00	5.00	3.180	500	S6102	100.00	16.00	11.400
383	13395 13196	60.00	2.50	1.219	442		80.00	6.00	3.766	501	13732 13659	100.00	20.00	13.572
384	13196 S5647	60.00	10.00	4.241	44.		80.00	10.00	5.938	502	13839	101.60	3.20	2.671
386		60.00	20.00	6.786	443		80.00	10.00	5.938	504	13069	101.60	5.74	4.667
387	13218	60.32	3.91	1.870	44		80.00	11.50	6.682	505	13296	101.60	8.08	6.409
388	13525	60.33	5.28	2.468	44		80.00	15.00	8.270	506	13407	101.60		7.770
389	13236	60.33	5.54	2.575	448	13744	80.00	15.00		507	13495	101.60	19.05	13.339
390		61.00	8.00	3.596	449	-	80,00	20.00		508		102.00		9.160
391	13239	62.00	6.37	3.005	450		80.00	21.00	10.509	509	13521	105.00		2.174
392	13050	63.00	1.60	0.833	451	_	80.00	25.00	11.663	510	13604	105.15	1.90	1.664
393	13526	63.00	2.00	1.035	452		80.20	2.00	1.327	511	13666	106.00	3.70	3.211
394 395	13453 13404	63.00	3.00	1.527	453		82.00	7.00	4.453	512	13151 13344	108.00	3.00	2.672
395	13404	63.00	9.00	4.122	454		82.00	3.20	2.154	513 514	13455	110.00	5.00	4.453
397	13059	63.50	3.18	1.627	45		85.00	1.30	0.922	515	13455 S6003	110.00		8.842
398	13625	63.50	6.00	2.926	45		85.00	27.50	13.413	516	13668	110.00		12.087
399	13139	63.50	7.00	3.354	458		86.00	8.00	5.293	517	13178	112.00		9.803
400		63.50	9.55	4.370	455		86.35	3.18	2.243	518	13491	113.50		6.492
401	13448	64.00	6.00	2.952	460) 13714	88.00	2.00	1.459	519	-	113.54		1.925
402	13671	64.00	8.25	3.901	461	13715	88,00	3,00	2.163	520	13638	114.20	8.51	7,629

TUBE - 03

	SQU	ARE I	UBES											
				-	SL. No.	Section No.	A	в	Weight kg/m	SL. No.	Section No.	A	в	Weight kg/m
					46	14456	25.40	2.00	0.505	101	14548	87.00	2.00	1.836
1	в			a:	47	14554	25.40	2.36	0.587	102	14549	87.00	2,90	2.634
				C.	48	14465	25.40	2.41	0.598	103	14494	87.00	3.80	3.415
					49	14505 14497	30.00	1.80	0.548	104	14484 14495	87.00	4.00	3.586
				-	51	14546	31.00	0.70	0.229	106	14508	100.00	3.00	3.142
					52	14467	31.75	1.25	0.412	107	14561	101.60	2.36	2.529
DI.	Contraction of			Weight	53 54	14457 14458	31.75	1.63	0.530	108	14517 14528	101.60	3.18	3.374
SL. No.	Section No.	A	в	kg/m	55	14540	32.00	0.58	0.197	110	14547	150.00	5.00	7.830
1	14490	11.00	0.60	0.067	56	14529	32.00	1.70	0.556	111	14537	178.00	9.00	16.427
2	14556	11.50	0.65	0.076	57	14475	32.00	2.60	0.825	112	14530	200.00	4.00	8.467
3	14519 14481	12.00	0.55	0.068	58 59	14488	35.00	0.93	0.342	1				
5	14527	12.20	1.20	0.143	60	14539	36.00	0.70	0.267					
6	14485	12.70	0.81	0.104	61	14535	37.35	4.70	1.657					
7	14451	12.70	1.22	0.151	62	14524	37.50	0.80	0.317	1				
8 9	14452	12.70	1.63	0.195	63 64	14468	38.10	1.25	0.497					
10	14502	15.88	1.27	0.200	65	14459	38.10	1.63	0.642					
11	14491	16.00	1.00	0.162	66	S6276	38.10	2.00	0.780	1				
12	14478	17.00	0.62	0.109	67	14460	38.10	2.13	0.827	1				
13	14474 14472	17.50	1.44	0.245	68 69	14461	38.10	2.41	0,929	1				
15	14531	18.00	2.00	0.345	70	14534	38.10	6.35	2.177					
16	14512	18.15	0.64	0.121	71	14518	40.00	0.80	0.339					
17	14486	18.50	0.69	0.133	72	14506	40.00	1.80	0.743	1				
18	14496 14544	18.50	0.90	0.171	73	14564	40.00	2.00	0.821					
20	14482	19.05	1.13	0.219	75	14480	40.00	3.00	1.198	1				
21	14453	19.05	1.22	0.235	76	14563	40.00	4.00	1.555	1				
22	14542 14454	19.05	1.57	0.296	77	14522 14558	44.45	2.00	0.917					
24	14560	19.05	2.36	0.425	79	14473	44.46	3.20	1.426	I				
25	14552	19.05	3.18	0.545	80	14471	50.00	1.18	0.621					
26	14521	20.00	1.50	0.299	81	14525	50.00	1.50	0.785					
27	14509 14550	20.00	1.70	0.335	82	14510 14462	50.00	1.70	0.887	1				
29	14536		3.25	0.588	84	14515	50.00	2.30	1.185					
30	14532	22.50	0.52	0.123	85	14503	50.00	2.70	1.379					
31	14483	22.50	0.55	0.130	86	14545	50.00	3.00	1.523	1				
32	14479 14487	22.50	0.63	0.148	87	14553 14463	50.80	2.36	1.235					
34	14477	23.50	0.87	0.212	89	14464	50.80	3.05	1.573	1				
35	14557	23.50	0.92	0.224	90	14543	50.80	3.18	1.635					
36	14469	23.50	1.02	0.247	91	14498	60.00	4.00	2.419					
37 38	14520 14470	24.50	0.67	0.172	92	14500 14489	62.00 62.00	3.80	2.388	1				
39	14504	25.00	1.80	0.451	94	14559	63.50	1.90	1.264					
40	14516	25.00	2.80	0.671	95	14492	63.50	2.38	1.571	1				
41	14476 14541	25.40	0.82	0.219	96	14507	75.00	2.70	2.108					
42	14541	25.40	0.91	0.241	97	14526 14538	75.00	3.20	2.481	1				
44	14551	25.40	1.57	0.404	99	14493	76.20	2.38	1.897					
45	14455	25.40	1.63	0.418	100	14562	80.00	4.00	3.283	1				

