

## SQUARE DRIVE HYDRAULIC TORQUE WRENCHES

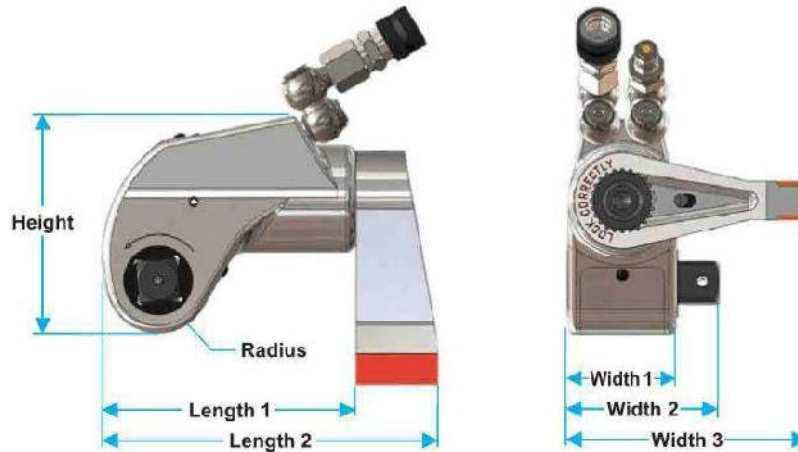
### MTD - SERIES



- Faster Stroke!
- Anti-Back Lash Mechanism!
- Hands-Off Operation!
- Less Moving Parts!
- Unique Design to Fit Every Application!
- Accurate Repeatability!

### Technical

Model No.	MTD - 2	MTD - 3	MTD - 5	MTD - 7	MTD - 11	MTD - 20	MTD - 27	MTD - 60
Square Drive	3/4"	1"	1.1/2"	1.1/2"	1.1/2"	2.1/2"	2.1/2"	2.1/2"
Min. Torque Kg-m(Ft/Lbs)	17(127)	45(330)	86 (627)	102(740)	152(1,100)	267(1,940)	376(2,720)	801(5,800)
Max. Torque Kg-m(Ft/Lbs)	175(1,270)	460(3,330)	752 (5,490)	1020(7,400)	1520(11,010)	2852(20,625)	3760(27,200)	8018(58,000)
Output Accuracy	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%	+/-3%
Repeatability	100%	100%	100%	100%	100%	100%	100%	100%
Duty Cycle	100%	100%	100%	100%	100%	100%	100%	100%
Tool Weight Kgs/(Lbs)	1.85/(4.00)	4.20/(9.30)	8.40/(18.60)	8.90/(19.60)	13.60/(30.00)	28.5/(62.70)	32.75/(72.20)	60.80/(134.00)



### Dimensions

Model No.	MTD - 2		MTD - 3		MTD - 5		MTD - 7		MTD - 11		MTD - 20		MTD - 27		MTD - 60	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
Height	105.00	4.13	131.00	5.15	161.60	6.36	175.90	6.92	198.20	7.80	235.50	9.27	259.70	10.22	295.00	11.61
Length 1	121.00	4.76	157.00	6.18	181.58	7.15	205.00	8.07	240.00	9.44	240.20	9.45	318.30	12.53	393.30	15.48
Length 2	160.00	6.29	207.7	8.17	251.76	9.91	276.00	10.86	313.33	12.33	410.10	16.14	415.70	16.36	521.00	20.51
Radius	25.00	0.98	33.00	1.30	41.27	1.62	43.25	1.70	49.70	1.95	59.20	2.33	61.90	2.43	73.80	2.90
Width 1	51.20	2.01	68.50	2.70	79.40	3.13	93.50	3.68	99.90	3.93	124.20	4.88	133.80	5.26	167.50	6.60
Width 2	71.60	2.81	94.70	3.72	111.20	4.38	130.40	5.13	139.00	5.47	182.10	7.16	198.00	7.79	227.00	8.93
Width 3	108.00	4.25	148.70	5.85	175.10	6.89	202.00	7.95	222.50	8.75	279.40	11.0	297.00	11.70	370.00	14.56

**Note :** • All tool weights include Couplers, Swivels, Reaction Arm and Internal Oil.

# FEATURES OF MTD - SERIES











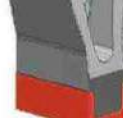





▲ *-7 Torques the Nut in Seconds!*



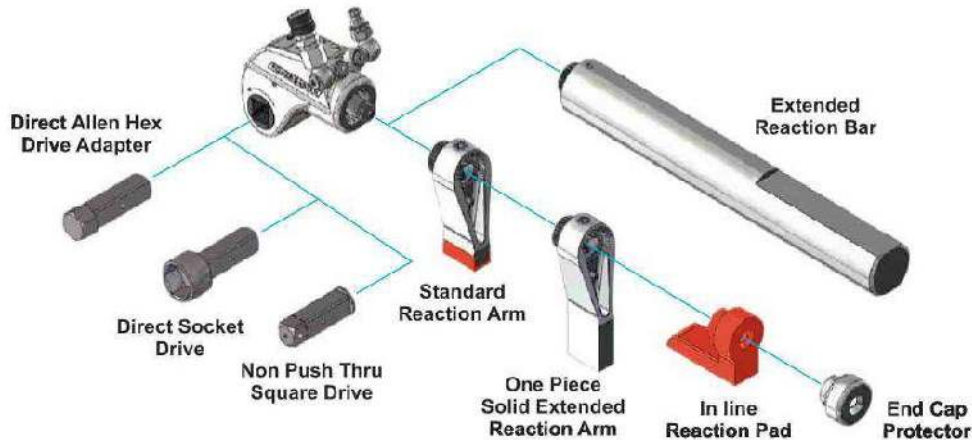
▲ *MTD-3 In use during a super critical application in the Power Industry.*

The Multi - Faceted **MTD** Series is the preferred tool of choice on applications in every industry. From Petrochemical Plants, Steel Plants, Offshore Platforms and the windmill industry, the **MTD** series is the most versatile tool that outperforms all the others!

