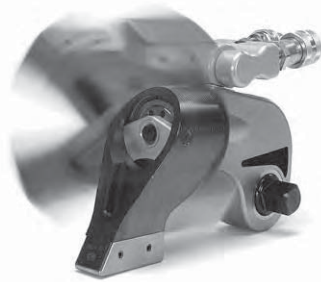


TORQUE WRENCH

SQUARE DRIVE - TWSD

Max Torque 33,198 Nm at 700 bar
(24,500 lb-ft at 10,000 psi)



360° Reaction Arm

OK FOR SUBSEA



SQUARE DRIVE TORQUE WRENCH

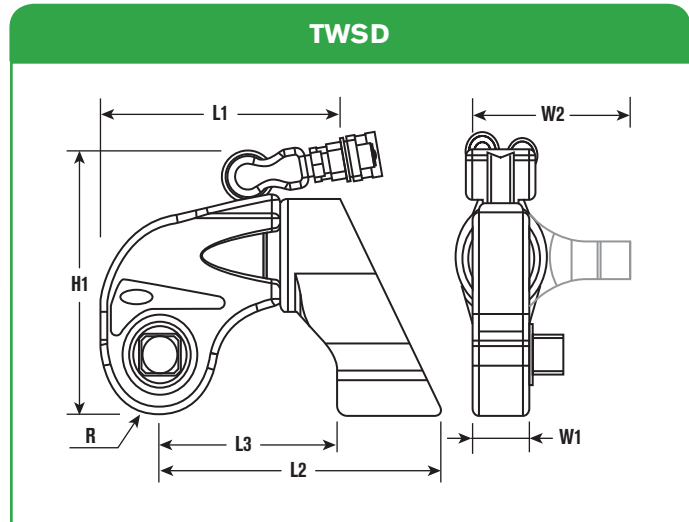
- Low weight, high strength design
- Superior torsional strength
- Fast operation cycle
- Fine tooth ratchet
- Floating piston design
- Swivel manifold internal relief valve prevents retract side over-pressurization
- Rigid steel body construction
- Compact frame size
- Reaction and drive accessories available

**TWSD CONVERSION CHART,
SEE PAGE 120**



Specifications and Dimensional Data

- Push button reversal of square drive
- Corrosion resistant finish
- 360° reaction arm
- Push to lock reaction arms
- Multi-axis high flow swivel manifold
- Simple design
- Consistently accurate torque output
- Fully enclosed drive mechanism



Tool Model	L1		L2		L3		H1		R		W1		W2	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
TWSD1	5.5	139	6.7	170	4.4	112	5.7	145	1.1	28	1.3	33	3.4	86
TWSD3*	6.7	170	7.7	196	4.9	124	6.9	175	1.5	38	1.8	46	4.1	104
TWSD6*	7.7	196	9.3	236	5.6	142	8.1	206	1.8	46	2.0	51	5.4	137
TWSD11	9.2	234	11.5	292	7.0	178	9.5	241	2.2	56	2.4	61	6.5	165
TWSD25	12	305	14.8	376	9.1	231	12.4	315	2.8	71	3.0	76	7.9	200

Tool Model	Square Drive	Min Torque		Max. Torque		Tool Weight	
	in	lb-ft	Nm	lb-ft	Nm	lb	kg
TWSD1	3/4	156	211	1,300	1,762	5.1	2.3
TWSD3*	1	368	499	3,070	4,160	9.9	4.5
TWSD6*	1-1/2	722	979	6,020	8,157	17.4	7.9
TWSD11	1-1/2	1,313	1,780	10,940	14,823	28.9	13.1
TWSD25	2-1/2	2,940	3,984	24,500	33,198	65.0	29.5

*TWSD3 and TWSD6 are obsolete and have been replaced by the TWHC Series.

Ordering Information

Order No.	Description
TWSD1	WRENCH - 1,300 lb-ft, 1,762 Nm
TWSD11	WRENCH - 10,940 lb-ft, 14,823 Nm
TWSD25	WRENCH - 24,500 lb-ft, 33,198 Nm

Order No.	Description
DFTAS000001	WRENCH HANDLE Size 1 Tool Ref. TWSD1 and TWSD3
DFTAS000002	WRENCH HANDLE Size 2 Tool Ref. TWSD06 and TWSD11

