

Planetary Hoists



A Series



C4

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 **dinamic oil**

MAIN COMPONENTS

1 Hydraulic Motor:

Orbit, gear or optional piston motor on some models.

2 Negative Static Multi Disc Brake:

Is connected to the motor shaft and winch body. Pressurized oil from the hydraulic circuit opens the brake, and the springs automatically re-apply when pressured is released. The brake is automatically controlled by the hydraulic brake valve and is opened and closed by starting and stopping the motor.

3 Planetary Reduction Stage:

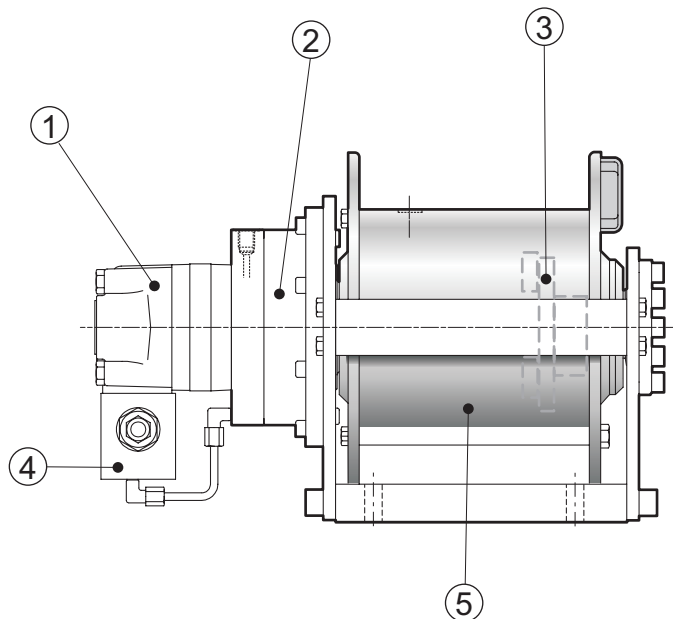
The overall dimensional size of the winch is very compact. Gear ratios of each model are selected to maximize line speed and line pull performance.

4 Brake Control Valve:

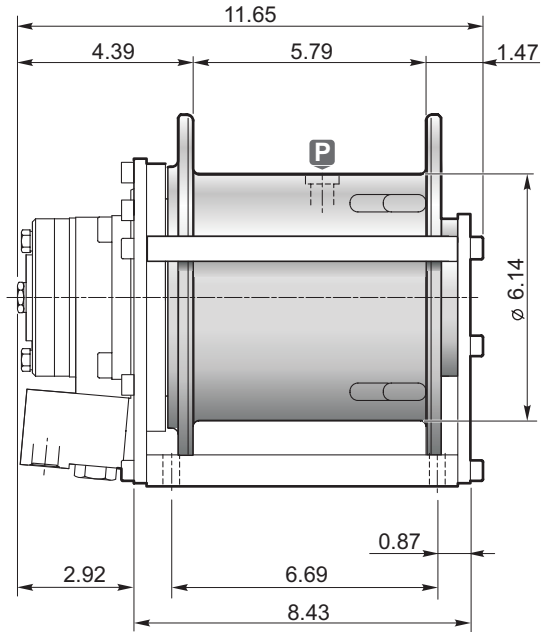
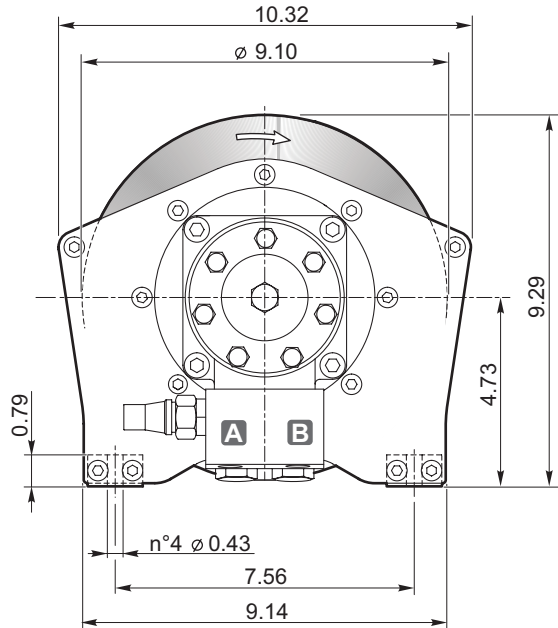
The brake control valve is a critical safety device that provides dynamic braking and is mounted directly onto the motor.

5 Drum and Winch Frame:

Our drums and frames are manufactured from structural steel or ductile iron castings to provide a durable and compact winch. The design of our compact winch family provides maximum flexibility for use in a wide variety of applications.