<p><b>Mono Body Housing:</b> Highest quality aircraft grade 7075 Aluminum housing for unrivalled strength.</p>		<p><b>360 Swivels:</b> Dual 360° Swivel allows free 360° individual movement of duplex hoses across all applications.</p>	
<p><b>Multi Tooth Ratchet Assembly:</b> Highest strength teeth ensures 28° torque stroke with greatest accuracy.</p>		<p><b>Non-drip Quick Connects Couplers:</b> 4:1 safety ratio couplers. Assure safe operation with ease for engaging and disengaging of hoses.</p>	
<p><b>Square Drive:</b> "Push through" Square Drive that easily pushes through to switch from loosens to tighten.</p>		<p><b>Anti Backlash Mechanism:</b> Allows hands free working.</p>	
<p><b>Laser Engraved Torque Chart:</b> Laser engraved shroud for on the spot Torque chart viewing.</p>		<p><b>Drive Plate:</b> Single piece high strength alloy drive plate for maximum life. Allows small nose radius for the tool.</p>	
<p><b>Piston Assembly:</b> Smooth leak proof functioning of enclosed alloy steel piston provides required torque. Uses a single seal for maximum maintenance free operation.</p>		<p><b>Direct Housing Reaction:</b> Allows use without reaction arm</p>	
<p><b>Boot:</b> Replaceable pad allowing on site change over. Protects costly replacement of reaction arm.</p>		<p><b>Reaction Arm Release Button:</b> Housed within the reaction arm.</p>	
<p><b>Reaction Arm:</b> Long Length Reaction Arm allows multi positioning. Allows taking reaction on most applications.</p>		<p><b>Drive Segment:</b> Ensures tool will never lock up.</p>	

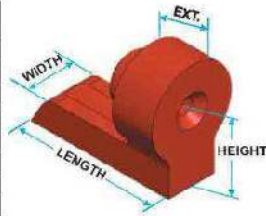
# MTD SERIES ACCESSORIES

PART NO. ARE AS PER MODEL MENTIONED ON PAGE - 1



## In line Reaction Pad

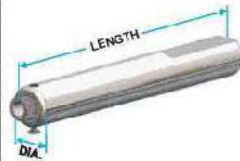
Length	Height	Width	Ext.
3.55	1.65	1.13	0.83
4.50	2.15	1.52	1.09
5.10	2.45	1.85	1.33
6.25	2.90	2.05	1.65
6.85	3.26	2.24	1.96
9.05	4.13	3.14	3.00
8.85	4.33	2.30	2.75
10.62	5.51	4.00	3.54



• All Dimensions are in inches.

## Extended Reaction Tube

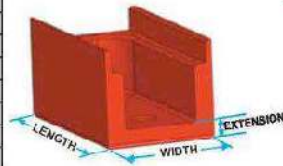
Extended Reaction Tube Model	Dia.	Length
APSD-2-03-ERT	2.00	18.57
APSD-3-03-ERT	2.63	23.75
APSD-5-03-ERT	3.00	22.50
APSD-7-03-ERT	3.50	23.00
APSD-11-03-ERT	3.75	25.10
APSD-20-03-ERT	4.00	21.65
APSD-27-03-ERT	5.00	16.50
APSD-60-03-ERT	6.00	14.00



• All Dimensions are in inches.

## Extension Boot

Ext.	Length	Width
1.00	1.520	1.00
2.00		
3.00		
1.00	2.000	1.25
2.00		
3.00		
1.00	2.741	2.00
2.00		
3.00		
1.00	2.741	1.75
2.00		
3.00		
1.00	3.000	2.00
2.00		
3.00		
1.00	4.17	2.50
2.00		
3.00		
1.00	4.000	2.50
2.00		
3.00		
1.00	5.11	3.50
2.00		
3.00		



• All Dimensions are in inches.

## Direct Allen Hex Drive Adapter

Direct Allen Hex Drive Adaptor Model
APSD-2-11 (Specify A/F Size)
APSD-3-11 (Specify A/F Size)
APSD-5-11 (Specify A/F Size)
APSD-7-11 (Specify A/F Size)
APSD-11-11 (Specify A/F Size)
APSD-20-11 (Specify A/F Size)
APSD-27-11 (Specify A/F Size)
APSD-60-11 (Specify A/F Size)



## Non Push Thru Square Drive

Non Push Thru Square Drive Model
APSD-2-NPSD
APSD-3-NPSD
APSD-5-NPSD
APSD-7-NPSD
APSD-11-NPSD
APSD-20-NPSD
APSD-27-NPSD
APSD-60-NPSD



## Direct Socket Drive

Direct Socket Drive Model
APSD-2-DS
APSD-3-DS
APSD-5-DS
APSD-7-DS
APSD-11-DS
APSD-20-DS
APSD-27-DS
APSD-60-DS



## End Cap Protector

End Cap Protector Model
PSD-2-EC
PSD-3-EC
PSD-5-EC
PSD-7-EC
PSD-11-EC
PSD-20-EC
PSD-27-EC
PSD-60-EC



## Types of Reaction Arms



Reaction Arm with 1" Boot    Reaction Arm with 2" Boot    Reaction Arm with 3" Boot    Standard Reaction Arm    Wide Boot Reaction Arm    One Piece Solid Extended Reaction Arm

