(A UNIT OF TRAYO GROUP)



# **Company Profile**









## **BOLTING INTEGRITY SOLUTION**

(A UNIT OF TRAYO GROUP)



### ABOUT US:

We ourselves would like to introduce as M/S OM SAI LOGISTICS is part of Trayo Group located at Jamnagar with Annual Group Turnover of Rs.12.50 Crores.

Presently we undertakes an array of on-site bolting services ranging from simple bolting of a single flange joint, to major constructions and maintenance of bolted joints of critical applications.

Om Sai Logistics utilizes the highest-standard methodology with Technical association of Powertorc (Powertorc is one of the fast growing manufacturing company who provides wide range of Hydraulic Bolt Torqueing and Tensioning equipment's) in hydraulic bolting, bolt tensioning and bolt torqueing technology when it comes to overall joint integrity.

Om Sai Logistics provides multi-skilled technicians with specialist portable equipment, achieving a high quality service with specific focus to Health, Safety and Environment. We provide complete training to our engineers & technician prior to their on-site jobs. Our Engineers & Technicians combine innovative thinking with industry-tested methods and ensure controlled bolting services are carried out with unmatched speed, precision, and safety.

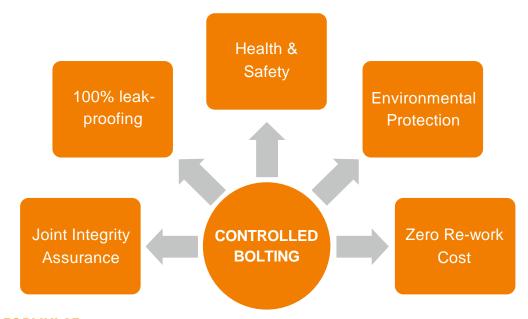
We have the capability and expertise to respond quickly to tight customer deadlines and offer 24/7 service, our infrastructure and locations enable us to respond quickly to customer needs throughout the India.

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## **❖ CONTROLLED BOLTING SOLUTION:**

Controlled bolting ensures accurate Torqueing / Tensioning and eliminates any ambiguity regarding Joint Integrity. In other words, controlled bolting leads to Joint Integrity Assurance for leak-proof bolting which prevents any hazardous effects due to inaccuracy. This results in 100% leak-proofing, safety and environmental protection from these harmful effluents.



#### **FORMULAE**

#### Important Formulae:

1. Pressure, P = F/A

Where, P = Pressure; F = Force or Load:

A = cross-sectional area.

2. Torque, T = F\*d

Where, F = Force applied in the perpendicular direction

d = displacement.

3. Bolt Stress = Bolt Load / Bolt Tensile Stress Area

4. Flow, Q = V/ t
Where, V = volume;

t = time.

#### Conversions:

1. Pressure: 1 Bar = 14.5 psi = 1.02 kg/cm2

1 MPa = 10 Bar 1 N/mm2 = 10 Bar 1 kgf/cm2 = 1 Bar

**2. Load:** 1 kg = 9.81 N

1 ton = 1000 kg = 9810 N

**3. Torque:** 1 Nm = 0.738 lbs.ft

1 kgm = 9.81 Nm

**4. Power:** 1HP = 0.74 kW

**5. Weight:** 1 kg = 2.205 lbs

**6. Length:** 1 in = 25.4 mm

1 ft = 304.8 mm

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## VISION:

To be a successful service oriented company by meet or exceed our customer needs and expectations by delivering cost effective, right quality and customer oriented service on time. We aim to be known as symbol of reliability, innovation and hard work.

### QUALITY POLICY:

OM SAI LOGISTICS is committed to achieve and sustain excellence in its construction business through an established Quality Management System.

We aim achieve Customer Satisfaction by providing Goods and Services as per contractual, statutory and regulatory requirements and in the process improving company's competencies and competitiveness.

We shall achieve this through continual improvement or our business processes, organization drive on innovation and productivity and effective human resource management.

We value training and sharing of information at all levels within the organization.

#### **QUALITY OBJECTIVES**

- Enhancement of Customer Satisfaction.
- Timely completion of Project.
- Effective Planning and Monitoring System.
- > Effective Human Resources Management.
- Continual Improvement in Productivity of our Resources.