Standard Reaction Arm included for all models

TORQUE WRENCH REACTION ARMS - TWSD

TWSD EXTENDED REACTION ARM TWSD-ERA



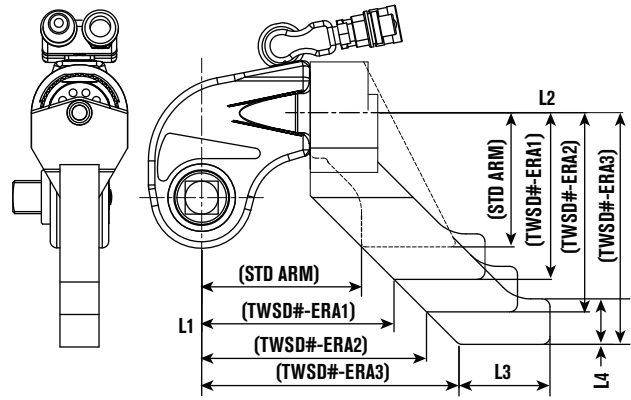
- Long reach version of TWSD standard reaction arm
- 3 standard sizes per model (+25mm/50mm/75mm), specials upon request
- Replaces standard reaction arm – quick release pin locking
- Steel alloy construction
- 360° rotation
- Available for full range of tool sizes

TW HANDLE



- Robust steel construction with ribbed polymer grip
- Multi-position on tool for balanced handling
- Cap-screw locking with positive 'docking'
- Is suitable for all wrench models (TWHC, TWSD, TWLC), however for larger sizes (TWSD25/TWLC30/TWHC50) we recommend the use of eye-bolt lifting.

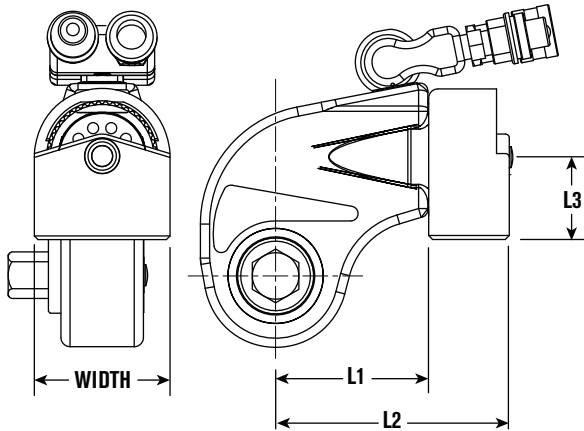
Specifications and Dimensional Data



Tool Ref	Order No.	L1		L2		L3		L4	
		mm	in	mm	in	mm	in	mm	in
STD ARM		112	4.41	86	3.39				
TWSD1	TWSD1-ERA1	137	5.39	111	4.37	60	2.36	30	1.18
	TWSD1-ERA2	162	6.38	136	5.35				
	TWSD1-ERA3	187	7.36	161	6.34				
STD ARM		124	4.88	105	4.13				
TWSD3	TWSD3-ERA1	149	5.87	130	5.12	70	2.76	35	1.38
	TWSD3-ERA2	174	6.85	155	6.10				
	TWSD3-ERA3	199	7.83	180	7.09				
STD ARM		142	5.59	136	5.35				
TWSD6	TWSD6-ERA1	167	6.57	161	6.34	95	3.74	40	1.57
	TWSD6-ERA2	192	7.56	186	7.32				
	TWSD6-ERA3	217	8.54	211	8.31				
STD ARM		179	7.05	165	6.5				
TWSD11	TWSD11-ERA1	204	8.03	190	7.48	110	4.33	40	1.57
	TWSD11-ERA2	229	9.02	215	8.46				
	TWSD11-ERA3	254	10	240	9.45				
STD ARM		231	9.09	200	7.87				
TWSD25	TWSD25-ERA1	256	10.08	225	8.86	145	5.71	50	1.97
	TWSD25-ERA2	281	11.06	250	9.84				
	TWSD25-ERA3	306	12.05	275	10.83				

Order No.	Description	Tool Ref
DFTAS000001	Wrench Handle Size 1	TWSD1
		TWSD3
		TWHC1
		TWHC3
		TWLC2
DFTAS000002	Wrench Handle Size 2	TWSD6
		TWSD11
		TWHC6
		TWLC4
		TWLC8
		TWLC15

