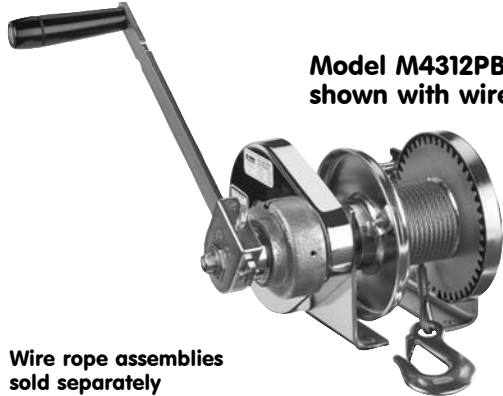


Model M4022PB


 Model M4312PBSS
 shown with wire rope

 Wire rope assemblies
 sold separately

Spur Gear Hand Winches

Up to 2000 lb capacity

- **Machine Cut Spur Gears** for accurate and long lasting service.
- **Automatic Brake Models** provide positive load control for lifting and lowering operations. Brake models have PB suffix.
- **Corrosion Resistant** trivalent zinc plated finish protects against corrosion in harsh environments.
- **Quick Disconnect Anchor**¹ for quickly attaching or removing wire rope equipped with a swaged ball fitting.
- **Bronze and Radial Ball Bearings** provide smooth and efficient operation.
- **Large Diameter Drums** minimize wear to extend wire rope life.
- **Gear Covers** protect gears and help prevent injuries.
- **Stainless Steel Models Available** for harsh environments, see models with SS suffix. Stainless steel models are electro-polished for added corrosion resistance.
- **Two-year Limited Warranty**

Spur Gear Hand Winches – Configurations and Performance Characteristics – Section 1

model number	description	load rating (lb)			wire rope dia. (in)	drum capacity (ft) ²			single gear ratio	double gear ratio	force ³ to lift 1000 lb	approx. ship wt. (lb)
		1st layer	mid drum	full drum		1st layer	mid drum	full drum				
M401	500 lb – marine duty (for pulling only)	500	400	300	1/8 3/16	7 4	60 27	130 60	—	—	—	8
M4022	1000 lb – marine duty (for pulling only)	1000	700	500	1/8 3/16	4 3	52 26	130 57	2.85:1	—	40 lb	12
M4022PB	1000 lb – marine duty with brake (for lifting)	1000	700	500	1/8 3/16	4 3	52 26	130 57	2.85:1	—	41 lb	17
M4032	1000 lb – marine duty (for pulling only)	1000	700	500	1/8 3/16	11 7	110 51	250 110	2.85:1	—	40 lb	14
M4032PB	1000 lb – marine duty with brake (for lifting)	1000	700	500	1/8 3/16	11 7	110 51	250 110	2.85:1	—	41 lb	18
M4042PBSS	1000 lb – stainless steel with brake (for lifting)	1000	800	600	1/8 3/16 1/4	12 8 5	110 48 27	240 110 59	3.83:1	—	46 lb (single gear)	24
M4312	2000 lb – marine duty (for pulling only)	2000	1600	1200	3/16 1/4 5/16	8 5 4	48 27 17	110 59 39	3.83:1	14.7:1	20 lb (double gear)	23
M4312PB	2000 lb – marine duty with brake (for lifting)	2000	1600	1200	3/16 1/4 5/16	8 5 4	48 27 17	110 59 39	—	14.7:1	17 lb (double gear)	28
M4312PBSS	2000 lb – stainless steel with brake (for lifting)	2000	1600	1200	3/16 1/4 5/16	8 5 4	48 27 17	110 59 39	—	14.7:1	17 lb (double gear)	28
M4412	2000 lb – marine duty (for pulling only)	2000	1600	1200	3/16 1/4 5/16	18 14 11	97 52 35	210 120 77	3.83:1	14.7:1	20 lb (double gear)	25
M4412PB	2000 lb – marine duty with brake (for lifting)	2000	1600	1200	3/16 1/4 5/16	18 14 11	97 52 35	210 120 77	—	14.7:1	17 lb (double gear)	30

Please contact factory or nearest Thern Distributor for firm fixed price and delivery.

¹ For Models M4022, M4022PB, M4032, M4032PB ball end is available for 1/8 inch and 3/16 inch only.