HANN	ELS - SQ	UARE FI	LET										
	ł		A				SL. No.	Section No.	A	В	С	D	Weight kg/m
	Ŧ				1		51	15629	18.00	12.00	1.10	1.10	0.118
	0				æ		52	15741	19.00	15.00	1.00	1.00	0.127
				1.5			53	15694	19.00	19.00	1.00	1.00	0.149
	С				<u> </u>		55	15608	19.05	19.05	1.63	1.63	0.237
						7	56	15684	20.00	10.00	1.40	1.40	0.140
SL.	Section	А	в	с	D	Weight	57	15747	20.00	20.00	1.00	1.00	0.156
No.	No.	128		100		kg/m	58	15665	20.00	20.00	3.00	3.00	0.438
2	15660	5.50	10.90	1.10	2.00	0.074	59	15785	20.30	20.30	2.00	2.00	0.307
3	15693	6.60	9.50	0.80	0.80	0.092	61	15695	22.00	19.00	1.10	1.10	0.172
4	15679	7.50	7.50	0.60	0.60	0.034	62	15712	22.00	20.00	1.10	1.10	0.178
5	15666	7.80	6.90	0.49	0.49	0.027	63	15627	22.20	12.70	1.10	1.10	0.135
6	15626	8.00	6.00	1.50	1,50	0.069	64	15719	22.40	14.22	1.52	1.52	0,195
7	15715	8.00	7.00	0.36	0.36	0.021	65	15643	23.00	10.80	0.68	0.68	0.079
8	15602	8.75	9.50	1.20	1.50	0.087	66	15646	23.00	11.00	1.19	1.19	0.136
9	15771 15789	8.75	9.50	1.10	1.40	0.081	67	15661 15662	23.00	11.00	1.45	1.45	0.165
11	15635	9.00	8.00	0.57	0.57	0.037	69	15663	23.00	11.00	1.97	1.02	0.218
12	15784	9.00	15.00	1.20	1.20	0.118	70	15742	23.00	15.00	1.00	1.00	0.137
13	15776	9.30	9.30	0.55	0.55	0.040	71	15678	23.00	23.00	1.10	1.10	0.198
14	15778	9.40	9.40	0.90	0.90	0.064	72	15632	24.00	11.00	1.20	1.20	0.141
15	15603	9.52	9.52	0.57	0.57	0.042	73	15677	24.00	12.50	1.90	1.90	0.232
16	15673 15702	9.52	9.52	0.76	0.76	0.055	74	15700	24.60	4.00	1.10	1.20	0.096
18	15650	9.52	9.52	1.15	1.15	0.081	76	15763	25.00	15.00	5.00	6.00	0.661
19	15604	9.52	9.52	1.60	1.60	0.110	77	15733	25.00	20.00	1.10	1.10	0.186
20	15672	9.52	12.50	1.65	1.65	0.139	78	15769	25.00	30.00	2.50	2.50	0.540
21	15706	10.00	12.00	2.80	2.80	0.214	79	15786	25.00	50.00	2.00	2.00	0.653
22	15717	10.00	12.00	2.80	2.80	0.215	80	15718	25.16	19.03	1.40	1.40	0.228
23	15668 15667	11.70	11.70 8.50	0.51	0.51	0.047	81	15710 15633	25.20	4.10	1.00	1.00	0.085
25	15622	12.00	9.00	0.62	0.62	0.048	83	15634	25.40	12.70	2.00	3.00	0.311
26	15767	12.00	10.00	1.20	1.20	0.096	84	15610	25.40	12.70	3.18	3.18	0.381
27	15724	12.00	15.00	1.80	1.80	0.186	85	S5417	25.00	41.00	7.00	10.00	1.847
28	15749	12.00	20.00	2.00	2.00	0.259	86	15611	25.40	19.05	3.18	3.18	0.491
29	15740 15621	12.50	15.00	1.00	1.00	0.109	87	15775 15612	25.40	25.40	1.20	1.20	0.239
31	15674	12.70	12.70	0.85	0.85	0.083	89	15647	30.00	13.00	0.90	0.90	0.130
32	15605	12.70	12.70	1.09	1.09	0.105	90	15657	30.00	30.00	3.00	3.00	0.681
33	15606	12.70	12.70	2.38	2.38	0.213	91	15618	31.50	19.00	3.00	3.00	0.514
34	15676	13.50	11.00	2.30	2.30	0.192	92	15686	31.75	12.70	1.56	1.56	0.228
35	15726 15681	14.00	14.00	1.00	1.00	0.108	93	15613	31.75	12.70	3.18	3.18	0.435
37	15692	14.50	14.50	0.90	0.90	0.154	94	28048	33.00	7.00	5.00	5.00	0.142
38	15607	15.00	10.00	1.60	1.60	0.137	96	\$6033	34.00	33.00	1.40	1.40	0.367
39	15630	15.00	12.00	1.10	1.10	0.109	97	15648	37.00	15.00	0.85	0.85	0.147
40	15698	15.00	15.00	1.20	1.20	0.138	98	15743	38.00	15.00	1.00	1.00	0.178
41	15659	15.00	15.00	2.00	2.00	0.221	99	15748	38.00	25.00	3.00	3.00	0.664
42	15664 \$5338	15.40	15.40	1.40	1.40	0.164	100	15649 15732	38.10	12.00	2.50	2.50	0.385
45	15783	16.00	4.00	1.50	1.50	0.085	101	15682	38.10	19.05	2.40	2.40	0.462
45	15696	16.00	16.00	1.20	1.20	0.148	103	15614	38.10	19.05	3.22	3.22	0.607
46	15675	16.00	19.00	1.20	1.20	0.167	104	15751	38.10	38.10	3.18	3.18	0.926
47	15669	16.80	10.50	0.49	0.49	0.049	105	15787	39.00	20.60	2.00	2.00	0.411
48	15782	16.95	9.85	1.20	1.20	0.111	106	15739	40.00	20.00	1.10	1.10	0.231
49	15642 27418	17.00	10.50	0.63	0.63	0.062	107	15708 15774	40.00	20.00	1.20	1,20	0.251
30	27418	18.00	4.50	2.40	3.20	0.171	108	13774	40.00	20.00	1.50	1.50	0.311

