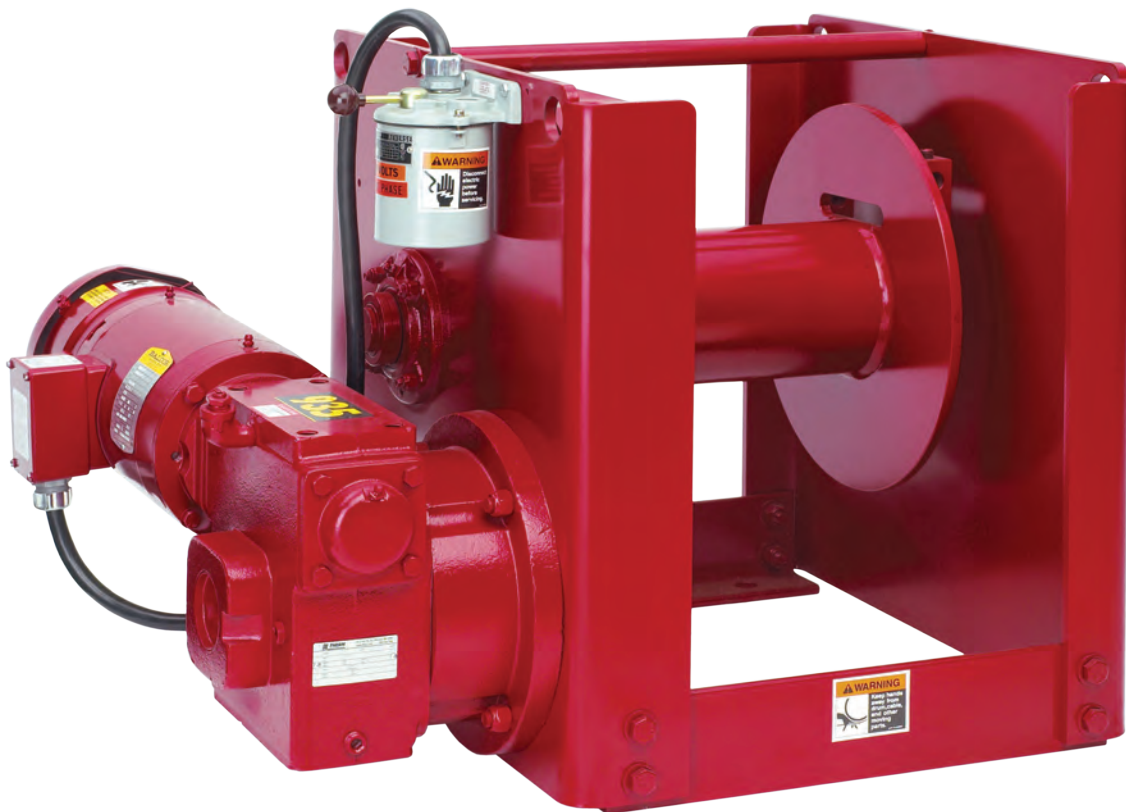




HEAVY-DUTY ELECTRIC POWER WINCH

4WS SERIES



thern.com
(507) 454-2996

4WS SERIES

HEAVY-DUTY ELECTRIC POWER WINCHES



HEAVY-DUTY, DIRECT-DRIVE GEARS

Enhance Load Control and Positioning

The 4WS Series of power winches (800 to 26,000 pounds) is designed to lift, lower, pull, or position heavy loads. Heavy-duty spur and worm gears, plus direct-drive gearing enhance load security and positioning accuracy. Sealed cast-iron gearcase housing with integral oil bath lubricates rotating gears for long service life. Ideal for long-lift or long-pull applications with single-phase power.

