



HEAVY-DUTY ELECTRIC POWER WINCH

4BP SERIES



thern.com
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4BP SERIES

HEAVY-DUTY ELECTRIC POWER WINCHES

BEVEL, PLANETARY GEAR DRIVEN Heavy Duty Winch for Reliable Heavy Lifting and Pulling

The 4BP Series of heavy-duty electric power winches (31,000 to 51,000 pounds) is designed for a wide range of applications including barge and rail car positioning, bulk material handling, and much more. The range of options in lifting capacity, motor power and drum width enable a 4BP winch to be implemented within a relatively small footprint while retaining a high load rating and wire rope capacity. Fixed or variable speed controls may be mounted directly on the winch, minimizing footprint and allowing precise control of the winch.

Dedicated Lifting Points for Installation

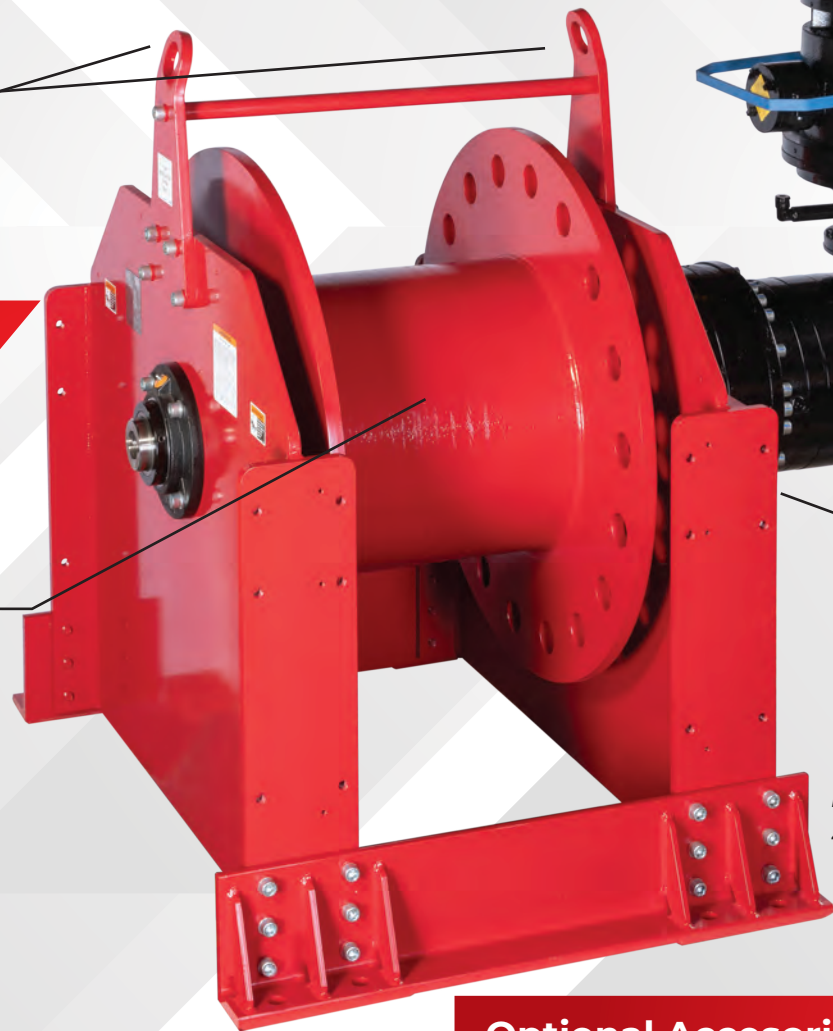
- Make installation safer and easier by utilizing installation lifting points

Standard Options

- 31,000, 41,500 or 51,000 pound load capacity, high or low speed motor and narrow or wide drum width

Large Diameter Welded Steel Drum

- Integrated wire rope anchor points promote uniform winding and long life of wire rope
- Continuous, solid-steel drum shaft and steel frame provide optimal strength and security
- Various drum widths available to accommodate required lengths of wire rope and footprint requirements
- Complete wire rope assemblies available upon request