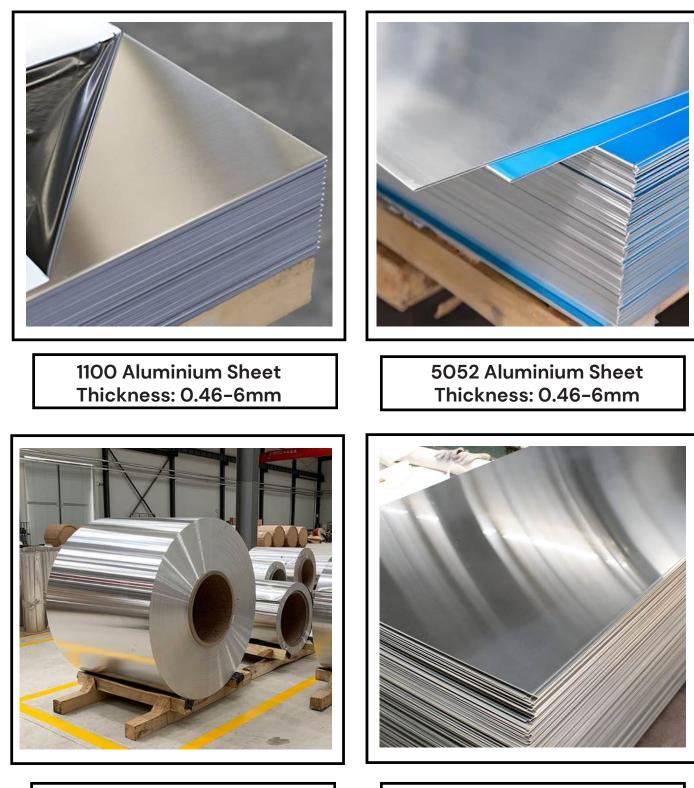
100000	Sectior	A	в	с	D	Weight	
No. 109	No.	40.00	20.00	1.80	1.80	kg/m 0.371	B
110	15658	40.00	40.00	4.00	4.00	1.210	50 50
111	15625	40.00	40.00	5.00	5.00	1.485	
112	15699	42.50	25.00	2.00	2.00	0.478	1×45°
113	15744	44.00	15.00	1.00	1.00	0.194	A
115	15781	44.00	28.00	1.78	1.78	0.463	
116	15620	44.45	25.40	3.18	4.78	0.928	SL. Section A B R Weight
117 118	15738 15720	45.00	20.00	1.10	1.10	0.246	No. No. Kg/m
119	15713	45.00	37.00	2.00	3.00	0.802	1 17545 23.40 1.13 0.60 0.184 2 17539 23.90 1.65 0.80 0.268
120	15791	45.00	50.00	5.00	5.00	1.822	
121	15688	45.00	54.00	2.00	2.00	0.805	
122 123	15745 15734	50.00	15.00	1.00	1.00	0.210	
123	15730	50.00	25.00	1.80	1.10	0.468	PC
125	15637	50.00	40.00	5.00	5.00	1,620	A
126	15683	50.80	25.40	3.00	3.00	0.773	
127 128	15656 15701	50.80	25.40	4.76	4.76	1.183	SL. Section A B C Weight kg/m
129	15773	50.80	50.80	3.18	3.18	1.050	1 17711 24.60 12.30 0.73 0.096
130	15728	67.00	39.00	2.80	2.80	1.053	2 17579 24.60 12.30 0.95 0.123
131 132	15691 15765	68.00	22.00	1.20	1.20	0.354	V. Vi
133	15716	76.00	32.00	5.00	2.20	1.256	
134	15617	76.20	50.80	3.18	3.18	1.472	
135	15707	76.40	19,20	1.90	1.20	0.432	
136 137	15770 15746	90.00	75.00	12.50	17.50	8.133	
138	15762	100.00	25.00	1.50	1.50	0.595	
139	15680	100.00	25.00	2.00	2.00	0.788	
140	15709 15736	100.00	30.00	1.10	1.10	0.468	
141	15766	100.00	50.00	10.00	10.00	4.860	
143	15788	100.00	103.00	2.50	2.50	2.031	
144	15725	101.60	50.80	5.00	5.00	2.608	
145 146	15723 S6371	101.60		6.35	6.35 2.00	3.266	
147	15703	110.00	25.00	2.00	2.00	0.842	
		120.00	and the second second	8.00	8.00	4.406	
			00.00			Concernance of the local division of the loc	
	15777	130.00	50.00	7.00	7.00	4.082	
		130.00		11.60	11.60	7.573	
	15750	152.40		7.60	4.60	4.310	
156	S6370	164.00	25.00	2.00	2.00	1.134	
157	15790	200,00	100.00	12.00	12.00	12.182	
148	15780 15779 86032 15777 15729 15764 15750 15772 86370	120.00 120.00 127.00 130.00 130.00 134.00 150.00 152.40 164.00	50.00 60.00 48.00 50.00 67.50 32.00 50.00 63.50 25.00	8.00 8.00 12.00 7.00 11.60 10.00 4.00 7.60 2.00	8.00 8.00 12.00 7.00 11.60 8.00 4.00 4.60 2.00	4.406 4.838 6.447 4.082 7.573 4.190 2.613 4.310 1.134	