A11



Performance info: 5.23:1 ratio - 3.05 cu.in. disp. - 2250 PSI

Layer	n	1	2	3	4	5
Line pull	[lbs]	1100	1000	950	890	840
Line speed @ 7.7 GPM	[fpm]	164	176	189	200	214

Above specifications based on 1/4" wire rope diameter

A	Hoisting port	9/16" 18-UNF
B	Lowering port	

P	Lubrication oil plug	3/8" BSP
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 Weight	75
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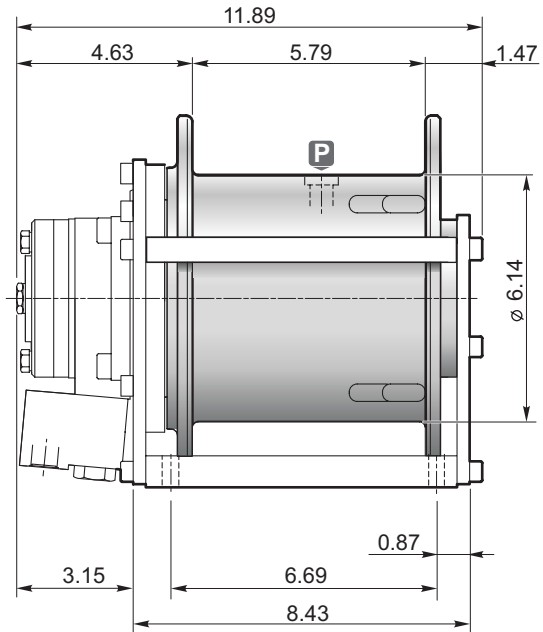
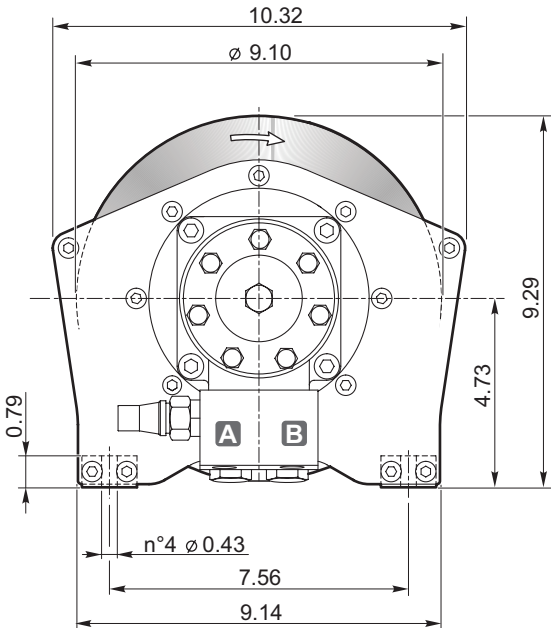
Rope Dia. [in]	Rope storage capacity [FT]				
	Layer				
	1	2	3	4	5
1/4"	37	77	120	165	214*
5/16"	30	62	97	135*	—

D/d	
	25.5
	20.6

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is clockwise (counterclockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 310 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.20 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

THE PRESENT EQUIPMENT CAN'T BE USED TO LIFT PEOPLE



Performance info: 5.23:1 ratio - 4.88 cu.in. disp. - 2300 PSI

Layer	n	1	2	3	4	5
Line pull	[lbs]	1800	1650	1550	1450	1350
Line speed @ 7.7 GPM	[fpm]	102	110	118	125	132

Above specifications based on 1/4" wire rope diameter

A	Hoisting port	9/16" 18-UNF
B	Lowering port	

P	Lubrication oil plug	3/8" BSP
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 Weight	75
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Rope Dia. [in]	Rope storage capacity [FT]				
	Layer				
	1	2	3	4	5
1/4"	37	77	120	165	214*
5/16"	30	62	97	135*	—

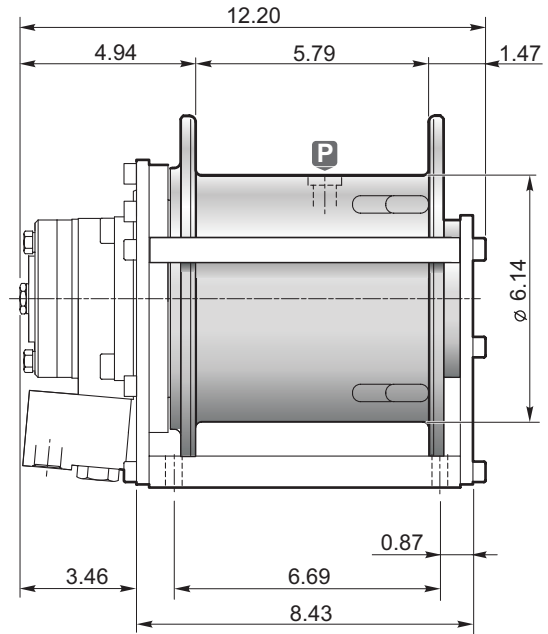
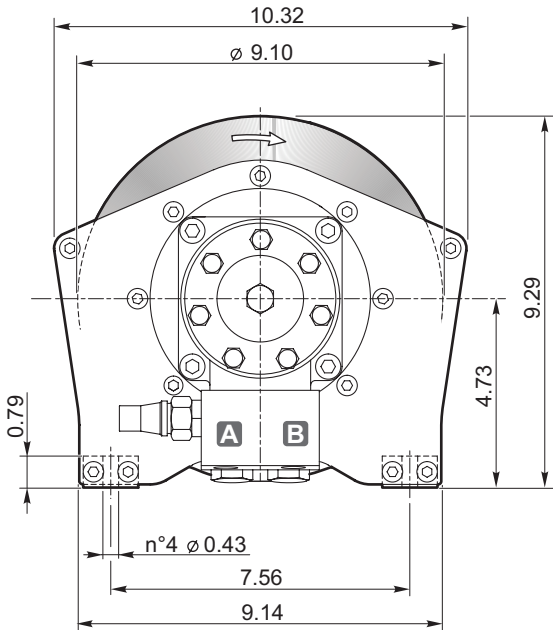
D/d	
	25.5
	20.6