# MTD SERIES TORQUE CONVERSION CHART

PSI	P.S.I./FT/lbs									Bar	Bar/N.M.								
	MTD-2 ft./lbs	MTD-3 ft./lbs	MTD-5 ft./lbs	MTD-7 ft./lbs	MTD-11 ft./lbs	MTD-20 ft./lbs	MTD-27 ft./lbs	MTD-60 ft./lbs	MTD-2 N.m.		MTD-3 N.m.	MTD-5 N.m.	MTD-7 N.m.	MTD-11 N.m.	MTD-20 N.m.	MTD-27 N.m.	MTD-60 N.m.		
1,000	127	330	534	740	1,090	2,220	2,720	5,943	68	172	447	723	1,003	1,478	3,010	3,687	8,056		
1,200	152	395	643	888	1,308	2,677	3,264	7,132	82	206	535	872	1,204	1,773	3,630	4,425	9,668		
1,400	178	460	745	1,036	1,526	3,102	3,808	8,320	95	241	624	1,101	1,404	2,069	4,205	5,162	11,279		
1,600	203	525	855	1,185	1,745	3,559	4,352	9,509	109	275	712	1,298	1,605	2,366	4,825	5,900	12,890		
1,800	229	590	957	1,332	1,962	3,983	4,896	10,697	122	310	800	1,298	1,806	2,660	5,400	6,637	14,501		
2,000	255	655	1,067	1,470	2,210	4,441	5,440	11,662	136	346	888	1,447	1,993	2,996	6,020	7,374	15,809		
2,200	279	722	1,177	1,617	2,430	4,898	5,984	12,828	150	378	979	1,596	2,192	3,294	6,639	8,112	17,390		
2,400	305	789	1,279	1,765	2,652	5,322	6,528	13,994	163	413	1,070	1,733	2,393	3,595	7,215	8,849	18,971		
2,600	330	856	1,388	1,911	2,873	5,779	7,072	15,161	177	447	1,160	1,883	2,591	3,895	7,835	9,587	20,552		
2,800	356	923	1,490	2,058	3,095	6,204	7,616	16,327	190	483	1,251	2,021	2,790	4,196	8,410	10,324	22,133		
3,000	380	990	1,600	2,210	3,340	6,661	8,160	17,337	204	515	1,342	2,170	2,996	4,528	9,030	11,062	23,570		
3,200	406	1,058	1,710	3,560	3,560	7,118	8,704	18,546	218	550	1,434	2,319	4,826	4,826	9,649	11,799	25,141		
3,400	432	1,126	1,812	2,505	3,785	7,542	9,248	19,705	231	586	1,526	2,457	3,395	5,131	10,225	12,530	26,712		
3,600	457	1,194	1,922	2,652	4,005	7,999	9,792	20,854	245	620	1,619	2,606	3,595	5,429	10,844	13,274	28,284		
3,800	483	1,262	2,024	2,800	4,230	8,424	10,336	22,024	258	655	1,711	2,744	3,796	5,734	11,420	14,011	29,855		
4,000	510	1,330	2,118	2,960	4,400	8,881	10,890	23,236	272	691	1,803	2,872	4,013	5,965	12,040	14,749	31,567		
4,200	533	1,397	2,244	3,108	4,620	9,338	11,424	24,450	286	723	1,894	3,042	4,213	6,263	12,659	15,486	33,145		
4,400	559	1,464	2,346	3,256	4,840	9,763	11,968	25,615	299	758	1,985	3,181	4,414	6,561	13,235	16,224	34,723		
4,600	584	1,531	2,456	3,405	5,060	10,220	12,512	26,779	313	792	2,075	3,329	4,616	6,859	13,854	16,961	36,301		
4,800	609	1,598	2,558	3,552	5,280	10,644	13,056	27,943	326	826	2,166	3,468	4,815	7,153	14,430	17,699	37,880		
5,000	635	1,665	2,667	3,716	5,500	11,101	13,600	29,322	340	861	2,257	3,617	5,037	7,456	15,049	18,436	39,749		
5,200	660	1,732	2,777	3,865	5,720	11,558	14,144	30,495	354	895	2,348	3,765	5,239	7,754	15,669	19,174	41,339		
5,400	686	1,799	2,879	4,013	5,940	11,983	14,688	31,668	367	930	2,439	3,904	5,440	8,052	16,245	19,911	42,929		
5,600	711	1,856	2,989	4,162	6,160	12,440	15,232	32,841	381	964	2,516	4,053	5,642	8,350	16,864	20,648	44,519		
5,800	737	1,933	3,092	4,311	6,380	12,884	15,776	34,014	394	999	2,620	4,191	5,843	8,649	17,440	21,386	46,109		
6,000	760	2,000	3,201	4,440	6,620	13,322	16,320	34,696	408	1,030	2,711	4,340	6,019	8,974	18,059	22,123	47,404		
6,200	787	2,065	3,311	4,588	6,838	13,779	16,864	36,135	422	1,067	2,799	4,489	6,219	9,270	18,679	22,861	48,984		
6,400	813	2,130	3,413	4,736	7,060	14,203	17,408	37,300	435	1,102	2,887	4,627	6,420	9,571	19,254	23,598	50,564		
6,600	838	2,195	3,523	4,884	7,280	14,660	17,952	38,466	449	1,136	2,976	4,776	6,621	9,869	19,874	24,336	52,144		
6,800	864	2,260	3,625	5,032	7,500	15,085	18,496	39,632	462	1,171	3,064	4,914	6,821	10,167	20,450	25,073	53,725		
7,000	890	2,325	3,735	5,180	7,710	15,542	19,040	40,914	476	1,206	3,152	5,063	7,022	10,452	21,069	25,811	55,483		
7,200	914	2,398	3,845	5,328	7,927	15,999	19,584	42,033	490	1,239	3,251	5,212	7,223	10,746	21,689	26,548	57,048		
7,400	940	2,461	3,946	5,476	8,147	16,423	20,128	43,252	503	1,274	3,336	5,351	7,423	11,044	22,264	27,286	58,632		
7,600	965	2,529	4,057	5,625	8,368	16,880	20,672	44,421	517	1,308	3,428	5,499	7,625	11,344	22,884	28,023	60,217		
7,800	991	2,597	4,159	5,772	8,588	17,305	21,216	45,590	530	1,343	3,520	5,638	7,825	11,642	23,459	28,760	61,802		
8,000	1,015	2,665	4,269	5,920	8,820	17,762	21,760	46,859	544	1,376	3,613	5,786	8,025	11,956	24,079	29,498	63,522		
8,200	1,041	2,731	4,378	6,068	9,045	18,219	22,304	48,030	558	1,411	3,702	5,936	8,226	12,261	24,699	30,235	65,110		
8,400	1,067	2,797	4,480	6,216	9,265	18,644	22,848	49,202	571	1,446	3,792	6,074	8,426	12,560	25,274	30,973	66,698		
8,600	1,092	2,863	4,590	6,365	9,485	19,101	23,392	50,373	585	1,480	3,881	6,223	8,628	12,858	25,894	31,710	68,286		
8,800	1,118	2,929	4,692	6,512	9,705	19,525	23,936	51,545	598	1,516	3,971	6,361	8,828	13,156	26,469	32,448	69,874		
9,000	1,145	2,995	4,802	6,660	9,930	19,982	24,480	52,799	612	1,552	4,060	6,510	9,028	13,461	27,089	33,185	71,574		
9,200	1,168	3,062	4,912	6,808	10,148	20,439	25,024	53,972	626	1,583	4,151	6,659	9,229	13,757	27,709	33,923	73,165		
9,400	1,194	3,129	5,014	6,956	10,368	20,864	25,568	55,146	639	1,619	4,242	6,797	9,430	14,055	28,284	34,660	74,755		
9,600	1,219	3,196	5,124	7,105	10,588	21,321	26,112	56,319	653	1,652	4,332	6,946	9,632	14,353	28,904	35,397	76,346		
9,800	1,245	3,263	5,226	7,252	10,810	21,745	26,656	57,492	666	1,688	4,423	7,084	9,831	14,654	29,479	36,135	77,936		
10,000	1,270	3,330	5,340	7,400	11,010	22,220	27,200	59,401	680	1,722	4,514	7,230	10,031	14,925	30,099	36,872	80,524		

