

THWD SERIES

Low Profile Hexagon Hydraulic Torque Wrenches



Features

- The low profile cassettes are made in compact and ultra slim structure to fit into tight spaces
- Rigid steel design ensure the durability, reliability and safety of the tools
- Maximum flexibility with full range Interchangeable hexagon cassettes and reducing inserts, no tools necessary.
- Compact nose radius allows the tool to perform easily in tighter spaces.
- Constant torque output provides accuracy up-to $\pm 3\%$
- Multi direction high flow swivel manifold (360°X-axis * 180°Y-axis) .
- Fast operation cycle, fine tooth ratchet, corrosion resistance, low weight, high strength design.

How to Choose a Low Profile Hexagon Wrench

Please order drive unit and cassette separately and pay attention to the same size, for example TWHD20 and TWHL20-2375.



Choose the appropriate Drive unit .

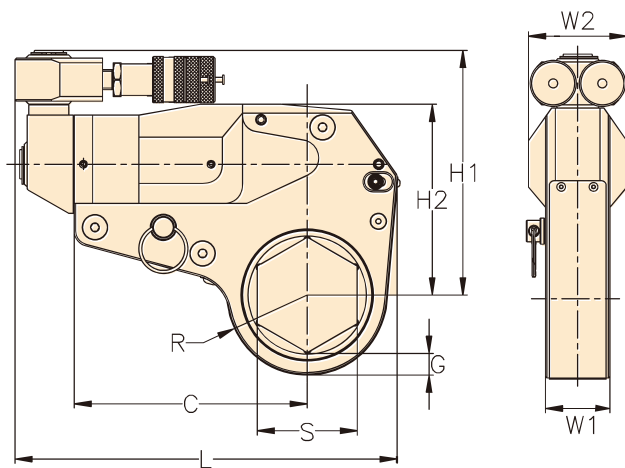
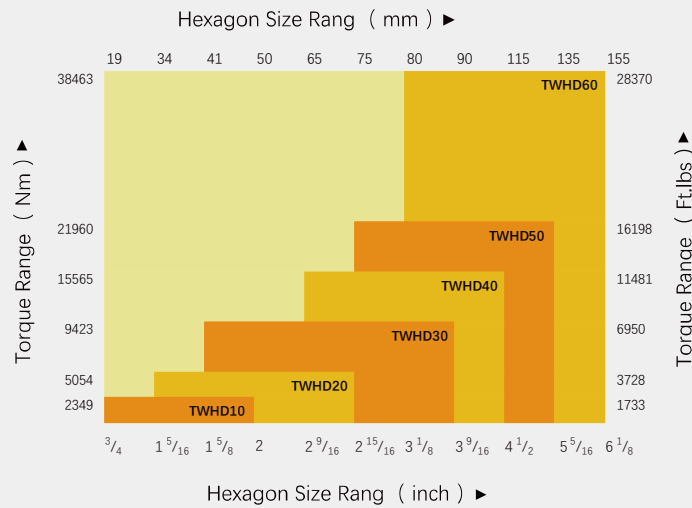


Find the cassettes for your application (nut size) .



Add reducers for additional nut sizes, the combinations of use of different cassettes and reducers provide the maximum capability to achieve diverse jobs .

Drive Unit and Interchangeable Hexagon Head Selection Chart



Maximum Torque: 28370 Ft.lbs

Hexagon Range: 3/4 - 6 1/8 inch

Nose Radius: 1.17-4.64 inch

Maximum Operating Pressure: 10,000 psi

Principle of Torque Wrenches Selecting

Please refer to the bolt torque recommendation form. See " How to Select Hydraulic Torque Wrench " for details.

Select the Right Torque

Choose your AIPI Torque Wrench using the untightening rule of thumb: Loosening torque equals about 250% of tightening torque.



Torque Wrench Pumps

Air and electric torque wrench pumps that are idea for use with hydraulic torque wrenches.