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### SAFETY POLICY:

OM SAI LOGISTICS will provide manpower that are reliable, safety-minded and verifiably skilled. OSL has a reputation for the highest safety standards in our industry.

#### **Our Program Includes:**

- Random Worksite safety inspections
- Pre-employment, post-accident and random drug testing
- Weekly Toolbox Safety Talks
- Site specific safety co-ordination with Clients
- First Aid, CPR and AED training
- Confined Space training
- Use of Personal Protective Equipment
- ➤ Other specialized topics as per Clients and OSHA requirements

Om Sai Logistics goal for its services is the protection of personnel, equipment, and the environment. By maintaining comprehensive guidelines for proper EHS management of our personnel, we provide the safest and most regulatory compliant personnel in the industry. Our emphasis on safety starts at

The top of the organization and is taught to all personnel as the major basis for project performance. Our EHS guidelines provide the basis for all site specific programs that are used throughout the world. With a high level of safely consciousness, OSL personnel maintain high levels of productivity and get the job done either on time or early.

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## AREA OF OPERATION:

#### **On-Site Structural Bolt Torqueing**



This service provides a simple and safe method for ensuring controlled tightening and loosening of bolts. A wide range of light, compact, safe and easy-to-use hydraulic, pneumatic, and electric torque tools are available.

#### On-Site Piping Bolt Torqueing & Tensioning





OSL's Stud Tensioning service is an accurate method of tightening threaded fasteners and subsequently inducing load through advanced hydraulic technology – all without directly turning the nut thereby avoiding frictional losses. Stud Tensioning insures that gaskets are compressed as required by the manufacturer in order to achieve optimum joint integrity.

OSL's team of experienced and trained technicians ensures that any tensioning job is done efficiently, safely and to the industry's highest standards. Our hydraulic stud tensioners apply loads that are reliable and accurate with long-lasting, high pressure/low friction seals. The tensioners are designed with quality, simplicity and versatility in mind.

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#### **Annual Rate Contracts for Controlled Bolting**



Om Sai Logistics specializes in undertaking Annual Rate Contracts for controlled bolting services. Such contracts are supported with prompt mobilization of resources and efficient repair services.

#### **Plant Turnaround & Shutdown**



Om Sai Logistics holds competence in managing complex situations like Plant Turnaround & Shutdown Maintenance with utmost precision, speed and safety.

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## **❖** EQUIPMENT RESOURCES:

#### **ELECTRICALLY OPERATED POWER PACK FOR TORQUE WRENCHES**



MODEL NO. : PE-1
Power Rating : 1.5HP
Maximum Pressure : 700Bar

Flow Rate : 9.7LPM @ 100Bar

0.97LPM @ 700Bar

Tank Capacity : 8 Liters Available Qty. : 20 Nos.

# ELECTRICALLY OPERATED THREE STAGE POWER PACK FOR TORQUE WRENCHES



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PE-3 1.5HP MODEL NO. Power Rating Maximum Pressure : 700Bar Flow Rate : 7LPM @ 100Bar

0.9LPM @ 700Bar

8 Liters Tank Capacity : 5 Nos. Available Qty.

#### PNEUMATICALLY OPERATED HYDRAULIC POWER PACK FOR TORQUE **WRENCHES**



MODEL NO. PA-1 Power Rating 1.5HP 700Bar Maximum Pressure

: 7.5LPM @ 50Bar Flow Rate

0.9LPM @ 700Bar

10 Liters Tank Capacity Available Qty. 5 Nos.

#### PNEUMATICALLY OPERATED THREE STAGE HYDRAULIC POWER PACK FOR **TORQUE WRENCHES**

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MODEL NO. : PA-3
Power Rating : 1.1 KW
Maximum Pressure : 700Bar

Flow Rate : 7LPM @ 50Bar

1.6LPM @ 200Bar 0.9LPM @ 700Bar

Tank Capacity : 8 Liters Available Qty. : 2 Nos.

# PNEUMATICALLY OPERATED HYDRAULIC POWER PACK FOR BOLT TENSIONERS



MODEL NO. : PA-1BT
Pressure Ratio : 1:220Bar
Tank Capacity : 10 Liters

Flow at Max. Pressure : 0.01 Liter per min.