			С	HAN	INE	LS					
CHANNELS - ROUND FIL	LET TOES		R3-	A							
			B		۶×	T T					
	0			.	R ²				Weight		
SL No	and the second se	A	В	С	D	R1	R2	R3	kg/m		
1	16034	14.20	19.00	1.50	1.50	-	0.75	1.00	0.197		
2		16.00	16.00	0.80	0.80	0.40	0.75	0.40	0.100		
4	17621	27.00	14.00	1.50	1.50	1.60	0.75	3.20	0.200		
5		50.80	31.75	6.65	4.40	3.25	-	-	1.597		
6	-	53.80 63.00	25.40	4.76	4.76	8.00	-	12.76	1.107		
8		63.50	25.40	4.76	4.76	8.00	-	12.76	1.232		
9		65.00	35.00	3.00	3.00	1.00	-	1.50	1.043		
10		75.00	40.00	5.00	5.00	5.00	-	-	1.986		
11		76.00	38.00	5.00	3.00	7.00	-	-	1.617		
11		76.20	38.10	7.94	6.35	8.50	4.50	-	2.728		
14		85.00	40.00	3.00	3.00	1.00	-	2.00	1.284		
15		88.80	28.50	2.90	2.90	2.10	1.45	5.00	1.067		
1		100.00	50.00	1.80	1.80	1.50	-	-	1.061		
18		101.60	41.83	6.68	6.68	9.52	-	-	3.205		
15		101.60	50.80	7.90	6.40	9.10	-	-	3.746		
20	-	102.00	50.00	8.00	8.00	9.00	-	- 3.00	4.111		
22	_	125.00	55.00	6.50	6.50	6.00	-	-	3.938		
23		127.00		8.00	5.00	6.00	-	-	4.563		
24	-	127.20	47.88	8.05	8.05	9.40	-	-	4.598		
25		140.00	50.00	8.00	8.00	6.00		-	4.881		
2		152.40	51.60	8.10	8.10	11.20	20	-	5.380		
28		160.00	79.50	10.00	10.00	1.00		-	8.072		
29		177.80	58.40	9.98	9.98	7.00	-	-	7.543		
3		177.80	95.25	10.09	10.09	3.17	3.17	- 15.87	11.455		
32		184.00	43.00	3.00	3.00	-	-	-	2.128		
33		203.20	65.00	11.84	11.84	12.70	-	-	10.081		
34	_	224.00		3.00	3.00	- 10.00	-	3.00	2.452		
34	-	254.00	92.87	13.18	13.18	12.90	-	-	14.903		
3		254.00		13.18	13.18	12.90	-	8.00	14.829		
38	3 16028	264.00	43.00	3.00	3.00	-	-	3.00	2.776		
Ţ.)	SI			В	С		eight kg/m
X.		C	-	-	110			0 35.0	0 6.00		1.639
D B						2 2738	3 100.0	00 40.0	0 6.50	3.50	2.221
						3 2738					3.406
				1		1 2738 5 2738					4.446
	A			-		5 2738					5.607
			A	l dimen	sions ir	n mm.					