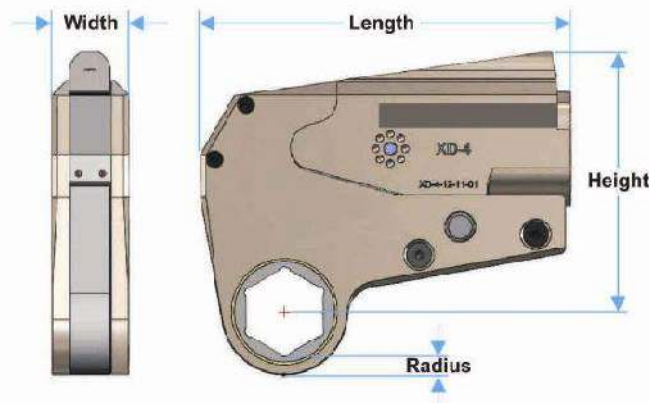
## LOW CLEARANCE HYDRAULIC TORQUE WRENCHES XD - SERIES



- Flat Design from Cylinder to Link!
- Unique Shaped Piston!
- Direct Flow Oil Distribution for Faster Stroke!
- Less Moving Parts!
- Accurate Repeatability!
- Hands-Off Operation!

### Technical

Model No.	XD-1	XD-2	XD-4	XD-8	XD-16	XD-32	XD-45
Tool Hex from	13mm / 1/2"	19mm / 3/4"	25mm / 1"	50mm / 1.7/8"	65mm / 2.5/8"	80mm / 3.1/8"	80mm / 3.1/8"
to	41mm / 1.5/8"	60mm / 2.3/8"	80mm / 3.1/8"	105mm / 4"	135mm / 4.5/8"	165mm / 6.1/2"	165mm / 6.1/2"
Min. Torque Kg-m (Ft/Lbs)	6 (45)	26 (192)	54 (395)	115 (830)	215 (1,560)	445 (3,220)	658 (4,865)
Max. Torque Kg-m (Ft/Lbs)	77 (560)	260 (1,928)	540 (3,950)	1192 (8,630)	2293 (16,600)	4924 (35,650)	6410 (47,380)
Output Accuracy	+/- 3%	+/- 3%	+/- 3%	+/- 3%	+/- 3%	+/- 3%	+/- 3%
Repeatability	100%	100%	100%	100%	100%	100%	100%
Duty Cycle	100%	100%	100%	100%	100%	100%	100%
Corrosion Protection	Standard						
Cylinder Weight Kgs / (Lbs)	0.50 / (1)	1.73 / (3.80)	2.97 / (6.50)	5.79 / (12.80)	7.48 / (16.50)	12.17 / (26.90)	13.70 / (30.20)
Link Weight from Kgs / (Lbs)	0.50 / (1)	1.14 / (2.50)	2.57 / (5.70)	5.68 / (12.50)	9.85 / (21.70)	13.80 / (30.40)	13.18 / (29.00)
to Kgs / (Lbs)	0.50 / (1)	1.66 / (3.70)	3.62 / (8.00)	6.91 / (15.20)	13.00 / (28.60)	18.30 / (40.30)	17.95 / (39.50)



### Dimensions

Model No.	XD-1		XD-2		XD-4		XD-8		XD-16		XD-32		XD-45	
	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch
Length	111.00	4.37	147.00	5.78	203.20	8.00	253.00	9.96	330.00	13.00	390.00	15.35	450.00	17.71
Height	82.60	3.25	103.00	4.05	144.00	5.65	179.50	7.06	193.80	7.63	278.00	10.94	278.00	10.94
Width	19.90	0.78	31.70	1.25	41.40	1.63	52.00	2.04	63.50	2.50	82.40	3.25	123.80	4.87
Radius	5.80	0.23	9.30	0.36	11.85	0.45	13.90	0.54	16.80	0.66	23.75	0.94	23.75	0.94

**Note :** All tool weights include Couplers, Swivels and Internal Oil.

# XD SERIES FEATURES



▲  
*XD-4 Speedy torquing!*

- Clearance **ABOVE** The Nut - No Problem For A XD!
- Clearance **BEHIND** The Nut - No Problem For A XD!
- Clearance **BETWEEN** The Nut - No Problem For A XD!

