

HYDRAULIC & MECHANICAL TOOLS



SELECT FROM A WIDE RANGE OF HYDRAULIC & MECHANICAL TOOLS TO COMPLETE YOUR SYSTEM REQUIREMENTS

- Full range of torque wrenches, low clearance in-line drives and pumps for your bolting applications.
- Specialty tools include nut splitters, spreaders, bead breakers and pipe flange tools.
- Hydraulic clamps for those unique applications requiring higher forces.
- Hydraulic testers and accessories to monitor hydraulic circuits.
- Wide selection of mechanical tools, such as pliers, pry bars, O-ring picks, thread chasers and more.





	Section / Series	Page Description	Page(s)
	TWHC, TWSD, TWLC, TWSL	High Cycle Torque Wrench, Square Drive Torque Wrench, Low Clearance Torque Wrench, SlimLine Torque Wrench	187-190 191-194 195-199 201-202
	X1	X1E1 - Electric Torque Wrench Pump, X1A1 - Air Torque Wrench Pump	203 204
	PE30 TWP	Electric Hydraulic Torque Wrench Pump	205
	PE55 TWP	Electric Hydraulic Torque Wrench Pump	206
	RWP55	Air Hydraulic Torque Wrench Pump	207
	HNS	Hydraulic Nut Splitter	208
	FLS	Hydraulic Flange Spreader	209-210
	HFS	Pipe Flange, Hydraulic Spreader	211
	HS	Hydraulic Spreaders	212
	CC	Hydraulic C-Clamps & Accessories	213
	BB	Bead Breaker, Tire Removing Tool	214
	HP35	Hydraulic Punches and Accessories	215-216
	HT	Hydraulic Testers and Accessories	217-219
	PLIERS	Retaining Ring Pliers (Internal & External)	220
	HAND TOOLS	Wrenches, Pry Bars, Spanners & Jimmy Bars	221
	SERVICE TOOLS	Pipe Sealant, O-Ring Seal Picks, Thread Chaser, and Magnetic Pick-Up	222

Model Shown:
TWHC3



>Features

QUALITY MEANS LOWER COST OF OWNERSHIP

- Designed for high cycle life (2-3x more than existing technology)
- Increased reliability provided by simple drive assembly means less downtime
- Corrosion resistant material for use in harsh environments

ENHANCED USABILITY:

- Compact nose radius allows the tool to fit in tighter, hard-to-reach spaces
- Low weight, high strength design
- Fast operation, long stroke and optimum flow
- Multi-direction high flow swivel manifold
- Push-button square drive reversal and reaction arm positioning for all models except TWHC50

DESIGNED WITH SAFETY IN MIND:

- Fully-enclosed drive mechanism for operator safety
- Swivel manifold internal relief valve prevents retract side over-pressurization
- Fine tooth pawl prevents tool 'lock-on'

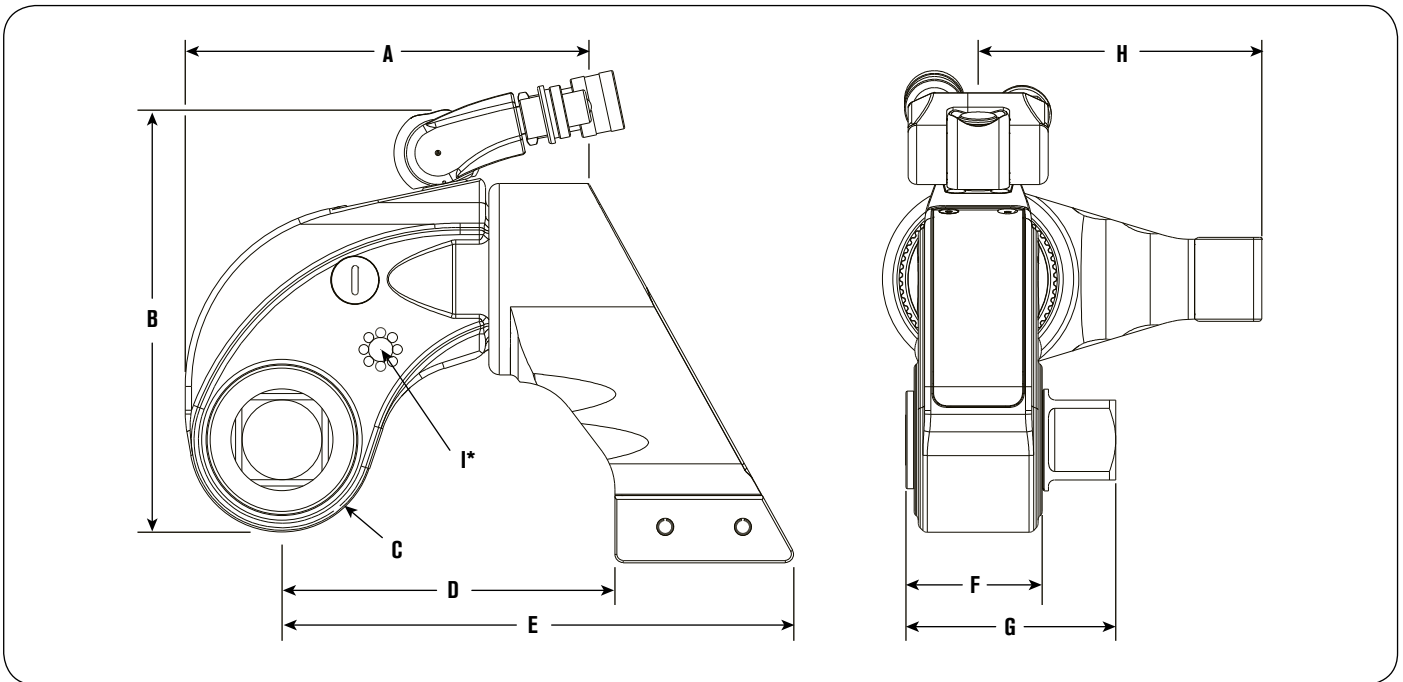
▶ The TWSD50 is the perfect choice in this power generation application.



HANDLES SOLD SEPARATELY



The tool's designed long-stroke mechanism imparts a minimum 30 degree nut rotation per stroke while maintaining a tight and compact nose radius. This is a clear advantage over the short stroke and back-up pawl mechanisms of light alloy competitive models. Fewer parts and reduced torsion in operation equals reduced wear, maintenance and associated costs.



* Dimension I shows thread size (on both sides of the tool) for safety handle or lifting point. TWHC50 model available with lifting points only.

► **Technical Dimensions**

Tool Model	Min Torque	Max Torque	Square Drive	A	B	C	D	E	F	G	H	I	Prod. Wt.
	(Nm)	(Nm)		(in.)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
TWHC1	230	1916	3/4	132,1	145,0	27,9	111,5	169,9	39,6	67,8	86,1	M6 x 1.0	2,8
TWHC3	510	4252	1	165,1	173,5	36,6	129,5	197,6	53,1	83,8	105,1	M6 x 1.0	5,3
TWHC6	984	8203	1 1/2	192,0	201,7	43,9	158,5	243,6	61,0	99,8	135,1	M8 x 1.25	8,8
TWHC50	8623	71859	2 1/2	404,6	356,6	87,9	266,4	446,5	115,1	192,3	258,0	M12 x 1.75	68,9

► **Ordering Information**

Order No.	Description
TWHC1	Wrench
TWHC3	Wrench
TWHC6	Wrench
TWHC50	Wrench

Order No.	Description
TWHC1H	Wrench with Handle
TWHC3H	Wrench with Handle
TWHC6H	Wrench with Handle

Order No.	Description
DFTAS000001	Handle for TWHC1
DFTAS000001	Handle for TWHC3
DFTAS000002	Handle for TWHC6

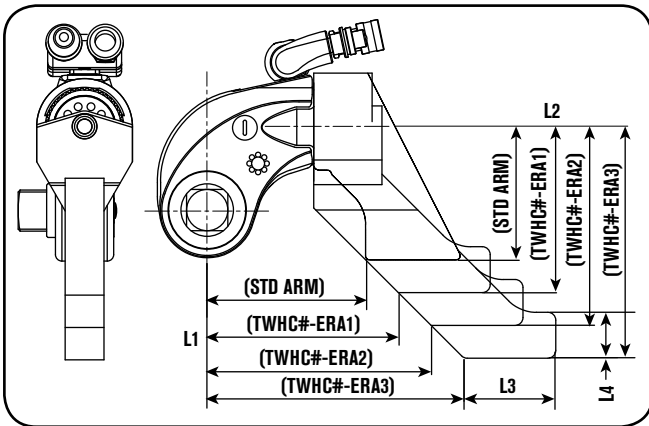
TWHC EXTENDED REACTION ARM TWHC-ERA



>Features

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

▶ Ordering Information



Tool Ref	Order No.	L1	L2	L3	L4	Weight (kg)
		(mm)	(mm)	(mm)	(mm)	
STD ARM		112,0	86,1	—	—	—
TWHC1	TWHC1-ERA1	136,9	111,0	59,9	30,0	2
	TWHC1-ERA2	162,1	135,9			2,3
	TWHC1-ERA3	186,9	161,0			2,6
STD ARM		130,0	104,9	—	—	—
TWHC3	TWHC3-ERA1	154,9	130,0	70,1	35,1	3
	TWHC3-ERA2	180,1	154,9			3,5
	TWHC3-ERA3	205,0	180,1			3,9
STD ARM		158,2	135,9	—	—	—
TWHC6	TWHC6-ERA1	183,9	161,0	95,0	39,9	5
	TWHC6-ERA2	209,0	185,9			5,6
	TWHC6-ERA3	233,9	211,1			6,2

TW HANDLE



>Features

- 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/TWLC 30/TWHC50) we recommend the use of eye-bolt lifting.

▶ Ordering Information

Order No.	Description	Tool Ref
DFTAS000001	Wrench Handle	TWSD1
		TWSD3
		TWHC1
		TWHC3
		TWLC2

Order No.	Description	Tool Ref
DFTAS000002	Wrench Handle	TWSD6
		TWSD11
		TWHC6
		TWLC4
		TWLC8
		TWLC15

TWHC REACTION PAD TWHC-RP

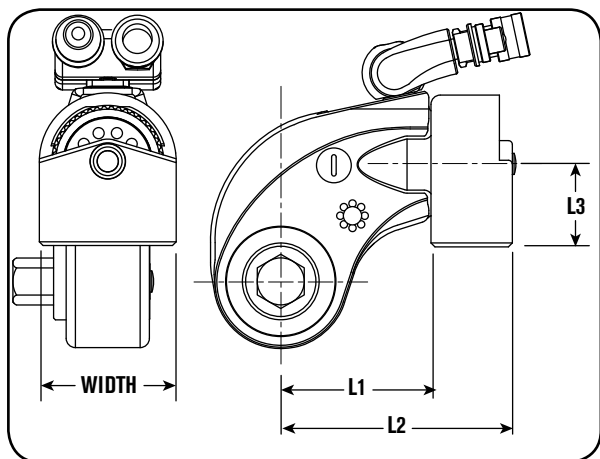


Features

- In-Line Reaction Pad for TWHC wrenches used as simple pad, or modified platform for specific application (Machine-able/Weld-able platform)
- Replaces standard reaction arm via quick release locking pin
- Steel alloy construction
- 360° rotation
- Available for full range of tool sizes

Ordering Information

Tool Ref	Order No.	L1	L2	L3	Width	Weight
		(mm)	(mm)	(mm)	(mm)	(kg)
TWHC1	TWHC1-RP	72,0	116,0	49,0	64,0	1
TWHC3	TWHC3-RP	86,1	137,9	55,1	75,9	1,5
TWHC6	TWHC6-RP	99,1	162,1	62,0	88,9	2,3



TWHC LONG REACTION ARM TWHC-LRA

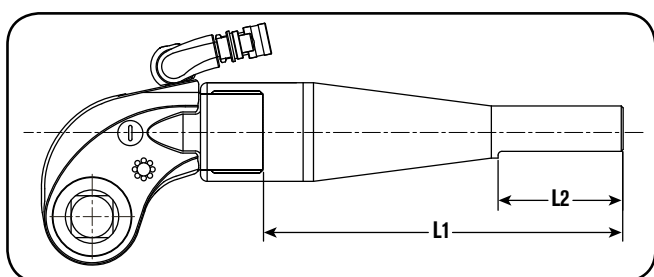


Features

- Tubular extension arm for TWHC wrenches for in-line reaction outside wrench profile
- Replaces standard reaction arm via 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

Ordering Information

Tool Ref	Order No.	L1	L2	Weight
		(mm)	(mm)	(kg)
TWHC1	TWHC1-LRA	500,9	152,4	4,5
TWHC3	TWHC3-LRA			6
TWHC6	TWHC6-LRA			8,1



Model Shown:
TWSD11



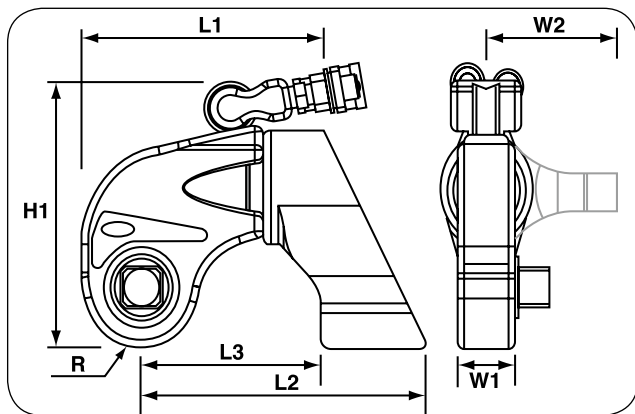
Features

HYDRAULIC SQUARE DRIVE TORQUE WRENCHES

- Corrosion resistant finish, low weight, high strength steel body construction design with superior torsional strength.
- Fast operation cycle, fine tooth ratchet, with floating piston design.
- Multi-axis high flow swivel manifold with internal relief valve prevents retract side over-pressurization
- Push button reversal of square drive
- 360° reaction arm, with push to lock reaction arm.
- Simple design, fully enclosed drive mechanism, provides accurate torque output

NOTE: Standard Reaction Arm included for all models

▶ The TWSD11 is th perfect choice with a large reaction surface to eliminate damage to the gears during the tightening process.

