

TWS-N - HYDRAULIC TORQUE WRENCHES - SQUARE DRIVE



Working pressure 700 Bar

Compact, lightweight, aluminium construction

Fitted with 360° Uni-Swivel quick release couplings

Hi-Force TWS-N series lightweight aluminium hydraulic torque wrenches are designed to handle the toughest bolting jobs accurately and quickly. All models provide a torque accuracy of $\pm 3\%$. The internal reaction arm spline allows the operator to easily position the tool and, if necessary, react directly off the tool body in very confined access applications. All models incorporate an easily reversible high grade alloy steel square drive enabling the operator to quickly switch from tightening to loosening applications. Uni-Swivel quick release couplers are fitted as standard to all models enabling easy positioning of the hydraulic hoses away from any possible "pinch points". Optional allen hex drives are available (see page 76) along with a comprehensive range of high quality torque wrench sockets. (See pages 77 & 78).

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- » Accurate to $\pm 3\%$ with calibration chart supplied
- » Multi-position reaction foot with safety lock feature
- » Reversible square drive for tightening and loosening applications
- » Suitable for continuous operation at maximum pressure



Allen hex drive adaptors
(see page 76)



Did you know.....

Hi-Force hydraulic torque tools are manufactured on the latest "State of the art" CNC machining centres, guaranteed to manufacture components to the highest quality standards available.

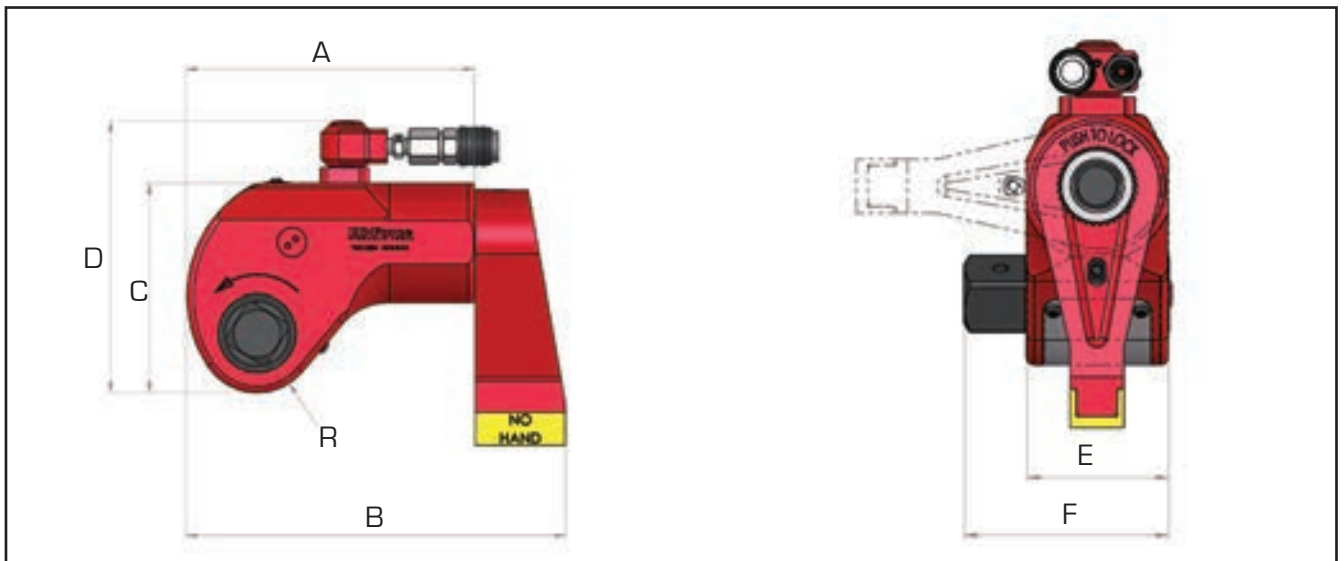
TWS-N - HYDRAULIC TORQUE WRENCHES - SQUARE DRIVE