LANC	SLE	s - SQUA		ET		SL. No.	Section No.	A	в	Weight kg/m
		0.34		122		52	16411	31.75	3.00	0.488
		×4.		В		53	16472	32.00	5.00	0.797
		+			-	54	16428	35.00	1.10	0.204
			A			55	\$5521	35.00	2.00	0.367
_			1-			56	16477	35.00	3.40	0,610
1.825	L.	Section	A	в	Weight	57	16489	35.00	4.00	0.712
_	0.	No.			kg/m	58	16458	38.00	2.80	0.553
-	1	16508	6.00	1.50	0.042	60	16482 16432	38.00	5.00	0.959
_	2	16496 16442	11.00	0.37	0.022	61	16499	38.10	1.50	0.302
-	4	16442	11.00	0.47	0.027	62	16412	38.10	1.57	0.316
-	5	16500	12.00	1.30	0.079	63	16479	38.10	2.25	0.449
-	6	16401	12.70	0.75	0.050	64	16453	38.10	2.50	0.497
	7	16402	12.70	1.52	0.098	65	16483	38.10	2.76	0.546
-	8	16403	12.70	3.18	0.191	66	16502	38.10	3.00	0.593
	9	16459	15.00	1.30	0.100	67	16413	38.10	3.18	0.627
-	10	16497	16.80	0.34	0.030	68 69	16414 16421	38.10	4.78	0.921
_	11 12	16443 16510	16.80	0.39	0.035	70	16484	38.10	5.80	1.102
_	13	16310	18.00	0.60	0.045	71	16506	40.00	1.60	0.338
-	14	16454	19.00	0.80	0.079	72	16452	40.00	2,50	0.523
	15	16404	19.05	0.62	0.064	73	16465	40.00	2.80	0.584
	16	16462	19.05	1.00	0.099	74	16438	40.00	3.00	0.623
	17	16405	19.05	1.31	0.130	75	16423	40.00	4.00	0.820
-	18	16450	19.05	1.60	0.158	76	16435	40.00	5.00	1.013
-	19	16478 16460	19.05	2.00	0.195	78	16437	50.00	1.00	0.267
-	20 21	16436	19.05	2.75	0.218	79	16505	50.00	1.60	0.425
	22	16406	19.05	3.18	0.299	80	16488	50.00	2.00	0.529
_	23	16446	20.00	1.20	0.126	81	16469	50.00	2.80	0.735
1	24	16486	20.00	2.00	0.205	82	16440	50.00	3.00	0.786
1	25	16444	21.00	0.46	0.052	83	16491	50.00	4.00	1.036
	26	16504	21.00	3.00	0.316	84	16473 16481	50.00	6.00	1.523
	27	16498	23.00	0.55	0.067	85	16485	50.00	5.00	1.987
_	28 29	16427 16433	23.00	0.62	0.076	87	16487	50.80	1.60	0.432
-	30	16455	25.00	1.30	0.231	88	16501	50.80	3.18	0.845
_	31	16424	25.00	1.50	0.196	89	16415	50.80	4.78	1.249
_	32	16507	25.00	1.60	0.209	90	16494	50.80	6.00	1.548
-	33	16463	25.00	1.80	0.234	91	16430	50.80	6.35	1.633
	_		25.00		0.259	92	16439	60.00	6.00	1.847
_	35	16441	25.40	0.80	0.108	93	16503 16480	60.00	8.00	2.419
_	36 37	16408 16407	25.40	1.01	0.137	95	16416	63.50	4.78	1.577
-	37	16451	25.40	1.60	0.163	96	16420	63.50	6.35	2.057
_	39	16461	25.40	2.10	0.273	97	16470	75.00	2.70	1.074
	40	16474	25.40	2.25	0.295	98	16475	75.00	3.00	1.191
1	41	16409	25.40	3.18	0.409	99	16417	75.00	4.78	1.873
_	42	16449	25.40	5.00	0.618	100	S6235	76.20	4.75	1.893
_	13	16456	28.00	1.80	0.263	101	16434 16429	76.20	9.52	3,673
_	44	16445	29.00	0.59	0.091	102		80.00	8.00	3.283
_	45	16464	30.00	1.80	0.283	103	16492	100.00		5.130
_	46 47	16447 16468	30.00	2.00	0.313	105	16490	114,30	6.35	3.810
_	48	16468	30.00	3.00	0.462	106		160.00		9.979
_	49	16418	30.00	5.00	0.742					
_	50	16431	31.75	0.72	0.122					
1	51	16410	31.75	1.57	0.262					