Specifications and Dimensional Data



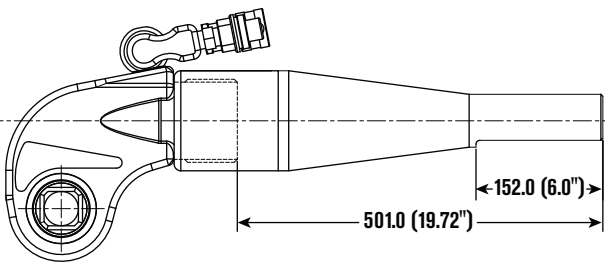
Tool Ref	Order No.	L1		L2		L3		Width	
		mm	in	mm	in	mm	in	mm	in
TWSD1	TWSD1-RP	72	2.835	116	4.567	43,5	1.713	63	2.480
TWSD3	TWSD3-RP	84	3.307	136	5.354	48	1.890	74	2.913
TWSD6	TWSD6-RP	93,5	3.681	155,5	6.122	57	2.244	90	3.543
TWSD11	TWSD11-RP	109,5	4.311	184,5	7.264	65,5	2.579	105	4.133
TWSD25	TWSD25-RP	136,5	5.374	243,5	9.587	88,5	3.484	143	5.630

TWSD REACTION PAD TWSD-RP



- Wrench In-Line Reaction Pad for TWSD wrench: used as simple pad or modified platform for specific application (Machine-able/Weld-able platform)
- Replaces standard reaction arm – quick release pin locking
- Steel alloy construction
- 360 degree rotation
- Available for full range of tool sizes

Specifications and Dimensional Data



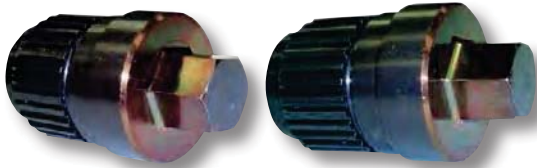
Tool Ref	Order No.	L1		L2	
		mm	in	mm	in
TWSD1	TWSD1-LRA	501	19.72	152	6
TWSD3	TWSD3-LRA				
TWSD6	TWSD6-LRA				
TWSD11	TWSD11-LRA				
TWSD25	TWSD25-LRA				

TWSD LONG REACTION ARM TWSD-LRA



- Tubular extension arm for TWSD wrench: in-line reaction outside wrench profile
- Replaces standard reaction arm – quick release pin locking
- Steel/light alloy construction (reaction flat machined on tube end)
- Can be cut down to suit specific length
- Available for full range of tool sizes

SQUARE DRIVE ADAPTERS & SOCKETS



Custom sizes are available upon request

Wrench Size	Hexagon Drive Size A/F (inch)	Male Hex Drive		Hexagon Drive Size A/F (mm)	Order No.	
		Order No.	Order No.		Order No.	Order No.
		TWSD	TWHC		TWSD	TWHC
1 (TWSD1) (TWHC1)	5/8	TWD1-063	TWHCHD01-063	17mm	TWD1-017	TWHCHD01-017
	3/4	TWD1-075	TWHCHD01-075	19mm	TWD1-019	TWHCHD01-019
	7/8	TWD1-088	TWHCHD01-088	22mm	TWD1-022	TWHCHD01-022
	1	TWD1-100	TWHCHD01-100	24mm	TWD1-024	TWHCHD01-024
				27mm	TWD1-027	TWHCHD01-027
3 (TWSD3) (TWHC3)	5/8	TWD3-063	TWHCHD03-063	17mm	TWD3-017	TWHCHD03-017
	3/4	TWD3-075	TWHCHD03-075	19mm	TWD3-019	TWHCHD03-019
	7/8	TWD3-088	TWHCHD03-088	22mm	TWD3-022	TWHCHD03-022
	1	TWD3-100	TWHCHD03-100	24mm	TWD3-024	TWHCHD03-024
	1-1/8	TWD3-113	TWHCHD03-113	27mm	TWD3-027	TWHCHD03-027
	1/14	TWD3-125	TWHCHD03-125	30mm	TWD3-030	TWHCHD03-030
	1-3/8	TWD3-138	TWHCHD03-138	32mm	TWD3-032	TWHCHD03-032
	1-1/2	TWD3-150	TWHCHD03-150	36mm	TWD3-036	TWHCHD03-036
	1-5/8	TWD3-163	TWHCHD03-163	41mm	TWD3-041	TWHCHD03-041
6 (TWSD6) (TWHC6)	5/8	TWD6-063	TWHCHD06-063	17mm	TWD6-017	TWHCHD06-017
	3/4	TWD6-075	TWHCHD06-075	19mm	TWD6-019	TWHCHD06-019
	7/8	TWD6-088	TWHCHD06-088	22mm	TWD6-022	TWHCHD06-022
	1	TWD6-100	TWHCHD06-100	24mm	TWD6-024	TWHCHD06-024
	1-1/8	TWD6-113	TWHCHD06-113	27mm	TWD6-027	TWHCHD06-027
	1-1/4	TWD6-125	TWHCHD06-125	30mm	TWD6-030	TWHCHD06-030
	1-3/8	TWD6-138	TWHCHD06-138	32mm	TWD6-032	TWHCHD06-032
	1-1/2	TWD6-150	TWHCHD06-150	36mm	TWD6-036	TWHCHD06-036
	1-5/8	TWD6-163	TWHCHD06-163	41mm	TWD6-041	TWHCHD06-041
11 (TWSD11)	1-1/8	TWD11-113		27mm	TWD11-027	
	1-1/4	TWD11-125		30mm	TWD11-030	
	1-3/8	TWD11-138		32mm	TWD11-032	
	1-1/2	TWD11-150		36mm	TWD11-036	
	1-5/8	TWD11-163		41mm	TWD11-041	
25 (TWSD25)	1-3/4	TWD11-175		46mm	TWD11-046	
	1-1/2	TWD25-150		36mm	TWD25-036	
	1-5/8	TWD25-163		41mm	TWD25-041	
	1-3/4	TWD25-175		46mm	TWD25-046	
	1-7/8	TWD25-188		50mm	TWD25-050	
	2	TWD25-200		55mm	TWD25-055	
	2-1/4	TWD25-225		60mm	TWD25-060	
2-1/2	TWD25-250		65mm	TWD25-065		
2-3/4	TWD25-275		70mm	TWD25-070		