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is clockwise (counterclockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 310 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.20 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

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A24



Performance info: 5.23:1 ratio - 6.10 cu.in. disp. - 2450 PSI

Layer	n	1	2	3	4
Line pull	[lbs]	2400	2190	2000	1860
Line speed @ 7.7 GPM	[fpm]	82	90	98	106

Above specifications based on 5/16" wire rope diameter

A	Hoisting port	9/16" 18-UNF
B	Lowering port	

P	Lubrication oil plug	3/8" BSP
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 Weight	75
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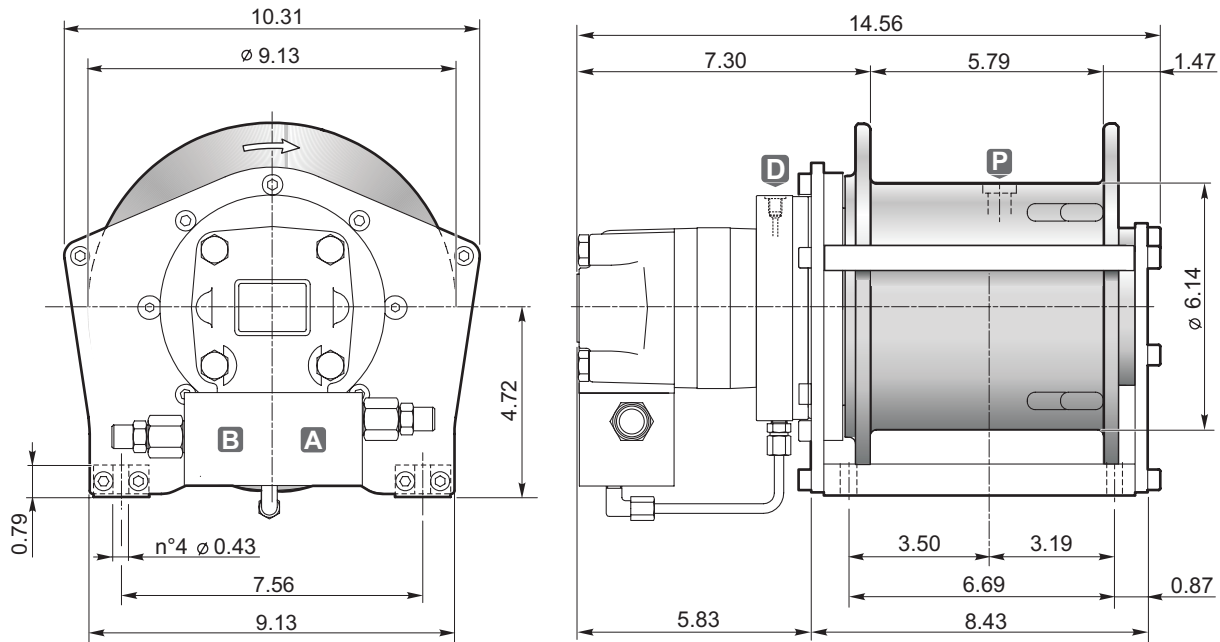
Rope Dia. [in]	Rope storage capacity [FT]			
	Layer			
	1	2	3	4
5/16"	30	62	97	135*
3/8"	25	52	82*	—

D/d
20.5
17.4

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is clockwise (counterclockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 310 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.20 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

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Performance info: 5.23:1 ratio - 7.63 cu.in. disp. - 2250 PSI

Layer	n	1	2	3	4
Line pull	[lbs]	3000	2730	2500	2320
Line speed @ 15 GPM	[fpm]	140	153	167	180

Above specifications based on 5/16" wire rope diameter

A	Hoisting port	7/8"
B	Lowering port	14-UNF

D	Motor case drain	1/4" BSP
P	Lubrication oil plug	3/8" BSP

 Weight	100
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Rope Dia. [in]	Rope storage capacity [FT]			
	Layer			
	1	2	3	4
5/16"	30	62	97	135*
3/8"	25	52	82*	—