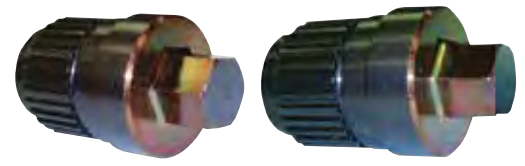


Technical Dimensions

Tool Model	L1	L2	L3	H1	R	W1	W2	Square Drive	Max. Torque	Tool Wt.
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(in.)	(Nm)	(kg)
TWSD11	233,9	292,1	178,1	241,0	55,9	61,0	165,1	1 1/2	14833	13,1
TWSD25	305,1	375,9	230,9	315,0	71,1	75,9	199,9	2 1/2	33489	29,5

Ordering Information

Order No.	Description	Order No.	Description
TWSD11	Wrench - 14833 Nm	DFTAS000002	Wrench Handle Size 2 Tool Ref. TWSD06 and TWSD11
TWSD25	Wrench - 33489 Nm		



► Ordering Information

SQUARE DRIVE - ADAPTERS & SOCKETS

Torque Wrench	Hexagon Drive Size AF (mm)	Order No.		Torque Wrench	Hexagon Drive Size AF (mm)	Order No.	
		TWSD	TWHC			TWSD	TWHC
(TWSD1) (TWHC1)	17		TWHCHD01-017	(TWSD6) (TWHC6)	30		TWHCHD06-030
	19		TWHCHD01-019		32		TWHCHD06-032
	22		TWHCHD01-022		36		TWHCHD06-036
	24		TWHCHD01-024		41		TWHCHD06-041
(TWSD3) (TWHC3)	17		TWHCHD03-017		(TWSD11)	27	TWD11-027
	19		TWHCHD03-019	30		TWD11-030	-
	22		TWHCHD03-022	32		TWD11-032	-
	24		TWHCHD03-024	36		TWD11-036	-
	27		TWHCHD03-027	41		TWD11-041	-
	30		TWHCHD03-030	46		TWD11-046	-
	32		TWHCHD03-032	(TWSD25)	36	TWD25-036	-
	36		TWHCHD03-036		41	TWD25-041	-
41		TWHCHD03-041	46		TWD25-046	-	
(TWSD6) (TWHC6)	17		TWHCHD06-017		50	TWD25-050	-
	19		TWHCHD06-019		55	TWD25-055	-
	22		TWHCHD06-022	60	TWD25-060	-	
	24		TWHCHD06-024	65	TWD25-065	-	
	27		TWHCHD06-027	70	TWD25-070	-	



► Ordering Information

SQUARE DRIVE - IMPACT SOCKETS

Socket Size (mm)	3/4" Drive	1" Drive	1 1/2" Drive	2 1/2" Drive	Socket Size (mm)	3/4" Drive	1" Drive	1 1/2" Drive	2 1/2" Drive
	Part No.	Part No.	Part No.	Part No.		Part No.	Part No.	Part No.	Part No.
22	TWSIA022	TWSIB022	—	—	75	—	—	TWSIC075	—
24	TWSIA024	TWSIB024	—	—	80	—	TWSIB080	TWSIC080	TWSIF080
32	TWSIA032	TWSIB032	—	—	85	—	TWSIB085	TWSIC085	TWSIF085
36	TWSIA036	TWSIB036	—	—	90	—	TWSIB090	TWSIC090	TWSIF090
41	TWSIA041	TWSIB041	TWSIC041	—	95	—	TWSIB095	TWSIC095	TWSIF095
46	TWSIA046	TWSIB046	—	—	100	—	TWSIB100	—	TWSIF100
50	TWSIA050	TWSIB050	—	—	110	—	TWSIB110	TWSIC110	TWSIF110
55	—	TWSIB055	—	—	115	—	—	TWSIC115	TWSIF115
60	—	TWSIB060	TWSIC060	—	120	—	—	TWSIC120	—
65	—	TWSIB065	TWSIC065	—	135	—	—	—	TWSIF135
70	—	TWSIB070	TWSIC070	—	150	—	—	—	TWSIF150

NOTE: 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.

TWSD EXTENDED REACTION ARM TWSD-ERA

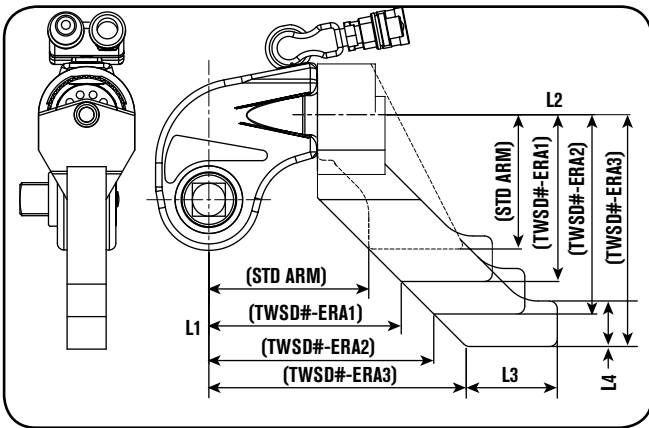


Features

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

Tool Ref	Order No.	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	Weight (kg)
STD ARM		179,1	165,1			
TWSD11	TWSD11-ERA1	204,0	190,0	110,0	39,9	8
	TWSD11-ERA2	229,1	214,9			8,5
	TWSD11-ERA3	254,0	240,0			9,5
STD ARM		230,9	199,9			
TWSD25	TWSD25-ERA1	256,0	225,0	145,0	50,0	18
	TWSD25-ERA2	280,9	249,9			20
	TWSD25-ERA3	306,07	275,08			147,0

Ordering Information



TW HANDLE



Features

- 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.

Ordering Information

Order No.	Description	Tool Ref
DFTAS000001	Wrench Handle	TWHC1
		TWHC3
		TWLC2

Order No.	Description	Tool Ref
DFTAS000002	Wrench Handle	TWSD11
		TWHC6
		TWLC4
		TWLC8
		TWLC15

TWSD REACTION PAD TWSD-RP

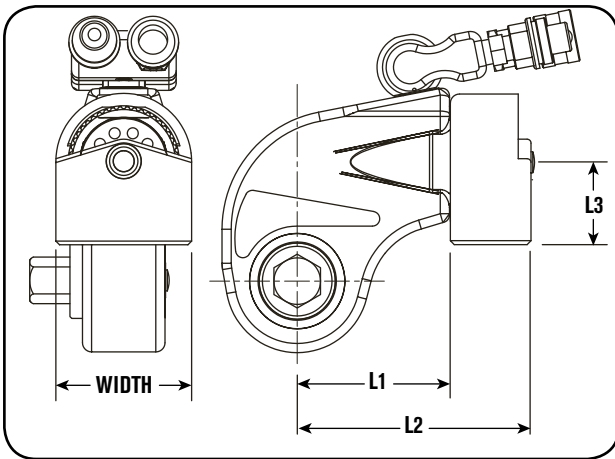


Features

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

Ordering Information

Tool Ref	Order No.	L1	L2	L3	Width (mm)	Weight (kg)
		(mm)	(mm)	(mm)		
TWSD11	TWSD11-RP	109,5	184,5	65,5	105,0	4
TWSD25	TWSD25-RP	136,5	243,5	88,5	143,0	10



TWSD LONG REACTION ARM TWSD-LRA

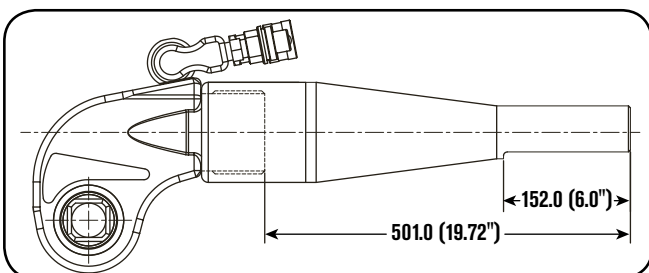


Features

- Tubular extension arm for TWSD wrenches for in-line reaction outside wrench profile
- Replaces standard reaction arm via quick release locking pin
- 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

Ordering Information

Tool Ref	Order No.	L1	L2	Weight (kg)
		(mm)	(mm)	
TWSD11	TWSD11-LRA	500,9	152,4	11
TWSD25	TWSD25-LRA			22



Model Shown:

TWLC Body

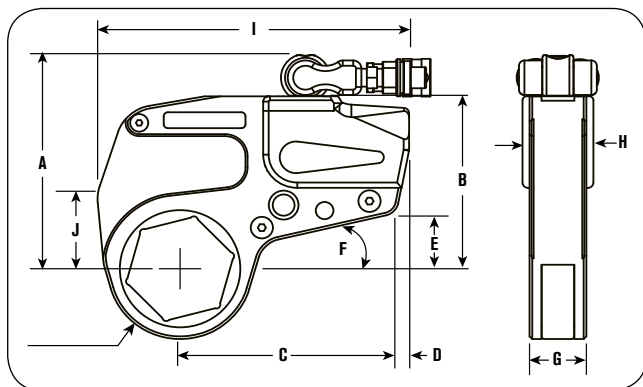


* Links sold separately.
Tool is not shipped with link.

Features

THE CLEARANCE TOOL FEATURES A LONG NECK, SHORT HEIGHT, AND SMALL NOSE RADIUS FOR INACCESSIBLE BOLTING AREAS FOUND IN INDUSTRY.

- Corrosion resistant finish, low weight, high strength steel body construction design with superior torsional strength.
- Fine tooth ratchet with floating piston design with small nose radius, allows for a fast operation cycle.
- Link pin does not fall out.
- Multi-axis high flow swivel manifold with internal relief valve prevents retract side over-pressurization
- “Hardened” steel reaction pad on TWLC8, 15 & 30
- Simple design, auto-connect drive piston quick interchangeable heads, no tools necessary, consistent torque output
- Replaceable reaction pad on larger models
- Power Team PowerThon™ Limited Lifetime Warranty



Torque Wrench Hoses - Non-Conductive Dual Line



Order No.	Hose Length (m)	Hose I.D. (in.)
TWH15	4,6	1/4"
TWH20	6,1	1/4"
TWH30	15,2	1/4"

Technical Dimensions

Body Order No.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)
TWLC2	96,5	104,1	127,0	7,6	35,6	12,7	33,0	43,2
TWLC4	119,4	129,5	160,0	10,2	43,2	12,7	43,2	50,8
TWLC8	147,3	157,5	177,8	25,4	40,6	15,2	53,3	66,0
TWLC15	175,3	185,4	200,7	27,9	43,2	15,2	63,5	76,2
TWLC30	223,5	238,8	266,7	25,4	61,0	15,2	81,3	94,0

Ordering Information

Tool Model	Hex Range (mm)	Min.Torque (Nm)	Max.Torque (Nm)	Weight. (Body Only) (kg)
TWLC2	26 - 50	256	2135	1,0
TWLC4	33 - 80	647	5389	2,0
TWLC8	49 - 100	1293	10779	3,5
TWLC15	62 - 116	2416	20134	7,0
TWLC30	80 - 115	4686	39048	14,5

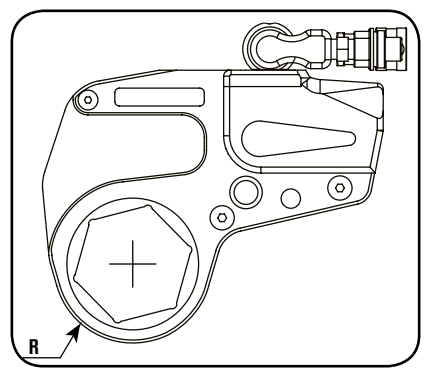


Special sizes available upon request.