Designed for tightening and loosening

Internal reaction arm spline

Accurate to +/- 3%



Model number	Torque Capacity		Square drive size	Weight incl. reaction foot kg
	Nm at 700 Bar	lbf.ft at 10,000 PSI		
TWS17N	1727	1254	¾"	1.9
TWS45N	4529	3289	1"	4.8
TWS100N	10064	7308	1 ½"	9.0
TWS150N	14974	10873	1 ½"	15.0
TWS370N	36992	26860	2 ½"	32.5

Dimensions in mm						
A	B	C	D	E	F	R
129	167	90	131	51	73	25
167	218	121	170	68	98	34
223	293	163	211	92	135	46
247	323	192	236	100	141	54
329	432	240	288	137	204	66

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Sizes available for all TWS-N wrenches

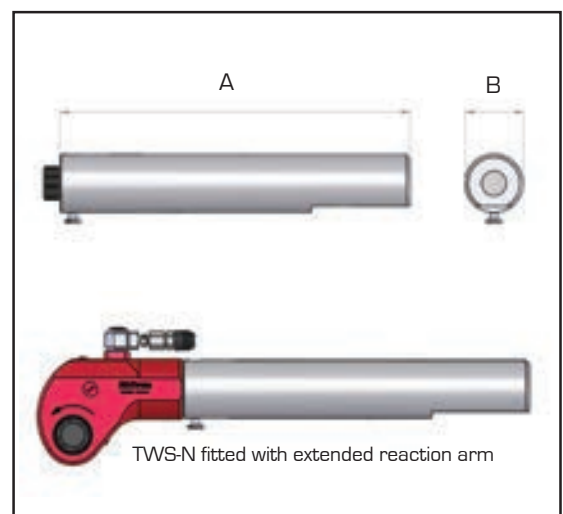
Limitations on applied torque (check before use)

Suitable for tightening & loosening applications

For tool Model number	Imperial Allen Hexagon Drive Adaptors			Metric Allen Hexagon Drive Adaptors		
	Model Number	Hexagon Size	Maximum Torque load Nm	Model Number	Hexagon Size	Maximum Torque load Nm
TWS17N	IH17N-008	1/2"	470	MH17N-14	14mm	740
	IH17N-010	5/8"	930	MH17N-17	17mm	1350
	IH17N-012	3/4"	1600	MH17N-19	19mm	1612
	IH17N-014	7/8"	1700	MH17N-22	22mm	1700
	IH17N-100	1"	1700	MH17N-24	24mm	1700
TWS45N	IH45N-010	5/8"	930	MH45N-17	17mm	1100
	IH45N-012	3/4"	1600	MH45N-19	19mm	1600
	IH45N-014	7/8"	2550	MH45N-22	22mm	2550
	IH45N-100	1"	3800	MH45N-24	24mm	3700
	IH45N-102	1 1/8"	4500	MH45N-27	27mm	4500
	IH45N-104	1 1/4"	4500	MH45N-32	32mm	4500
TWS100N	IH100N-014	7/8"	1890	MH100N-22	22mm	2480
	IH100N-100	1"	3800	MH100N-24	24mm	3700
	IH100N-102	1 1/8"	5440	MH100N-27	27mm	4650
	IH100N-104	1 1/4"	7480	MH100N-30	30mm	6380
	IH100N-106	1 3/8"	9920	MH100N-32	32mm	7625
	IH100N-108	1 1/2"	10000	MH100N-36	36mm	10000
TWS150N	IH150N-104	1 1/4"	7400	MH150N-30	30mm	7000
	IH150N-106	1 3/8"	9900	MH150N-32	32mm	7500
	IH150N-108	1 1/2"	15000	MH150N-36	36mm	10900
	IH150N-110	1 5/8"	15000	MH150N-41	41mm	15000
	IH150N-112	1 3/4"	15000	MH150N-46	46mm	15000
TWS370N	IH370N-108	1 1/2"	12900	MH370N-36	36mm	10000
	IH370N-110	1 5/8"	16300	MH370N-41	41mm	16300
	IH370N-112	1 3/4"	20400	MH370N-46	46mm	22500
	IH370N-114	1 7/8"	25100	MH370N-50	50mm	30600
	IH370N-200	2"	30600	MH370N-55	55mm	37000
	IH370N-204	2 1/4"	37000	MH370N-60	60mm	37000