Air Pressure : 1.8 – 7 Bar

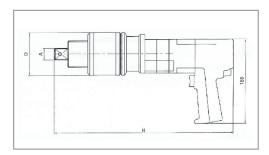
Available Qty. : 6 Nos.

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### **PNEUMATIC TORQUE WRENCH**





#### **Technical Data**

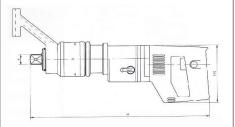
TYPE	Torque (Nm)	Square drive min-max	Gear diam. (mm) D	Height (mm) H	Weight (kgs)	No-load speed
PTP-80	40-800	3/4"& 1"	88	360	6	19
PTP-120	40-1200	1"	88	360	7	19
PTP-250	70-2500	1"	88	410	7	7,5
PTP-400	70-4000	1 1/2"	88	410	8	7,5
PTP-500	100-5000	1 1/2"	88	460	9	2
PTP-600	400-6000	1 1/2"	130	420	12	2,8
PTP-1000	450-10000	1 1/2"	130	460	16	1,8

### **ELECTRIC TORQUE WRENCH**

#### **Technical Data**

TYPE	Torque (Nm) minmax.	Gear diam. (mm) D	Height (mm) H	Weight (kgs)	No-load speed	Square Drive
PET-81	90-850	88	510	6,5	16	3/4" & 1"
PET-101	30-1200	88	510	8	14	1"
PET-241	430-2500	88	540	9	9	1"
PET-351	360-3500	88	550	10	8	1 1/2"
PET-501	800-5000	88	610	11	3	1 1/2"
PET-601/1	820-6000	130	585	15	6	1 1/2"
PET-901	1930-10000	130	620	18	2,5	1 1/2"





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### **HYDRAULIC TORQUE WRENCHES**



#### **SQUARE DRIVE TYPE**

Model Nos	Units	PS-2	PS-5	PS-8	PS-10	PS-15	PS-25	PS-35	PS-50	PS-70
Square Drive	Inch	3/4[]	10	1.1/2	1.1/2	1.1/2	2.1/2	2.1/20	2.1/2	2.1/2
Torque Range	Nm	180-1810	450-4510	750-7520	1070-10800	1550-15510	2650-26600	3470-34750	4850-48600	7 150-71499
	Ft.Lbs	135-1357	331-3333	553-5553	775-7965	1106-11450	1917-19675	2551-25630	3611-36113	5324-53248
Body Length (L1)	mml	142	175□	2100	222	244	305□	3240	370	400
	inch	5.591	6.88	8.26	8.74	9.6	12	12.75	14.6	15.75
Overall length (L2)	mml	1701	230	2701	290	316	382	400	465	516
	inch	6.81	9.01	10.62	11.49	12.48	15.00	15.75	18.3	20.31
Tool Width (H1)	mm	501	681	800	901	1000	120	135	152	160
	inch	1.971	2.68	3.15	3.54□	3.94	4.72	5.31	5.98	6.30
Overall Width Includes Square  drive(H2)	mm1 inch1	710 2.830	951 3.71	122 4.84	1340 5.20	142 5.59	182 7.2	200 7.87	216 8.5	222 8.74
Tool height (H3)	mm	950	125	148	167	181	220	246	282	290
	inch	3.77	4.96	5.88	6.57	7.16	8.66	9.68	11.10	11.415
Overall Height (H4)	mm	130	1750	1981	216	2301	270	296	3310	340
	inch	5.15	6.92	7.83	8.54	9.13	10.62	11.69	13.07	13.38
Tool Radius Around Bolt (R1)	mmI	26	341	38	470	501	601	661	770	80
	inch	1.01	1.33	1.53	1.85□	20	2.32	2.59	3.03	3.15
Reaction Reach (R2)	mm	85I	115	1371	152	1541	185	1991	240	260
	inch	3.34	4.48	5.39	6.02	6.06□	7.32	7.83	9.48	10.23
Weight 1	Kg□	2.50	5.0	8.0	11.00	15.2	26.5	350	501	87
0 0	Lbs	5.50	110	17.6	24.2	33.44	57.2	74.8	110	191.4