LOW CLEARANCE - REDUCERS								
Body Order No.	Link	Nut A/F (mm)	Reducer (mm)	Reducer	Reducer (mm)	Reducer	Reducer (mm)	Reducer
	Part No.			Part No.		Part No.		Part No.
TWLC2	TWL2-032	32	—	—	—	—	—	—
	TWL2-036	36	—	—	—	—	—	—
	TWL2-041	41	41-36	TWR2-041036	41-32	TWR2-041032	—	—
	TWL2-046	46	46-41	TWR2-046041	46-36	TWR2-046036	46-32	TWR2-046032
	TWL2-050	50	50-46	TWR2-050046	50-41	TWR2-050041	50-36	TWR2-050036
	TWL2-055	55	55-50	TWR2-055050	55-46	TWR2-055046	55-41	TWR2-055041
TWLC4	TWL2-060	60	60-55	TWR2-060055	60-50	TWR2-060050	60-46	TWR2-060046
	TWL4-041	41	41-36	TWR4-041036	41-32	TWR4-041032	—	—
	TWL4-046	46	46-41	TWR4-046041	46-36	TWR4-046036	46-32	TWR4-046032
	TWL4-050	50	50-46	TWR4-050046	50-41	TWR4-050041	50-36	TWR4-050036
	TWL4-055	55	55-50	TWR4-055050	55-46	TWR4-055046	55-41	TWR4-055041
	TWL4-060	60	60-55	TWR4-060055	60-50	TWR4-060050	60-46	TWR4-060046
	TWL4-065	65	65-60	TWR4-065060	65-55	TWR4-065055	65-50	TWR4-065050
	TWL4-070	70	70-65	TWR4-070065	70-60	TWR4-070060	70-55	TWR4-070055
TWLC8	TWL4-075	75	75-70	TWR4-075070	75-65	TWR4-075065	75-60	TWR4-075060
	TWL4-080	80	80-75	TWR4-080075	80-70	TWR4-080070	80-65	TWR4-080065
	TWL8-060	60	60-55	TWR8-060055	60-50	TWR8-060050	60-46	TWR8-060046
	TWL8-065	65	65-60	TWR8-065060	65-55	TWR8-065055	65-50	TWR8-065050
	TWL8-070	70	70-65	TWR8-070065	70-60	TWR8-070060	70-55	TWR8-070055
	TWL8-075	75	75-70	TWR8-075070	75-65	TWR8-075065	75-60	TWR8-075060
	TWL8-080	80	80-75	TWR8-080075	80-70	TWR8-080070	80-65	TWR8-080065
	TWL8-085	85	85-70	TWR8-085080	85-65	TWR8-085075	85-70	TWR8-085070
TWLC15	TWL8-090	90	90-85	TWR8-090085	90-80	TWR8-090080	90-75	TWR8-090075
	TWL8-095	95	95-90	TWR8-095090	95-85	TWR8-095085	95-80	TWR8-095080
	TWL8-100	100	100-95	TWR8-100095	100-90	TWR8-100090	100-85	TWR8-100085
	TWL15-070	70	70-65	TWR15-070065	70-60	TWR15-070060	70-55	TWR15-070055
	TWL15-075	75	75-70	TWR15-075070	75-65	TWR15-075065	75-60	TWR15-075060
	TWL15-080	80	80-75	TWR15-080075	80-70	TWR15-080070	80-65	TWR15-080065
	TWL15-085	85	85-80	TWR15-085080	85-75	TWR15-085075	85-70	TWR15-085070
	TWL15-090	90	90-85	TWR15-090085	90-80	TWR15-090080	90-75	TWR15-090075
	TWL15-095	95	95-90	TWR15-095090	95-85	TWR15-095085	95-80	TWR15-095080
	TWL15-100	100	100-95	TWR15-100095	100-90	TWR15-100090	100-85	TWR15-100085
TWLC30	TWL15-105	105	105-100	—	105-95	—	105-90	—
	TWL15-425	—	—	TWR15-425388	—	TWR15-425375	—	TWR15-425350
	TWL15-110	110	110-105	—	110-100	—	110-95	—
	TWL15-115	115	115-110	—	115-105	—	115-100	—
	TWL15-463	—	—	TWR15-463425	—	TWR15-463388	—	TWR15-463375
	TWL30-080	80	80-75	TWR30-080075	80-70	TWR30-080070	80-65	TWR30-080065
	TWL30-085	85	85-80	TWR30-085080	85-65	TWR30-085075	85-70	TWR30-085070
	TWL30-090	90	90-85	TWR30-090085	90-80	TWR30-090080	90-75	TWR30-090075
	TWL30-095	95	95-90	TWR30-095090	95-85	TWR30-095085	95-80	TWR30-095080
	TWL30-100	100	100-95	TWR30-100095	100-90	TWR30-100090	100-85	TWR30-100085
	TWL30-105	105	105-100	TWR30-105100	105-95	TWR30-105095	105-90	TWR30-105090
	TWL30-425	—	—	TWR30-425388	—	TWR30-425375	—	TWR30-425350
	TWL30-110	110	110-105	—	110-100	—	110-95	—
	TWL30-115	115	115-110	—	115-105	—	115-100	—
	TWL30-463	—	—	TWR30-463425	—	TWR30-463388	—	TWR30-463375
TWL30-120	120	120-115	—	120-110	—	120-105	—	
TWL30-500	—	—	TWR30-500463	—	TWR30-500425	—	TWR30-500388	
TWL30-130	130	130-120	—	130-115	—	130-110	—	
TWL30-135	135	135-125	TWR30-135125	135-120	TWR30-135120	135-115	TWR30-135115	
TWL30-145	145	—	—	—	—	—	—	
TWL30-150	150	—	—	—	—	—	—	
TWL30-155	155	—	—	—	—	—	—	

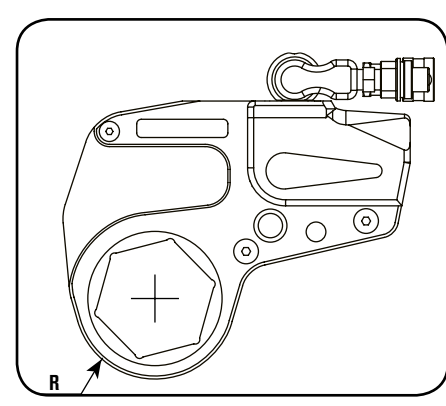
AVAILABLE UPON REQUEST

Nut A/F (mm)	TWLC2					TWLC4					TWLC8				
	Link Order No.	Radius R (mm)	I (mm)	J (mm)	Weight (Link Only) (kg)	Link Order No.	Radius R (mm)	I (mm)	J (mm)	Weight (Link Only) (kg)	Link Order No.	Radius R (mm)	I (mm)	J (mm)	Weight (Link Only) (kg)
26	TWL2-026	31,5	180,1	38,1	2	-	36,6	227,1	53,1	224,0	-	50,5	274,1	77,0	7
27	TWL2-027					-									
29	TWL2-029					-									
30	TWL2-030					-									
32	TWL2-032					-									
33	TWL2-033					-									
35	TWL2-035	-													
36	TWL2-036	-													
38	TWL2-150	34,5	181,1	39,9	2	TWL4-150	36,6	227,1	53,1	224,0	-	50,5	274,1	77,0	7
40	TWL2-040					TWL4-040									
41	TWL2-041	-	-	-	-	TWL4-041	-	-	-	-	-	-	-	-	-
43	TWL2-043	37,1	182,9	39,9	2	TWL4-043	39,1	227,1	53,1	4	-	50,5	274,1	77,0	7
44	TWL2-044					TWL4-044									
46	TWL2-046	-	-	-	-	TWL4-046	-	-	-	-	-	-	-	-	-
48	TWL2-188	39,9	184,9	42,9	2	TWL4-188	41,9	227,1	53,1	4	TWL8-188	50,5	274,1	77,0	7
49	TWL2-049					TWL4-049					TWL8-049				
50	TWL2-050					TWL4-050					TWL8-050				
52	TWL2-052	42,4	184,9	42,9	2	TWL4-052	44,5	227,1	53,1	4	TWL8-052	50,5	274,1	77,0	7
54	TWL2-054					TWL4-054					TWL8-054				
55	TWL2-055					TWL4-055					TWL8-055				
57	TWL2-057					TWL4-225					TWL8-057				
59	TWL2-059	45,5	184,91	42,9	2	TWL4-059	47,5	227,1	53,1	4	TWL8-059	50,5	274,1	77,0	7
60	TWL2-060					TWL4-060					TWL8-060				
62	-	-	-	-	-	TWL4-062	50,0	227,1	53,1	4	TWL8-062	53,1	274,1	77,0	7,5
63	-	-	-	-	-	TWL4-063					TWL8-063				
65	-	-	-	-	-	TWL4-065	53,1	229,11	55,9	4	TWL8-065	55,9	274,1	77,0	7,5
67	-	-	-	-	-	TWL4-067					TWL8-067				
68	-	-	-	-	-	TWL4-068	55,63	229,11	55,9	4,5	TWL8-068	58,4	274,1	77,0	7,5
70	-	-	-	-	-	TWL4-070					TWL8-070				
71	-	-	-	-	-	TWL4-071	58,93	230,12	57,91	4,5	TWL8-071	62,0	277,1	71,9	8
73	-	-	-	-	-	TWL4-073					TWL8-073				
75	-	-	-	-	-	TWL4-075					TWL8-075				
77	-	-	-	-	-	TWL4-077	58,93	230,12	57,91	4,5	TWL8-077	62,0	277,1	71,9	8
78	-	-	-	-	-	TWL4-313					TWL8-313				
80	-	-	-	-	-	TWL4-080	-	-	-	-	TWL8-080	67,1	277,11	71,9	8
81	-	-	-	-	-	-					TWL8-081				
83	-	-	-	-	-	-					TWL8-083				
84	-	-	-	-	-	-					TWL8-084				
85	-	-	-	-	-	-					TWL8-085				
87	-	-	-	-	-	-					TWL8-087				
89	-	-	-	-	-	-					TWL8-089				
90	-	-	-	-	-	-					TWL8-090				
91	-	-	-	-	-	-					TWL8-091				
92	-	-	-	-	-	-					TWL8-092				
94	-	-	-	-	-	-	TWL8-094	73,41	277,11	71,88	8				
95	-	-	-	-	-	-	TWL8-095								
97	-	-	-	-	-	-	TWL8-097								
99	-	-	-	-	-	-	TWL8-388								
100	-	-	-	-	-	-	TWL8-100								



NOTE: The sizes listed on these pages encompass both heavy hex and standard hex nut sizes. Check your local SPX FLOW Power Team Office for availability as some items may be special order.