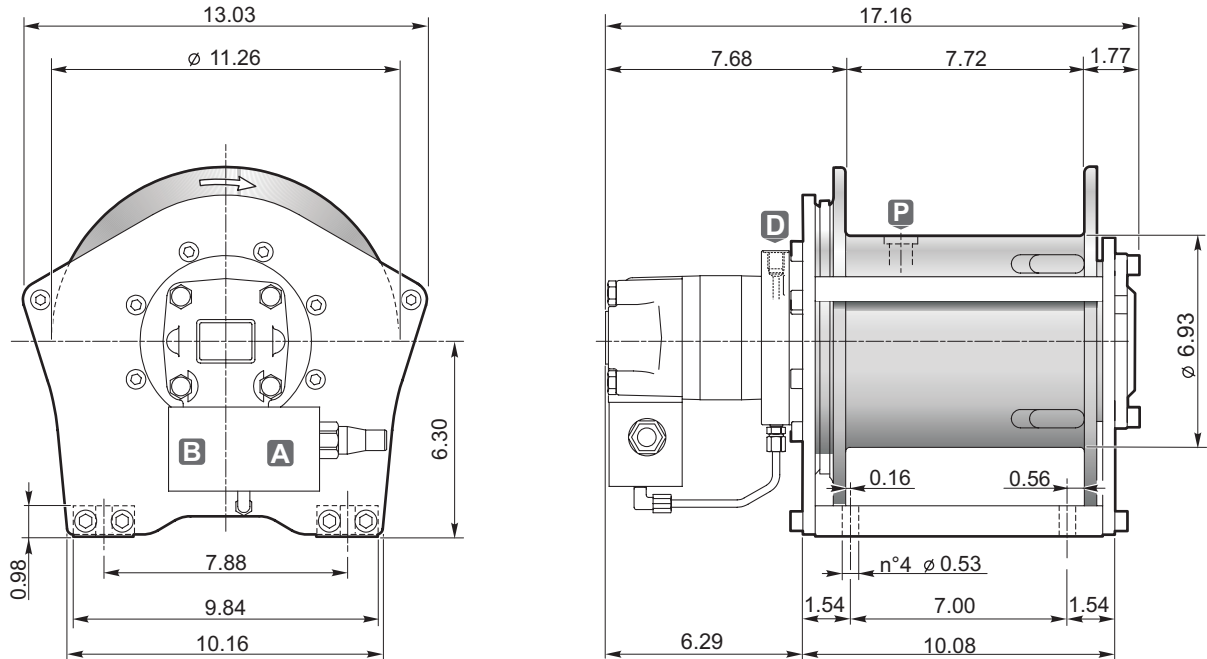
D/d	
	20.5
	17.4

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is clockwise (counterclockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 310 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.20 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

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A44




Performance info: 4.77:1 ratio - 12.2 cu.in. disp. - 2450 PSI

Layer	n	1	2	3	4	5*
Line pull	[lbs]	4400	4000	3650	3350	3100
Line speed @ 20 GPM	[fpm]	141	155	170	184	200

Above specifications based on 3/8" wire rope diameter

A	Hoisting port	7/8" 14-UNF
B	Lowering port	

D	Motor case drain	1/4" BSP
P	Lubrication oil plug	3/8" BSP

 Weight	110
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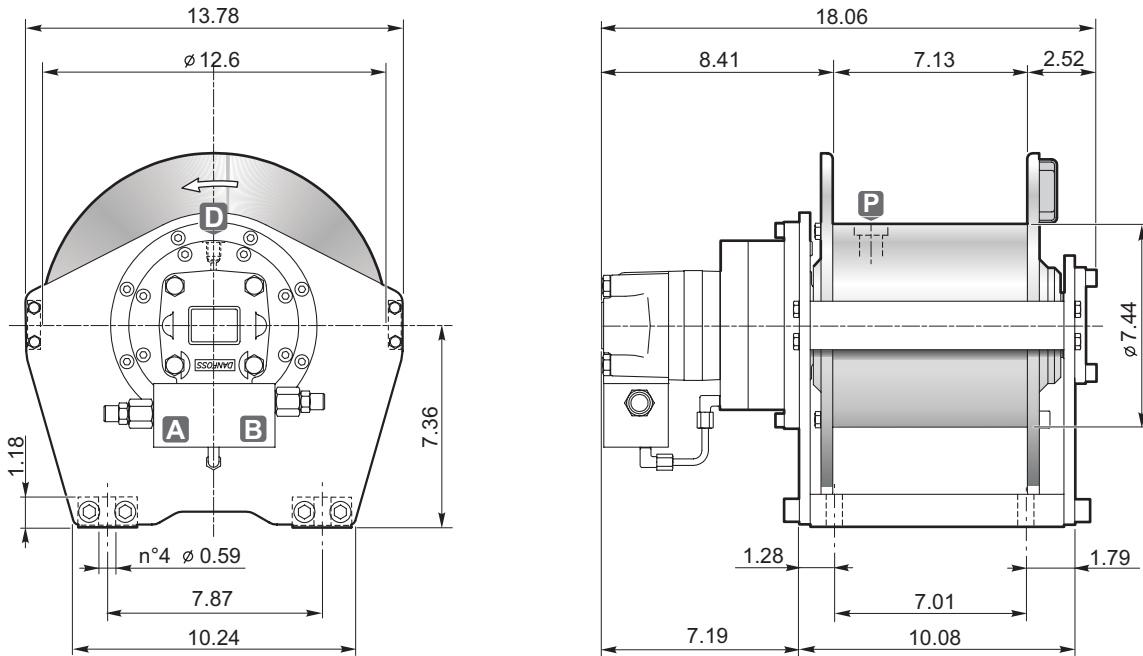
Rope Dia. [in]	Rope storage capacity [FT]				
	Layer				
	1	2	3	4	5
3/8"	37	78	124	173	225*
7/16"	32	68	108	151*	—