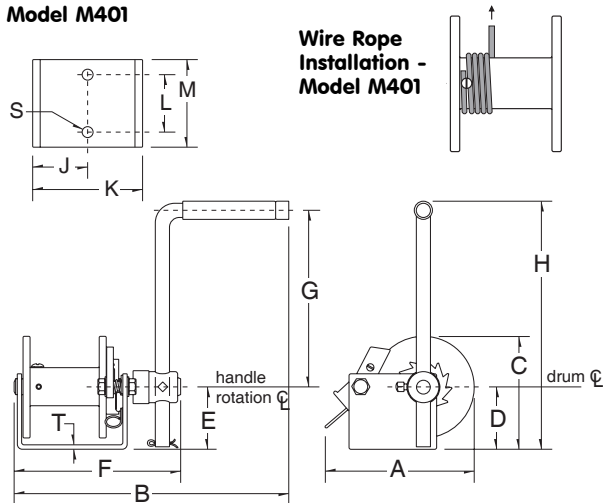
For Models M4042PBSS, M4312, M4312PB, M4312PBSS, M4412, M4412PB ball end is available for 3/16 inch and 1/4 inch only.

² Actual drum capacities may be 25-30% less, due to nonuniform winding. Wire rope tension will also affect drum capacity.

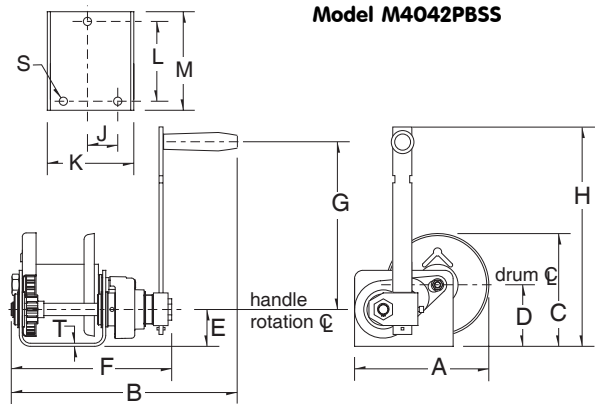
³ Approximate handle force required to lift 1000 lb with an empty drum, and maximum handle length.

See Dimensions on Next Page

Model M401



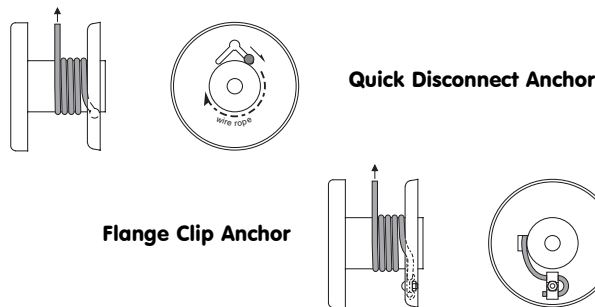
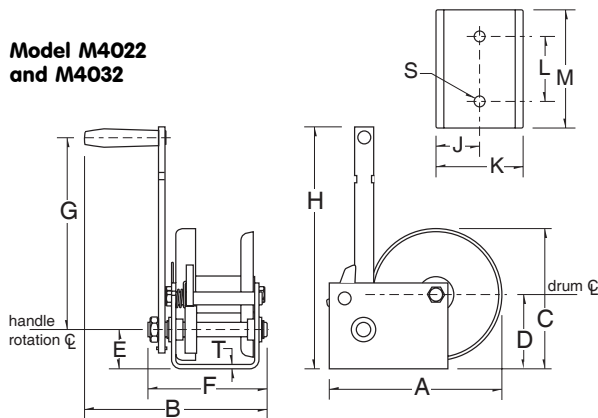
Model M4042PBSS



Wire Rope Installation - Models M4042PBSS

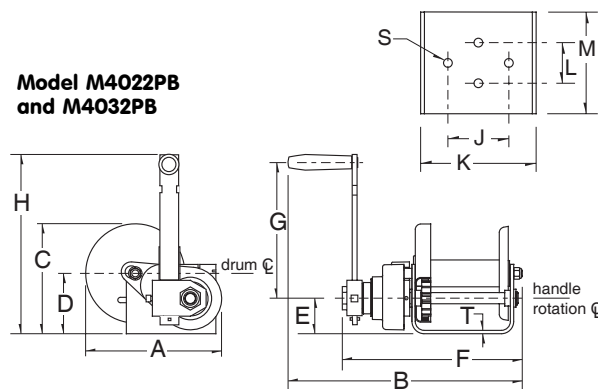
Model M4022 and M4022PB Base

Model M4022 and M4032



Model M4032 and M4032PB Base

Model M4022PB and M4032PB



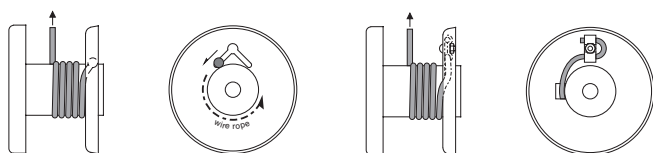
Spur Gear Hand Winches – Dimensions (in)