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#### **DIRECT HEX TYPE**



#### **HEX TYPE**

Model Nos	Units	PH-2	PH-6	PH-8	PH-20	PH-45
Torque Range	NmI	230-2410	580-6470	1090-11770	1850-18520	4180-44600
0 0	Ft.Lbs	172-1935	400-4800	777-8726	1370-13722	3038-33038
Nut on the side	mmI	19-60□	34-800	41-1050	50-117 <sub>1</sub>	110-175
0 0	inch	³⁄42.3/8□	1.5/16-3.1/8	1.5/8-4.1/8	2-4.1/2	4.1/4-6.7/8
Overall Length L	mmI	196.4	2461	301□	361	441
0 0	inch	7.7"[]	9.6	11.8	14.27	17.36
H10 0	mml	128.5	1871	216	2391	315
0 0	inch	5.05	7.36	8.50	9.40	12.4
H20 0	mml	105	145.71	1781	2041	285
0 0	inch	4.13	5.73	<b>7</b> 0	8.031	11.22
Width at the I	mm	321	420	53□	64□	85
link W1III	inch	1.250	1.625	2.1	2.551	3.34
Width at the I	mmI	<b>51</b> 0	66□	831	991	131
cylinder W2	inch	20	2.59□	3.26	3.89□	5.15
Nose Radius (R)	mmi	27 to 46	36 to 610	46 to 781	60 to 871	85 to 175
Weight	Kg□	10	20	3.3	5.50	11.4
Drive Unit	Lbs	2.2	4.4	7.20	12.1	25.3
Weight	Kg□	1.70	4.6	8.40	11.61	30
Ratchet Unit	Lbs	3.70	10.10	18.4	25.50	66

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## **HYDRAULIC BOLT TENSIONERS**



Model No		olt / d Size	Cylinder	Stroke Cap	Effective Area				D	imensio	on				Approx. Weight
	(metric)	(Inch)	(tons)	(mm)	(cm2)	Α	В	С	D	Е	F	G	Н	J	Kg
	M16	-								49					
	M18	3/4"								49					
PHT-3	M20	-	23.5	10	15.7	62	90	168	75	51	28	16	30	32.5	2
	M22	7/8"								51					
	M24	1"								60					
	M27	1 1/8"								60					
	M30	-								72					
PHT-5	M33	1 1/4"	50	15	33	60	106	187	102	74	44	22	36	47	4
	M36	1 3/8"								76					
	M39	1 1/2"								80					
	M39	1 1/2"								88					
	M42	1 5/8"								90					
PHT-9	M45	1 3/4"	90	15	59.7	60	120	208	133	94	56	28	49	61	6
	M48	1 7/8"								100					
	M52	2"								104					
	M48	1 7/8"								110					
PHT-13	M52	2"								112					
	M56	2 1/4"	125	15	83	62	135	231	163	118	68	34	59	73	10
	M60	-								126					
	M64	2 1/2"								126					
	M64	2 1/2"								136					
	M68	•								144					
PHT-19	M72	2 3/4"	185	15	123	62	150	254	193	146	80	42	66	86.5	15
	M76	3"								154					
	M76	3"								162					
	M80	-								162					
PHT-27	M85	3 1/4"	265	15	176	73	180	286	233	174	104	48	77	110	24.5
	M90	3 1/2"								185					
	M95	3 3/4"								200					
	M100	4"								212					

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### **FLANGE SPREADER**

Туре	Standard Hydraul	ic Flange Spreader
Model No.	PFS-10M	PFS-10H
Jaws Closed	2.3mm/0.09"	2.3mm/0.09"
Jaws Open	76.2mm/3"	76.2mm/3"
Width of Jaws	114mm / 4.5"	114mm / 4.5"
Width of Body	114mm / 4.5"	114mm / 4.5"
Jaw Penetration	38.1mm / 1.5"	38.1mm / 1.5"
Rated Force	4.5ton / 10,000lbs	4.5ton / 10,000lbs
Weight	6.1kg/13lbs	5.4kg / 12lbs

