



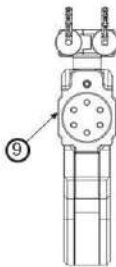
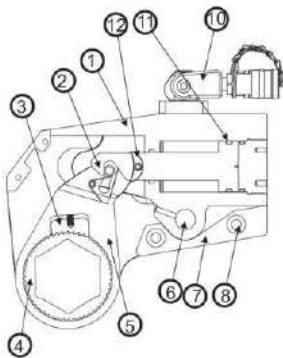
Opt Removable handle

One plug to connect

Double-Acting, Hexagon Cassette Wrenches Lightweight, Low Profile & Slim Nose Radius

- ※ Tool body can be Reaction Arm, easy to work.
- ※ Bronze bushing anti galling.
- ※ "Drop Hole" will protect over pressure operating.

Output Accuracy : +/-3% Repeatability : 100%



1		High Strength Body Cylinder and Link Body are manufactured from high grade and strength alloy. Rust-resistant surface finish.
2		Engagement Plunger Smooth leak proof functioning of enclosed alloy steel piston and engaged hook head.
3		Never Lock Drive Segment Never lock drive segment does not let the wrench lock and thus eliminates the requirement of a ratchet release mechanism.
4		Multi Tooth Ratchet Assembly Strong strength, high accuracy and best speed.
5		Drive Plate Single piece high strength alloy drive plate for maximum life. Allows small nose radius for the tool.
6		Steel Link Pin One simple pin for cassette link to cylinder engagement without using any additional or special tool.
7		In-line Reaction Pad This ensures torsion free reaction during use.
8		Steel Alignment Pin Ensure equal load distribution between the 2 side plates.
9		Completely Flat Design Cylinder & Link Equal width of cylinder and link ensures tool sits flat on flange surface. Allows use in most confined areas.
10		360°*180° Swivel-Hose-Free Operation
11		Piston Seal High temperature Polyurethane seals ensure years of maintenance free operation.
12		Sliders Reduce friction and prevent wear on the piston.



HW SERIES

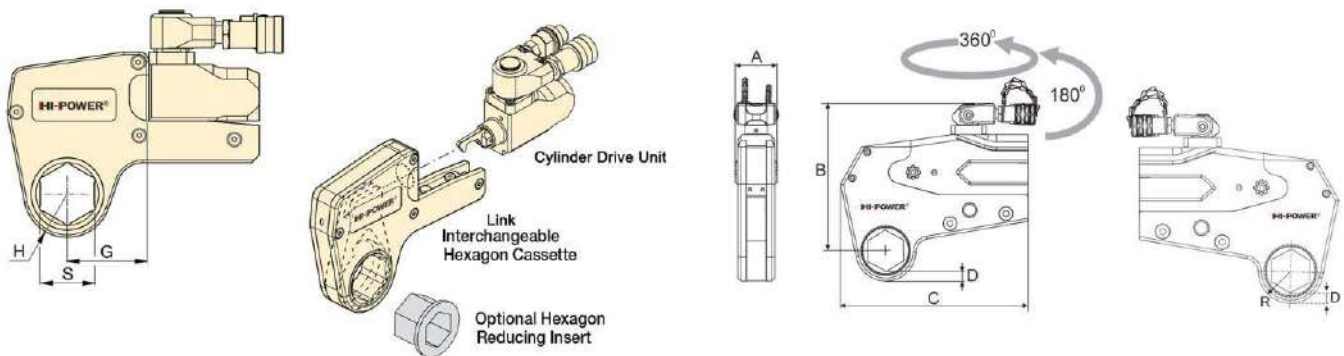
Cylinder Drive Unit



Link

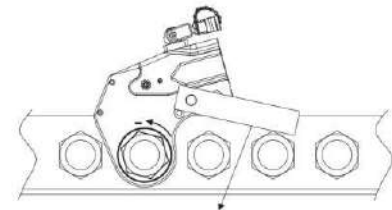
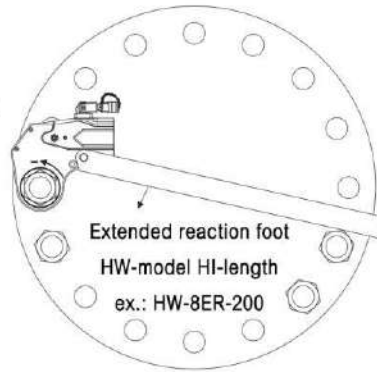
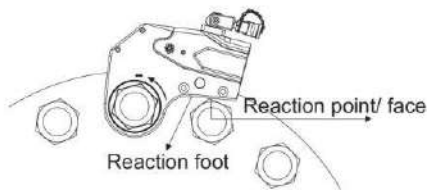