	M401	M4022	M4022PB	M4032	M4032PB	M4042PBSS
drum dia.	1.50	1.50	1.50	1.50	1.50	2.50
flange dia.	4.06	4.56	4.56	4.56	4.56	5.50
drum width	2.75	2.00	2.00	4.00	4.00	3.00
A	6.56	7.27	7.27	7.27	7.27	8.21
B	10.56	9.00	12.12	11.00	14.12	13.77
C	4.56	6.12	6.12	6.12	6.12	6.90
D	2.50	3.31	3.31	3.31	3.31	3.75
E	2.50	2.00	2.00	2.00	2.00	2.25
F	5.81	5.25	8.12	7.25	10.12	9.76
G ¹	8.50	11.03	10.59	11.03	10.59	10.59
H ¹	11.28	13.56	13.12	13.56	13.12	13.50
J	2.19	1.84	1.84	3.00	3.00	1.44
K	4.38	3.68	3.68	5.68	5.68	5.26
L	2.50	2.82	2.82	2.00	2.00	5.00
M	3.50	5.00	5.00	5.00	5.00	6.00
S(hole dia.)	.40	.43	.43	.43	.43	.41
T	.18	.18	.18	.18	.18	.18

Dimensions are for reference only and subject to change without notice.

¹ Models M401, M4022PB, M4032PB and M4042PBSS handles are adjustable, dimension shown is for maximum handle length.

Wire Rope Installation - Models M4022, M4022PB, M4032 and M4032PB



Quick Disconnect Anchor

Flange Clip Anchor

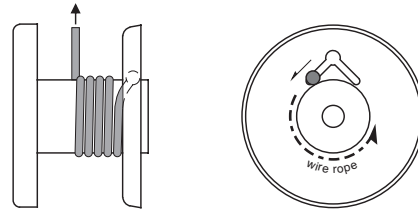
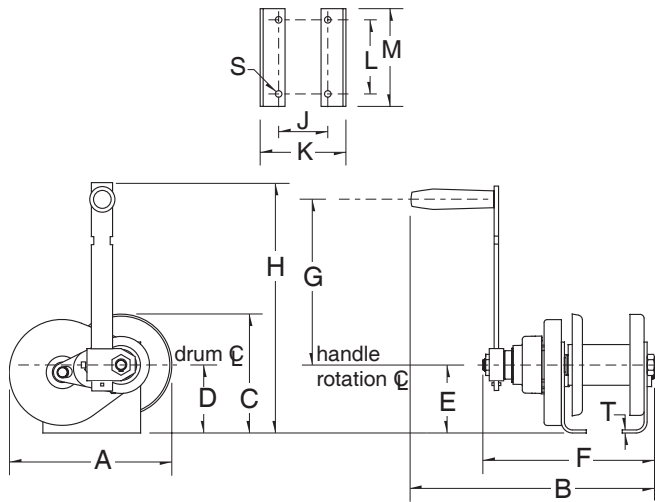
Important:

It is the owner's or operator's responsibility to determine the suitability of the equipment to its intended use. Study all applicable codes, manuals, and regulations. Be sure to read the Owner's Manual supplied with the equipment before operating it.