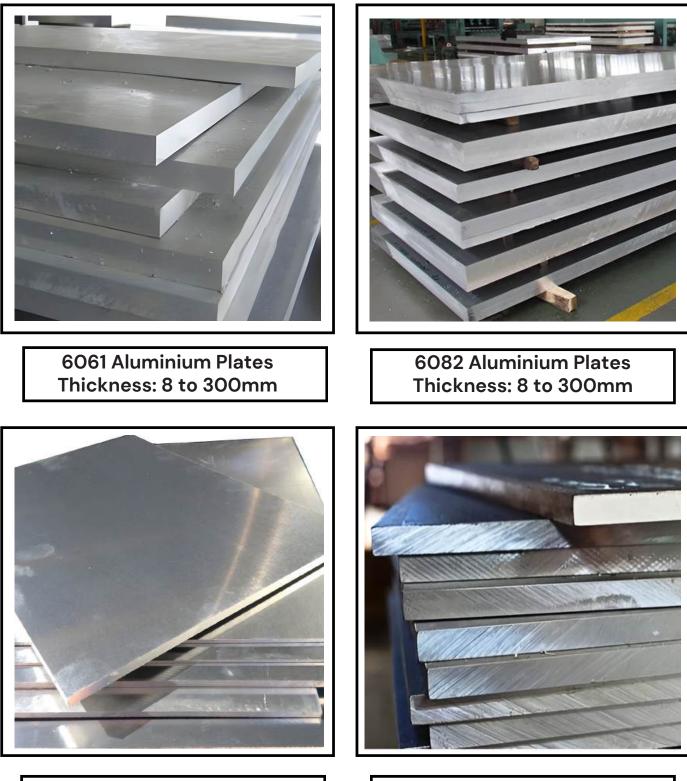
						LES
EQUAL A	NGLES -	SQUARE . C	FILLET			SL. Section A B C Weight kg/m
		1-				51 16739 60.00 40.00 3.00 0.786
	t					52 16796 60.00 40.00 8.00 1.987
	m					53 16783 60.00 50.00 3.00 0.866
	<u> </u>					54 16737 60.00 50.00 8.00 2.203
		A				55 16751 63.00 38.00 5.00 1.295 56 16718 63.50 19.05 1.22 0.268
	ी					56 16718 63.50 19.05 1.22 0.268 57 16774 63.50 22.23 3.18 0.708
	Section	А	в	С	Weight	58 16761 68.15 15.05 3.00 0.649
No.	No.				kg/m	59 16789 70.00 20.00 3.00 0.704
1	16763 16756	14.90	9.90	2.00	0.123	60 16782 75.00 50.00 5.00 1.620
2	16756	16.00	10.00	0.41	0.028	61 16735 80.00 50.00 5.00 1.688 62 16797 80.00 60.00 10.00 3.509
4	16732	16.50	10.50	0.49	0.035	62 16797 80.00 60.00 10.00 3.509 63 16795 91.50 50.00 4.00 1.485
5	16729	18.00	10.00	1.60	0.114	63 16793 91.30 50.00 4.00 1.483 64 16792 100.00 20.00 4.00 1.252
6	16757	19.00	12.00	1.23	0.098	65 16741 100.00 40.00 3.00 1.110
7	16719	19.05	12.70	0.62	0.052	66 16791 100.00 50.00 5.00 1.957
8	16701	19.05	12.70	0.79	0.066	67 16784 100.00 50.00 5.00 1.957
9	16734 16760	19.50	10.00	2.00	0.148	68 16785 100.00 50.00 6.00 2.332
10	16738	22.00	10.00	1.60	0.131	69 16786 100.00 50.00 8.00 3.067 70 16762 101.00 76.00 6.35 2.925
12	16744	22.00	12.70	3.00	0.257	70 16762 101.00 76.00 6.35 2.925 71 16794 122.70 50.00 4.00 1.822
13	16754	22.25	12.70	2.00	0.178	72 16778 150.00 40.00 2.00 1.015
14	16733	22.50	11.00	0.50	0.044	73 16776 152.40 38.10 3.18 1.608
15	16775	25.00	9.60	1.70	0.151	74 16793 160.00 100.00 10.00 6.750