D/d	19.5
	16.8

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is clockwise (counterclockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 455 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.25 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

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Performance info: 12.28:1 ratio - 6.1 cu.in. disp. - 2550 PSI

Layer	n	1	2	3	4
Line pull	[lbs]	5500	4800	4300	3850
Line speed @ 10 GPM	[fpm]	61	69	78	86

Above specifications based on 9/16" wire rope diameter

A Hoisting port	7/8" 14 UNF	D Motor case drain	1/4" BSP	Weight 180
B Lowering port		P Lubrication oil plug	3/8" BSP	

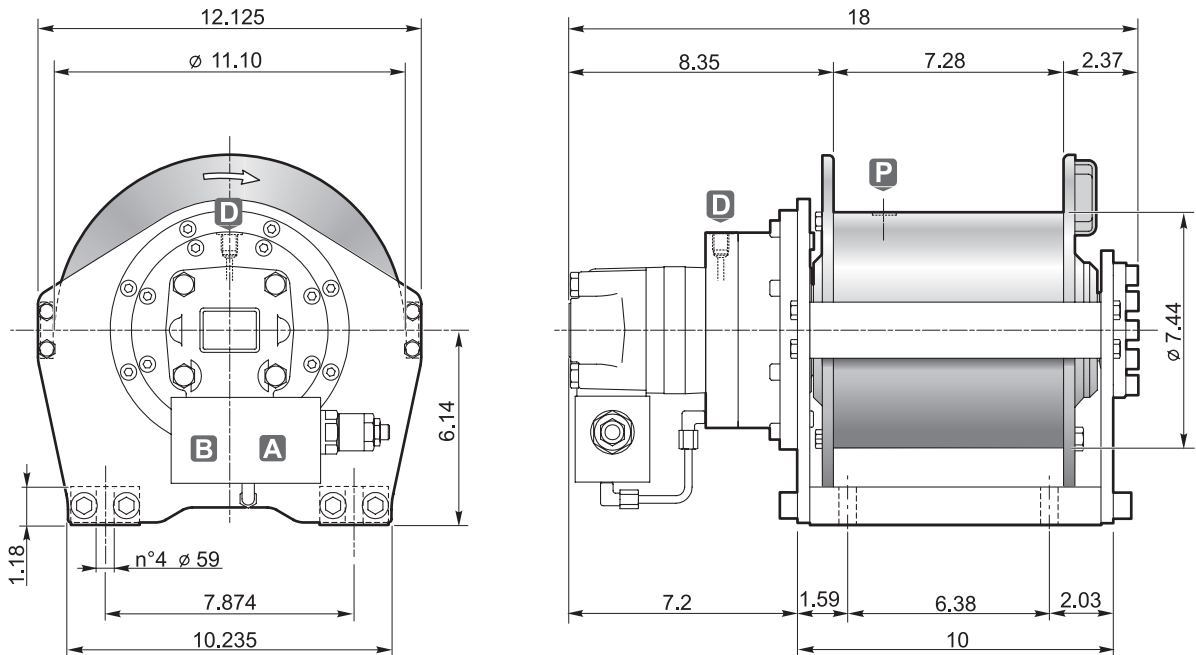
Rope Dia. [in]	Rope storage capacity [FT]			
	Layer			
1/2"	28	59	93	131
9/16"	24	52	84	118*

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is counterclockwise (clockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 545 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 3 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.25 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

THE PRESENT EQUIPMENT CAN'T BE USED TO LIFT PEOPLE

A60




Performance info: 12.28:1 ratio - 6.10 cu.in. disp. - 2650 PSI

Layer	n	1	2	3	4*
Line pull	[lbs]	6000	5400	4900	4500
Line speed @ 17 GPM	[fpm]	103	114	126	137