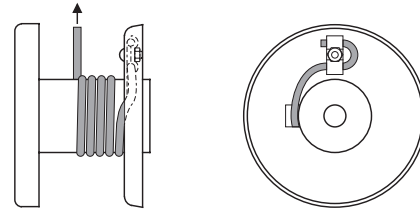
See Additional Dimensions on Next Page

Models M4312PB, M4412PB and M4312PBSS

Wire Rope Installation - Models M4312, M4312PB, M4312PBSS, M4412 and M4412PB

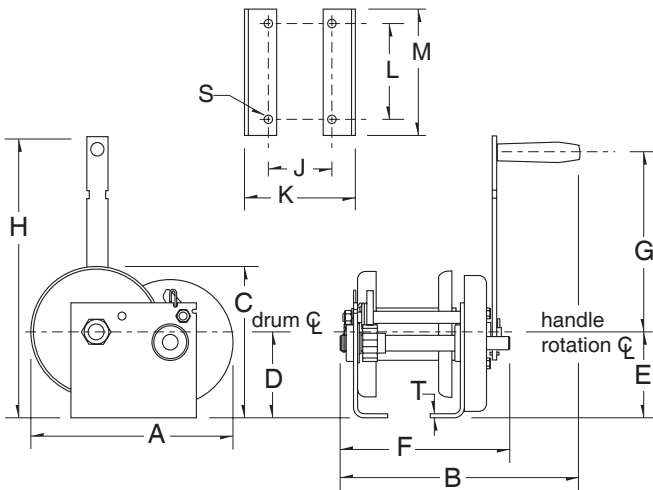


Quick Disconnect Anchor



Flange Clip Anchor

Models M4312 and M4412



Spur Gear Hand Winches – Dimensions (in)

	M4312	M4312PB	M4312PBSS	M4412	M4412PB
drum dia.	2.50	2.50	2.50	2.50	2.50
flange dia.	5.50	5.50	5.50	5.50	5.50
drum width	3.00	3.00	3.00	6.00	6.00
A	10.00	10.00	10.00	10.00	10.00
B	12.70	14.50	14.50	15.70	17.50
C	7.15	7.15	7.15	7.15	7.15
D	4.00	4.00	4.00	4.00	4.00
E	4.00	4.00	4.00	4.00	4.00
F	8.00	10.78	10.78	11.00	13.78
G ¹	8.75	10.59	10.59	8.75	10.59
H ¹	13.35	15.19	15.19	13.35	15.19
J	3.34	3.34	3.34	6.34	6.34
K	5.31	5.31	5.31	8.31	8.31
L	5.00	5.00	5.00	5.00	5.00
M	6.00	6.00	6.00	6.00	6.00
S (hole dia.)	.40	.40	.41	.40	.40
T	.18	.18	.18	.18	.18

Dimensions are for reference only and subject to change without notice.

¹ Models M4312PB, M4312PBSS and M4412PB handles are adjustable, dimension shown is for maximum handle length.

Important:

It is the owner's or operator's responsibility to determine the suitability of the equipment to its intended use. Study all applicable codes, manuals, and regulations. Be sure to read the Owner's Manual supplied with the equipment before operating it.



Model M452B shown with disc brake and wire rope

Wire rope assemblies sold separately



Model M492

Spur Gear Hand Winches Double Reduction

Up to 10,000 lb capacity

- **Machine Cut Spur Gears** for accurate and long lasting service.
- **Automatic Brake Models** provide positive load control for lifting and lowering operations. Brake models have B suffix.
- **Corrosion Resistant** durable paint finish combined with trivalent zinc plating protects against corrosion.
- **Bronze and Radial Ball Bearings** provide smooth and efficient operation.
- **Large Diameter Drums** minimize wear to extend wire rope life.
- **Spring Loaded Ratchets** for positive engagement with gear.
- **Steel Gear Covers** protect gears and help prevent injuries.
- **Handles Adjust** in length to change force required to move load.
- **Two-year Limited Warranty**

Spur Gear Hand Winches – Configurations and Performance Characteristics – Section 1

model number	description	load rating (lb)			wire rope dia. (in)	drum capacity (ft) ¹				single gear ratio	double gear ratio	force ² to lift 1000 lb	approx. ship wt. (lb)
		1st layer	mid drum	full drum		1st layer	mid drum	full drum					
M452	4000 lb – marine duty (for pulling only)	4000	3300	2500	1/4 5/16 3/8	23 18 14	130 89 64	300 200 140	4.42:1	19.54:1	10 lb (double gear)	83	
M452B	4000 lb – marine duty with brake (for lifting)	4000	3300	2500	1/4 5/16 3/8	23 18 14	130 89 64	300 200 140	—	19.54:1	10 lb (double gear)	91	
M452B-A	4000 lb – marine duty with brake (for lifting) 4 inch drum width	4000	3300	2500	1/4 5/16 3/8	13 9 7	83 56 40	190 120 89	—	19.54:1	10 lb (double gear)	83	
M492	10,000 lb – marine duty (for pulling only)	10,000	7400	5400	5/16 3/8 1/2	27 21 15	240 170 100	540 390 230	5.00:1	25.00:1	8 lb (double gear)	166	
M492B	10,000 lb – marine duty with brake (for lifting)	10,000	7400	5400	5/16 3/8 1/2	27 21 15	240 170 100	540 390 230	—	25.00:1	8 lb (double gear)	173	
M492-12	10,000 lb – marine duty (for pulling only) 12 inch drum width	10,000	7400	5400	5/16 3/8 1/2	46 37 27	380 270 160	850 610 360	5.00:1	25.00:1	8 lb (double gear)	175	
M492B-12	10,000 lb – marine duty with brake (for lifting) 12 inch drum width	10,000	7400	5400	5/16 3/8 1/2	46 37 27	380 270 160	850 610 360	—	25.00:1	8 lb (double gear)	190	
MB451	disc brake only for M452 (for lifting)											13	
MB491	disc brake only for M492 and M492-12 (for lifting)											15	
HW452	hand wheel only for M452 (for pulling only)											19	
HW492	hand wheel only for M492 and M492-12 (for pulling only)											20	