Nut A/F (mm)	TWLC15					TWLC30					Nut A/F (mm)	TWLC30 (Continued)											
	Link Order No.	Radius R (mm)	I (mm)	J (mm)	Weight (Link Only) (kg)	Link Order No.	Radius R (mm)	I (mm)	J (mm)	Weight (Link Only) (kg)		Link Order No.	Radius R (mm)	I (mm)	J (mm)	Weight (Link Only) (kg)							
62	TWL15-062					-					122	TWL30-122											
63	TWL15-063					-					123	TWL30-123											
65	TWL15-065	60,5	312,9	87,9	12,5	-					124	TWL30-124	99,1	400,1	109,0	28,5							
67	TWL15-067					-				125	TWL30-125												
68	TWL15-068					-				127	TWL30-500												
70	TWL15-070					-				129	TWL30-129												
71	TWL15-071					-				130	TWL30-130												
73	TWL15-073	63,0	312,9	87,9	12,5	-					132	TWL30-132	104,9	400,1	109,0	28,5							
75	TWL15-075					-				133	TWL30-133												
77	TWL15-077					-				135	TWL30-135												
78	TWL15-313	66,5	312,9	87,9	13	-					137	TWL30-538					110,0	400,1	109,0	28,5			
80	TWL15-080					TWL30-080				138	TWL30-138												
81	TWL15-081					TWL30-081				140	TWL30-140												
83	TWL15-083					TWL30-083				141	TWL30-141												
84	TWL15-084					TWL30-084				143	TWL30-143												
85	TWL15-085					71,9	312,9	87,9	13,5	TWL30-085	77,0	392,9	103,9	26,5	144	TWL30-144							
87	TWL15-087									TWL30-087													
89	TWL15-089									TWL30-089													
90	TWL15-090									TWL30-090													
91	TWL15-091									TWL30-091												146	TWL30-146
92	TWL15-092	TWL30-092								148					TWL30-148								
94	TWL15-094	TWL30-094				149	TWL30-149																
95	TWL15-095	78,0	316,0	80,0	13,5	TWL30-095	83,1	392,9	103,9	26,5	150	TWL30-150	116,1	400,1	109,0	29,5							
97	TWL15-097					TWL30-097																	
99	TWL15-388					TWL30-388																	
100	TWL15-100					TWL30-100																	
102	TWL15-102					TWL30-102												151	TWL30-151				
103	TWL15-103	TWL30-103				152	TWL30-152																
105	TWL15-105	82,6	316,0	80,0	14	TWL30-105	88,9	392,9	103,9	27,5	154	TWL30-154											
106	TWL15-106					TWL30-106																	
108	TWL15-425					TWL30-425																	
110	TWL15-110	TWL30-110				155	TWL30-155																
111	TWL15-111	TWL30-111																					
113	TWL15-113	TWL30-113																					
114	TWL15-114	87,4	316,0	80,0	14	TWL30-114	91,9	392,9	103,9	27,5													
115	TWL15-115					TWL30-115																	
116	TWL15-116					TWL30-116																	
117	TWL15-463					TWL30-463																	
119	-					TWL30-119								99,1	400,1	109,0	28,5						
120	-					TWL30-120																	



- To Specify a TWLC solution:
1. Find a link for your application (nut size)
 2. Choose the appropriate drive body
 3. Add reducers for additional nut sizes

NOTE: Please order Drive Body and Link separately and pay attention to the same size, for Example TWLC2 and TWL2-041.

TWLC REACTION BAR TWLC-RB



Features

- In-Line Extension Reaction Bar for TWLC wrenches allows extended reach on the same plane
- Pin engagement, no tools required
- Available for full range of tool sizes

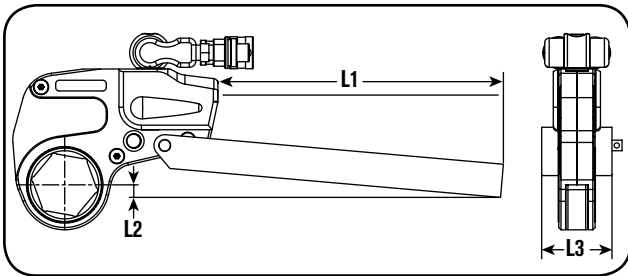


Reaction Accessories

Power Team offers a varied range of alternative and optional reaction accessories which help to find a reaction point solution no matter how unusual the bolted application is.

Ordering Information

Tool Ref	Order No.	L1 (mm)	L2 (mm)	L3 (mm)	Weight (kg)
TWLC2	TWLC2-RB	381,0	27,9	55,1	2,6
TWLC4	TWLC4-RB	457,2	35,1	66,0	4,8
TWLC8	TWLC8-RB	457,2	37,1	85,1	9,0
TWLC15	TWLC15-RB	508,0	40,0	102,0	14,5
TWLC30	TWLC30-RB	508,0	35,0	127,0	27,0



TWLC REACTION PADDLE TWLC-RP

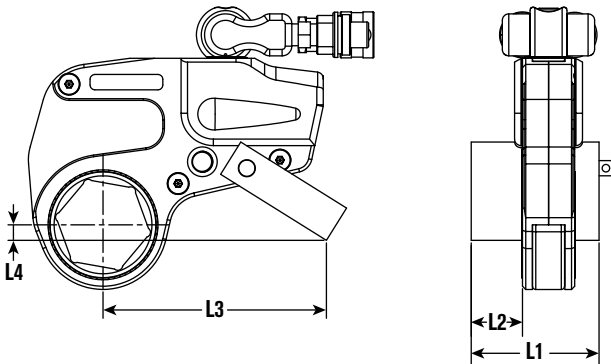


Features

- Off-Set Reaction Arm for TWLC wrenches allows off-set reaction within wrench profile
- Pin engagement, no tools required
- Light alloy construction
- Available for full range of tool

Ordering Information

Tool Ref	Order No.	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	Weight (kg)
TWLC2	TWLC2-RP	84,1	35,1	142,0	13,0	0,5
TWLC4	TWLC4-RP	109,0	46,0	178,1	19,1	0,9
TWLC8	TWLC8-RP	136,4	57,2	220,0	25,9	1,8
TWLC15	TWLC15-RP	165,1	70,1	252,0	45,0	3,5
TWLC30	TWLC30-RP	200,0	86,1	317,0	43,9	6,0



**HAVE A UNIQUE APPLICATION?
DOES STANDARD PRODUCT NOT FIT?**



CUSTOM REACTION PADS AND REDUCERS ARE AVAILABLE.
Contact SPX FLOW or an authorized Power Team distributor for more details!

**WHEN NOTHING ELSE WILL WORK,
SPLIT ADAPTERS ARE MADE TO ORDER
AND AVAILABLE UPON REQUEST.**



TWLC15 split adapter,
closed position



TWLC15 split adapter,
open position

Model Shown:

TWSL4-046 Link (left) & TWSL4-060 Link with TWLC4 Drive Body (right)



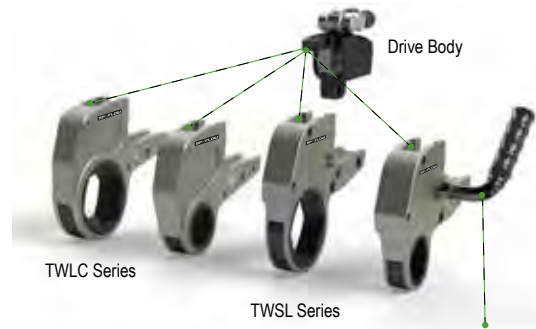
Features

ENGINEERED TO FIT INACCESSIBLE APPLICATIONS WITH MINIMAL CLEARANCE.

- Dynamic engineering modeling (Finite Element Analysis and optimized tool design to extend life and durability).
- The SlimLine links use the same quick change Drive Body as the existing TWLC links
- Small nose radius, fits all standard API and ANSI flanges.
- Rigid steel body construction with corrosion resistant plating.
- Fully-enclosed drive mechanism for operator safety.
- Swivel manifold has an internal relief valve to prevent retract side over-pressurization.
- Multi-axis swivel technology for free positioning of tool and hoses.



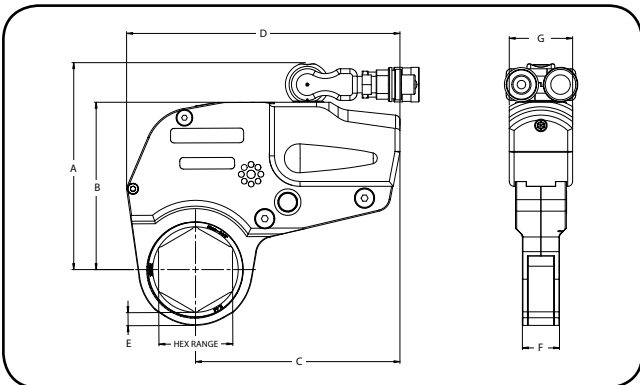
Drive Body interchanges with the TWLC & TWSL link sizes



Optional Handle
Order #: DFTAS000002

The Drive Body is designed to interchange with the TWLC (Low Clearance) and the new TWSL (SlimLine) Links, lowering your tool investment across each series to broaden your application reach.

Tools

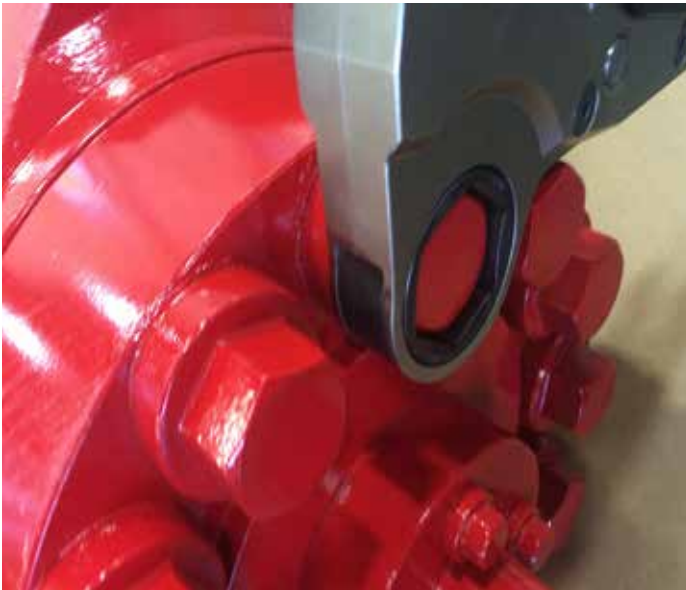


Technical Dimensions

Order No.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
TWSL4	167,9	136,9	167,9	224,3	10,7	30,5	51,8

NOTE: Sizes; TWSL2-# and TWSL8-#, contact factory for details.

► **Technical Fit Overview**



SlimLine Application Range

Due to the compact design, the maximum torque of the TWSL links vary depending on link size, reference the information below for complete details.

New SlimLine* (TWSL Series) Standard (TWLC Series)

*Shown with optional handle, order # DFTAS000002.

► The TWSL's narrow width and reduced radius design enables the tool to fit into tight areas where standard low clearance links cannot.

► **Torque Wrench Drive Body Ordering Information for SlimLine**

Drive Body Order No.	Hex Range for SlimLine		SlimLine Min. Torque (Nm)	SlimLine Max. Torque (Nm)	Weight (Link Only) (kg)
	(mm)	(mm)			
TWLC2	28,7	60,5	Contact Factory for Details		1,0
TWLC4	46,0	79,5	685	3577 - 5707	2,0
TWLC8	57,2	100,1	Contact Factory for Details		3,5

Note: Links are sold separately from the drive body, refer to the tables below.

► **Torque Wrench Link Ordering Information for SlimLine**

Link Order No.	Hex Range for SlimLine		SlimLine Min. Torque (Nm)	SlimLine Max. Torque (Nm)	Weight (Link Only) (kg)
	(mm)	(mm)			
TWSL2-#	28,7	60,5	Contact Factory for Details		
TWSL4-#	46,0	79,5	685	3577 - 5707	3,6 - 3,8
TWSL8-#	57,2	100,1	Contact Factory for Details		

Note: The "#" suffix will be replaced with the actual link size in a numeric value.

► **TWSL4 SlimLine Link Reference Table***

Nut A/F (mm)	Link Order No.	Max. Torque (Nm)	Weight (Link Only) (kg)
46,0	TWSL4-046	3577	3,6
50,8	TWSL4-050	4434	3,7
55,6	TWSL4-055	4837	3,7
60,5	TWSL4-060	5242	3,8
65,0	TWSL4-065	5708	3,8
69,9	TWSL4-070	5708	3,8
74,7	TWSL4-075	5708	3,8
79,5	TWSL4-080	5708	3,8

Other Related Items

Contact your nearest Power Team sales representative for assistance in sizing the proper tool for your application, or go to powerteam.com website for details about other available link sizes not listed.

Pumps Hoses Tools

Model Shown:
X1E1-PT



Features

THE POWER TEAM X1E1-PT: SOLD FOR YEARS TO END CUSTOMERS.