Extended Reaction Arms

For tool Model number	Model Number	Length A		Diameter B	
		Inch	mm	Inch	mm
TWS17N	ERA17-21	21"	533	1 3/4"	44.5
	ERA17-24	24"	610	1 3/4"	44.5
	ERA17-36	36"	914	1 3/4"	44.5
TWS45N	ERA45-21	21"	533	2 1/2"	63.5
	ERA45-24	24"	610	2 1/2"	63.5
	ERA45-36	36"	914	2 1/2"	63.5
TWS100N	ERA100-21	21"	533	3 1/2"	88.9
	ERA100-24	24"	610	3 1/2"	88.9
	ERA100-36	36"	914	3 1/2"	88.9
TWS150N	ERA150-21	21"	533	3 1/2"	88.9
	ERA150-24	24"	610	3 1/2"	88.9
	ERA150-36	36"	914	3 1/2"	88.9
TWS370N	ERA370-21	21"	533	4 3/4"	120.6
	ERA370-24	24"	610	4 3/4"	120.6
	ERA370-36	36"	914	4 3/4"	120.6



IS - IMPERIAL HEXAGON AF SIZE HEAVY DUTY SOCKETS

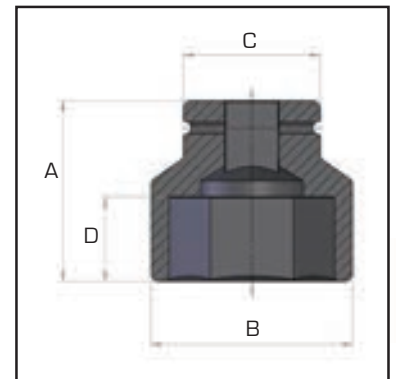


Square drives from $\frac{3}{4}$ " to $2\frac{1}{2}$ "

Across flat sizes up to $6\frac{7}{8}$ "

Supplied complete with retaining ring and pin

Hi-Force high quality imperial size heavy duty sockets are designed and manufactured for use with all Hi-Force bolting products, including hydraulic torque wrenches and impact wrenches. The IS range of imperial impact sockets offers 47 models, with square drives from $\frac{3}{4}$ " to $2\frac{1}{2}$ " and across flat sizes up to $6\frac{7}{8}$ ". Long length, bi-hexagonal and special sockets are available on request.



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Model number	Square drive	Nut AF inches	Dimensions in mm			
			A	B	C	D
IS2-101	$\frac{3}{4}$ "	$1\frac{1}{16}$ "	52	40	38	16
IS2-104	$\frac{3}{4}$ "	$1\frac{1}{4}$ "	52	44	44	20
IS2-107	$\frac{3}{4}$ "	$1\frac{7}{16}$ "	56	51	44	23
IS2-110	$\frac{3}{4}$ "	$1\frac{5}{8}$ "	62	58	44	27
IS2-113	$\frac{3}{4}$ "	$1\frac{13}{16}$ "	68	67	44	32
IS2-200	$\frac{3}{4}$ "	2"	72	71	54	35
IS2-203	$\frac{3}{4}$ "	$2\frac{3}{16}$ "	74	77	54	35
IS2-206	$\frac{3}{4}$ "	$2\frac{3}{8}$ "	75	84	54	35
IS9-101	1"	$1\frac{1}{16}$ "	58	44	51	17
IS9-104	1"	$1\frac{1}{4}$ "	60	51	51	21
IS9-107	1"	$1\frac{7}{16}$ "	62	56	52	26
IS9-110	1"	$1\frac{5}{8}$ "	62	62	52	26
IS9-113	1"	$1\frac{13}{16}$ "	64	68	58	27
IS9-200	1"	2"	70	74	58	31
IS9-203	1"	$2\frac{3}{16}$ "	72	80	62	32
IS9-206	1"	$2\frac{3}{8}$ "	78	87	62	35
IS9-209	1"	$2\frac{9}{16}$ "	80	93	62	36
IS9-212	1"	$2\frac{3}{4}$ "	85	98	62	40
IS9-215	1"	$2\frac{15}{16}$ "	95	104	86	48
IS9-302	1"	$3\frac{1}{8}$ "	100	109	86	52
IS9-308	1"	$3\frac{1}{2}$ "	105	125	86	52
IS9-314	1"	$3\frac{7}{8}$ "	105	136	95	52
IS5-113	$1\frac{1}{2}$ "	$1\frac{13}{16}$ "	84	76	86	27
IS5-200	$1\frac{1}{2}$ "	2"	87	82	86	29