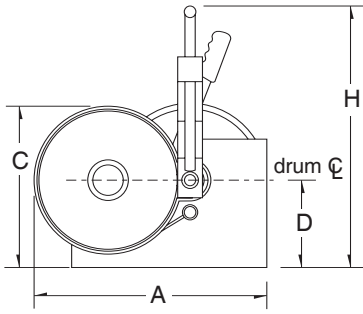
Please contact factory or nearest Thern Distributor for firm fixed price and delivery.

¹ Actual drum capacities may be 25-30% less, due to nonuniform winding. Wire rope tension will also affect drum capacity.

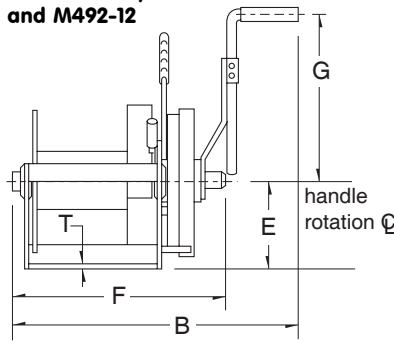
² Approximate handle force required to lift 1000 lb with an empty drum, and maximum handle length.

See Dimensions on Next Page

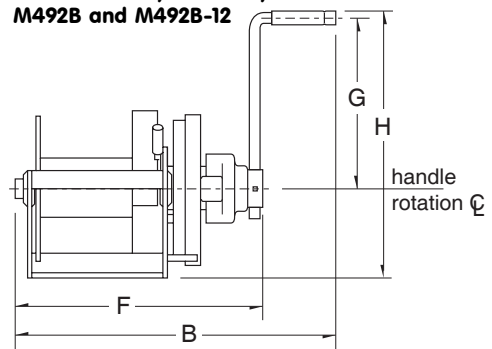
All Models



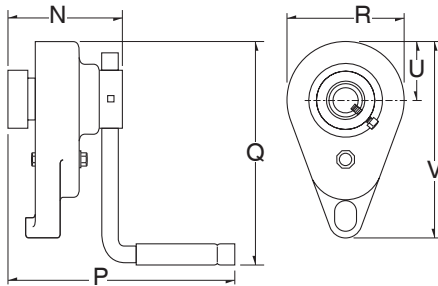
Models M452, M492 and M492-12



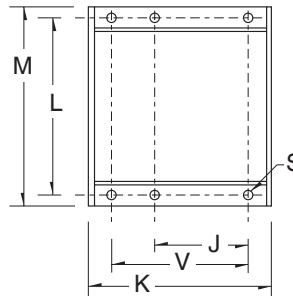
Models M452B, M452B-A, M492B and M492B-12



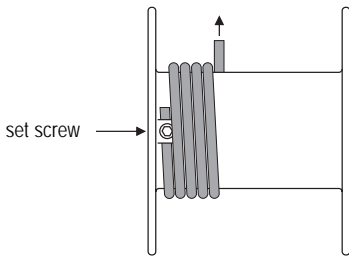
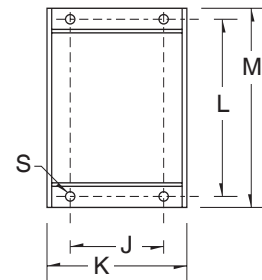
Models MB451 and MB491



Base for M492-12 and M492B-12



Base for M452, M452B, M452B-A, M492 and M492B Models



Wire Rope Installation - All Models

Disc Brakes – Dimensions (in)

	MB451	MB491
N	4.97	5.15
P	10.44	10.62
Q ¹	21.25	21.38
R	4.87	4.87
U	2.44	2.44
V	8.62	10.56

Dimensions are for reference only and are subject to change without notice.