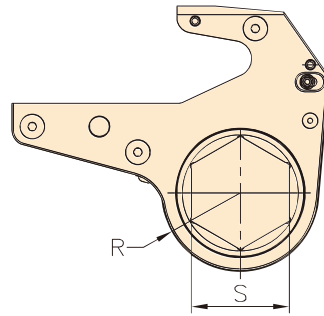
Hexagon Range		Torque Range		Drive Unit Model Number*	Drive Unit Weight **	Dimensions***						
inch	mm	Ft.lbs	N.m			L	H1	H2	W1	W2	G	C
3/4 - 2	19-50	173-1733	235-2349	TWHD10	1.5	8.00	5.16	3.78	1.26	1.97	0.47	4.57
1 5/16 - 2 15/16	34-75	373-3728	505-5054	TWHD20	3.8	9.80	6.30	4.88	1.65	2.52	0.59	5.96
1 5/8 - 3 9/16	41-90	695-6950	942-9423	TWHD30	6.8	12.00	7.72	6.30	2.10	2.95	0.67	7.42
2 9/16 - 4 1/2	65-115	1148-11481	1556-15565	TWHD40	9.5	13.07	9.53	7.54	2.52	3.43	0.79	9.21
2 15/16 - 5 5/16	75-135	1620-16198	2196-21960	TWHD50	13.2	15.04	14.40	8.46	2.87	3.82	0.90	10.63
3 1/8 - 6 1/8	80-155	2837-28370	3846-38463	TWHD60	23.4	17.68	12.01	10.04	3.35	4.72	1.10	12.50

* The above form of drive unit model number.

** Weight of drive unit without hexagon cassettes.

*** Dimensions of Torque wrench with hexagon cassettes.

Hexagon Cassettes for Low Profile Hexagon Torque Wrenches



Each type of low profile drive unit matches certain range of hexagon cassettes and reducers to cover the maximum range of nut sizes, which are tolerated by the torque value of the same drive unit.

When selecting the proper cassette for the application, pay attention to the distance between the bolt and the wall side.

Also pay attention to the distance between the hexagonal edge in the cassette and the outer edge of the link.

The R value in the following table can guide you choose the right one.

Drive Unit Model Number	TWHD10		
Maximum Torque	1733 Ft.lbs		
Hexagon Cassettes	S (inch)	R (inch)	Weight (lbs)
TWHL10-2000	2	1.61	3.3
TWHL10-46	1 ³ / ₁₆	1.50	3.3
TWHL10-1625	1 ⁵ / ₈	1.38	3.1
TWHL10-1438	1 ⁷ / ₁₆	1.24	3.0
TWHL10-1313	1 ⁵ / ₁₆	1.24	2.9
TWHL10-1250	1 ¹ / ₄	1.20	3.1
TWHL10-30	1 ³ / ₁₆	1.20	3.1
TWHL10-27	1 ¹ / ₁₆	1.17	3.1
TWHL10-0938	1 ⁵ / ₁₆	1.17	3.1
TWHL10-22	7 ⁷ / ₈	1.17	3.1
TWHL10-19	3 ³ / ₄	1.17	3.1

Drive Unit Model Number	TWHD20		
Maximum Torque	3728 Ft.lbs		
Hexagon Cassettes	S (inch)	R (inch)	Weight (lbs)
TWHL20-75	2 ¹⁵ / ₁₆	2.25	9.8
TWHL20-70	2 ³ / ₄	2.15	9.8
TWHL20-65	2 ⁹ / ₁₆	2.06	9.7
TWHL20-2375	2 ³ / ₈	1.99	9.7
TWHL20-2188	2 ³ / ₁₆	1.87	9.3
TWHL20-2000	2	1.80	9.3
TWHL20-46	1 ¹³ / ₁₆	1.72	8.8
TWHL20-1625	1 ⁵ / ₈	1.72	9.0
TWHL20-1438	1 ⁷ / ₁₆	1.48	8.4
TWHL20-1313	1 ⁵ / ₁₆	1.48	8.6