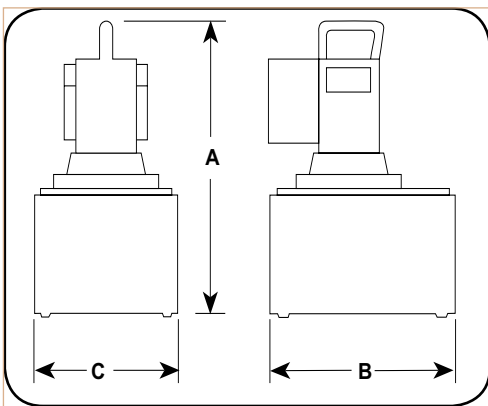
- Base pump unit: Power Team PE55 series – the standard in the industry
- Two-speed high-performance pump
- Retract side internal relief-valve protects tools
- 4-way / 2-position solenoid valve standard
- Utilizes rugged electrical controls
- External adjustable pressure regulator
- Hand remote standard
- For single or double-acting tools



CAUTION

THIS PUMP SHOULD NOT BE USED FOR LIFTING APPLICATIONS, IT'S DESIGN FOR TORQUE WRENCH APPLICATIONS ONLY.

Tools



Ordering Information

Order No.	A	B	C	Description	Electric Motor Volt	Oil Delivery per min. (cm ³)	Oil Reservoir Cap. (l)	Prod. Wt. (kg)
	(mm)	(mm)	(mm)					
X1E2-PT	457	330	353	Electric-Powered Torque Wrench Pump	220V	901	9,5	33

Model Shown:
X1A1-PT



Features

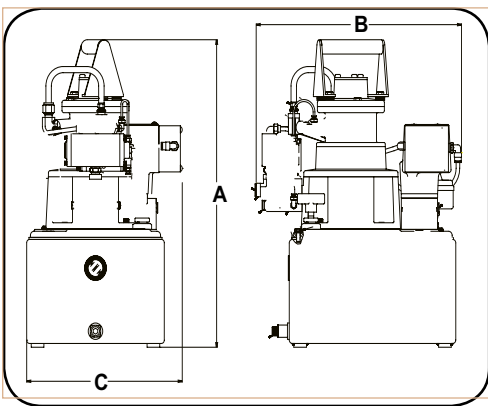
X1A1-PT FEATURES THE SAME RUGGED TIME-PROVEN DESIGN AS THE POWER TEAM X1E1-PT.

- Base pump unit, Power Team PA55 series – the standard in the industry
- Two-speed high-performance pump
- Retract side internal relief-valve protects tools
- 4-way / 2-position air valve standard
- External adjustable pressure regulator
- Hand remote standard



CAUTION

THIS PUMP SHOULD NOT BE USED FOR LIFTING APPLICATIONS, IT'S DESIGN FOR TORQUE WRENCH APPLICATIONS ONLY.



Ordering Information

Order No.	A	B	C	Description	Oil Delivery per min. (cm ³)	Oil Reservoir Cap. (l)	Prod. Wt. (kg)
	(mm)	(mm)	(mm)				
X1A1-PT	477	457	273	Air-Powered Torque Wrench Pump	901	9,5	40

Model Shown:
PE30TWP



Features

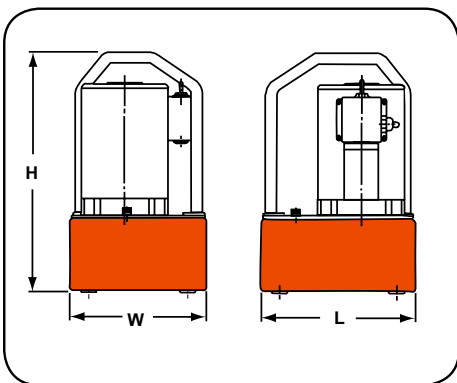
VANGUARD® ELECTRIC HYDRAULIC TORQUE WRENCH PUMPS.

- Two-speed general duty pump.
- External adjustable pressure regulator.
- Retract side internal relief valve protects tool.
- Hand remote control with 6,1 m. cord.
- Use for single or double-acting tools.



CAUTION

THIS PUMP SHOULD NOT BE USED FOR LIFTING APPLICATIONS, IT'S DESIGN FOR TORQUE WRENCH APPLICATIONS ONLY.



Tools

Ordering Information

Order No.	Width (mm)	Length (mm)	Height (mm)	Electric Motor (4000 rpm)	Oil Delivery (l/min.)	Oil Reservoir Cap. (l)	Usable Oil (l)	Prod. Wt. (kg)
PE30TWP	356	331	458	4000 rpm		4,75	4,5	31
PE30TWP-E110*	356	331	458	0,75 Kw, 115V / 50Hz, 13 amps	5 @ 7 Bar 0,5 @ 7 Bar	4,75	4,5	31
PE30TWP-E220*	356	331	458	0,75 Kw, 220V / 50Hz, 7 amps		4,75	4,5	33

* CE Approved - designed for 50 Hz applications

Model Shown:

PE55TWP, PE55TWP-4



Features

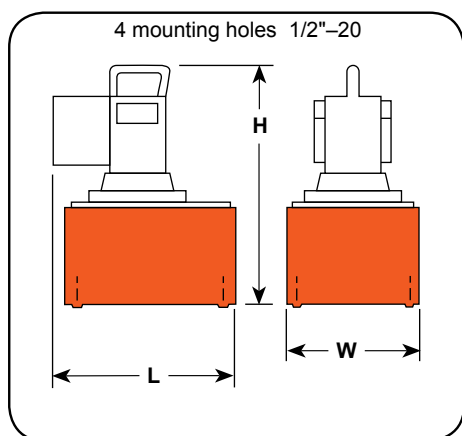
VANGUARD® ELECTRIC HYDRAULIC TORQUE WRENCH PUMPS.

- Two-speed high-performance pump.
- External adjustable pressure regulator
- Retract side internal relief valve protects tool.
- Hand remote control with 6,1 m. cord.
- Use for single or double-acting tools.
- Four-tool manifold allows use of up to four tools simultaneously.



CAUTION

THIS PUMP SHOULD NOT BE USED FOR LIFTING APPLICATIONS, IT'S DESIGN FOR TORQUE WRENCH APPLICATIONS ONLY.



Ordering Information

Order No.	Width (mm)	Length (mm)	Height (mm)	Electric Motor (12000 rpm)	Oil Delivery (l/min.)	Oil Reservoir Cap. (l)	Usable Oil (l)	Prod. Wt. (kg)
PE55TWP	435	241	460	0,84 Kw		9,5	8,4	34,0
PE55TWP-E110*	470	241	460	110V / 50Hz, 25 amps	11,5 @ 7 bar 0,9 @ 700 Bar	9,5	8,4	34,0
PE55TWP-E220*	470	241	460	220V / 50Hz, 13 amps		9,5	8,4	34,0
PE55TWP-4	470	241	486	0,84 Kw		9,5	8,4	35,4
PE55TWP-4-E110*	470	241	486	110V / 50Hz, 25 amps	11,5 @ 7 bar 0,9 @ 700 Bar	9,5	8,4	35,4
PE55TWP-4-E220*	470	241	486	220V / 50Hz, 13 amps		9,5	8,4	35,4

* CE Approved - designed for 50 Hz applications

Model Shown:
RWP55-4



Features

AIR HYDRAULIC TORQUE WRENCH PUMP

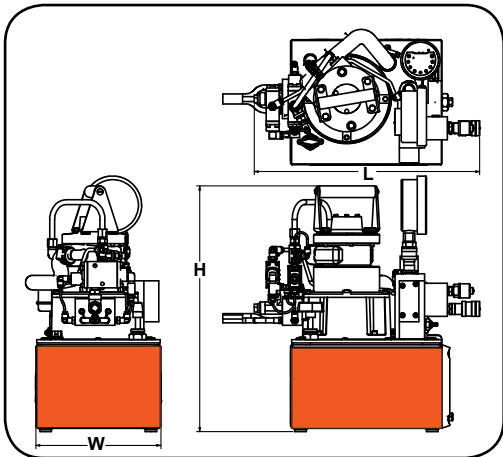
- Use where air is the preferred source of power.
- Powerful 2,2 Kw motor starts under load.
- External adjustable pressure regulator.
- Retract side internal relief valve protects tools.
- Use for single or double-acting tools.
- Four-tool manifold allows use of up to four tools simultaneously.
- 7,6 m. pneumatic remote controller included.



CAUTION

THIS PUMP SHOULD NOT BE USED FOR LIFTING APPLICATIONS, IT'S DESIGN FOR TORQUE WRENCH APPLICATIONS ONLY.

Tools



Ordering Information

Order No.	Width (mm)	Length (mm)	Height (mm)	Air Motor	Oil Delivery (l/min.)	Oil Reservoir Cap. (l)	Usable Oil (l)	Prod. Wt. (kg)
RWP55	450	280	483	2,25 Kw, 1,4 m ³ @ 6 bar	7,6 @ 7 Bar 0,9 @ 700 Bar	9,5	8,4	44
RWP55-4 (4-TOOL MANIFOLD)	450	280	483	2,25 Kw, 1,4 m ³ @ 6 bar	7,6 @ 7 Bar 0,9 @ 700 Bar	9,5	8,4	44

Model Shown:

HNS150, HNS150A, HNS225

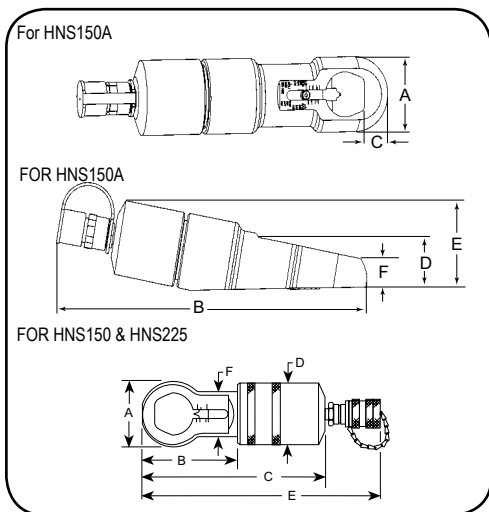


Features

HYDRAULIC NUT SPLITTERS

- Specially designed “tool steel” cutter blade penetrates the nut to the precise point where it cracks, stopping short of the bolt threads.
- Dial-in” feature on HNS150 makes adjustment of splitter simple, without the worry of damaging the bolt.
- Nut splitter features a dramatically improved cutter blade with an 800% greater resistance to chipping and breaking over previous models.
- Compact size allows you to use it in confined areas where it will deliver enough force to split the toughest “fused” or rusted-on grade 2H nuts.
- All models feature a rugged one-piece cutting frame coupled to a heavy-duty hydraulic cylinder.

▶ **Align mark on cutter blade with scale.**



▶ **Ordering Information**

Order No.	A	B	C	D	E	F	Head Thickness	Replacement Blade	Prod. Wt.
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
HNS150	73	86	200	70	264	53	25,4	308840	3,7
HNS150A	77	361	27	54	94	30	25,4	351985	7,2
HNS225	108	153	366	99	—	82	38,1	308022	13,2

NUT GRADE CAPACITIES

Order No.	2 or A	5 or B	8 or C	2DRH
HNS150	12,7 - 38,1 mm hex	12,7 - 38,1 mm hex	12,7 - 33 mm hex	12,7 - 29 mm hex
HNS150A	12,7 - 36 mm hex	12,7 - 36 mm hex	12,7 - 33 mm hex	12,7 - 29 mm hex
HNS225	29 - 57 mm hex	54 - 57 mm hex	29 - 55 mm hex	29 - 43 mm hex

Model Shown:

FLS15, FLS15-ST

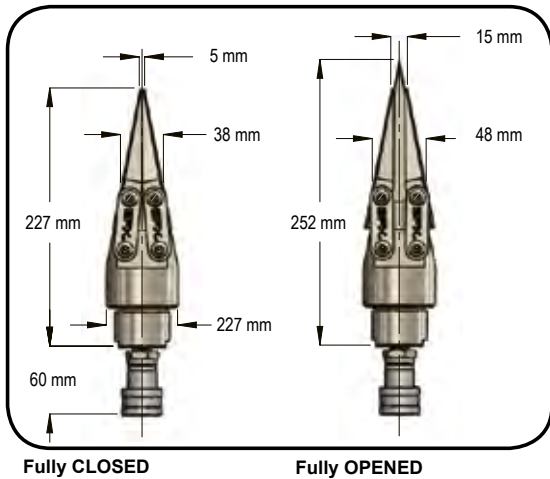


Features

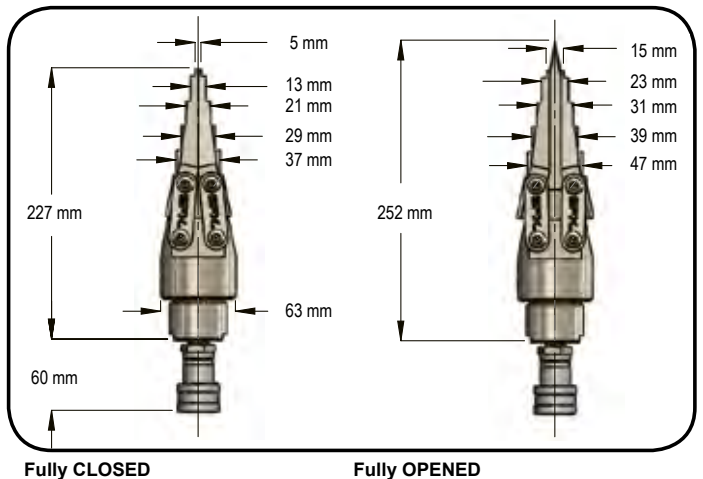
INTEGRATED WEDGE CONCEPT IDEAL FOR CREATING SPACE FOR FLANGE SURFACE CLEANING AND REPAIR

- 15 Metric Ton wedge-driven spreader. Jaws fully supported by wedge for excellent durability.
- Low friction provided by heavy-duty extended-life lubricant, ideal for flanges with narrow gaps (only 5 mm required for entry).
- Compact and lightweight design (only 252 mm long at a weight of 3,2 kg).
- Ergonomically balanced handle included.
- Suitable for the offshore environment due to superior corrosion resistance
- Quick adjustments for various tasks due to interchangeable shoes (both stepped and serrated)
- Easy and quick maintenance without special tools required.
- Includes female half coupler & mates to standard 3/8" male half coupler (9798).