¹ Handles are adjustable, dimension shown is for maximum handle length.

Important:

It is the owner's or operator's responsibility to determine the suitability of the equipment to its intended use. Study all applicable codes, manuals, and regulations. Be sure to read the Owner's Manual supplied with the equipment before operating it.

Spur Gear Hand Winches – Dimensions (in)

	M452	M452B	M452B-A	M492	M492B	M492-12	M492B-12
drum dia.	4.00	4.00	4.00	5.00	5.00	5.00	5.00
flange dia.	8.50	8.50	8.50	12.38	12.38	12.38	12.38
drum width	6.38	6.38	4.00	7.62	7.62	12.00	12.00
A	15.25	15.25	15.25	20.38	20.38	20.38	20.38
B	22.00	21.90	19.62	25.12	25.00	29.50	29.38
C	10.69	10.69	10.83	14.00	14.00	14.00	14.00
D	5.81	5.81	5.81	7.50	7.50	7.50	7.50
E	5.81	5.81	5.81	7.50	7.50	7.50	7.50
F	14.81	16.43	14.06	18.44	19.53	22.82	23.90
G ¹	18.62	18.38	18.38	22.50	18.50	22.50	18.50
H ¹	24.44	24.19	24.19	30.00	26.00	30.00	26.00
J	6.75	6.75	4.50	8.00	8.00	8.00	8.00
K	9.50	9.50	7.12	12.00	12.00	16.38	16.38
L	11.25	11.25	11.25	15.50	15.50	15.50	15.50
M	12.50	12.50	12.50	17.00	17.00	17.00	17.00
S (hole dia.)	.56	.56	.56	.81	.81	.81	.81
T	.25	.25	.25	.38	.38	.38	.38
V	-	-	-	-	-	12.38	12.38

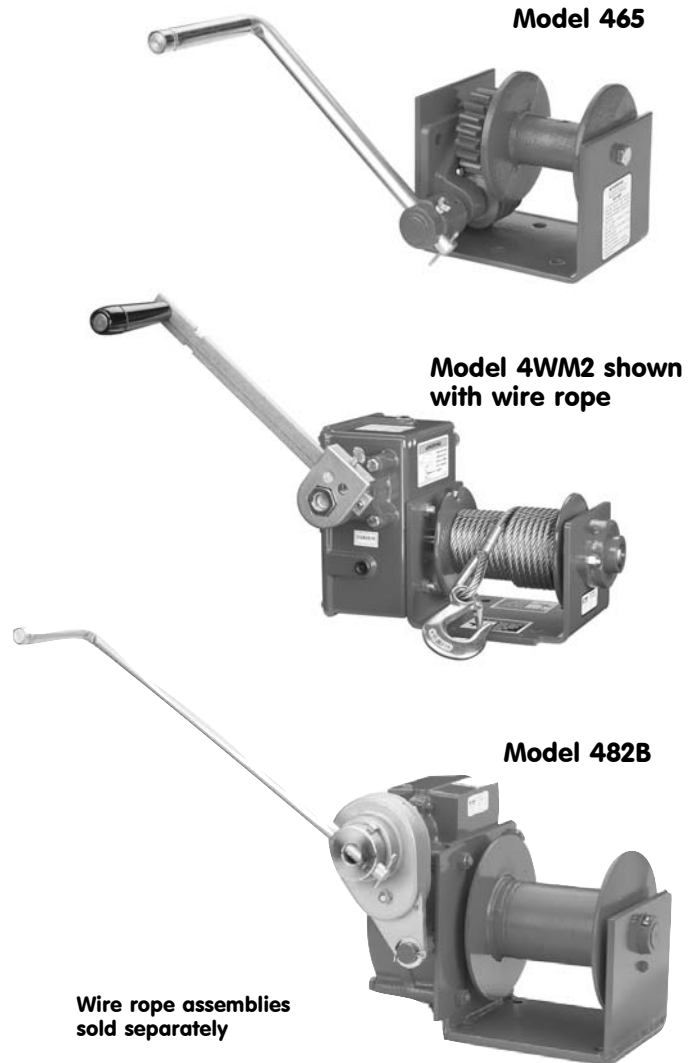
Dimensions are for reference only and subject to change without notice.