Flange-Mounted Premium Motor & Enclosure

- Reversible, three-phase, industrial-grade motor, endures continuous operation. Single-phase version also available
- A totally enclosed, fan-cooled (TEFC) design, featuring IP44+ and F-class insulation, resists debris and contamination for long service life
- Standard motors comply with industry standards: UL, CSA, IEC, and NEMA MG1



Product Shown:
4WS6M12

Durable Gears & Gearbox Design

- Heavy-duty spur gears, providing secondary reduction, are guarded with grease zerks for easy lubrication and maintenance
- Large-capacity bearings enhance smooth operation and durability
- Sealed, cast-iron gearbox with integral oil bath for primary gears dissipates heat and provides continuous lubrication for enhanced service life
- Direct-drive gearing, featuring spur and worm gears, enhance load control and positioning while resisting wear
- Primary speed reducers meet AGMA and/or DIN standards

Load-Holding Motor Disk Brake

- Spring-set, electrically-released brake helps control loads and facilitates safe operation

ASME B30.7 Compliance Available

- Contact Thern for details

Integral Drum & Shaft Design

- Large-diameter, welded-steel drum, featuring outside flange anchors, promotes uniform winding and life of wire rope
- Anchors allow cable to be over or under wound and provide multiple drum exit angles
- Flange-style, self-aligning roller bearings with cast-iron housing maintain smooth drum rotation
- Continuous, solid-steel drum shaft and steel frame provide optimal strength and security
- Complete wire rope assemblies available upon request

PERFORMANCE

Series	IMPERIAL				
	Load Rating	Power Supply	Line Speed	Drum Capacity	Clutch
4WS1M6	1,500 lbs	.5-1.5 hp	17-44 fpm	260 ft	Yes
4WS3M10	3,700 lbs	1-3 hp	8-23 fpm	500 ft	Yes
4WS6M12	6,400 lbs	1-5 hp	4-24 fpm	660 ft	Yes
4WS9M18	10,000 lbs	5-10 hp	13-32 fpm	1,500 ft	No
4WS16M20	16,000 lbs	7.5-15 hp	12-35 fpm	1,530 ft	No
4WS26M26	26,200 lbs	10-25 hp	10-36 fpm	1,480 ft	No

Series	METRIC				
	Load Rating	Power Supply	Line Speed	Drum Capacity	Clutch
4WS1M6	680 kg	.37-1.1 kW	5-13 mpm	79 m	Yes
4WS3M10	1,675 kg	.75-2.2 kW	2-7 mpm	152 m	Yes
4WS6M12	2,900 kg	.75-3.7 kW	1-7 mpm	201 m	Yes
4WS9M18	4,535 kg	3.7-7.5 kW	3-9 mpm	457 m	No
4WS16M20	7,255 kg	5.5-11 kW	3-10 mpm	466 m	No
4WS26M26	11,880 kg	7.5-18.5 kW	3-10 mpm	451 m	No



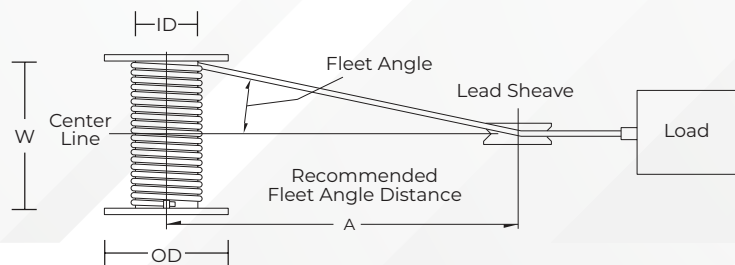
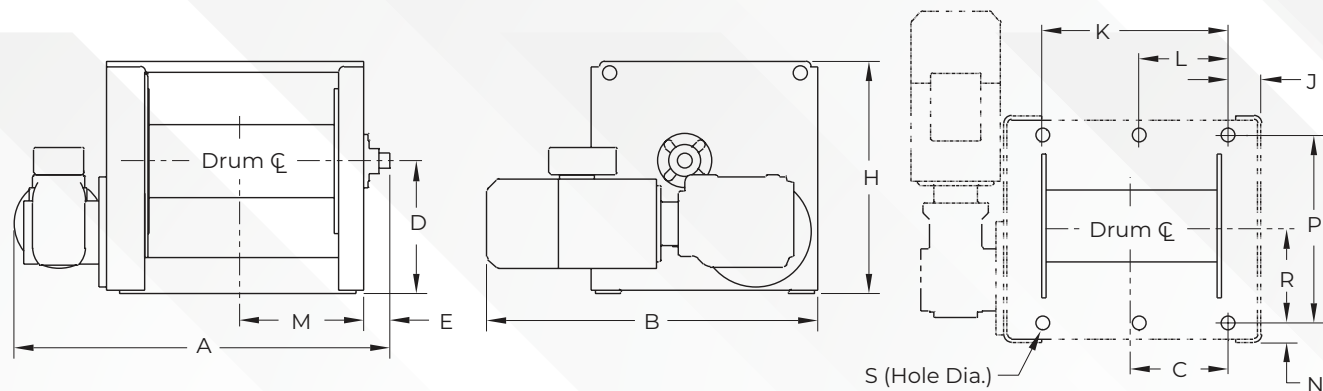
NOTICE: These products are not for lifting people or things over people.