- Tensioners - Too Big To Fit!
- Multipliers - Too Big To Fit!
- Nut Runners - Too Big To Fit!
- Impact Wrenches - Too Big To Fit!
- Other Hydraulic Wrenches - Too Big To Fit!
- XD - Perfect Fit!

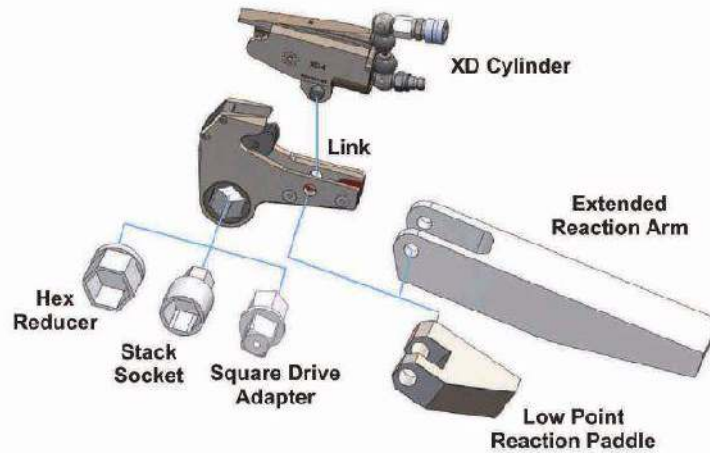


*XD cylinder and link are the same width.  
XD exclusive that allows a flat contact between the wrench and flange surface.* ▶

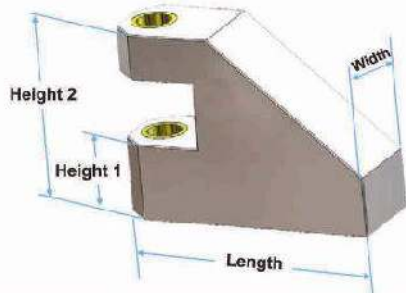
<p><b>High Strength Body:</b> Cylinder and Link Body are manufactured from high grade, high strength alloy.</p>		<p><b>Multi Tooth Ratchet Assembly:</b> Highest strength teeth ensures 28° torque stroke with greatest accuracy.</p>	
<p><b>Flat Design Cylinder And Link:</b> Equal width of cylinder and link ensures tool sits flat on flange surface. Allows use in most confined areas.</p>		<p><b>Never Lock Drive Segment:</b> Never lock drive segment does not let the wrench lock and thus eliminates the requirement of a ratchet release mechanism.</p>	
<p><b>360 Swivels:</b> Dual 360° Swivel allows free 360° individual movement of duplex hoses across all applications.</p>		<p><b>In-line Reaction Pad:</b> This ensures torsion free reaction during use.</p>	
<p><b>Non-drip Quick Connects Couplers:</b> 4:1 safety ratio couplers. Assure safe operation with ease for engaging and disengaging of hoses.</p>		<p><b>Sliders:</b> Reduce friction and prevent wear on the piston.</p>	
<p><b>Link Pin:</b> One simple pin for cassette link to cylinder engagement without using any additional or special tool.</p>		<p><b>Alignment Pins:</b> Ensure equal load distribution between the 2 side plates.</p>	
<p><b>Drive Plate:</b> Single piece high strength alloy drive plate for maximum life. Allows small nose radius for the tool.</p>		<p><b>Piston Seals:</b> High temperature Polyurethane seals ensure years of maintenance free operation.</p>	

# XD SERIES ACCESSORIES

PART NO. AS PER MODEL MENTIONED ON PAGE - 1



## Low Point Reaction Arm



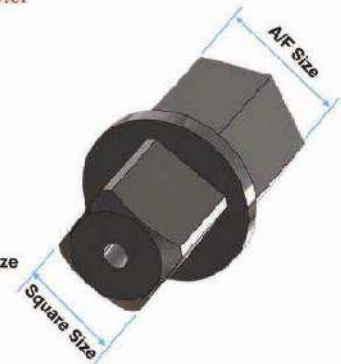
Tool Model	Low Point Reaction Arm Model	Length	Width	Height 1	Height 2
XD-1	PXD-1 RP	2.73	0.65	0.90	1.96
XD-2	PXD-2 RP	4.35	1.03	1.49	3.26
XD-4	PXD-4 RP	5.65	1.23	2.02	4.23
XD-8	PXD-8 RP	7.15	1.78	2.53	5.35
XD-16	PXD-16 RP	9.05	2.51	3.04	6.36
XD-32	PXD-32 RP	11.20	3.26	3.95	8.30
XD-45	PXD-45 RP	11.20	3.26	3.95	8.30

• All Dimensions are in inches.

## Hex To Square Drive Adaptor

Tool Model	Hex To Square Drive Adaptor Model
XD-1	AHS1
XD-2	AHS2
XD-4	AHS4
XD-8	AHS8
XD-16	AHS16
XD-32	AHS32
XD-45	AHS45

• Specify A/F size and Square size when ordering.