¹ Handles are adjustable, dimension shown is for maximum handle length.

Worm Gear Hand Winches

Up to 4000 lb capacity

- **Machine Cut Worm Gears** provide accurate operation and long lasting service.
- **Enclosed Oil Bath** provides continuous lubrication of gears to minimize wear, except on Model 465. On Model 4WM2 oil seals keep oil in and dirt out.
- **Hex Drive** and handle are included. Model 4WM2 can be power driven with a maximum 400 rpm drill-motor.
- **Automatic Brake Models** provide positive load control for lifting. Brake models have a PB or B suffix. Model 4WM2 features an internal mechanical brake.
- **Corrosion Resistant** durable paint finish protects against corrosion in harsh environments.
- **Bronze Bearings** on most models for smooth operation.
- **Large Diameter Drums** minimize wire rope wear.
- **Handles Adjust** in length to change force required to move the load.
- **Mounting Options** include floor, wall, or ceiling. Adapter plate may be required, contact factory.
- **Two-year Limited Warranty**



Worm Gear Hand Winches – Configurations and Performance Characteristics – Section 1

model number	description	load rating (lb)			wire rope dia. (in)	drum capacity (ft) ¹			force ² to lift 1000 lb	approx. ship wt. (lb)	
		1st layer	mid drum	full drum		1st layer	mid drum	full drum			
465	750 lb – open gears (recommended for pulling only)	750	600	400	1/8 3/16	7 4	58 27	130 59	20:1	21 lb	12
462	1000 lb – enclosed gearing (recommended for pulling only)	1000	700	500	1/8 3/16	7 4	61 28	140 61	15:1	34 lb	15
4622PB	1000 lb – enclosed gearing with brake (for lifting)	1000	700	500	1/8 3/16	7 4	61 28	140 61	15:1	26 lb	21
472	2000 lb – enclosed gearing (recommended for pulling only)	2000	1700	1300	3/16 1/4 5/16	15 11 8	65 35 23	140 77 52	24:1	24 lb	32
4WM2	2000 lb – enclosed gearing with brake (for lifting) Drill Driveable	2000	1500	1200	1/4 3/16 (not recommended for this winch)	11	35	77	32:1	14 lb	41
482	4000 lb – enclosed gearing (recommended for pulling only)	4000	3300	2500	1/4 5/16 3/8	23 18 14	140 91 65	300 200 140	26:1	31 lb	100
482B	4000 lb – enclosed gearing with brake (for lifting)	4000	3300	2500	1/4 5/16 3/8	23 18 14	140 91 65	300 200 140	26:1	21 lb	113

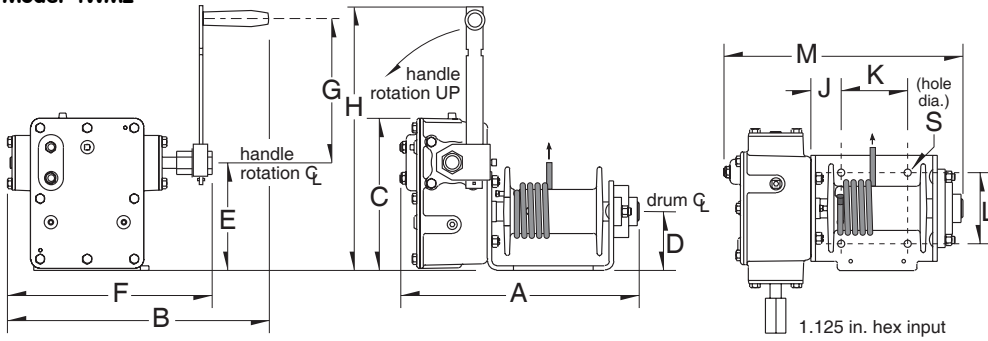
Please contact factory or nearest Thern Distributor for firm fixed price and delivery.

¹ Actual drum capacities may be 25-30% less, due to nonuniform winding. Wire rope tension will also affect drum capacity.

² Approximate handle force required to lift 1000 lb with an empty drum, and maximum handle length.