Refer to technical pages for detailed performance information.

4WS SERIES

HEAVY-DUTY ELECTRIC POWER WINCHES

4WS Series



4WS Series Drum Dimensions

Model	Drum Diameter (ID)		Flange Diameter (OD)		Drum Width (W)		Fleet Angle Distance (A) ¹	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(ft)	(m)
4WS9M18	9	229	20	508	18	457	29	8.8
4WS16M20	10.75	273	24	610	20	508	32	9.8
4WS26M26	14	356	28	711	26	660	42	12.8

¹ Recommended minimum distance between drum and lead sheave for smooth drum.

Dimensions are for reference only and subject to change without notice. Please contact Thern for exact dimensions.

Electric Motor Controls

Model	Description	Approx. Ship Wt.	
		(lb)	(kg)
10S3D4	electric motor controls 230/3/60 to 3 hp	25	12
10S7D4	electric motor controls 230/3/60 to 7.5 hp	25	12
10S10D4	electric motor controls 230/3/60 to 10 hp	28	13
10S20D4	electric motor controls 230/3/60 to 20 hp	28	13
10S30D4	electric motor controls 230/3/60 to 30 hp	60	28
10S7E4	electric motor controls 460/3/60 to 7.5 hp	25	12
10S15E4	electric motor controls 460/3/60 to 15 hp	25	12
10S20E4	electric motor controls 460/3/60 to 20 hp	28	13
10S40E4	electric motor controls 460/3/60 to 40 hp	60	28

Controls include NEMA 4 rated enclosure and NEMA 4X rated pendant control on 50-foot cord.

Motor controls sold separately. Please contact Thern or nearest Thern Distributor for firm, fixed price and delivery. All prices include mounting and wiring to motor.

4WS Series Drum Capacities

Wire Rope Diameter	Breaking Strength ²	Drum Capacity	4WS9M18		4WS16M20		4WS26M26					
			(in)	(mm)	(lb)	(kg)	(ft)	(m)	(ft)	(m)	(ft)	(m)
7/16	20,400	9,254	1st	87	26.5	-	-	-	-	-	-	-
			Mid	670	204.2	-	-	-	-	-	-	-
			Full	1,500	457.2	-	-	-	-	-	-	-
1/2	26,600	12,066	1st	76	23.2	-	-	-	-	-	-	-
			Mid	520	158.5	-	-	-	-	-	-	-
			Full	1,170	356.6	-	-	-	-	-	-	-
9/16	33,600	15,240	1st	67	20.4	89	27.1	-	-	-	-	-
			Mid	420	128.0	690	210.3	-	-	-	-	-
			Full	930	283.5	1,530	466.3	-	-	-	-	-
5/8	41,200	18,688	1st	59	18	78	23.8	-	-	-	-	-
			Mid	340	103.6	560	170.7	-	-	-	-	-
			Full	760	231.6	1,250	381	-	-	-	-	-
3/4	58,800	26,671	1st	48	14.6	65	19.8	110	33.5	-	-	-
			Mid	240	73.2	400	121.9	670	204.2	-	-	-
			Full	540	164.6	880	268.2	1,480	451.1	-	-	-
7/8	79,600	36,106	1st	-	-	54	16.5	94	28.7	-	-	-
			Mid	-	-	290	88.4	480	146.3	-	-	-
			Full	-	-	640	195.1	1,070	326.1	-	-	-
1	103,400	46,902	1st	-	-	47	14.3	82	25.0	-	-	-
			Mid	-	-	220	67.1	370	112.8	-	-	-
			Full	-	-	490	149.4	830	253.0	-	-	-
1-1/8	130,000	58,968	1st	-	-	-	-	71	21.6	-	-	-
			Mid	-	-	-	-	300	91.4	-	-	-
			Full	-	-	-	-	660	201.2	-	-	-
1-1/4	159,800	72,485	1st	-	-	-	-	63	19.2	-	-	-
			Mid	-	-	-	-	240	73.2	-	-	-
			Full	-	-	-	-	530	161.5	-	-	-
1-3/8	192,000	87,090	1st	-	-	-	-	56	17.1	-	-	-
			Mid	-	-	-	-	200	61.0	-	-	-
			Full	-	-	-	-	440	134.1	-	-	-