Impact Sockets - Imperial (for TWHC & TWSD)

Socket Size Imperial	3/4" Drive Order No.	1" Drive Order No.	1-1/2" Drive Order No.	2-1/2" Drive Order No.
7/8"	TWSIA088	TWSIB088	-	-
1-1/16"	TWSIA106	TWSIB106	-	-
1-1/4"	TWSIA125	TWSIB125	-	-
1-3/8"	TWSIA138	TWSIB138	-	-
1-7/16"	TWSIA144	TWSIB144	-	-
1-5/8"	TWSIA163	TWSIB163	TWSIC163	-
1-13/16"	TWSIA181	TWSIB181	-	-
2"	TWSIA200	TWSIB200	TWSIC200	-
2-3/16"	TWSIA219	TWSIB219	TWSIC219	-
2-3/8"	TWSIA238	TWSIB238	TWSIC238	-
2-9/16"	-	TWSIB256	TWSIC256	-
2-3/4"	-	TWSIB275	TWSIC275	-
2-15/16"	-	TWSIB294	TWSIC294	-
3-1/8"	-	TWSIB313	TWSIC313	TWSIF313
3-3/8"	-	TWSIB338	TWSIC338	TWSIF338
3-1/2"	-	TWSIB350	TWSIC350	TWSIF350
3-3/4"	-	TWSIB375	TWSIC375	TWSIF375
3-7/8"	-	TWSIB388	-	TWSIF388
4-1/8"	-	TWSIB413	TWSIC413	TWSIF413
4-1/4"	-	TWSIB425	TWSIC425	TWSIF425
4-5/8"	-	-	TWSIC463	TWSIF463
5"	-	-	-	TWSIF500
5-3/8"	-	-	-	TWSIF538
5-3/4"	-	-	-	TWSIF575
6-1/8"	-	-	-	TWSIF613

Impact Sockets - Metric (for TWHC & TWSD)

Socket Size Metric	3/4" Drive Order No.	1" Drive Order No.	1-1/2" Drive Order No.	2-1/2" Drive Order No.
22mm	TWSMA022	TWSMB022	-	-
24mm	TWSMA024	TWSMB024	-	-
32mm	TWSMA032	TWSMB032	-	-
36mm	TWSMA036	TWSMB036	-	-
41mm	TWSMA041	TWSMB041	TWSMC041	-
46mm	TWSMA046	TWSMB046	-	-
50mm	TWSMA050	TWSMB050	-	-
55mm	-	TWSMB055	-	-
60mm	-	TWSMB060	TWSMC060	-
65mm	-	TWSMB065	TWSMC065	-
70mm	-	TWSMB070	TWSMC070	-
75mm	-	-	TWSMC075	-
80mm	-	TWSMB080	TWSMC080	TWSMF080
85mm	-	TWSMB085	TWSMC085	TWSMF085
90mm	-	TWSMB090	TWSMC090	TWSMF090
95mm	-	TWSMB095	TWSMC095	TWSMF095
100mm	-	TWSMB100	-	TWSMF100
110mm	-	TWSMB110	TWSMC110	TWSMF110
115mm	-	-	TWSMC115	TWSMF115
120mm	-	-	TWSMC120	-
135mm	-	-	-	TWSMF135
150mm	-	-	-	TWSMF150

For Long Reach (Extended Length) sockets add "LR" to the end of the part number. For 12 point (bi-hex) sockets, add "BH" to the end of the part number.