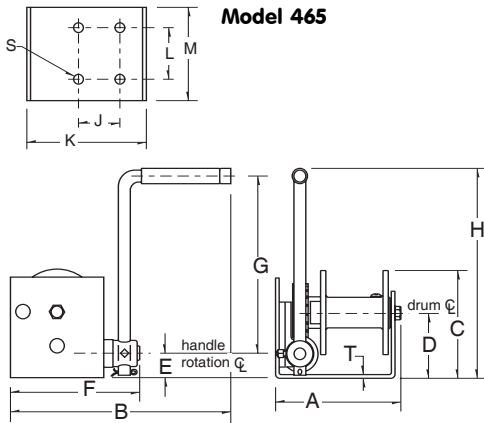
See Dimensions on Next Page

Model 4WM2

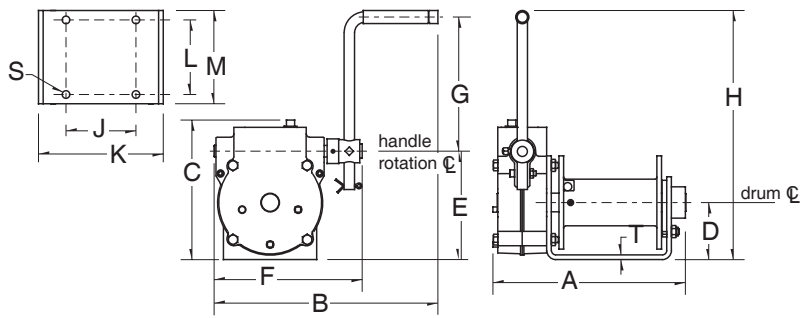


Install wire rope correctly as shown, or brake will not operate properly.

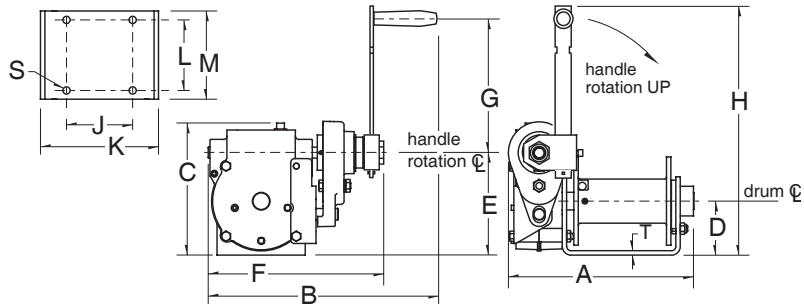
Model 465



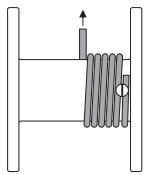
Models 462, 472 and 482



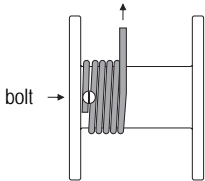
Models 4622PB and 482B



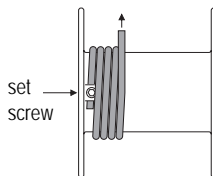
Wire Rope Installation Model 465



Wire Rope Installation Models 462 and 4622PB



Wire Rope Installation Models 472, 482 and 482B



Worm Gear Hand Winches – Dimensions (in)

	465	462	4622PB	472	482	482B	4WM2
drum dia.	1.50	1.50	1.50	2.50	4.00	4.00	2.50
flange dia.	4.00	4.06	4.06	5.00	8.50	8.50	5.00
drum width	2.81	2.81	2.81	5.00	6.50	6.50	5.00
A	6.50	7.75	7.50	10.12	13.97	13.97	13.50
B	10.50	10.25	11.81	12.00	18.88	20.94	15.56
C	5.44	5.63	5.62	7.12	12.80	12.80	8.56
D	3.40	2.38	2.40	3.06	5.75	5.75	3.31
E	1.40	4.38	4.38	5.81	10.38	10.38	6.04
F	6.38	5.88	7.60	7.94	12.50	15.47	11.56
G	8.75	9.00	10.59	7.25	12.25	18.38	10.59
H	10.59	13.38	15.59	13.38	22.62	29.19	17.30
J	2.00	2.00	2.00	3.75	7.00	7.00	1.75
K	5.75	4.44	4.44	6.69	9.00	9.00	3.75
L	2.50	2.50	2.50	4.00	6.00	6.00	4.00
M	4.50	3.50	3.50	5.00	8.00	8.00	13.50
S (hole dia.)	.40	.40	.40	.40	.56	.56	.41
T	.19	.19	.19	.25	.50	.50	–

Dimensions are for reference only and subject to change without notice.

Important:
It is the owner's or operator's responsibility to determine the suitability of the equipment to its intended use. Study all applicable codes, manuals, and regulations. Be sure to read the Owner's Manual supplied with the equipment before operating it.