Values based on 6x37 IWRC EIPS wire rope.

Actual drum capacities 25-30% less due to nonuniform winding. Wire rope tension will also affect drum capacity.

² Wire rope should be selected based on the breaking strength to load rating ratio and application parameters. Industry standards suggest a 5:1 breaking strength to load rating ratio for lifting and a 3:1 ratio for pulling.

4WS Series Winch Dimensions

Model	A		B		C		D		E		H		J		K		L		M		N		P		R		S (hole dia.)		Ship Weight	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lb)	(kg)
4WS9M18-7000-20	44	1,118	33.75	857	8.5	216	17.75	451	5.13	130	31	787	4	102	18	457	-	-	12.5	318	2.75	70	22	559	12.5	318	1-3/16	30	1,100	499
4WS9M18-7000-30	45.5	1,156	38.5	978	8.5	216	17.75	451	5.13	130	31	787	4	102	18	457	-	-	12.5	318	2.75	70	22	559	12.5	318	1-3/16	30	1,100	499
4WS9M18-10000-10	44	1,118	33.75	857	8.5	216	17.75	451	5.13	130	31	787	4	102	18	457	-	-	12.5	318	2.75	70	22	559	12.5	318	1-3/16	30	1,100	499
4WS9M18-10000-20	45.5	1,156	38.5	978	8.5	216	17.75	451	5.13	130	31	787	4	102	18	457	-	-	12.5	318	2.75	70	22	559	12.5	318	1-3/16	30	1,100	499
4WS9M18-10000-30	45.5	1,156	40	1,016	8.5	216	17.75	451	5.13	130	31	787	4	102	18	457	-	-	12.5	318	2.75	70	22	559	12.5	318	1-3/16	30	1,160	527
4WS16M20-13000-15	48	1,219	34.75	883	9.5	241	20	508	6.25	159	34	864	4	102	20	508	10	254	13.5	343	2.75	70	27.5	699	16.25	413	1-3/16	30	1,550	704
4WS16M20-13000-20	48	1,219	37	940	9.5	241	20	508	6.25	159	34	864	4	102	20	508	10	254	13.5	343	2.75	70	27.5	699	16.25	413	1-3/16	30	1,610	731
4WS16M20-13000-35	48	1,219	39.5	1,003	9.5	241	20	508	6.25	159	34	864	4	102	20	508	10	254	13.5	343	2.75	70	27.5	699	16.25	413	1-3/16	30	1,650	749
4WS16M20-16000-15	48	1,219	34.75	883	9.5	241	20	508	6.25	159	34	864	4	102	20	508	10	254	13.5	343	2.75	70	27.5	699	16.25	413	1-3/16	30	1,550	704
4WS16M20-16000-20	48	1,219	37	940	9.5	241	20	508	6.25	159	34	864	4	102	20	508	10	254	13.5	343	2.75	70	27.5	699	16.25	413	1-3/16	30	1,610	731
4WS26M26-22000-20	60.5	1,537	43.5	1,105	12.38	314	25.38	645	8.06	205	44.5	1,130	5.88	149	26	660	13	330	18.25	464	3	76	36	914	21.75	552	1-3/8	35	3,110	1,411
4WS26M26-22000-25	60.5	1,537	47	1,194	12.38	314	25.38	645	8.06	205	44.5	1,130	5.88	149	26	660	13	330	18.25	464	3	76	36	914	21.75	552	1-3/8	35	3,290	1,493
4WS26M26-22000-35	60.5	1,537	50	1,270	12.38	314	25.38	645	8.06	205	44.5	1,130	5.88	149	26	660	13	330	18.25	464	3	76	36	914	21.75	552	1-3/8	35	3,350	1,520
4WS26M26-26000-10	60.5	1,537	42	1,067	12.38	314	25.38	645	8.06	205	44.5	1,130	5.88	149	26	660	13	330	18.25	464	3	76	36	914	21.75	552	1-3/8	35	3,070	1,393
4WS26M26-26000-15	60.5	1,537	43.5	1,105	12.38	314	25.38	645	8.06	205	44.5	1,130	5.88	149	26	660	13	330	18.25	464	3	76	36	914	21.75	552	1-3/8	35	3,110	1,411