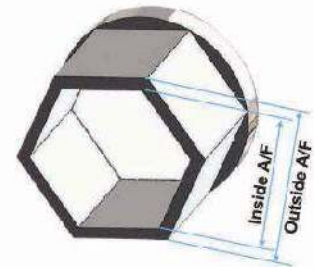


## Hex Reducer

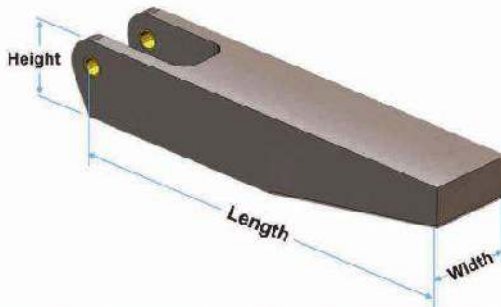
• Indicate Outside A/F, Inside A/F when ordering.

Tool Model	Hex Reducer Model
XD-1	HR-1-#-#
XD-2	HR-2-#-#
XD-4	HR-4-#-#
XD-8	HR-8-#-#
XD-16	HR-16-#-#
XD-32	HR-32-#-#
XD-45	HR-45-#-#

• # - Inside and outside A/F of Hex Reducer to be specified.



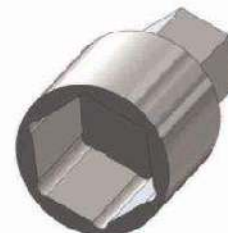
## Extended Reaction Arm



Tool Model	Extended Reaction Arm Model	Length	Height	Width
XD-1	PXD-1-EXT	13.5	1.25	1.25
XD-2	PXD-2-EXT	19.30	1.54	1.90
XD-4	PXD-4-EXT	20.29	2.05	2.40
XD-8	PXD-8-EXT	20.35	2.52	3.03
XD-16	PXD-16-EXT	21.50	3.04	3.65
XD-32	PXD-32-EXT	22.28	3.95	4.52
XD-45	PXD-45-EXT	22.28	3.95	4.52

• All Dimensions are in inches.

## Stack Socket



## XD SERIES HEX LINK PART NUMBERS

XD-1 Link		XD-2 Link		XD-4 Link		XD-8 Link		XD-16 Link		XD-32 Link	
Number	Hex Size	Number	Hex Size	Number	Hex Size	Number	Hex Size	Number	Hex Size	Number	Hex Size
XD-1RL008	1/2"	XD-2RL012	3/4"	XD-4RL100	1"	XD-8RL114	1.7/8"	XD-16RL210	2.5/8"	XD-32RL302	3.1/8"
XD-1RL009	9/16"	XD-2RL013	13/16"	XD-4RL101	1.1/16"	XD-8RL115	1.15/16"	XD-16RL211	2.11/16"	XD-32RL303	3.3/16"
XD-1RL010	5/8"	XD-2RL014	7/8"	XD-4RL102	1.1/8"	XD-8RL200	2"	XD-16RL212	2.3/4"	XD-32RL304	3.1/4"
XD-1RL011	11/16"	XD-2RL015	15/16"	XD-4RL103	1.3/16"	XD-8RL201	2.1/16"	XD-16RL213	2.13/16"	XD-32RL305	3.5/16"
XD-1RL012	3/4"	XD-2RL100	1"	XD-4RL104	1.1/4"	XD-8RL202	2.1/8"	XD-16RL214	2.7/8"	XD-32RL306	3.3/8"
XD-1RL013	13/16"	XD-2RL101	1.1/16"	XD-4RL105	1.5/16"	XD-8RL203	2.3/16"	XD-16RL215	2.15/16"	XD-32RL307	3.7/16"
XD-1RL014	7/8"	XD-2RL102	1.1/8"	XD-4RL106	1.3/8"	XD-8RL204	2.1/4"	XD-16RL300	3"	XD-32RL308	3.1/2"
XD-1RL015	15/16"	XD-2RL103	1.3/16"	XD-4RL107	1.7/16"	XD-8RL205	2.5/16"	XD-16RL301	3.1/16"	XD-32RL309	3.9/16"
XD-1RL100	1"	XD-2RL104	1.1/4"	XD-4RL108	1.1/2"	XD-8RL206	2.3/8"	XD-16RL302	3.1/8"	XD-32RL310	3.5/8"
XD-1RL101	1.1/16"	XD-2RL105	1.5/16"	XD-4RL109	1.9/16"	XD-8RL207	2.7/16"	XD-16RL303	3.3/16"	XD-32RL311	3.11/16"
XD-1RL102	1.1/8"	XD-2RL106	1.3/8"	XD-4RL110	1.5/8"	XD-8RL208	2.1/2"	XD-16RL304	3.1/4"	XD-32RL312	3.3/4"
XD-1RL103	1.3/16"	XD-2RL107	1.7/16"	XD-4RL111	1.11/16"	XD-8RL209	2.9/16"	XD-16RL305	3.5/16"	XD-32RL313	3.13/16"
XD-1RL104	1.1/4"	XD-2RL108	1.1/2"	XD-4RL112	1.3/4"	XD-8RL210	2.5/8"	XD-16RL306	3.3/8"	XD-32RL314	3.7/8"