Above specifications based on 3/8" wire rope diameter

A	Hoisting port	7/8" 14-UNF
B	Lowering port	

D	Motor case drain	1/4" BSP
P	Lubrication oil plug	3/8" BSP

 Weight	165
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Rope Dia. [in]	Rope storage capacity [FT]			
	Layer			
	1	2	3	4
3/8"	38	79	124	172*
7/16"	32	68	108	151*

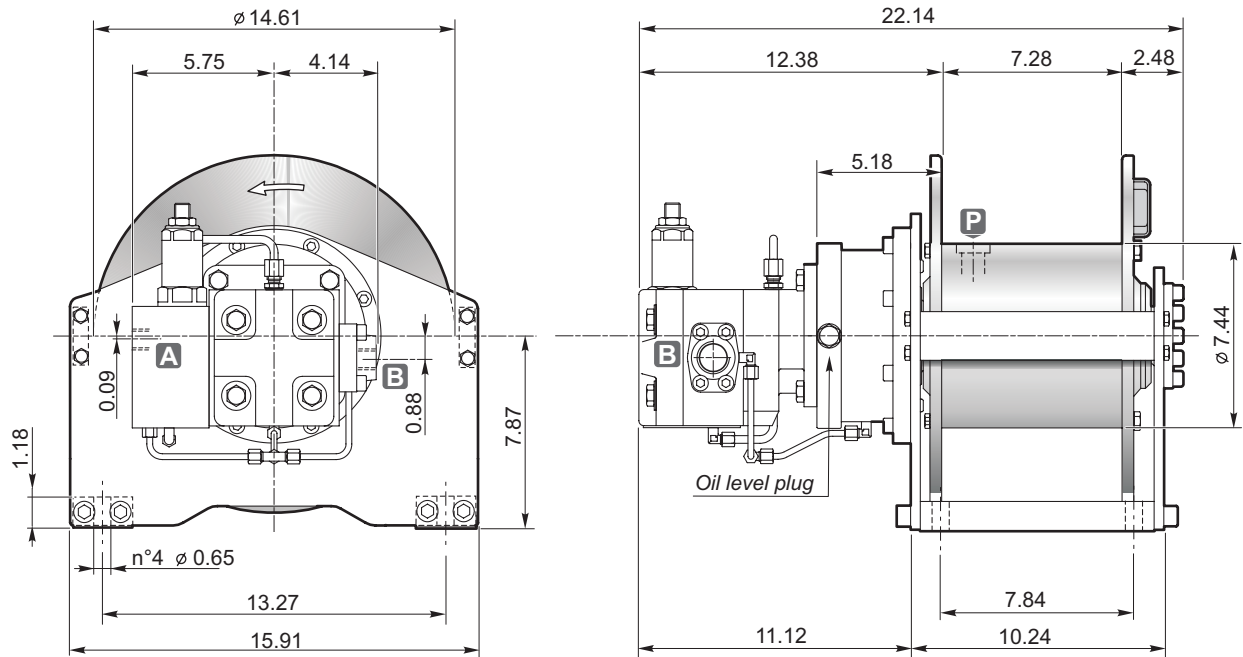
D/d
20.8
18.0

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is clockwise (counterclockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 545 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 3 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.37 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

THE PRESENT EQUIPMENT CAN'T BE USED TO LIFT PEOPLE

A62-3



Performance info: 26.5:1 ratio - 3.5 cu.in. disp. - 2450 PSI

Layer	n	1	2	3	4	5	6	7	8
Line pull	[lbs]	6000	5400	4920	4510	4160	3860	3600	3380
Line speed @ 21 GPM	[fpm]	90	100	110	120	130	140	150	160

Above specifications based on 7/16" wire rope diameter

A Hoisting port	1" 5/16-12 THD SAE-16 ORB	P Lubrication oil plug	3/8" BSP	Weight 200
B Lowering port				