Drive Unit Model Number	TWHD30		
Maximum Torque	6950 Ft.lbs		
Hexagon Cassettes	S (inch)	R (inch)	Weight (lbs)
TWHL30-3500	3 ¹ / ₂	2.70	14.3
TWHL30-3375	3 ³ / ₈	2.66	14.3
TWHL30-3313	3 ⁵ / ₁₆	2.66	14.3
TWHL30-3125	3 ¹ / ₈	2.54	13.9
TWHL30-75	2 ¹⁵ / ₁₆	2.43	13.9
TWHL30-70	2 ³ / ₄	2.35	13.4
TWHL30-65	2 ⁹ / ₁₆	2.23	13.0
TWHL30-2375	2 ³ / ₈	2.11	12.8
TWHL30-2188	2 ³ / ₁₆	2.03	12.3
TWHL30-2000	2	1.87	11.7
TWHL30-46	1 ¹³ / ₁₆	1.87	12.1
TWHL30-1625	1 ⁵ / ₈	1.87	12.1

Drive Unit Model Number	TWHD40		
Maximum Torque	11481 Ft.lbs		
Hexagon Cassettes	S (inch)	R (inch)	Weight (lbs)
TWHL40-4500	4 ¹ / ₂	3.40	26.2
TWHL40-110	4 ⁵ / ₁₆	3.40	25.6
TWHL40-4250	4 ¹ / ₄	3.17	25.6
TWHL40-105	4 ¹ / ₈	3.17	25.1
TWHL40-100	3 ¹⁵ / ₁₆	3.17	24.9
TWHL40-3875	3 ⁷ / ₈	3.06	24.9
TWHL40-95	3 ³ / ₄	2.94	24.3
TWHL40-3688	3 ¹¹ / ₁₆	2.94	24.3
TWHL40-3500	3 ¹ / ₂	2.86	24.3
TWHL40-3375	3 ³ / ₈	2.74	23.8
TWHL40-3313	3 ⁵ / ₁₆	2.74	23.8
TWHL40-3125	3 ¹ / ₈	2.62	23.6
TWHL40-75	2 ¹⁵ / ₁₆	2.50	23.6
TWHL40-70	2 ³ / ₄	2.31	23.1
TWHL40-65	2 ⁹ / ₁₆	2.31	23.4

Drive Unit Model Number	TWHD50		
Maximum Torque	16198 Ft.lbs		
Hexagon Cassettes	S (inch)	R (inch)	Weight (lbs)
TWHL50-5375	5 ³ / ₈	3.96	39.7
TWHL50-5125	5 ¹ / ₈	3.96	40.1
TWHL50-5000	5	3.76	39.2
TWHL50-4938	4 ¹⁵ / ₁₆	3.76	39.2
TWHL50-4750	4 ³ / ₄	3.76	39.5
TWHL50-4625	4 ⁵ / ₈	3.37	39.5
TWHL50-4500	4 ¹ / ₂	3.37	38.8
TWHL50-110	4 ⁵ / ₁₆	3.37	38.4
TWHL50-4250	4 ¹ / ₄	3.37	38.4
TWHL50-105	4 ¹ / ₈	3.37	38.6
TWHL50-100	3 ¹⁵ / ₁₆	3.09	37.7
TWHL50-3875	3 ⁷ / ₈	3.09	37.7
TWHL50-95	3 ³ / ₄	3.02	37.3
TWHL50-3688	3 ¹¹ / ₁₆	3.02	37.3
TWHL50-3500	3 ¹ / ₂	2.90	37.0
TWHL50-3375	3 ³ / ₈	2.78	37.0
TWHL50-3313	3 ⁵ / ₁₆	2.78	37.0
TWHL50-3125	3 ¹ / ₈	2.66	36.4
TWHL50-75	2 ¹⁵ / ₁₆	2.54	36.4