Model Number	Hex. Size		Min. Torque		Max. Torque		Weight (kg)		Dimensions(mm)			
	(in)	(mm)	(lbf.ft)	(N.m)	(lbf.ft)	(N.m)	Cylinder	Link	A	B	C	D
HW-2	1-1/4~2-3/8"	30~60	192	260	2178	2994	1.99	1.48~1.85	32.0	148.8~156.8	168.0~175.5	9.1~11.7
HW-4	1-5/8~3-1/8"	41~80	395	535	4732	6504	3.35	3.05~3.95	41.4	172.9~189.2	204.4~220.8	12.7~13.7
HW-8	1-7/8~4-1/8"	50~105	830	1125	10689	14692	6.64	6.25~8.60	52.5	210.4~235.4	268.1~283.9	13.7~19.5
HW-16	2-3/4~4-5/8"	70~115	1560	2115	16854	23165	8.50	11.98~14.16	64.0	245.7~258.3	326.7~344.7	19.5~23.0
HW-32	3-1/8~6-1/8"	80~155	3220	4365	37566	51632	16.1	25.10~30.36	82.5	287.6~313.1	422.5~442.5	23.0~26.0



Bolt Dia. M	Across flat mm	Bolt Dia. (Imp.) in	Across flat (Imp.) in	HW-2			HW-4			HW-8			HW-16			HW-32		
				Link model	R (mm)	D (mm)	Link model	R (mm)	D (mm)	Link model	R (mm)	D (mm)	Link model	R (mm)	D (mm)	Link model	R (mm)	D (mm)
20	30	3/4	1-1/4	HW-2L 30	26.6	9.1												
22	32			HW-2L 32	26.6	9.1												
24	36	7/8	1-7/16	HW-2L 36	33.5	10.4												
27	41	1	1-5/8	HW-2L 41	34.4	10.4	HW-4L 41	36.8	12.7									
30	46	1-1/8	1-13/16	HW-2L 46	37.2	10.4	HW-4L 46	39.5	12.7									
33	50	1-1/4	2	HW-2L 50	40.6	11.7	HW-4L 50	42.3	12.7	HW-8L 50	43.3	13.7						
36	55	1-3/8	2-3/16	HW-2L 55	43.7	11.7	HW-4L 55	45.2	12.7	HW-8L 55	45.9	13.7						
39	60	1-1/2	2-3/8	HW-2L 60	46.6	11.7	HW-4L 60	47.9	12.7	HW-8L 60	48.9	13.7						
42	65	1-5/8	2-9/16				HW-4L 65	51.7	13.7	HW-8L 65	52.5	13.7						
45	70	1-3/4	2-3/4				HW-4L 70	54.8	13.7	HW-8L 70	54.5	13.7	HW-16L 70	60.3	19.5			
48	75	1-7/8	2-15/16				HW-4L 75	57.3	13.7	HW-8L 75	57.2	13.7	HW-16L 75	63.1	19.5			
52	80	2	3-1/8				HW-4L 80	60.1	13.7	HW-8L 80	59.9	13.7	HW-16L 80	66.0	19.5	HW-32L 80	72.0	25.0
56	85									HW-8L 85	67.2	17.5	HW-16L 85	69.0	19.5	HW-32L 85	75.0	25.0
60	90	2-1/4	3-1/2							HW-8L 90	70.1	18.0	HW-16L 90	71.8	19.5	HW-32L 90	78.0	25.0
64	95									HW-8L 95	73.5	18.0	HW-16L 95	79.3	21.0	HW-32L 95	80.5	25.0
68	100	2-1/2	3-7/8							HW-8L 100	76.4	18.0	HW-16L 100	80.0	21.0	HW-32L 100	83.5	25.0
72	105	2-3/4	4-1/4							HW-8L 105	80.5	19.5	HW-16L 105	82.0	21.0	HW-32L 105	87.5	26.5
76	110												HW-16L 110	85.0	21.0	HW-32L 110	91.3	26.5
80	115												HW-16L 115	90.0	23.0	HW-32L 115	94.9	26.5
	117	3	4-5/8													HW-32L 117	94.9	26.5
85	120															HW-32L 120	96.5	26.5
	125	3-1/4	5													HW-32L 125	100.5	26.5
90	130															HW-32L 130	102.5	26.5
95	135	3-1/2	5-3/8													HW-32L 135	108.0	28.5
	140															HW-32L 140	110.0	28.5
100	145	3-3/4	5-3/4													HW-32L 145	113.0	28.5
105	150															HW-32L 150	116.0	28.5
110	155	4	6-1/8													HW-32L 155	119.0	28.5