16	16780	25.00	11.00	0.80	0.076	75 16781 160.00 100.00 12.00 8.035
17	16787 16717	25.00	16.00	2.30	0.240	76 16767 180.00 55.00 5.00 3.105
19	16721	25.40	12.70	0.64	0.065	
20	16720	25.40	12.70	1.22	0.121	EQUAL ANGLES-ROUND FILLET TOES
21	16702	25.40	12.70	1.57	0.154	↓ , ■
22	16773	25.40	19.05	1.60	0.185	d the m
23	16704	25.40	20.64	1.98	0.235	
24	16777 16736	28.04	21.69	2.64	0.335	
25	16769	30.00	25.00	3.00	0.381	
27	16706	31.75	19.05	3.18	0.409	
28	S5595	35.00	20.00	3.00	0.421	SL. Section A B R1 Weight kg/m
29	16723	37.00	24.00	0.80	0.130	1 16903 31.75 3.18 5.08 0.532
30	16788	38.00	25.00	2.18	0.358	2 16906 38.10 4.78 4.76 0.934
31	16743 16742	38.10 38.10	22.22	2.50	0.390	3 16911 45.00 4.00 4.00 0.937
33	16742			2.36	0.303	4 16912 50.80 6.20 6.50 1.621
34	16708	38.10	25.40	3.18	0.517	5 16910 88.00 6.00 6.00 2.774
35	16726	38.10	25.40	4.75	0.753	UNEQUAL ANGLES-ROUND FILLET TOES
36	16711	40.00	20.00	3.00	0.461	
37	16771	44.00	22.00	2.00	0.345	
38	16779 16765	44.45	25.40	1.50	0.276	
40	16724	49.00	24.00	1.10	0.218	
41	16748	50.00	25.00	2.30	0.451	
42	16768	50.00	25.00	3.00	0.583	B
43	16716	50.00	25.40	5.00	0.950	SL. Section Weig
44	16766	50.00	30.00	3.00	0.623	No. No. A B C R1 kg/n
45	16772	50.00	40.00	4.00	0.928	1 16952 63.50 50.80 4.78 5.50 1.44
46	16753 16709	50.80	25.40	3.48	0.683	2 16957 75.00 50.00 6.20 6.50 2.01
47	16755	55.30	30.00	1.50	0.339	3 27390 101.60 31.75 3.80 2.40 1.33
49	16758	55.30	28.30	2.50	0.547	4 25146 120.00 80.00 8.00 8.00 4.18
50	16747	60.00	30.00	1.40	0.335	