Product Shown:
4BP30-20HE

High-Efficiency Premium Motor

- Energy-efficient 460 volt, reversible, three-phase, industrial-grade motor, endures continuous use at desired load capacity
- Totally enclosed, fan-cooled (TEFC) design, featuring IP66 and F-class insulation, resists debris and contamination for long service life
- Standard motors comply with industry standards: UL, CSA, IEC, and NEMA MG1
- Easy operation fail safe electric brake with manual release lever; simply press down handle to release brake

Reliable & Sturdy Gearbox Design

- Fully enclosed bevel, planetary gear set provides reliable operation under heavy loads and allows for optimal load control
- Large-capacity bearings enhance smooth operation and durability
- Sealed, cast-iron gearbox with integral oil bath for rotating gears dissipates heat and provides continuous lubrication for enhanced service life

Refer to technical pages for detailed performance information.



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

Optional Accesories

- Rotary Limit Switch
- Drum Guard
- Drum Locking Pin
- Pressure Roller Bar

PERFORMANCE

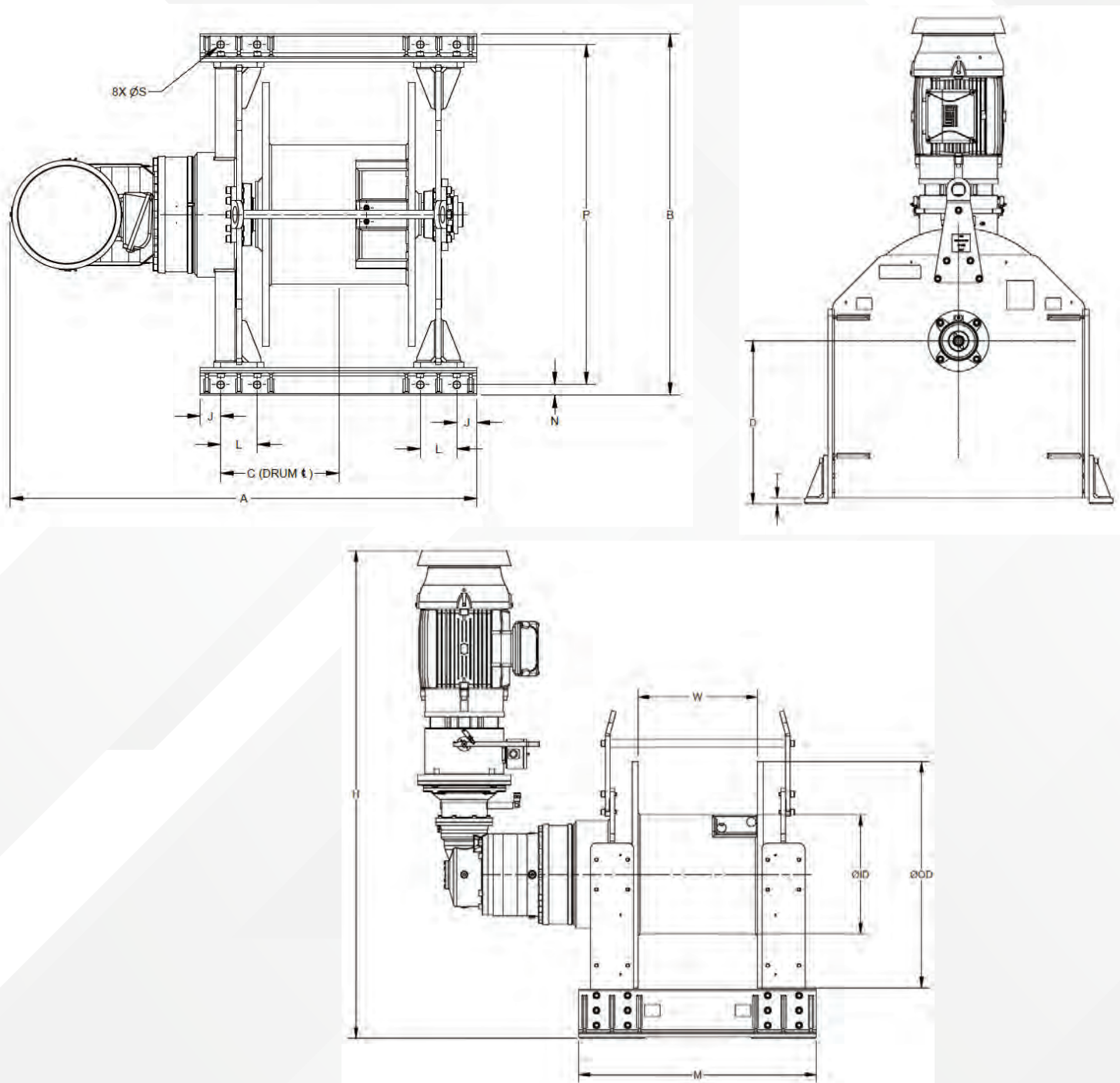
Series	IMPERIAL				
	Load Rating (First Layer)	Drum Width	Line Speed	Motor Power	Motor Voltage
4BP30-20HE	31,000 lbs	20 in	44-84 fpm	50 hp	460/3/60
4BP30-20LE	31,000 lbs	20 in	15-26 fpm	15 hp	460/3/60
4BP30-48HE	31,000 lbs	48 in	44-84 fpm	50 hp	460/3/60
4BP30-48LE	31,000 lbs	48 in	15-26 fpm	15 hp	460/3/60
4BP40-24HE	41,500 lbs	24 in	52-80 fpm	75 hp	460/3/60
4BP40-24LE	41,500 lbs	24 in	17-26 fpm	25 hp	460/3/60
4BP40-48HE	41,500 lbs	48 in	52-80 fpm	75 hp	460/3/60
4BP40-48LE	41,500 lbs	48 in	17-26 fpm	25 hp	460/3/60
4BP50-24HE	51,000 lbs	24 in	44-73 fpm	75 hp	460/3/60
4BP50-24LE	51,000 lbs	24 in	15-25 fpm	30 hp	460/3/60
4BP50-48HE	51,000 lbs	48 in	44-73 fpm	75 hp	460/3/60
4BP50-48LE	51,000 lbs	48 in	15-25 fpm	30 hp	460/3/60