HW Series, Low Profile Hexagon Wrenches

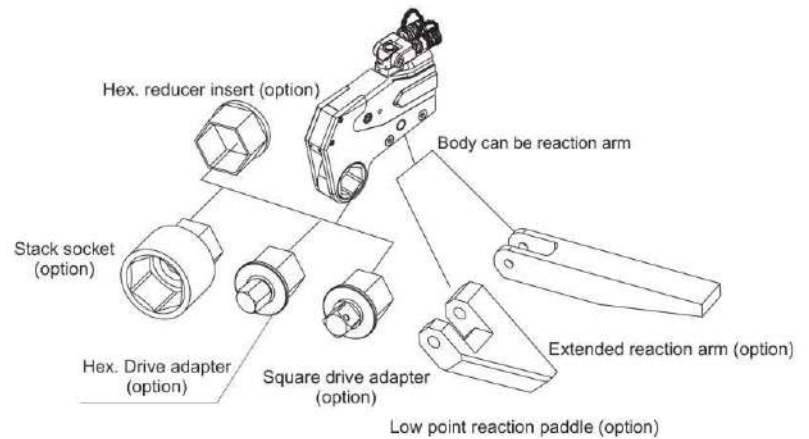


HW Series Torque Conversion Chart

Work pressure		HW-2				HW-4				HW-8	
		1-1/4" to 1-13/16" 30 to 46mm	1-1/4" to 1-13/16" 30 to 46mm	1-7/8" to 2-3/8" 47 to 60mm	1-7/8" to 2-3/8" 47 to 60mm	1-5/8" to 2-9/16" 41 to 65mm	1-5/8" to 2-9/16" 41 to 65mm	2-3/4" to 3-1/8" 70 to 80mm	2-3/4" to 3-1/8" 70 to 80mm	1-7/8" to 3-1/8" 50 to 80mm	1-7/8" to 3-1/8" 50 to 80mm
psi	bar	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m
1450	100	284	384	315	428	581	788	685	929	1269	1720
1740	120	340	461	379	513	697	945	822	1115	1523	2064
2031	140	397	538	442	599	813	1103	959	1301	1776	2409
2321	160	454	615	505	684	929	1260	1097	1487	2030	2753
2611	180	510	692	568	770	1046	1418	1234	1673	2284	3097
2901	200	567	769	631	855	1162	1575	1371	1858	2538	3441
3191	220	624	846	694	941	1278	1733	1508	2044	2792	3785
3481	240	680	923	757	1026	1394	1890	1645	2230	3045	4129
3771	260	737	999	820	1112	1510	2048	1782	2416	3299	4473
4061	280	794	1076	883	1198	1626	2205	1919	2602	3553	4817
4351	300	851	1153	946	1283	1743	2363	2056	2788	3807	5161
4641	320	907	1230	1009	1369	1859	2520	2193	2973	4060	5505
4931	340	964	1307	1073	1454	1975	2678	2330	3159	4314	5849
5221	360	1021	1384	1136	1540	2091	2835	2467	3345	4568	6193
5511	380	1077	1461	1199	1625	2207	2993	2604	3531	4822	6537
5802	400	1134	1538	1262	1711	2323	3150	2741	3717	5075	6881
6092	420	1191	1614	1325	1796	2440	3308	2878	3903	5329	7226
6382	440	1247	1691	1388	1882	2556	3465	3015	4088	5583	7570
6672	460	1304	1768	1451	1967	2672	3623	3153	4274	5837	7914
6962	480	1361	1845	1514	2053	2788	3780	3290	4460	6091	8258
7252	500	1418	1922	1577	2138	2904	3938	3427	4646	6344	8602
7542	520	1474	1999	1640	2224	3020	4095	3564	4832	6598	8946
7832	540	1531	2076	1703	2309	3137	4253	3701	5018	6852	9290
8122	560	1588	2153	1766	2395	3253	4410	3838	5203	7106	9634
8412	580	1644	2230	1830	2481	3369	4568	3975	5389	7359	9978
8702	600	1701	2306	1893	2566	3485	4725	4112	5575	7613	10322
8992	620	1758	2383	1956	2652	3601	4883	4249	5761	7867	10666
9282	640	1815	2460	2019	2737	3717	5040	4386	5947	8121	11010
9572	660	1871	2537	2082	2823	3834	5198	4523	6133	8375	11354
9863	680	1928	2614	2145	2908	3950	5355	4660	6319	8628	11698
10153	700	1985	2691	2208	2994	4066	5513	4797	6504	8882	12043