Drive Unit Model Number	TWHD60		
Maximum Torque	28370 Ft.lbs		
Hexagon Cassettes	S (inch)	R (inch)	Weight (lbs)
TWHL60-6125	6 ¹ / ₈	4.63	65.0
TWHL60-5875	5 ⁷ / ₈	4.55	64.2
TWHL60-5750	5 ³ / ₄	4.39	63.7
TWHL60-5500	5 ¹ / ₂	4.24	63.7
TWHL60-5375	5 ³ / ₈	4.16	63.5
TWHL60-5125	5 ¹ / ₈	4.04	62.8
TWHL60-5000	5	3.96	62.8
TWHL60-4938	4 ¹⁵ / ₁₆	3.96	62.8
TWHL60-4750	4 ³ / ₄	3.74	62.4
TWHL60-4625	4 ⁵ / ₈	3.74	62.4
TWHL60-4500	4 ¹ / ₂	3.62	62.4
TWHL60-110	4 ⁵ / ₁₆	3.54	62.4
TWHL60-4250	4 ¹ / ₄	3.54	62.4
TWHL60-105	4 ¹ / ₈	3.43	61.5
TWHL60-100	3 ¹⁵ / ₁₆	3.27	60.6
TWHL60-3875	3 ⁷ / ₈	3.27	60.6
TWHL60-95	3 ³ / ₄	3.15	60.6
TWHL60-3688	3 ¹¹ / ₁₆	3.15	60.6
TWHL60-3500	3 ¹ / ₂	3.07	60.6
TWHL60-3375	3 ³ / ₈	2.95	59.7
TWHL60-3313	3 ⁵ / ₁₆	2.95	59.7
TWHL60-3125	3 ¹ / ₈	2.76	59.7

Hexagon Reducers for Low Profile Hexagon Torque Wrenches



Features

- High-strength chromium-molybdenum steel alloy.
- Special sizes available upon request.