XD-1RL105	1.5/16"	XD-2RL109	1.9/16"	XD-4RL113	1.13/16"	XD-8RL211	2.11/16"	XD-16RL307	3.7/16"	XD-32RL315	3.15/16"
XD-1RL106	1.3/8"	XD-2RL110	1.5/8"	XD-4RL114	1.7/8"	XD-8RL212	2.3/4"	XD-16RL308	3.1/2"	XD-32RL400	4"
XD-1RL107	1.7/16"	XD-2RL111	1.11/16"	XD-4RL115	1.15/16"	XD-8RL213	2.13/16"	XD-16RL309	3.9/16"	XD-32RL401	4.1/16"
XD-1RL108	1.1/2"	XD-2RL112	1.3/4"	XD-4RL200	2"	XD-8RL214	2.7/8"	XD-16RL310	3.5/8"	XD-32RL402	4.1/8"
XD-1RL109	1.9/16"	XD-2RL113	1.13/16"	XD-4RL201	2.1/16"	XD-8RL215	2.15/16"	XD-16RL311	3.11/16"	XD-32RL403	4.3/16"
XD-1RL110	1.5/8"	XD-2RL114	1.7/8"	XD-4RL202	2.1/8"	XD-8RL300	3"	XD-16RL312	3.3/4"	XD-32RL404	4.1/4"
		XD-2RL115	1.15/16"	XD-4RL203	2.3/16"	XD-8RL301	3.1/16"	XD-16RL313	3.13/16"	XD-32RL405	4.5/16"
		XD-2RL200	2"	XD-4RL204	2.1/4"	XD-8RL302	3.1/8"	XD-16RL314	3.7/8"	XD-32RL406	4.3/8"
		XD-2RL201	2.1/16"	XD-4RL205	2.5/16"	XD-8RL303	3.3/16"	XD-16RL315	3.15/16"	XD-32RL407	4.7/16"
		XD-2RL202	2.1/8"	XD-4RL206	2.3/8"	XD-8RL304	3.1/4"	XD-16RL400	4"	XD-32RL408	4.1/2"
		XD-2RL203	2.3/16"	XD-4RL207	2.7/16"	XD-8RL305	3.5/16"	XD-16RL401	4.1/16"	XD-32RL409	4.9/16"
		XD-2RL204	2.1/4"	XD-4RL208	2.1/2"	XD-8RL306	3.3/8"	XD-16RL402	4.1/8"	XD-32RL410	4.5/8"
		XD-2RL205	2.5/16"	XD-4RL209	2.9/16"	XD-8RL307	3.7/16"	XD-16RL403	4.3/16"	XD-32RL411	4.11/16"
		XD-2RL206	2.3/8"	XD-4RL210	2.5/8"	XD-8RL308	3.1/2"	XD-16RL404	4.1/4"	XD-32RL412	4.3/4"
				XD-4RL211	2.11/16"	XD-8RL309	3.9/16"	XD-16RL405	4.5/16"	XD-32RL413	4.13/16"
				XD-4RL212	2.3/4"	XD-8RL310	3.5/8"	XD-16RL406	4.3/8"	XD-32RL414	4.7/8"
				XD-4RL213	2.13/16"	XD-8RL311	3.11/16"	XD-16RL407	4.7/16"	XD-32RL415	4.15/16"
				XD-4RL214	2.7/8"	XD-8RL312	3.3/4"	XD-16RL408	4.1/2"	XD-32RL500	5"
				XD-4RL215	2.15/16"	XD-8RL313	3.13/16"	XD-16RL409	4.9/16"	XD-32RL501	5.1/16"
				XD-4RL300	3"	XD-8RL314	3.7/8"	XD-16RL410	4.5/8"	XD-32RL502	5.1/8"
				XD-4RL301	3.1/16"	XD-8RL315	3.15/16"			XD-32RL503	5.3/16"
				XD-4RL302	3.1/8"	XD-8RL400	4"			XD-32RL504	5.1/4"
										XD-32RL505	5.5/16"
										XD-32RL506	5.3/8"
										XD-32RL507	5.7/16"
										XD-32RL508	5.1/2"
										XD-32RL509	5.9/16"
										XD-32RL510	5.5/8"
										XD-32RL511	5.11/16"
										XD-32RL512	5.3/4"
										XD-32RL513	5.13/16"
										XD-32RL514	5.7/8"
										XD-32RL515	5.15/16"
										XD-32RL600	6"
										XD-32RL601	6.1/16"
										XD-32RL602	6.1/8"