Dimensions are for reference only and subject to change without notice. Please contact Thern for exact dimensions.

4WS Series Performance Characteristics

Model	Model Number Extensions			Motor	Load Rating						Line Speed			
	Load Rating	Line Speed	Motor Codes ³		1st Layer		Mid Drum		Full Drum		1st Layer		Full Drum	
					(lb)	(kg)	(lb)	(kg)	(lb)	(kg)	(fpm)	(mpm)	(fpm)	(mpm)
4WS9M18	7,000	20	D, E, F	5	7,300	3,312	5,000	2,268	3,800	1,724	21	6.4	41	12.5
4WS9M18	7,000	30	D, E, F	7.5	7,500	3,402	5,200	2,359	4,000	1,815	32	9.8	61	18.6
4WS9M18	10,000	10	D, E, F	5	10,000	4,536	6,900	3,130	5,300	2,405	13	4.0	24	7.3
4WS9M18	10,000	20	D, E, F	7.5	10,000	4,536	6,900	3,130	5,300	2,405	21	6.4	41	12.5
4WS9M18	10,000	30	D, E, F	10	10,000	4,536	6,900	3,130	5,200	2,359	32	9.8	61	18.6
4WS16M20	13,000	15	D, E, F	7.5	13,000	5,897	8,800	3,992	6,700	3,040	14	4.3	26	7.9
4WS16M20	13,000	20	D, E, F	10	13,300	6,033	9,100	4,128	6,900	3,130	18	5.5	35	10.7
4WS16M20	13,000	35	D, E, F	15	13,000	5,897	8,900	4,038	6,700	3,040	35	10.7	68	20.7
4WS16M20	16,000	15	D, E, F	7.5	16,000	7,258	11,100	5,035	8,500	3,856	12	3.7	24	7.3
4WS16M20	16,000	20	D, E, F	10	16,000	7,258	11,100	5,035	8,500	3,856	16	4.9	31	9.4
4WS26M26	22,000	20	D, E, F	15	22,800	10,343	16,700	7,576	13,200	5,988	18	5.5	31	9.4
4WS26M26	22,000	25	D, E, F	20	22,600	10,252	16,500	7,485	13,100	5,943	25	7.6	43	13.1
4WS26M26	22,000	35	D, E, F	25	22,200	10,070	16,300	7,394	12,900	5,852	36	11.0	63	19.2
4WS26M26	26,000	10	D, E, F	10	26,200	11,885	19,400	8,800	15,400	6,986	10	3.0	17	5.2
4WS26M26	26,000	15	D, E, F	15	26,000	11,794	20,200	9,163	16,500	7,485	16	4.9	27	8.2

Please contact Thern or nearest Thern distributor for firm, fixed price and delivery.

Motor Codes		
D	230 volt	3 phase
E	460 volt	3 phase
F	All other voltages, please contact Thern.	



MADE IN USA 

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