Series	METERIC				
	Load Rating (First Layer)	Drum Width	Line Speed	Motor Power	Motor Voltage
4BP30-20HE	14,060 kg	508 mm	13-23 mpm	37 Kw	460/3/60
4BP30-20LE	14,060 kg	508 mm	5-8 mpm	11 Kw	460/3/60
4BP30-48HE	14,060 kg	1219 mm	13-23 mpm	37 Kw	460/3/60
4BP30-48LE	14,060 kg	1219 mm	5-8 mpm	11 Kw	460/3/60
4BP40-24HE	18,800 kg	610 mm	16-24 mpm	56 Kw	460/3/60
4BP40-24LE	18,800 kg	610 mm	5-8 mpm	19 Kw	460/3/60
4BP40-48HE	18,800 kg	1219 mm	16-24 mpm	56 Kw	460/3/60
4BP40-48LE	18,800 kg	1219 mm	5-8 mpm	19 Kw	460/3/60
4BP50-24HE	23,135 kg	610 mm	13-22mpm	56 Kw	460/3/60
4BP50-24LE	23,135 kg	610 mm	5-8 mpm	22.3 Kw	460/3/60
4BP50-48HE	23,135 kg	1219 mm	13-22 mpm	56 Kw	460/3/60
4BP50-48LE	23,135 kg	1219 mm	5-8 mpm	22.3 Kw	460/3/60