Change sizes by removing single link pin

ALL XD SERIES Links are available in MM sizes also. Consult for Part Numbers.



# QUADRA - PORT SYSTEM

## For Accurate & Even Bolt Loading

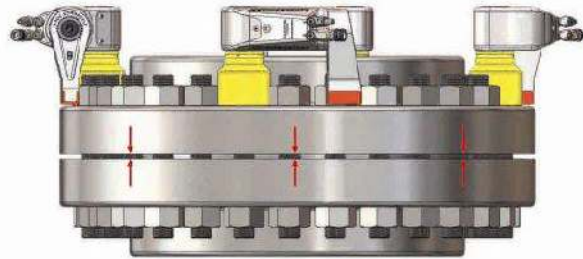
The primary focus of the Quadra-Port System is to eliminate the common "Criss-Cross" bolt tightening pattern that causes crushing or over torquing of gaskets. With the Quadra-Port System multi Powermaster torque wrenches are utilized along with our Quadra-Port Hydraulic Pumps. Once the Powermaster wrenches are in place a single operator can apply even load at the push of a button. The Quadra-Port System will evenly close the gap and apply equal torque to  $\pm 3\%$  accuracy!



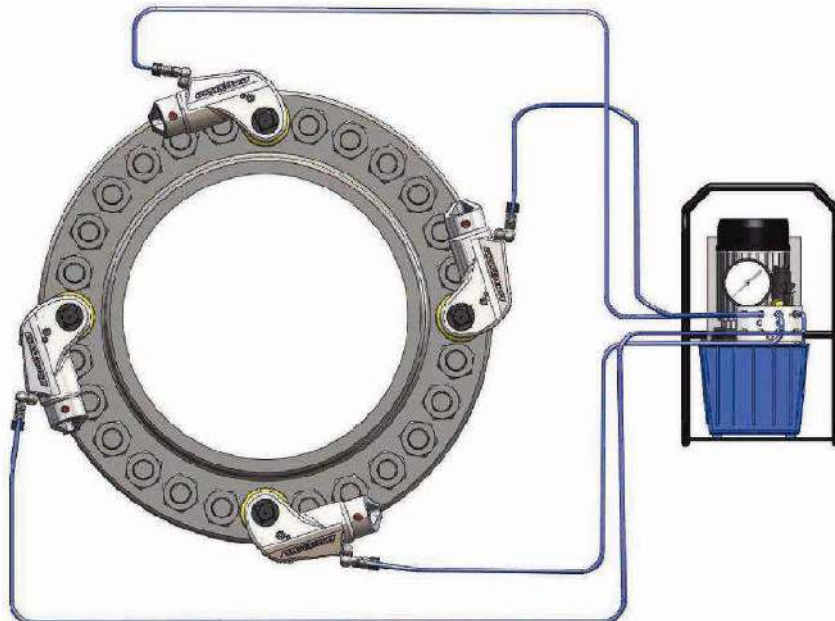
## Ensures Even Load Distribution



▲  
*Uneven load using one tool*



▲  
*Even and precise loading with Quadra-Port 4 tool system.*



▲  
*Quadra-Port four tool system*

# BACK UP WRENCHES



## FEATURES

- Heavy duty industrial construction.
- Ergonomic and Safe.
- Totally Mechanical - No Hydraulic.
- Easy to release.
- Eliminates Striker Wrenches, Shims a Vice Grip Style Backup Wrenches.
- Stock in Standard and Metric Sizes.

### Technical Details:

PBW-1 Wrench Handle							
Metric Sizes				Standard Sizes			
Part No.	mm	Part No.	mm	Part No.	inch	Part No.	inch
BC-19M	19	BC-46M	46	BC-012	3/4	BC-200	2
BC-22M	22	BC-50M	50	BC-014	7/8	BC-203	2.3/16
BC-24M	24	BC-55M	55	BC-100	1	BC-206	2.3/8
BC-27M	27	BC-60M	60	BC-102	1.1/8	BC-209	2.9/16
BC-30M	30	BC-65M	65	BC-104	1.1/4	BC-212	2.3/4
BC-32M	32	BC-70M	70	BC-107	1.7/16	BC-215	2.15/16
BC-36M	36	BC-75M	75	BC-110	1.5/8	BC-302	3.1/8
BC-41M	41	BC-80M	80	BC-113	1.13/16	-	-

# ELECTRIC - POWER PACKS

## MT - 1000 SERIES



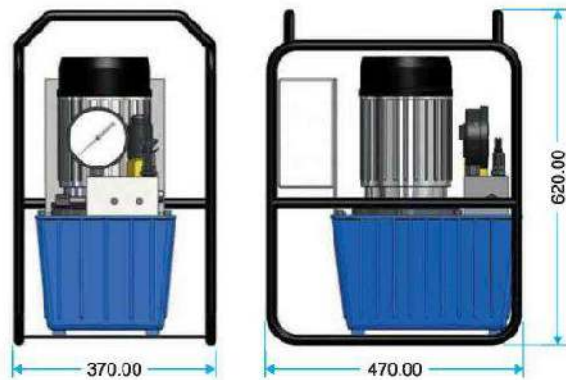
WITH MONO PORT



WITH QUODRA PORT (4 PORT)

### High Flow – High Speed for Heavy Duty Application

- Quadra-Port Multi-Port Manifold (Max. 4 Ports).
- Cool running continuous duty axial piston pump.
- Single phase induction motor.
- 115V and 230V available.
- Starts under full load.
- Runs on reduced voltage.
- Quiet operation (approx. 80 dBA @ 10,000 PSI).
- Rugged remote pendant to control motor and valve.
- Easily adjustable pressure control knob.
- Auto-dump relieves oil pressure from hoses.
- Completely enclosed motor housing and electronics.
- 2 Gallon oil reservoir.
- Precise PSI/BAR pressure gauge.
- Quick-connect no-drip couplers with safety locking collar.
- Supplied with dual non-conductive high pressure hose with couplers.



Resvr. Size (Gal.)	Valve		Motor Specifications	Flow Rate @ 115 VAC		Weight	
	Control	Type		600 psi	10,000 psi	kg	lbs
2	Solenoid	3 Way/2 Pos.	1.5 HP Single Phase	9.5 lpm	0.9 lpm	38	84

*Retract pressure is preset at 1,300 PSI.*

# PNEUMATIC - POWER PACKS

## AP - 1000 SERIES



**WITH MONO PORT**

*High Flow – High Speed for Heavy Duty Application*

- Quadra-Port Multi-Port Manifold (Max. 4 Ports).
- Cool running continuous duty axial piston pump.
- Powerful 1.5HP industrial duty air motor.
- Runs on 50 cfm / 80 PSI of air.
- Quiet operation (approx. 80 dBA @ 10,000 PSI).
- Rugged remote pendant to control motor and valve.
- Easily adjustable pressure control knob.
- Auto-dump relieves oil pressure from hoses.
- Filter-lubricator for long trouble free operation.
- 2 Gallon oil reservoir.
- Precise PSI/BAR pressure gauge.
- Quick-connect no-drip couplers with safety locking collar.
- Supplied with dual non-conductive high pressure hose with couplers.



**WITH QUODRA PORT (4 PORT)**



Resvr. Size (Gal.)	Valve		Motor Specifications	Flow Rate @ 50 cfm/ 90psi		Weight	
	Control	Type		600 psi	10,000 psi	kg	lbs
2	Solenoid	3 Way/2 Pcs.	1.5 HP Rctary Air	9.5 lpm	0.9 lpm	27	59

*Retract pressure is preset at 1,300 PSI.  
Standard Roll Bar Dimensions : 25-7/16" L x 20-1/2" H x 169-3/4" W*

## QUODRA - PORT PUMP ACCESSORIES



*Hoses available in all lengths  
(15' hose standard with all pumps)*



*No-Drip Quick-Connect Couplers  
(Standard on all Powermaster equipment)*