FLS15 Spreader



FLS15-ST Spreader



Tools

Order No.	Maximum Spreading Force	Minimum Tip Clearance (mm)	Maximum Tip Spread (mm)	Spreader Type	Oil Cap. (cm ³)	Maximum Operating Pressure (bar)	Prod. Weight (kg)
FLS15 FLS15-ST	15 ton	5	10 mm pro hub	Hydraulic	16	700	3,2



Features


TYPICAL APPLICATIONS:

- Pipe and flange repair
- Removing elbows
- Couplers & gasket and metal seal replacement
- Heavy equipment maintenance


OTHER OPTIONAL ACCESSORIES


HANDLE		
	Order No.	Description
	2008410	Lightweight spreaders handle is designed for use with FLS15 or FLS15-ST. Wt., 55 g.


STEPPED BLOCK		
	Order No.	Description
	SB15	Use to increase the wedge opening. Designed to use with FLS15 or FLS15-ST. (1 piece).



STEPPED SHOE		
	Order No.	Description
	2008083*	Lightweight spreader stepped shoe with an interlocking friction-free smooth, parallel wedge design. Wt. 290 g.

SERRATED SHOE		
	Order No.	Description
	2008082*	Lightweight spreader serrated shoe. Part number is for one shoe only. Two shoes required per spreader.

PUMP		
	Order No.	Description
	P19L	Two-speed, single-acting hand pump . 0,5 l oil capacity. Wt. 2,3 kg.

HOSE		
	Order No.	Description
	9764E	Hydraulic hose assembly.

ANALOG GAUGE		
	Order No.	Description
	9040E	Pressure gauge.

COUPLER & GAUGE ADAPTER		
	Order No.	Description
	9798	Male half coupler.
	9670	Gauge adapter

*

Tools

Model Shown:
HFS3A



▶ **HFS6AP59L** spreader offers up to 10 tons of spreading force to safely separate this flange.



Features

CONTROLLED AND GUIDED FLANGE SEPARATION TOOL

- You'll never again have to resort to "hammer and chisel" methods that waste time and effort. Flange spreaders should be used in pairs to provide even spreading force.
- Use HFS3A for applications where total thickness of flanges and max. spread gap is 76,2 mm or less, and flange bolts are a min. of 17,5 mm diameter.
- Use HFS6A if total thickness of flanges and max. spread gap is 152,6 mm or less, and flange bolts are a min. of 20,7 mm diameter.



Optional Wedge Ends

Standard 60° wedge is suitable for most flanges; 30° "thin" and 60° "blunt" wedges are optional.



350823



350822



350549



350550

▶ **Ordering Information**

Order No.	Cap. (ton)	Standard Wedge Type	Optional Wedges		Min. Flange Opening			Min. Flange Opening			Min. Combined Flange Opening (mm)	Pin Dia. (mm)	Prod. Wt. (kg)
			30° Thin	60° Blunt	60° Std.	60° Blunt	30°	60° Std.	60° Blunt	30°			
					(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
HFS3A	5	60° Sharp	350823	350822	1,6	25,4	1,6	38,1	38,1	18,3	76,2	17,4	4,1
HFS6A	10	60° Sharp	350549	350550	1,6	38,1	1,6	50,8	50,8	24,6	152,4	20,6	8,2

Model Shown:

HS2000, HS3000



Features

HYDRAULIC SPREADERS OFFER A GREATER FORCE THAN TRADITIONAL MECHANICAL TOOLS.

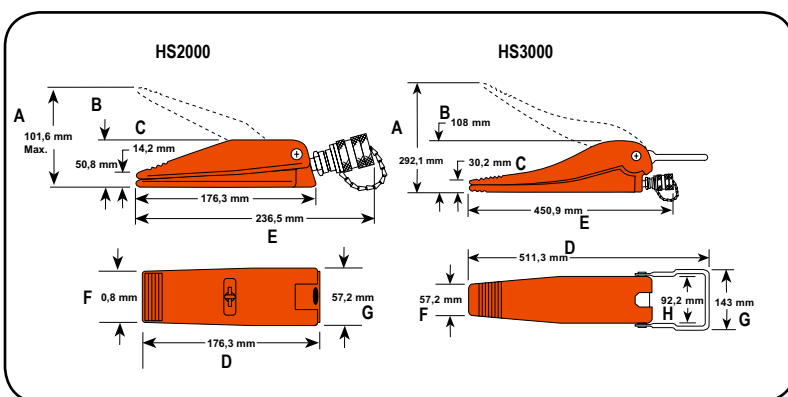
- Use to lift machines to spread concrete forms or rebar and perform straightening jobs.
- Conforms to ASME B30.1 standard.
- High strength alloy steel forged upper and lower jaws on HS2000.
- Jaws are spring-return to retract automatically when pressure is released.

HS2000 (FORGED STEEL)

- 1 ton capacity spreader, full 908 kg capacity at 700 bar with 102 mm spread.
- Can be “dead-ended” at 102 mm spread under full load.
- Needs only 14,2 mm clearance to engage jaws.

HS3000 (HIGH GRADE DUCTILE IRON)

- 1.5 ton capacity spreader, full 1362 kg capacity at 700 bar. with 292 mm spread.
- Needs only 30,2 mm clearance to engage jaws.
- Can be “dead-ended” at 292 mm spread at full load.



Ordering Information

Order No.	Cap. (ton)	Max. Spread (mm)	A	B	C	D	E	F	G	H	Oil Cap. (cm ³)	Min. Clearance Required (mm)	Prod. Wt. (kg)
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
HS2000	1,0	101,6	101,6	50,4	14,3	252,5	236,5	50,8	176,0	57,0	4	14,2	2,2
HS3000	1,5	292,0	292,0	108,0	30,2	—	451,0	57,2	511,0	143,0	92	30,2	10,0

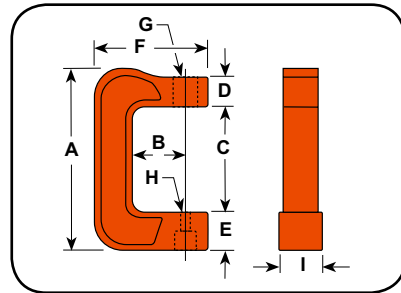
Model Shown:
CC10



Features

- In 5, 10 and 25 ton capacities. For use with Power Team general purpose single-acting series cylinders of comparable capacity.
- For clamping, pressing and bending. Ideal for welding and metal fabrication for fit-up of sheet or plate steel.
- Clamps withstand full rated capacity of the cylinders for which they are intended.

Note: To minimize the effects of off-center loading, the CC5, CC10 and CC25 should be used with the optional 350144 and 350145 swivel caps.



Ordering Information

Order No.	Cap. (ton)	A	B	C	D	E	F	G	H	I	Use With Cyl. No.	Prod. Wt. (kg)
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(in.)	(mm)	(mm)		
CC5	5	314,0	95,3	186,0	50,8	63,5	197,0	1 1/2" - 16 UN	22,2	76,2	C51C-C57C	11,3
CC10	10	403,0	152,4	240,0	50,8	85,8	273,0	2 1/4" - 14 UNS	22,2	88,9	C101C-C1010C	20,9
CC25	25	533,0	152,4	319,0	76,2	117,3	313,0	3 5/16" - 12 UNS	36,5	117,5	C251C-C2514C	41,3

OTHER OPTIONAL ACCESSORIES WITH CC5, CC10 & CC25 HYDRAULIC CLAMPS

SWIVEL CAPS

	Order No.	Cap. (ton)	A (mm)	B (mm)
	350144 *	5 - 10	35,0	19,0
	350145	25	50,8	25,4

PUSHING ADAPTERS

	Order No.	Cap. (ton)	A (mm)	B (in.)	C (mm)
	28228**	10	60,3	1 - 8	38,1
	28229**	25	73,0	1 1/4 - 7	44,5

THREADED ADAPTERS

	Order No.	Cap. (ton)	A (in.)	B (in.)	C (mm)	D (mm)
	38597	10	1 - 8	1 - 8	19,0	50,8
	38953	25	1.5-16	1 1/4 - 7	70,0	111,0

PUSHING ADAPTERS

	Order No.	Cap. (ton)	A (mm)	B (mm)	C (mm)	D (mm)	E (in.)
	201923**	10	79,4	57,2	136,5	12,7	1 - 8
	34510**	25	82,6	66,7	149,0	19,0	1 1/4 - 7

V PUSHING ADAPTERS

	Order No.	Cap. (ton)	A (mm)	B (in.)	C (mm)	D (mm)
	34806**	10	66,7	1 - 8	38,1	25,4
	34807**	25	79,4	1 1/4 - 7	44,5	31,8

PUSHING ADAPTERS

	Order No.	Cap. (ton)	A (mm)	B (mm)	C (mm)	D (mm)	E (in.)
	201454**	10	79,4	57,2	137,0	19,0	1 - 8
	34511**	25	82,6	66,7	149,0	25,4	1 1/4 - 7

* May be used with CC5

** Must be used with a threaded adapter.

PUSHING ADAPTERS

	Order No.	Cap. (ton)	A (mm)	B (mm)	C (mm)
	309874*	5	51,6	562,8	15,9

Model Shown:
BB1600



Features

TIRE REMOVING TOOL

- Made to fit into the pry bar pocket
- Hydraulic pressure does all the unseating.
- Lightweight and portable.



Recommended Products



P59L hydraulic hand pump and 9764E hose recommended to be used with BB1600.

- ▶ **BB1600 bead breaker and the P59L hand pump is the perfect choice for this tire removal application.**



Ordering Information

Order No.	Cylinder Capacity (@ 700 Bar)	Stroke (mm)	Rim Size (in.)	Prod. Wt. (kg)
BB1600	10	101,6	25" - 49"	10,3
BB1601	10	101,6	25" - 49"	10,9

For use with single, two, or three-piece rims

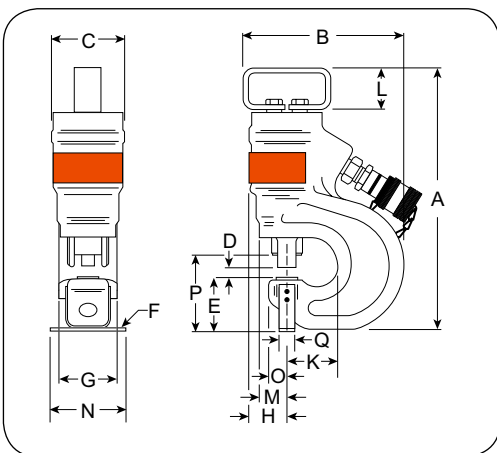
Model Shown:
HP35S



Features

- Punch smooth, precise holes in seconds. Much faster than drilling.
- Fully portable for construction, maintenance and service applications, or can be mounted on a workbench for production jobs.
- Has carrying handle for precise locating.
- Rugged, forged steel C-Frame for great strength and durability.
- Dual-action, spring-loaded stripper holds material during punching operation, strips material from punch on return. Scribe lines on stripper aid in locating the punch.