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4BP Series Drum Dimensions

Model	Drum Diameter (ID)		Flange Diameter (OD)		Drum Width (W)	
	(in)	(mm)	(in)	(mm)	(in)	(mm)
4BP30-20HE	20	508	38	965.2	20	508
4BP30-20LE	20	508	38	965.2	20	508
4BP30-48HE	20	508	38	965.2	48	1219.2
4BP30-48LE	20	508	38	965.2	48	1219.2
4BP40-24HE	24	609.6	42	1066.8	24	609.6
4BP40-24LE	24	609.6	42	1066.8	24	609.6
4BP40-48HE	24	609.6	42	1066.8	48	1219.2
4BP40-48LE	24	609.6	42	1066.8	48	1219.2
4BP50-24HE	24	609.6	46	1168.4	24	609.6
4BP50-24LE	24	609.6	46	1168.4	24	609.6
4BP50-48HE	24	609.6	46	1168.4	48	1219.2
4BP50-48LE	24	609.6	46	1168.4	48	1219.2

4BP Series Drum Capacities

Wire Rope Diameter	Breaking Strength ²	Drum Capacity	4BP30-20		4BP30-48		4BP40-24		4BP40-48		4BP50-24		4BP50-48		
			(ft)	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)	(ft)	(m)	
1-1/8	130,000	58,968	1st	72	21.9	200	60	-	-	-	-	-	-	-	
			Mid	400	121.9	970	60.9	-	-	-	-	-	-	-	
			Full	900	274.3	2160	158.3	-	-	-	-	-	-	-	
1-1/4	159,800	72,485	1st	63	19.2	180	54.8	95	28.9	220	67	-	-	-	
			Mid	320	97.5	770	234.6	440	134.1	870	265.1	-	-	-	
			Full	720	219.4	1720	524.2	970	295.6	1940	591.3	-	-	-	
1-3/8	192,000	87,090	1st	55	16.7	160	48.7	84	25.6	190	57.9	84	25.6	190	57.9
			Mid	270	82.2	650	198.1	360	109.7	730	222.5	480	146.3	950	289.5
			Full	600	182.8	1430	435.8	810	246.8	1620	493.7	1060	323	2120	646.1
1-1/2	228,000	103,420	1st	-	-	-	-	75	22.8	180	54.8	75	22.8	180	54.8
			Mid	-	-	-	-	310	94.4	610	185.8	400	121.9	800	243.8
			Full	-	-	-	-	680	207.2	1370	417.5	890	271.2	1790	545.5
1-5/8	264,000	119,750	1st	-	-	-	-	-	-	-	-	68	20.7	160	48.7
			Mid	-	-	-	-	-	-	-	-	330	100.5	670	204.2
			Full	-	-	-	-	-	-	-	-	740	225.5	1480	451.1

² 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.

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.