HW Series, Low Profile Hexagon Wrenches

How to build Torque Wrench drive and socket	
	Link model -H Hex. Across size Example: HW-8L95-H85
	Model HH Hex. Drive size -Hex. Socket size Example: HW-8HH75-90
	Model HS Hex. Drive size -Square drive size Example: HW-4HS46-1"
	Model HHM Hex. Drive size -Hex. Drive size Example: HW-4HHM41-27



HW Series Torque Conversion Chart											
Work pressure		HW-8		HW-16				HW-32			
		3-3/8" to 4-1/8" 85 to 105mm	3-3/8" to 4-1/8" 85 to 105mm	2-3/4" to 3-15/16" 70 to 100mm	2-3/4" to 3-15/16" 70 to 100mm	4-1/8" to 4-5/8" 105 to 115mm	4-1/8" to 4-5/8" 105 to 115mm	3-1/8" to 4-1/2" 80 to 115mm	3-1/8" to 4-1/2" 80 to 115mm	4-11/16" to 6-1/8" 120 to 155mm	4-11/16" to 6-1/8" 120 to 155mm
psi	bar	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m	lbf.ft	N.m
1450	100	1548	2099	2293	3109	2441	3309	4734	6418	5440	7376
1740	120	1858	2519	2752	3731	2929	3971	5681	7702	6528	8851
2031	140	2167	2938	3210	4353	3417	4633	6628	8986	7616	10326
2321	160	2477	3358	3669	4975	3905	5295	7574	10269	8704	11801
2611	180	2787	3778	4128	5596	4394	5957	8521	11553	9792	13277
2901	200	3096	4198	4586	6218	4882	6619	9468	12837	10880	14752
3191	220	3406	4618	5045	6840	5370	7281	10415	14120	11968	16227
3481	240	3715	5037	5504	7462	5858	7943	11361	15404	13057	17702
3771	260	4025	5457	5962	8084	6346	8604	12308	16688	14145	19177
4061	280	4335	5877	6421	8706	6835	9266	13255	17971	15233	20653
4351	300	4644	6297	6879	9327	7323	9928	14202	19255	16321	22128
4641	320	4954	6717	7338	9949	7811	10590	15149	20539	17409	23603
4931	340	5263	7136	7797	10571	8299	11252	16095	21823	18497	25078
5221	360	5573	7556	8255	11193	8787	11914	17042	23106	19585	26553
5511	380	5883	7976	8714	11815	9275	12576	17989	24390	20673	28029
5802	400	6192	8396	9173	12436	9764	13238	18936	25674	21761	29504
6092	420	6502	8815	9631	13058	10252	13900	19883	26957	22849	30979
6382	440	6812	9235	10090	13680	10740	14561	20829	28241	23937	32454
6672	460	7121	9655	10549	14302	11228	15223	21776	29525	25025	33929
6962	480	7431	10075	11007	14924	11716	15885	22723	30808	26113	35404
7252	500	7740	10495	11466	15546	12204	16547	23670	32092	27201	36880
7542	520	8050	10914	11924	16167	12693	17209	24617	33376	28289	38355
7832	540	8360	11334	12383	16789	13181	17871	25563	34659	29377	39830
8122	560	8669	11754	12842	17411	13669	18533	26510	35943	30465	41305
8412	580	8979	12174	13300	18033	14157	19195	27457	37227	31553	42780
8702	600	9288	12593	13759	18655	14645	19856	28404	38510	32641	44256
8992	620	9598	13013	14218	19276	15134	20518	29351	39794	33729	45731
9282	640	9908	13433	14676	19898	15622	21180	30297	41078	34817	47206
9572	660	10217	13853	15135	20520	16110	21842	31244	42361	35905	48681
9863	680	10527	14273	15593	21142	16598	22504	32191	43645	36993	50156
10153	700	10837	14692	16052	21764	17086	23166	33138	44929	38081	51632