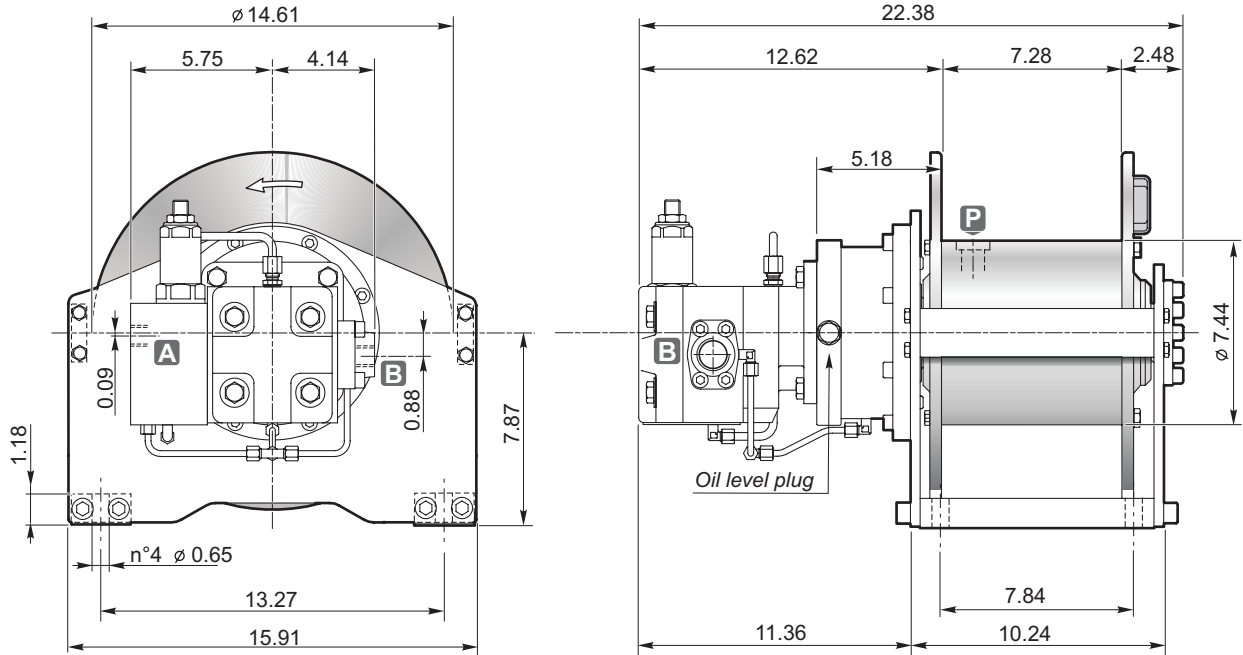
Rope Dia. [in]	Rope storage capacity [FT]									D/d
	Layer									
	1	2	3	4	5	6	7	8	9	
3/8"	38	79	124	172	225	280	340	403	470*	20.8
7/16"	32	68	108	151	197	248	302	360*	—	18.0

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is counterclockwise (clockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 361 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.40 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

PERSONNEL HANDLING APPLICATIONS ON REQUEST

A62-4



Performance info: 26.5:1 ratio - 4.0 cu.in. disp. - 2100 PSI

Layer	n	1	2	3	4	5	6	7	8
Line pull	[lbs]	6000	5400	4920	4510	4160	3860	3600	3380
Line speed @ 27 GPM	[fpm]	100	112	123	134	145	156	167	179
Line speed @ 60 GPM	[fpm]	223	248	273	297	322	346	371	396

Above specifications based on 7/16" wire rope diameter

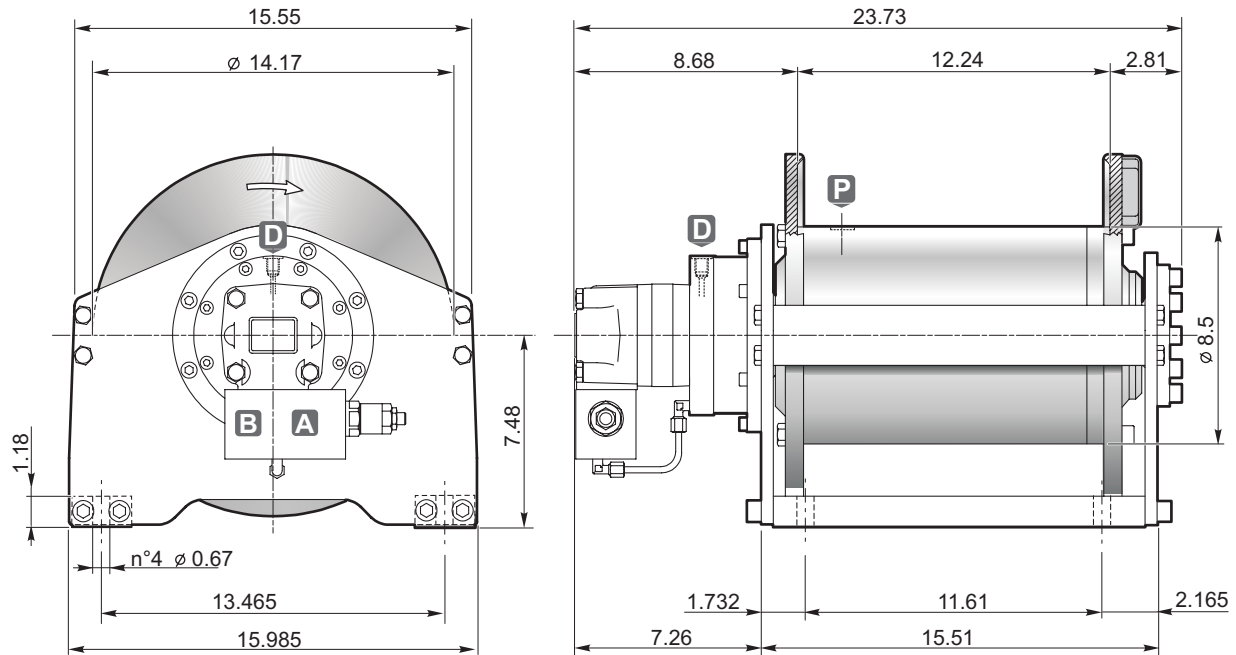
A	Hoisting port	1" 5/16-12 THD SAE-16 ORB	P	Lubrication oil plug	3/8" BSP	Weight	200
	B			Lowering port			