SHEETS AND COILS



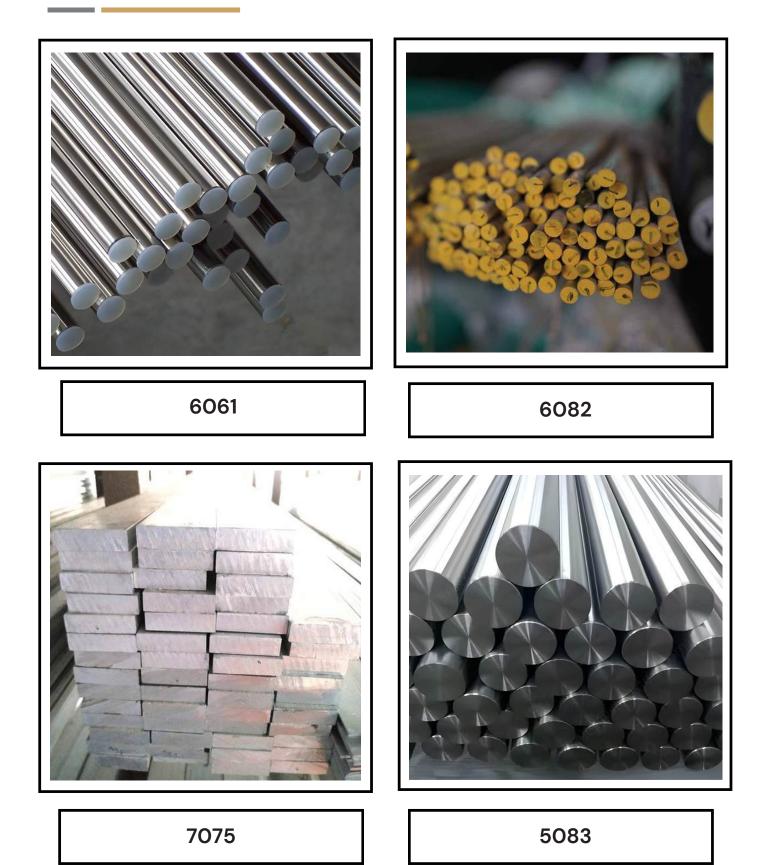
8011 Aluminium Coils Thickness: 0.28–2mm 5754 Aluminium Sheet Thickness: 0.46-6mm

PLATES

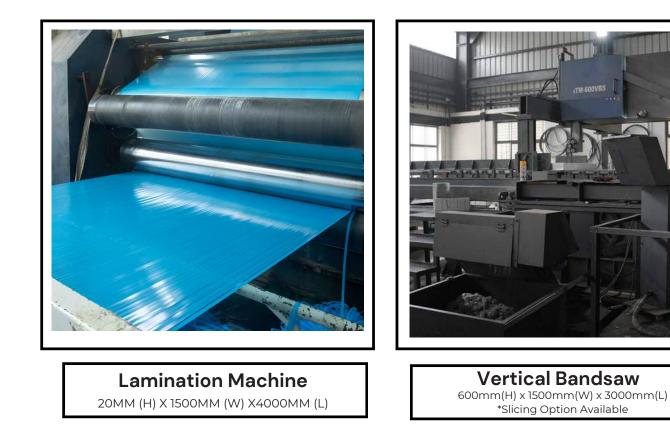


5083 Aluminium Plates Thickness: 8 to 300mm 7075 Aluminium Plates Thickness: 8 to 300mm

EXTRUSIONS



MACHINE





Horizontal Bandsaw 600mm(H) x 1500mm(W) x 3000mm(L) *Slicing Option Available



Small Vertical Bandsaw

WAREHOUE











For more details kindly visit our website www.metalcoglobal.com

11

www.metalcoglobal.com

THE

Thank You

Scan For All Our Units



HEAD OFFICE

NO.46, Sundar Industrial Compound, New Timber Yard Layout, Mysore Road, Bengaluru – 560026

Telephone 080-26744727

۲

Website www.metalcoglobal.c