Model number	Square drive	Nut AF inches	Dimensions in mm			
			A	B	C	D
IS5-203	$1\frac{1}{2}$ "	$2\frac{3}{16}$ "	90	86	86	36
IS5-206	$1\frac{1}{2}$ "	$2\frac{3}{8}$ "	92	93	86	38
IS5-209	$1\frac{1}{2}$ "	$2\frac{9}{16}$ "	95	97	86	40
IS5-212	$1\frac{1}{2}$ "	$2\frac{3}{4}$ "	100	105	86	43
IS5-215	$1\frac{1}{2}$ "	$2\frac{15}{16}$ "	103	110	86	45
IS5-302	$1\frac{1}{2}$ "	$3\frac{1}{8}$ "	110	116	86	50
IS5-308	$1\frac{1}{2}$ "	$3\frac{1}{2}$ "	118	130	86	55
IS5-314	$1\frac{1}{2}$ "	$3\frac{7}{8}$ "	125	140	95	58
IS5-404	$1\frac{1}{2}$ "	$4\frac{1}{4}$ "	125	150	95	58
IS5-410	$1\frac{1}{2}$ "	$4\frac{5}{8}$ "	135	165	95	65
IS5-500	$1\frac{1}{2}$ "	5"	140	179	127	70
IS5-506	$1\frac{1}{2}$ "	$5\frac{3}{8}$ "	150	195	127	75
IS6-302	$2\frac{1}{2}$ "	$3\frac{1}{8}$ "	140	124	127	51
IS6-308	$2\frac{1}{2}$ "	$3\frac{1}{2}$ "	140	135	127	51
IS6-314	$2\frac{1}{2}$ "	$3\frac{7}{8}$ "	150	147	127	57
IS6-404	$2\frac{1}{2}$ "	$4\frac{1}{4}$ "	160	159	127	64
IS6-410	$2\frac{1}{2}$ "	$4\frac{5}{8}$ "	170	172	127	71
IS6-500	$2\frac{1}{2}$ "	5"	175	185	127	75
IS6-506	$2\frac{1}{2}$ "	$5\frac{3}{8}$ "	180	197	127	79
IS6-512	$2\frac{1}{2}$ "	$5\frac{3}{4}$ "	185	210	127	83
IS6-602	$2\frac{1}{2}$ "	$6\frac{1}{8}$ "	190	223	127	91
IS6-608	$2\frac{1}{2}$ "	$6\frac{1}{2}$ "	195	235	127	95
IS6-614	$2\frac{1}{2}$ "	$6\frac{7}{8}$ "	200	248	127	105

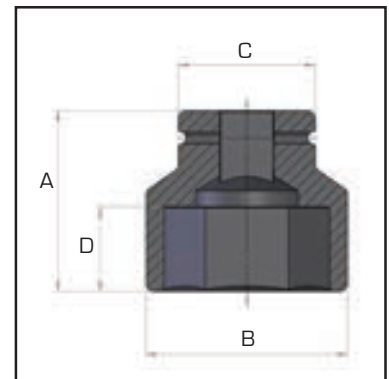
MS - METRIC HEXAGON AF SIZE HEAVY DUTY SOCKETS