Tools



Recommended Products

The PE172 electric/hydraulic pump is an ideal power source, which is included in item # HP35SP.

Technical Dimensions

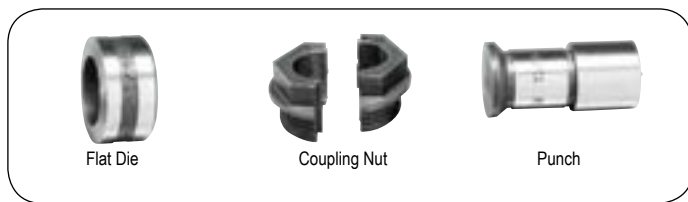
Order No.	Cap. (ton)	Max. Oper. Press. (bar)	Oil Cap. (cm ³)	Max. Material Thickness (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	K (mm)	L (mm)	M (mm)	N (mm)	O (mm)	P (mm)	Q (mm)
HP35	35	700	75	12,7	349	229	95	15	73	6	76	46	71	57	38	89	22	102	19

Model Shown:
HP35SP



► **Ordering Information**

Order No.	Description	Prod. Wt. (kg)
HP35	Punch only, includes metal case and die change tools.	19
HP35S	Punch with punches and dies. Includes HP35 punch, metal case and 250459 punch/die set.	20
HP35P-220	Punch set with pump. Same as HP35SP, but does not include punch/die set.	39
HP35SP-220	Punch set with pump. Includes HP35 punch, PE172-E220 electric/hydraulic pump, 9756E hose, 9798 hose half coupler, 250459 punch/die set, metal case.	40
250459	Punch/die set for round holes. Includes one each: PD437 11,1 mm punch/die, PD562 14,3 mm punch/die, PD688 17,5 mm punch/die, PD812 20,6 mm punch/die.	0,7



Optional Coupling Nut Wrench

Order No.	Description
252000	Makes punch/die changes easier without "rounding-off" coupling nuts. Wt., 0,3 kg.

PUNCH / DIE SETS FOR HP35 HYDRAULIC PUNCHES				
Punch Size (mm)	Punch Style	Hole Dia. (mm)	Punch with Flat Die Set	Punch with Bevel Die Set
6,4	○ Round	6,4	—	—
7,9		7,9	PD313	—
9,7		9,7	PD375	PD375B
11,2		11,2	PD437	PD437B
13,5		13,5	PD531	PD531B
14,2		14,2	PD562	PD562B
17,5		17,5	PD688	—
19,8		19,8	PD781	—
20,6		20,6	PD812	—

Model Shown:

HT50A, HT200



Features

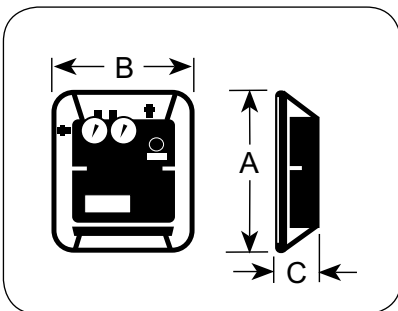
300 AND 750 L/MIN IN-LINE HYDRAULIC TESTERS

- Accurately measure oil flow, pressure and temperature on in-plant equipment, forklifts, machine tools and more.
- Temperature and flow readings are in Imperial and Metric and accurate to within $\pm 2\%$ of full scale.
- Dual pressure gauges for high and low pressure readings. Low pressure gauge is automatically shut-off and protected as pressure rises beyond its maximum reading.
- Automatic pressure compensating feature lets you increase flow without affecting pressure setting.
- Reverse flow through tester will not cause damage. A replaceable safety disc ruptures if pressure exceeds upper limit.
- Solid state voltage regulator eliminates errors caused by voltage change during testing.

200 L/MIN IN-LINE HYDRAULIC TESTER

- Troubleshoots systems with capacities to 200 l/min at pressures less than 350 bar. Accurately measure oil flow to $\pm 5\%$, pressure to within 2% and temperature readings within 1%.
- Pressure gauge is liquid filled to dampen system pulsation.

Tools



Ordering Information

Order No.	Max. Flow (l/min.)	Scale	Flow Range		Max. Oper. Press. (bar)	Temp. Scale Range (°C)	Port Sizes	A	B	C	Prod. Wt. (kg)
			(gpm)	(l/min.)				(mm)	(mm)	(mm)	
HT50A	200	—	0 - 50	0 - 200	345	-6 - 114	1-1/16-12UN Female O-Ring with Union Adapt 3/4" NPTF female.	311	159	255	16,8
HT75	300	High	15 - 75	50 - 300	345	40 - 120	3/4" NPT Swivel	349,3	301,6	146,0	8,6
		Low	3 - 15	10 - 60							
HT200	750	High	25 - 200	100 - 750	345	40 - 120	1 1/2" SAE Split Flange	403,5	336,6	171,5	13,6
		Low	5 - 40	20 - 150							

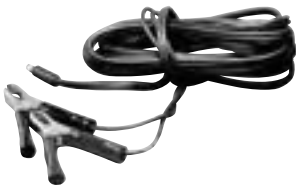
DUAL GAUGE CONVERSION KIT FOR 50 GPM TESTER.



Provides more precise low pressure readings. Remove pressure gauge block and gauge from tester and replace it with this block. Install high pressure gauge from tester (350 bar) onto this new block.

Order No.	Description
307281	Dual gauge conversion kit. Consists of gauge mounting block, pulsation dampener, thermal overload protector, low pressure gauge and gauge protector. Low pressure gauge calibrated 0-42 bar. Wt. 0,45 kg.

AUXILIARY POWER CORDS FOR USE WITH 300 AND 750 L/MIN TESTERS



CAUTION: For use on negative ground systems only.

Order No.	Description
37045	Auxiliary power cord. For use with any 12 or 24V battery to remotely power tester. Wt. 0,5 kg.

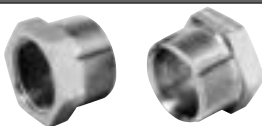
HOSES



Order No.	Description
9785	Hose, 19,1 mm I.D. x 3/4" NPTF male both ends. 3 m. length. 155 bar working pressure. (2 req'd on 200 and 300 l/min testers). Wt., 3 kg.
9786 *	Hose, 25,4 mm I.D. x 1-1/4" NPT male both ends. Recommended max. flow 340 l/min., with a working pressure of 280 bar. Wt., 6,3 kg.
9787 *	Hose, 31,8 mm I.D. x 1-1/4" NPT male both ends. Recommended max. flow 530 l/min., with a working pressure of 210 bar. Wt., 6,4 kg.
9788 *	Hose, 38,1 mm I.D. x 1-1/2" NPT male both ends. Recommended max. flow 750 l/min., with a working pressure of 175 bar. Wt., 11,4 kg.

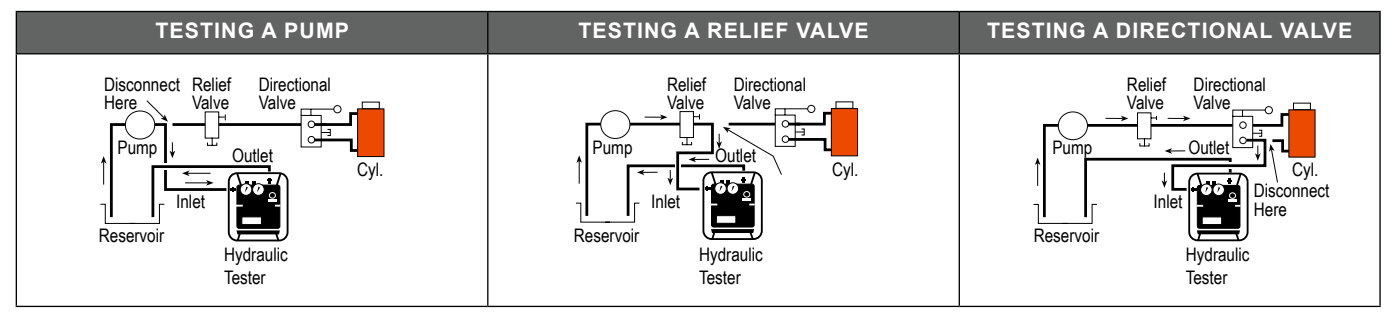
* Hose assemblies are all 4-ply spiral wound wire, 10 ft. long. For use with 200 gpm testers.

HOSE REDUCER BUSHINGS



Order No.	Description
203264	Consists of two hose reducer bushings, 1-1/4" NPT female x 1-1/2" NPT male end. Needed to adapt 9786 25,4 mm I.D. hose and 9787 31,8 mm I.D. hose to tester. Wt., 1 kg.

Typical Set-up: Testing the pump, relief valve, and directional valve



HYDRAULIC FITTINGS FOR USE WITH ALL TESTERS.

	16954	90° Swivel Adapter. 3/4" NPTF male x 3/4" NPSM female. Wt., 0,4 kg.		26073	Swivel adapter. 3/4" NPTF female x 1/2" NPSM female. Wt., 0,1 kg.
	22041	Coupler. 3/4" NPTF male x 3/4"-16 female ORB. Wt., 0,2 kg.		26074	45° Swivel Adapter. 3/4" NPSM female x 3/4" NPTF male. Wt., 0,3 kg.
	22042	Coupler. 3/4" -16 female ORB x 1-1/16"-12 female 37° JIC. Wt., 0,2 kg.		26075	Swivel Adapter. 3/4" NPSM female x 3/4" NPTF female. Wt., 0,2 kg.
	22043	Coupler. 3/4" -16 female ORB x 9/16"-18 female 37° JIC. Wt., 0,2 kg.		26076	Swivel Adapter. 3/4" NPTF male x 3/4" NPSM female. Wt., 0,2 kg.
	22044	Coupler. 3/4" -16 female ORB x 1/2"- 20 female 37° JIC. Wt., 0,2 kg.		26077	Cap. 3/4" NPTF. Wt., 0,3 kg.
	27737	Swivel Adapter. 3/4" -16 male x 3/4" NPSM female. For use with No. 9785 hose, which has 3/4" NPTF male thread. Wt., 0,1 kg.		26078	Plug. 3/4" NPTF. Wt., 0,1 kg.
	27287	Coupler. 3/4" -16 UNF female ORB x 7/8"-14 UNF female 37° JIC. Wt., 0,2 kg.		26079	Adapter. 3/4" NPTF female x 1-1/16" -12 male ORB. Wt., 0,2 kg.
	13449	Cap. 1-1/16"-12 UNF female, 3/4" O.D. tube, 37° flare. Wt., 0,1 kg.		208402	45° Union Adapter. 7/8"-14 UNF male 37° JIC x 3/4" NPTF female. 3,000 psi working pressure. Wt., 0,3 kg.
	26068	45° Swivel Adapter. 1" NPTF male x 3/4" NPSM female. Wt., 0,4 kg.		208401	45° Union Adapter. 7/8"-14 UNF male 37° JIC x 3/4" NPTF female. Wt., 0,4 kg.
	26069	Swivel Adapter. 1" NPTF female x 3/4" NPSM female. Wt., 0,2 kg.		206753	Coupler. 1-15/16"-12 UNF female 37° JIC x 3/4" NPTF female. Wt., 0,5 kgs.
	26070	Adapter. 1" NPTF male x 3/4" NPTF female. Wt., 0,1 kg.		26666	Connector. 1-5/16"-12 UNF male 37° JIC x 3/4" NPTF male. Wt., 0,2 kg.
	26071	Service Tee. 3/4" NPTF female (2) x 3/4" NPTF male. Wt., 0,4 kg.		28984	Straight Adapter. 3/4" NPTF female x 1-3/16" -12 UN male 37° JIC. Wt., 0,3 kg.
	26072	Swivel Adapter. 3/4" NPSM female x 1/2" NPTF male. Wt., 0,2 kg.		28985	Straight Adapter Union. 1-3/16"-12 UN female 37° JIC x 3/4" NPTF female. Wt., 0,6 kgs.

NOTE: The recommended maximum working pressure on the above fittings is 350 bar (except the 208402 is 210 bar).