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

4BP Series Winch Dimensions

Model	A		B		C		D		H		J		L		M		N		P		S		T		ID		OD		W		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)	(in)	(mm)	(lb)	(kg)
4BP30-20HE	67.25	1,708	52	1,321	17	432	27.5	699	81.84	2,079	2.94	75	5.25	133	39.88	1,013	1.5	38	49	1,245	1.09	28	1	25	20	508	38	965	20	508	4,347	1,972
4BP30-20LE	64.25	1,654	52	1,321	17	432	27.5	699	66.38	1,686	2.94	75	5.25	133	39.88	1,013	1.5	38	49	1,245	1.09	28	1	25	20	508	38	965	20	508	3,646	1,654
4BP30-48HE	95.25	2,351	52	1,321	31	787	27.5	699	81.84	2,079	2.94	75	5.25	133	67.88	1,724	1.5	38	49	1,245	1.09	28	1	25	20	508	38	965	48	1,219	5,184	2,351
4BP30-48LE	92.25	2,033	52	1,321	31	787	27.5	699	66.38	1,686	2.94	75	5.25	133	67.88	1,724	1.5	38	49	1,245	1.09	28	1	25	20	508	38	965	48	1,219	4,483	2,033
4BP40-24HE	86.03	2,181	60	1,524	21.75	553	30	762	75.84	1,926	4	102	8	203	51.5	1,308	2	51	56	1,422	1.63	41	1	25	24	610	42	1,067	24	610	6,133	2,782
4BP40-24LE	57	2,210	60	1,524	21.75	553	30	762	89.22	2,266	4	102	8	203	51.5	1,308	2	51	56	1,422	1.63	41	1	25	24	610	42	1,067	24	610	6,982	3,167
4BP40-48HE	110.03	2,795	60	1,524	33.75	857	30	762	75.84	1,926	4	102	8	203	75.5	1,918	2	51	56	1,422	1.63	41	1	25	24	610	42	1,067	48	1,219	7,291	3,307
4BP40-48LE	111	2,820	60	1,524	33.75	857	30	762	89.22	2,266	4	102	8	203	75.5	1,918	2	51	56	1,422	1.63	41	1	25	24	610	42	1,067	48	1,219	8,139	3,692
4BP50-24HE	87.81	2,230	64	1,626	21.75	553	32	813	77.84	1,977	4	102	8	203	51.5	1,308	2	51	60	1,524	1.63	41	1	25	24	610	46	1,168	24	610	6,836	3,101
4BP50-24LE	87	2,210	64	1,626	21.75	553	32	813	91.22	2,317	4	102	8	203	51.5	1,308	2	51	60	1,524	1.63	41	1	25	24	610	46	1,168	24	610	7,477	3,392
4BP50-48HE	111.81	2,840	64	1,626	33.75	857	32	813	77.84	1,977	4	102	8	203	75.5	1,918	2	51	60	1,524	1.63	41	1	25	24	610	46	1,168	48	1,219	7,993	3,625
4BP50-48LE	111	2,820	64	1,626	33.75	857	32	813	91.22	2,317	4	102	8	203	75.5	1,918	2	51	60	1,524	1.63	41	1	25	24	610	46	1,168	48	1,219	8,634	3,916

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4BP Series Performance Characteristics

Model	Model Number Extensions			Motor	Load Rating						Line Speed			
	Load Rating	Drum Width	Speed		1st Layer		Mid Drum		Full Drum		1st Layer		Full Drum	
					(lb)	(in)	(hp)	(lb)	(kg)	(lb)	(kg)	(fpm)	(mpm)	(fpm)
4BP30-20HE	31,000	20	High	50	31,000	14,060	23,200	10,525	18,700	8,485	44	13.1	84	22.9
4BP30-20LE	31,000	20	Low	15	31,000	14,060	23,200	10,525	18,700	8,485	15	4.5	26	7.9
4BP30-48HE	31,000	48	High	50	31,000	14,060	23,200	10,525	18,700	8,485	44	13.1	84	22.9
4BP30-48LE	31,000	48	Low	15	31,000	14,060	23,200	10,525	18,700	8,485	15	4.5	26	7.9
4BP40-24HE	41,500	24	High	75	41,500	18,800	32,900	14,900	27,200	12,300	52	15.8	80	24.4
4BP40-24LE	41,500	24	Low	25	41,500	18,800	32,900	14,900	27,200	12,300	17	5.2	26	7.9
4BP40-48HE	41,500	48	High	75	41,500	18,800	32,900	14,900	27,200	12,300	52	15.8	42	24.4
4BP40-48LE	41,500	48	Low	25	41,500	18,800	32,900	14,900	27,200	12,300	17	5.2	26	7.9
4BP50-24HE	51,000	24	High	75	51,000	23,135	38,300	17,315	30,700	13,925	44	13.4	73	22.3
4BP50-24LE	51,000	24	Low	30	51,000	23,135	38,300	17,315	30,700	13,925	15	4.6	25	7.6
4BP50-48HE	51,000	48	High	75	51,000	23,135	38,300	17,315	30,700	13,925	44	13.4	73	22.3
4BP50-48LE	51,000	48	Low	30	51,000	23,135	38,300	17,315	30,700	13,925	15	4.6	25	7.6



MADE IN USA 

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