Drive Unit Model Number	Hexagon Head Model Number	Hexagon Size (inch)	Hexagon Reducers Model Number						Reducer Lock Model	
			Model Number	A-B (inch)	Model Number	A-B (inch)	Model Number	A-B (inch)		
TWH10	TWHL10-2000	2	IHR10-2000-1625	2-1 ⁵ / ₈	IHR10-2000-1438	2-1 ⁷ / ₁₆	IHR10-2000-1250	2-1 ¹ / ₄	IHR-L2000	
	TWHL10-46	1 ¹³ / ₁₆	IHR10-46-1438	1 ¹³ / ₁₆ -1 ⁷ / ₁₆	IHR10-46-1250	1 ¹³ / ₁₆ -1 ¹ / ₄	IHR10-46-30	1 ¹³ / ₁₆ -1 ³ / ₁₆	IHR-L46	
	TWHL10-1625	1 ⁵ / ₈	IHR10-1625-1250	1 ⁵ / ₈ -1 ¹ / ₄	IHR10-1625-30	1 ⁵ / ₈ -1 ³ / ₁₆	IHR10-1625-27	1 ⁵ / ₈ -1 ¹ / ₁₆	IHR-L1625	
	TWHL10-1438	1 ⁷ / ₁₆	IHR10-1438-30	1 ⁷ / ₁₆ -1 ³ / ₁₆	IHR10-1438-27	1 ⁷ / ₁₆ -1 ¹ / ₁₆			IHR-L1438	
	TWHL10-1250	1 ¹ / ₄	IHR10-1250-27	1 ¹ / ₄ -1 ¹ / ₁₆					IHR-L1250	
TWH20	TWHL20-75	2 ¹⁵ / ₁₆	IHR20-75-65	2 ¹⁵ / ₁₆ -2 ³ / ₈	IHR20-75-2375	2 ¹⁵ / ₁₆ -2 ³ / ₈	IHR20-75-2188	2 ¹⁵ / ₁₆ -2 ³ / ₁₆	IHR-L75	
	TWHL20-70	2 ³ / ₄	IHR20-70-2375	2 ³ / ₄ -2 ³ / ₈	IHR20-70-2188	2 ³ / ₄ -2 ³ / ₁₆	IHR20-70-2000	2 ³ / ₄ -2	IHR-L70	
	TWHL20-65	2 ⁹ / ₁₆	IHR20-65-2188	2 ⁹ / ₁₆ -2 ³ / ₁₆	IHR20-65-2000	2 ⁹ / ₁₆ -2	IHR20-65-46	2 ⁹ / ₁₆ -1 ¹³ / ₁₆	IHR-L65	
	TWHL20-2375	2 ³ / ₈	IHR20-2375-2000	2 ³ / ₈ -2	IHR20-2375-46	2 ³ / ₈ -1 ¹³ / ₁₆	IHR20-2375-1625	2 ³ / ₈ -1 ⁵ / ₈	IHR-L2375	
	TWHL20-2188	2 ³ / ₁₆	IHR20-2188-46	2 ³ / ₁₆ -2 ¹³ / ₁₆	IHR20-2188-1625	2 ³ / ₁₆ -1 ⁵ / ₈	IHR20-2188-1438	2 ³ / ₁₆ -1 ⁷ / ₁₆	IHR-L2188	
	TWHL20-2000	2	IHR20-2000-1625	2-1 ⁵ / ₈	IHR20-2000-1438	2-1 ⁷ / ₁₆	IHR20-2000-1250	2-1 ¹ / ₄	IHR-L2000	
	TWHL20-46	1 ¹³ / ₁₆	IHR20-46-1438	1 ¹³ / ₁₆ -1 ⁷ / ₁₆			IHR20-46-30	1 ¹³ / ₁₆ -1 ³ / ₁₆	IHR-L46	
	TWHL20-1625	1 ⁵ / ₈	IHR20-1625-1250	1 ⁵ / ₈ -1 ¹ / ₄	IHR20-1625-30	1 ⁵ / ₈ -1 ³ / ₁₆	IHR20-1625-27	1 ⁵ / ₈ -1 ¹ / ₁₆	IHR-L1625	
	TWHL20-1438	1 ⁷ / ₁₆	IHR20-1438-30	1 ⁷ / ₁₆ -1 ³ / ₁₆	IHR20-1438-27	1 ⁷ / ₁₆ -1 ¹ / ₁₆			IHR-L1438	
	TWHL20-1250	1 ¹ / ₄	IHR20-1250-27	1 ¹ / ₄ -1 ¹ / ₁₆					IHR-L1250	