Square drives from 3/4" to 2 1/2"

Across flat sizes up to 145mm

Supplied complete with retaining ring and pin



Hi-Force high quality metric size heavy duty sockets are designed and manufactured for use with all Hi-Force bolting products, including hydraulic torque wrenches and impact wrenches. The MS range of metric impact sockets offers 56 models, with square drives from 3/4" to 2 1/2" and across flat sizes up to 145mm. Long length, bi-hexagonal and special sockets are available on request.

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Model number	Square drive	Nut AF mm	Dimensions in mm			
			A	B	C	D
MS2-24	3/4"	24	50	39	44	16
MS2-27	3/4"	27	54	43	44	16
MS2-30	3/4"	30	54	47	44	23
MS2-32	3/4"	32	56	49	44	23
MS2-36	3/4"	36	56	54	44	23
MS2-41	3/4"	41	58	60	44	24
MS2-46	3/4"	46	63	67	44	30
MS2-50	3/4"	50	72	71	54	32
MS2-55	3/4"	55	74	78	54	35
MS2-60	3/4"	60	75	84	54	37
MS9-24	1"	24	58	42	54	17
MS9-27	1"	27	58	46	54	17
MS9-30	1"	30	60	50	54	21
MS9-32	1"	32	60	51	54	21
MS9-36	1"	36	65	56	54	30
MS9-41	1"	41	67	63	54	31
MS9-46	1"	46	74	69	54	36
MS9-50	1"	50	80	74	54	42
MS9-55	1"	55	84	80	54	44
MS9-60	1"	60	87	86	54	44
MS9-65	1"	65	90	92	54	46
MS9-70	1"	70	96	99	54	51
MS9-75	1"	75	98	106	86	45
MS9-80	1"	80	100	112	86	48
MS9-85	1"	85	105	118	86	52
MS9-90	1"	90	105	125	86	52
MS9-95	1"	95	115	131	86	52
MS9-100	1"	100	115	137	95	58

Model number	Square drive	Nut AF mm	Dimensions in mm			
			A	B	C	D
MS5-36	1 1/2"	36	78	64	86	23
MS5-41	1 1/2"	41	80	70	86	26
MS5-46	1 1/2"	46	84	76	86	27
MS5-50	1 1/2"	50	87	81	86	29
MS5-55	1 1/2"	55	90	86	86	36
MS5-60	1 1/2"	60	92	93	86	38
MS5-65	1 1/2"	65	95	97	86	40
MS5-70	1 1/2"	70	100	105	86	43
MS5-75	1 1/2"	75	103	110	86	45
MS5-80	1 1/2"	80	110	116	86	50
MS5-85	1 1/2"	85	118	125	86	55
MS5-90	1 1/2"	90	118	130	86	55
MS5-95	1 1/2"	95	118	137	95	55
MS5-100	1 1/2"	100	125	140	95	58
MS5-105	1 1/2"	105	125	150	95	58
MS5-110	1 1/2"	110	125	156	95	58
MS5-115	1 1/2"	115	135	160	95	65
MS5-130	1 1/2"	130	140	185	127	70
MS6-80	2 1/2"	80	140	124	127	51
MS6-85	2 1/2"	85	140	130	127	51
MS6-90	2 1/2"	90	145	136	127	54
MS6-95	2 1/2"	95	145	143	127	54
MS6-100	2 1/2"	100	150	149	127	57
MS6-105	2 1/2"	105	155	155	127	61
MS6-110	2 1/2"	110	160	161	127	64
MS6-115	2 1/2"	115	165	167	127	67
MS6-130	2 1/2"	130	175	188	127	75
MS6-145	2 1/2"	145	185	208	127	83