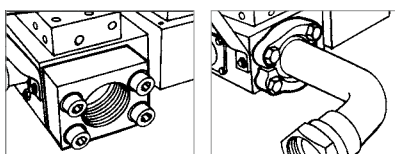
HT200 HYDRAULIC TESTER ACCESSORIES

Attach to the HT200 hydraulic tester by the use of flanged-head adapters and split flanges, or by a set of female straight adapters.



FLANGED HEAD ADAPTER UNIONS & SPLIT FLANGE KIT

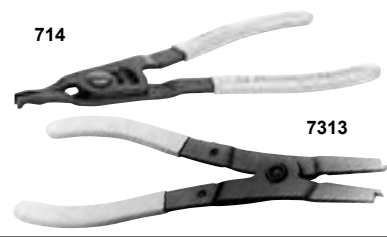
Order No.	Description
203154	Straight flange adapter. 38,1 mm flanged-head to 1-1/2" NPSM female swivel. Wt., 1 kg.
203155	45° flange adapter. 38,1 mm flanged-head by 1-1/2" NPSM female swivel. Wt., 1,5 kg.
203156	90° flange adapter. 38,1 mm flanged-head by 1-1/2" NPSM female swivel. Wt., 1,9 kg.
203017	Split Flange Kit. Consists of four flange halves and attaching bolts to permit use of 38,1 mm I.D. flange adapters listed at left. Wt., 1,3 kg.



FEMALE STRAIGHT FLANGE ADAPTER

Order No.	Description
203003	Consists of two female straight flange adapters with attaching bolts. When attached to inlet/outlet ports, allows connection of 1-1/2" NPT male hose ends to tester. Wt., 3,9 kg.

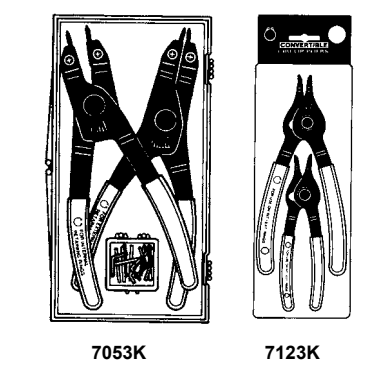
HORSESHOE LOCK RING PLIER



For removing horseshoe lock rings used on hydraulic brakes, differentials, etc. Plier is 203 mm long; max. spread: 23,8 mm

Order No.	Description
714	Horseshoe lock ring plier. Wt., 0,2 kg.
7313	External snap ring plier easily removes snap rings used to retain bearings on shafts. Max. spread: 27 mm.

RETAINING RING PLIER KITS



Choose from four sets; internal ring, external ring and convertible pliers for either internal or external rings.

Order No.	Description
7053K	Replaceable tip pliers kit. This versatile kit contains (1) internal and (1) external pliers with (8) tip sets. Two sets each: 0,9 mm dia. 90° bend, 1,2 mm dia. straight, 1,2 mm dia. 90° bend, 1,8 mm dia. straight. Recommended for 6,4 - 51 mm rings. Packaged in plastic storage case. Wt., 0,4 kg.
15702	Replaceable tip kit (only) for 7053K.
7123K	Convertible pliers kit. Contains 1120 (1 mm dia./straight tip) and No. 1340 (1,8 mm dia./straight tip). Each pliers "converts" to handle both internal and external rings. Packaged in a reusable plastic storage case. Wt., 0,4 kg.
7125K	Convertible pliers kit. Contains 1125 (.038" dia./45° bent tip) and No. 1345 (.070" dia./45° bent tip). Each pliers "converts" to handle both internal and external rings. Packaged in a reusable plastic storage case. Wt., 0,4 kg.



Order No.	Description
7406K	Professional pliers kit. Contains (6) retaining convertible pliers to handle both internal and external rings from 6,4 - 51 mm. Includes straight and 90° off-set pliers with 1, 1,2, and 1,8 mm tip diameters. Includes Nos. 1120, 1131, 1320, 1329, 1340 and 1349. Packaged in an impact resistant storage case. Wt., 0,9 kg.

REPLACEMENT TIPS FOR 7300 AND 7301 PLIERS

Order No.	Description
209201	Replacement tips (pr.) for the 7300 and 7301 pliers. Wt., 0,1 kg. Fed. Spec.:GGG-P-480

RETAINING RING PLIERS SELECTION GUIDE

Order No.	Type of Pliers	Tip Bend	Tip Size Dia. (mm)	For Internal Rings † Bore Dia. (mm)	For External Rings † Shaft Dia. (mm)	Order No.	Type of Pliers	Tip Bend	Tip Size Dia. (mm)	For Internal Rings † Bore Dia. (mm)	For External Rings † Shaft Dia. (mm)
0100	Internal	Str.	1	9,5 - 26	—	1120	Convertible	Str.	1	9,5 - 14	6,4 - 17
0200	External	Str.	1	—	6,4 - 22	1125*	Convertible	45°	1	9,5 - 14	6,4 - 17
0300	Internal	Str.	1,8	27 - 44,5	—	1131**	Convertible	90°	1	9,5 - 14	6,4 - 17
0400	External	Str.	1,8	—	24 - 36,5	1320	Convertible	Str.	1,2	16 - 26	17 - 22
0500	Internal	Str.	2,3	46 - 89	—	1329	Convertible	90°	1,2	16 - 26	17 - 22
0600	External	Str.	2,9	—	38 - 89	1340	Convertible	Str.	1,8	27 - 44,5	24 - 36,5
7300	Internal	Str.	3	78 - 152	—	1345*	Convertible	45°	1,8	27 - 44,5	24 - 36,5
7301	External	Str.	3	—	38 - 165	1349**	Convertible	90°	1,8	27 - 44,5	24 - 36,5

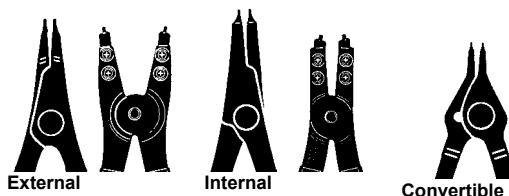
Fed. Spec.:GGG-P-480-E

* 45° Angled Tips



** 90° Angled Tips

† Capacities are shown for basic style rings.



CAUTION: Always wear safety goggles when using pliers




RATCHETING CHAIN WRENCHES

	Special head design allows you to turn wrench in either direction. Ratcheting action makes it possible to re-grip without removal. Fits parts of most any size and shape.	
	Order No.	Description
7400	Chain wrench, cap. 12,7 to 121 mm O.D. (Capacity= 450 Nm.) Handle length: 317,5 mm. Wt., 0,9 kg.	
	209199	Replacement chain with pin for 7400 chain wrench (406 mm long).
	7401	Chain wrench, cap. 76 to 171 mm O.D. (Capacity= 900 Nm) Handle length: 19.00" Wt., 2,3 kg.
	209200	Replacement chain with pin for 7401 chain wrench (610 mm long).


PRY BARS

	Our rolling head pry bars are an extremely popular and useful tool. Head may be used for almost any prying job since a great deal of leverage can be obtained. Long tapered body may be used as a lining-up drift.	
	Order No.	Description
7162	Pry bar; 9,5 mm round, 152 mm long. Wt., 0,1 kg.	
	7163	Pry bar; 11,1 mm round, 305 mm long. Wt., 0,3 kg.
	7164	Pry bar; 14,3 mm round, 406 mm long. Wt., 0,5 kgs.
	7165	Pry bar; 19 mm round, 457 mm long. Wt., 1 kg.


ADJUSTABLE GLAND NUT WRENCH

	Designed to handle 51 to 152 mm dia. hydraulic cylinder gland nuts on many construction vehicles. Fits 6,4 and 7,9 mm dia. pin holes. Features a 3/4" sq. drive.	
	Order No.	Description
1266	Adjustable gland nut wrench. Wt., 1,4 kg.	
204928	Replacement pin for 1266 (2 required)	


JIMMY BARS

	Ideal for general lifting or prying. Heat treated chrome alloy steel to resist bending or breaking.	
	Order No.	Description
7166	Jimmy bar; 15,9 mm round, 457 mm long. Wt., 0,6 kg.	
7167	Jimmy bar; 19 mm round, 610 mm long. Wt., 1,1 kg.	
7168	Jimmy bar; 22,2 mm round, 762 mm long. Wt., 1 kg.	


ADJUSTABLE HOOK SPANNER WRENCH

	Needed wherever turret adjusting nuts or packing gland nuts are used. Adjust 38 to 102 mm. Handle overall length: 483 mm.	
	Order No.	Description
885	Adjustable hook spanner wrench. Wt., 1,4 kg.	

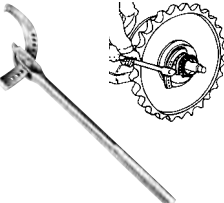
"MAJOR PERSUADER" JIMMY BARS

	Two big jimmy bars for big jobs. Forged from chrome alloy steel.	
	Order No.	Description
7420	Jimmy bar; 22,2 mm round, 1168 mm long. Wt., 3,4 kg.	
7421	Jimmy bar; 25,4 mm round, 1372 mm long. Wt., 1,9 kg.	

ADJUSTABLE HOOK SPANNER WRENCH

	Replace many fixed-size wrenches and cover a range of capacities needed to service industrial tractors and other equipment. Drop-forged jaws adjust to eleven positions for a capacity of 121 to 324 mm O.D. Handle overall length: 610 mm; diameter: 25,4 mm.	
	Order No.	Description
7307	Spanner wrench with one 9,5 mm thick jaw. Wt., 3,3 kg.	
7308	Spanner wrench with two interchangeable jaws: one 9,5 mm thick, one 19 mm thick. Wt., 5 kg.	

HEAVY-DUTY ADJUSTABLE SPANNER

	Extra heavy construction. Has one 19 mm thick, eleven-position hook-jaw for a capacity of 131 to 324 mm O.D. Drop-forged. Handle length: 654 mm; handle dia.: 33,3 mm.	
	Order No.	Description
7309	Heavy-duty adjustable hook spanner wrench. Wt., 5 kg.	

HTS50 HEAVY-DUTY PIPE SEALANT WITH PTFE



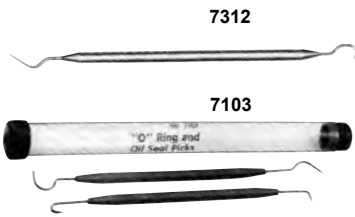
Note: Product labeling may vary from picture.

- Seals new or damaged threads; resists water, chemicals and oils.
- Replaces conventional tape methods; forms a clog-free seal.
- Effective at 700 Bar.

When "plumbing" a hydraulic system, there's now a better answer than tapes which can tear or shred, possibly plugging filters, valves or gauges. This compound combines the lubricating qualities of PTFE with a fast curing anaerobic sealant. Seals all metal fittings, plugs and threaded joints quickly and easily. Cures to form a permanent seal which is inert to hydrocarbons, most acids, chemicals, solvents and steam. Allows adjustment up to 16 hours after assembly; won't loosen under vibration. Prevents galling of mating parts upon disassembly. Withstands temperatures from -54° C to 190° C.

Order No.	Description
HTS50	Sealant, 50 ml. tube. Wt., 0,2 kg.

O-RING SEAL PICKS



Even the seemingly simple job of removing and installing O-ring seals can be difficult without the aid of the proper tool. The 7312 is constructed with plastic & steel O-ring seal pick does the job with ease. Two special picks in set 7103 get right to the trouble areas.

Order No.	Description
7312	O-ring seal pick. Wt., 0,1 kg.
7103	Set of two O-ring seal picks. Wt., 0,1 kg.

UNIVERSAL OUTSIDE THREAD CHASER



Restore damaged threads on shafts, housings, cages, etc., for re-assembly of matching parts. Eliminates need for thread-cutting equipment. Will not harm threads. V-pads and dies can be replaced. Cap. 32 to 127 mm O.D.

Order No.	Description
7402	Thread chaser, complete (with 6 dies: threads per inch – 4, 5, 6, 7, 7.5, 8, 9, 10, 11, 11.5, 12, 14, 16, 18, 20 and 24). Wt., 0,2 kg
202817	Metric die set (3 dies: mm per thread: 1, 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5, and 4). Wt., 0,1 kg.

MAGNETIC PICK-UP TOOL



Has permanent magnetic head for retrieving parts from otherwise inaccessible places.

Order No.	Description
7395	Pick-up tool with pocket clip. 152 mm lg. Wt., 0,1 kg.

Tools