	TWH30	TWHL30-3500	3 ¹ / ₂ "	IHR30-3500-3125	3 ¹ / ₂ -3 ¹ / ₈	IHR30-3500-75	3 ¹ / ₂ -2 ¹⁵ / ₁₆	IHR30-3500-70	3 ¹ / ₂ -2 ³ / ₄	IHR-L3500
TWHL30-3313		3 ⁵ / ₁₆	IHR30-3313-75	3 ⁵ / ₁₆ -2 ¹⁵ / ₁₆	IHR30-3313-70	3 ⁵ / ₁₆ -2 ³ / ₄	IHR30-3313-65	3 ⁵ / ₁₆ -2 ⁹ / ₁₆	IHR-L3313	
TWHL30-3125		3 ¹ / ₈	IHR30-3125-70	3 ¹ / ₈ -2 ³ / ₄	IHR30-3125-65	3 ¹ / ₈ -2 ⁹ / ₁₆	IHR30-3125-2375		IHR-L3125	
TWHL30-75		2 ¹⁵ / ₁₆	IHR30-75-65	2 ¹⁵ / ₁₆ -2 ³ / ₈	IHR30-75-2375	2 ¹⁵ / ₁₆ -2 ³ / ₈	IHR30-75-2188	2 ¹⁵ / ₁₆ -2 ³ / ₁₆	IHR-L75	
TWHL30-70		2 ³ / ₄	IHR30-70-2375	2 ³ / ₄ -2 ³ / ₈	IHR30-70-2188	2 ³ / ₄ -2 ³ / ₁₆	IHR30-70-2000	2 ³ / ₄ -2	IHR-L70	
TWHL30-65		2 ⁹ / ₁₆	IHR30-65-2188	2 ⁹ / ₁₆ -2 ³ / ₁₆	IHR30-65-2000	2 ⁹ / ₁₆ -2	IHR30-65-46	2 ⁹ / ₁₆ -1 ¹³ / ₁₆	IHR-L65	
TWHL30-2375		2 ³ / ₈	IHR30-2375-2000	2 ³ / ₈ -2	IHR30-2375-46	2 ³ / ₈ -1 ¹³ / ₁₆			IHR-L2375	
TWHL30-2188		2 ³ / ₁₆	IHR30-2188-46	2 ³ / ₁₆ -1 ¹³ / ₁₆	IHR30-2188-1625	2 ³ / ₁₆ -1 ⁵ / ₈			IHR-L2188	
TWH40	TWHL40-4500	4 ¹ / ₂	IHR40-4500-100	4 ¹ / ₂ -3 ¹⁶ / ₁₅	IHR40-4500-3875	4 ¹ / ₂ -3 ⁷ / ₈	IHR40-4500-95	4 ¹ / ₂ -3 ³ / ₄	IHR-L4500	
	TWHL40-110	4 ⁵ / ₁₆	IHR40-110-95	4 ⁵ / ₁₆ -3 ³ / ₄	IHR40-110-3688	4 ⁵ / ₁₆ -3 ¹¹ / ₁₆	IHR40-110-3500	4 ⁵ / ₁₆ -3 ¹ / ₂	IHR-L110	
	TWHL40-4250	4 ¹ / ₄	IHR40-4250-3688	4 ¹ / ₄ -3 ¹¹ / ₁₆	IHR40-4250-3500	4 ¹ / ₄ -3 ¹ / ₂	IHR40-4250-3313	4 ¹ / ₄ -3 ⁵ / ₁₆	IHR-L4250	
	TWHL40-105	4 ¹ / ₈	IHR40-105-3500	4 ¹ / ₈ -3 ¹ / ₂	IHR40-105-3313	4 ¹ / ₈ -3 ³ / ₁₆	IHR40-105-3125	4 ¹ / ₈ -3 ¹ / ₈	IHR-L105	
	TWHL40-100	3 ¹⁵ / ₁₆	IHR40-100-3313	3 ¹⁵ / ₁₆ -3 ⁵ / ₁₆	IHR40-100-3125	3 ¹⁵ / ₁₆ -3 ¹ / ₈	IHR40-100-75	3 ¹⁵ / ₁₆ -2 ¹⁵ / ₁₆	IHR-L100	
	TWHL40-3875	3 ⁷ / ₈	IHR40-3875-3125	3 ⁷ / ₈ -3 ¹ / ₈	IHR40-3875-75	3 ⁷ / ₈ -2 ¹⁵ / ₁₆	IHR40-3875-70	3 ⁷ / ₈ -2 ³ / ₄	IHR-L3875	
	TWHL40-95	3 ⁷ / ₄	IHR40-95-3125	3 ³ / ₄ -3 ¹ / ₈	IHR40-95-75	3 ³ / ₄ -2 ¹⁵ / ₁₆	IHR40-95-70	3 ³ / ₄ -2 ³ / ₄	IHR-L95	