Туре	Wedge type FI	ange Spreader
Model No.	PFS-8M	PFS-14H
Jaws Closed	6mm/0.24"	6mm/0.24"
Jaws Open	80mm/3.16"	80mm/3.16"
Rated Force	8ton / 17,000lbs	14ton/30,000lbs
Weight	7kg / 16lbs	8kg / 18lbs







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## MANPOWER RESOURCES:

	MANAGEMENT STAFF									
SR.NO	CATEGORY	NOS	REMARKS							
1	PROJECT MANAGER	1								
2	SITE IN CHARGE	3								
3	QUALITY IN-CHARGE	1								
4	SAFETY IN-CHARGE	1								
5	PLANNING ENGINEER	2								
6	QA/QC ENGG.	4								
7	EXECUTION ENGINEER	10								
8	SAFETY OFFICER	3								
9	P & A OFFICER	3								
	TOTAL	28								
	<b>TECHNICIANS</b>									
1	TECHNICIAN	30								
2	ASST. TECHNICIAN	60								
3	OTHERS	20								
	TOTAL	110								

## **CONTACT US:**

#### **OM SAI LOGISTICS**

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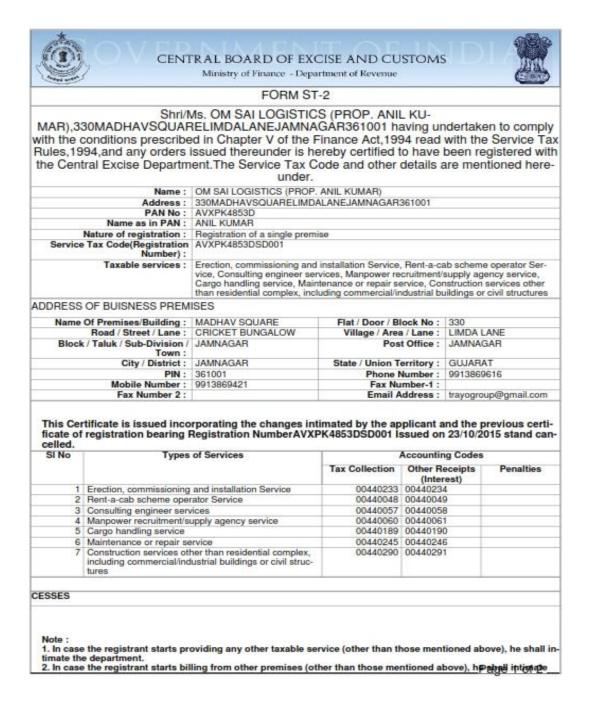
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### SERVICE TAX CERTIFICAT



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# **\*** TORQUE SPECIFICATION:

**Metric Sizes** 

lm	perial	Size	S
	periai	OILC	o

Bolt Size	A/F	Tigh	ntening F	orce = P(I	N) Toro	que = M <sub>A</sub>	( Nm )
	um .	8	3.8	10	.9	12	2.9
Line and the second		Р	MA	Р	MA	Р	MA
		N	Nm	N	Nm	N	Nm
M 2	4	863	0.373	1216	0.520	1461	0.628
M 2.3	4.5	1245	0.598	1755	0.843	2099	1.010
M 2.6	5	1598	0.863	2246	1.206	2697	1.451
M 3	5.5	2206	1.344	3109	1.883	3727	2.256
M 3.5	6	2962	2.060	4168	2.893	5001	3.481
M 4	7	3825	3.040	5374	4.315	6453	5.148
M 5	8-9	6257	6.031	8806	8.483	10591	10.200
M 6	10	8836	10.300	12405	14.710	14906	17.625
M 7	11-12	12945	17.162	18191	24.517	21771	28.439
M 8	13-14	16230	25.497	22751	35.304	27360	42.168
M 10	15-17	25791	50.014	36284	70.608	43541	85.317
M 12	19-21	37657	87.279	52956	122.60	63547	147.10
M 14	22-23	51681	138.30	72667	194.20	87279	235.40
M 16	24-26	71196	210.80	100027	299.10	120131	357.90
M 18	27	86494	289.30	121602	411.90	146118	490.30
M 20	30	111305	411.90	156415	578.60	187796	696.30
M 22	32	139254	559.00	195642	784.50	234378	941.40
M 24	36	160338	711.00	225552	1000	270662	1196
M 27	41	210842	1049	296159	1481	355980	1775
M 30	46	255952	1422	359902	2010	432471	2403
M 33	50	319695	1932	449142	2716	539363	3266
M 36	55	374612	2481	527595	3491	632526	4197
M 39	60	451104	3226	633506	4531	760992	5443
M 42	65	515827	3991	725688	5609	870826	6727
M 45	70	604087	4992	850232	7012	1019886	8414
M 48	75	679597	6021	956144	8473	1147372	10150
M 52	80	815909	7747	1147372	10885	1377827	13092
M 56	85	940453	9650	1323891	13582	1588669	16279
M 60	90	1098339	11964	1544540	16867	1853447	20202
M 64	95	1245438	14416	1750478	20300	2098612	24320
M 68	100	1425787	17615	2005013	24771	2406016	29725
M 72	105	1620036	21081	2278175	29645	2733810	35575
M 76	110	1826672	24973	2568758	35118	3082510	42141
M 80	115	2045697	29314	2876762	41222	3452115	49467
M 90	130	2647453	42525	3722982	59801	4467578	71761
M 100	145	3326624	59200	4678066	83250	5613679	99900

Bolt Size	A/F	Tighter	Tightening Force = $P(N)$ Torque = $M_A$ ( Nm )						
1	Inches	P	)		:		Т		
		·		,	,				
×	V	Р	M <sub>A</sub>	Р	M <sub>A</sub>	Р	M <sub>A</sub>		
		N	Nm	N	Nm	N	Nm		
1/4"	7/16"	4379	5.43	8320	10.3	8980	11.1		
5/16"	1/2"	7344	11.2	13954	21.3	15061	23.0		
3/8"	9/16"	10951	19.9	20807	37.9	22458	40.9		
7/16"	5/8"	15065	31.9	28623	60.7	30894	65.5		
1/2"	3/4"	20244	48.8	38463	92.7	41516	100		
9/16"	7/8"	26075	70.4	49542	134	53474	144		
5/8"	15/16"	32452	97.4	61658	185	66552	200		
3/4"	1.1/8"	49781	178	94584	338	102091	364		
7/8"	1.5/16"	67157	279	127599	530	137725	572		
1"	1.1/2"	88221	418	167620	795	180923	858		
1.1/8"	1.11/16"	111007	593	210913	1126	227652	1216		
1.1/4"	1.7/8"	142135	837	270091	1591	291527	1717		
1.3/8"	2.1/16"	168641	1096	320417	2083	345847	2248		
1.1/2"	2.1/4"	206578	1456	392498	2767	423648	2987		
UNF									
1/4"	7/16"	5232	6.28	9941	11.9	10730	12.9		
5/16"	1/2"	8410	12.5	15979	23.8	17247	25.7		
3/8"	9/16"	12911	22.7	24531	43.2	26478	46.6		
7/16"	5/8"	17416	35.9	33091	68.2	35717	73.6		
1/2"	3/4"	23685	55.4	45002	105	48574	114		
9/16"	7/8"	30075	79.0	57143	150	61678	162		
5/8"	15/16"	38156	111	72496	210	78250	227		
3/4"	1.1/8"	56078	195	106549	370	115005	399		
7/8"	1.5/16"	76297	309	144965	587	156470	634		
1"	1.1/2"	99200	459	188480	873	203439	942		
1.1/8"	1.11/16"	128738	667	244602	1267	264015	1368		
1.1/4"	1.7/8"	161358	925	306580	1757	330911	1896		
1.3/8"	2.1/16"	199331	1252	378728	2378	408786	2567		
1.1/2"	2.1/4"	240377	1642	456717	3119	492965	3367		

Note: Torque Chart as per co-efficient of friction  $\mu$  = 0.15

Newton - Meter Nm to Foot-Pounds lbs. ft. (1 Nm = 0.738 lbs. ft.) Kilogram - Force Meter to Newton - Meter (1 Kgm = 9.80 Nm)