	TWHL40-3688	3 ¹¹ / ₁₆	IHR40-3688-75	3 ¹¹ / ₁₆ -2 ¹⁵ / ₁₆	IHR40-3688-70	3 ¹¹ / ₁₆ -2 ³ / ₄	IHR40-3688-65	3 ¹¹ / ₁₆ -2 ⁹ / ₁₆	IHR-L3688	
	TWHL40-3500	3 ¹ / ₂ "	IHR40-3500-75	3 ¹ / ₂ -2 ¹⁵ / ₁₆	IHR40-3500-70	3 ¹ / ₂ -2 ³ / ₄	IHR40-3500-65	3 ¹ / ₂ -2 ⁹ / ₁₆	IHR-L3500	
	TWHL40-3313	3 ⁵ / ₁₆	IHR40-3313-70	3 ⁵ / ₁₆ -2 ³ / ₄	IHR40-3313-65	3 ⁵ / ₁₆ -2 ⁹ / ₁₆			IHR-L3313	
	TWHL40-3125	3 ¹ / ₈	IHR40-3125-65	3 ¹ / ₈ -2 ⁹ / ₁₆					IHR-L3125	
TWH50	TWHL50-5375	5 ³ / ₈	IHR50-5375-4750	5 ³ / ₈ -4 ³ / ₄	IHR50-5375-4625	5 ³ / ₈ -4 ⁵ / ₈	IHR50-5375-4250	5 ³ / ₈ -4 ¹ / ₄	IHR-L5375	
	TWHL50-5125	5 ¹ / ₈	IHR50-5125-4500	5 ¹ / ₈ -4 ¹ / ₂	IHR50-5125-110	5 ¹ / ₈ -4 ⁵ / ₁₆	IHR50-5125-4250	5 ¹ / ₈ -4 ¹ / ₄	IHR-L5125	
	TWHL50-5000	5	IHR50-5000-4250	5-4 ¹ / ₄	IHR50-5000-105	5-4 ¹ / ₈	IHR50-5000-3875	5-3 ⁷ / ₈	IHR-L5000	
	TWHL50-4750	4 ³ / ₄	IHR50-4750-105	4 ³ / ₄ -4 ¹ / ₈	IHR50-4750-100	4 ³ / ₄ -3 ¹⁵ / ₁₆	IHR50-4750-3875	4 ³ / ₄ -3 ⁷ / ₈	IHR-L4750	
	TWHL50-4625	4 ⁵ / ₈	IHR50-4625-100	4 ⁵ / ₈ -3 ¹⁵ / ₁₆	IHR50-4625-3875	4 ⁵ / ₈ -3 ⁷ / ₈	IHR50-4625-95	4 ⁵ / ₈ -3 ³ / ₄	IHR-L4625	
	TWHL50-4500	4 ¹ / ₂	IHR50-4500-3875	4 ¹ / ₂ -3 ⁷ / ₈	IHR50-4500-95	4 ¹ / ₂ -3 ³ / ₄	IHR50-4500-3688	4 ¹ / ₂ -3 ¹¹ / ₁₆	IHR-L4500	
	TWHL50-110	4 ⁵ / ₁₆	IHR50-110-95	4 ⁵ / ₁₆ -3 ³ / ₄	IHR50-110-3688	4 ⁵ / ₁₆ -3 ¹¹ / ₁₆	IHR50-110-3500	4 ⁵ / ₁₆ -3 ¹ / ₂	IHR-L110	
	TWHL50-4250	4 ¹ / ₄	IHR50-4250-3688	4 ¹ / ₄ -3 ¹¹ / ₁₆	IHR50-4250-3500	4 ¹ / ₄ -3 ¹ / ₂	IHR50-4250-3313	4 ¹ / ₄ -3 ⁵ / ₁₆	IHR-L4250	
	TWHL50-105	4 ¹ / ₈	IHR50-105-3500	4 ¹ / ₈ -3 ¹ / ₂	IHR50-105-3313	4 ¹ / ₈ -3 ³ / ₁₆	IHR50-105-3125	4 ¹ / ₈ -3 ¹ / ₈	IHR-L105	
	TWHL50-100	3 ¹⁵ / ₁₆	IHR50-100-3313	3 ¹⁵ / ₁₆ -3 ⁵ / ₁₆	IHR50-100-3125	3 ¹⁵ / ₁₆ -3 ¹ / ₈	IHR50-100-75	3 ¹⁵ / ₁₆ -2 ¹⁵ / ₁₆	IHR-L100	
	TWHL50-3875	3 ⁷ / ₈	IHR50-3875-3313	3 ⁷ / ₈ -3 ⁵ / ₁₆	IHR50-3875-3125	3 ⁷ / ₈ -3 ¹ / ₈	IHR50-3875-75	3 ⁷ / ₈ -2 ¹⁵ / ₁₆	IHR-L3875	
	TWHL50-95	3 ³ / ₄	IHR50-95-3125	3 ³ / ₄ -3 ¹ / ₈	IHR50-95-75	3 ³ / ₄ -2 ¹⁵ / ₁₆			IHR-L95	
	TWHL50-3688	3 ¹¹ / ₁₆	IHR50-3688-3125	3 ¹¹ / ₁₆ -3 ¹ / ₈	IHR50-3688-75	3 ¹¹ / ₁₆ -2 ¹⁵ / ₁₆			IHR-L3688	
	TWHL50-3500	3 ¹ / ₂ "	IHR50-3500-75	3 ¹ / ₂ -2 ¹⁵ / ₁₆	IHR50-3500-70	3 ¹ / ₂ -2 ³ / ₄			IHR-L3500	
	TWHL50-3313	3 ⁵ / ₁₆	IHR50-3313-70	3 ⁵ / ₁₆ -2 ³ / ₄					IHR-L3313	
	TWH60	TWHL60-6125	6 ¹ / ₈	IHR60-6125-5500	6 ¹ / ₈ -5 ¹ / ₂	IHR60-6125-5125	6 ¹ / ₈ -5 ¹ / ₈	IHR60-6125-5000	6 ¹ / ₈ -5	IHR-L6125
		TWHL60-5750	5 ³ / ₄	IHR60-5750-5125	5 ³ / ₄ -5 ¹ / ₈	IHR60-5750-5000	5 ³ / ₄ -5	IHR60-5750-4750	5 ³ / ₄ -4 ³ / ₄	IHR-L5750
TWHL60-5125		5 ¹ / ₈	IHR60-5125-4500	5 ¹ / ₈ -4 ¹ / ₂	IHR60-5125-110	5 ¹ / ₈ -4 ⁵ / ₁₆	IHR60-5125-4250	5 ¹ / ₈ -4 ¹ / ₄	IHR-L5125	
TWHL60-5000		5	IHR60-5000-4250	5-4 ¹ / ₄	IHR60-5000-105	5-4 ¹ / ₈	IHR60-5000-3875	5-3 ⁷ / ₈	IHR-L5000	
TWHL60-4750		4 ³ / ₄	IHR60-4750-105	4 ³ / ₄ -4 ¹ / ₈	IHR60-4750-100	4 ³ / ₄ -3 ¹⁵ / ₁₆	IHR60-4750-3875	4 ³ / ₄ -3 ⁷ / ₈	IHR-L4750	
TWHL60-4625		4 ⁵ / ₈	IHR60-4625-100	4 ⁵ / ₈ -3 ¹⁵ / ₁₆	IHR60-4625-3875	4 ⁵ / ₈ -3 ⁷ / ₈	IHR60-4625-95	4 ⁵ / ₈ -3 ³ / ₄	IHR-L4625	
TWHL60-4500		4 ¹ / ₂	IHR60-4500-3875	4 ¹ / ₂ -3 ⁷ / ₈	IHR60-4500-95	4 ¹ / ₂ -3 ³ / ₄	IHR60-4500-3688	4 ¹ / ₂ -3 ¹¹ / ₁₆	IHR-L4500	
TWHL60-110		4 ⁵ / ₁₆	IHR60-110-95	4 ⁵ / ₁₆ -3 ³ / ₄	IHR60-110-3688	4 ⁵ / ₁₆ -3 ¹¹ / ₁₆	IHR60-110-3500	4 ⁵ / ₁₆ -3 ¹ / ₂	IHR-L110	
TWHL60-4250		4 ¹ / ₄	IHR60-4250-3688	4 ¹ / ₄ -3 ¹¹ / ₁₆	IHR60-4250-3500	4 ¹ / ₄ -3 ¹ / ₂	IHR60-4250-3313	4 ¹ / ₄ -3 ⁵ / ₁₆	IHR-L4250	
TWHL60-105		4 ¹ / ₈	IHR60-105-3500	4 ¹ / ₈ -3 ¹ / ₂	IHR60-105-3313	4 ¹ / ₈ -3 ⁵ / ₁₆	IHR60-105-3125	4 ¹ / ₈ -3 ¹ / ₈	IHR-L105	
TWHL60-100		3 ¹⁵ / ₁₆	IHR60-100-3313	3 ¹⁵ / ₁₆ -3 ⁵ / ₁₆	IHR60-100-3125	3 ¹⁵ / ₁₆ -3 ¹ / ₈	IHR60-100-75	3 ¹⁵ / ₁₆ -2 ¹⁵ / ₁₆	IHR-L100	
TWHL60-3875		3 ⁷ / ₈	IHR60-3875-3313	3 ⁷ / ₈ -3 ⁵ / ₁₆	IHR60-3875-3125	3 ⁷ / ₈ -3 ¹ / ₈	IHR60-3875-75	3 ⁷ / ₈ -2 ¹⁵ / ₁₆	IHR-L3875	
TWHL60-95		3 ³ / ₄	IHR60-95-3125	3 ³ / ₄ -3 ¹ / ₈	IHR60-95-75	3 ³ / _{4</}				