Rope Dia. [in]	Rope storage capacity [FT]									D/d
	Layer									
	1	2	3	4	5	6	7	8	9	
3/8"	38	79	124	172	225	280	340	403	470*	20.8
7/16"	32	68	108	151	197	248	302	360*	—	18.0

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is counterclockwise (clockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 361 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.40 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

PERSONNEL HANDLING APPLICATIONS ON REQUEST




Performance info: 15.26:1 ratio - 7.67 cu.in. disp. - 2650 PSI

Layer	n	1	2	3	4	5
Line pull	[lbs]	8000	7200	6500	6000	5500
Line speed @ 17 GPM	[fpm]	76	84	93	101	110

Above specifications based on 1/2" wire rope diameter

A	Hoisting port	7/8" 14-UNF
B	Lowering port	

D	Motor case drain	1/4" BSP
P	Lubrication oil plug	3/8" BSP

 Weight	290
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Rope Dia. [in]	Rope storage capacity [FT]				
	Layer				
	1	2	3	4	5
1/2"	55	117	184	258	338*

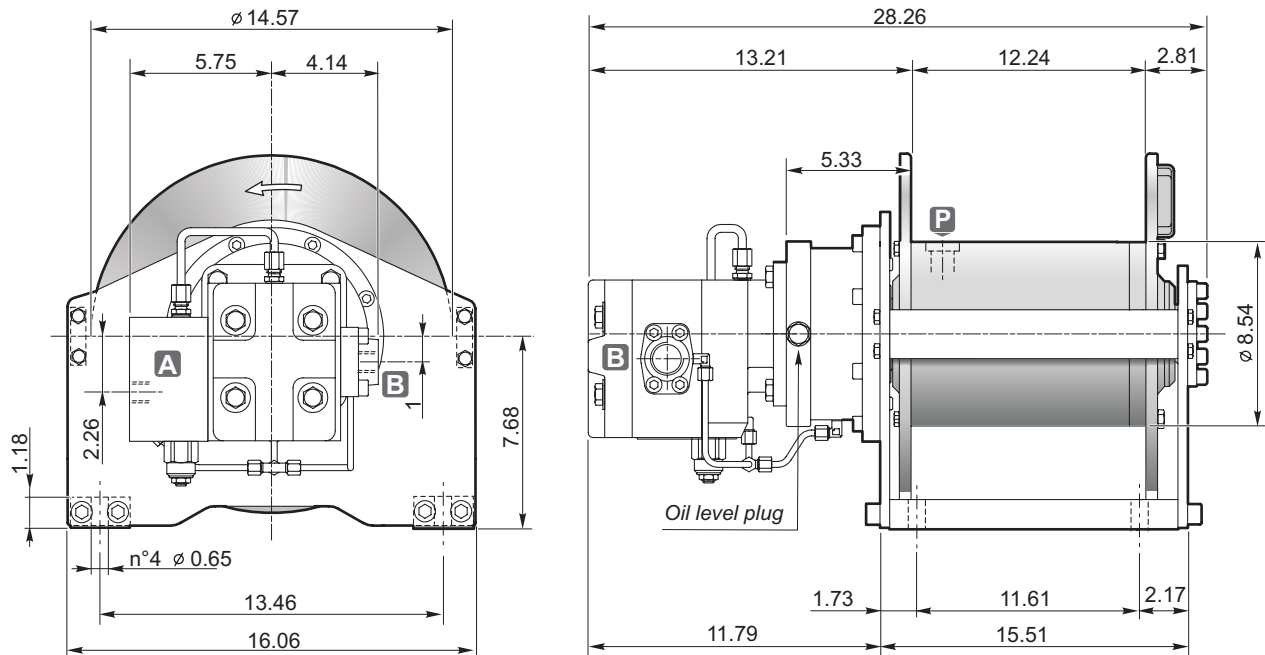
D/d	18
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* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is clockwise (counterclockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 545 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.75 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

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A81-5



Performance info: 21:1 ratio - 5.14 cu.in. disp. - 3000 PSI

Layer	n	1	2	3	4	5	6
Line pull	[lbs]	8000	7200	6500	6000	5500	5100
Line speed @ 45 GPM	[fpm]	195	216	238	260	281	303
Line speed @ 65 GPM	[fpm]	282	313	344	376	407	438

Above specifications based on 1/2" wire rope diameter

A Hoisting port	1" 5/16-12 THD SAE-16 ORB	P Lubrication oil plug	3/8" BSP	Weight 330
B Lowering port				

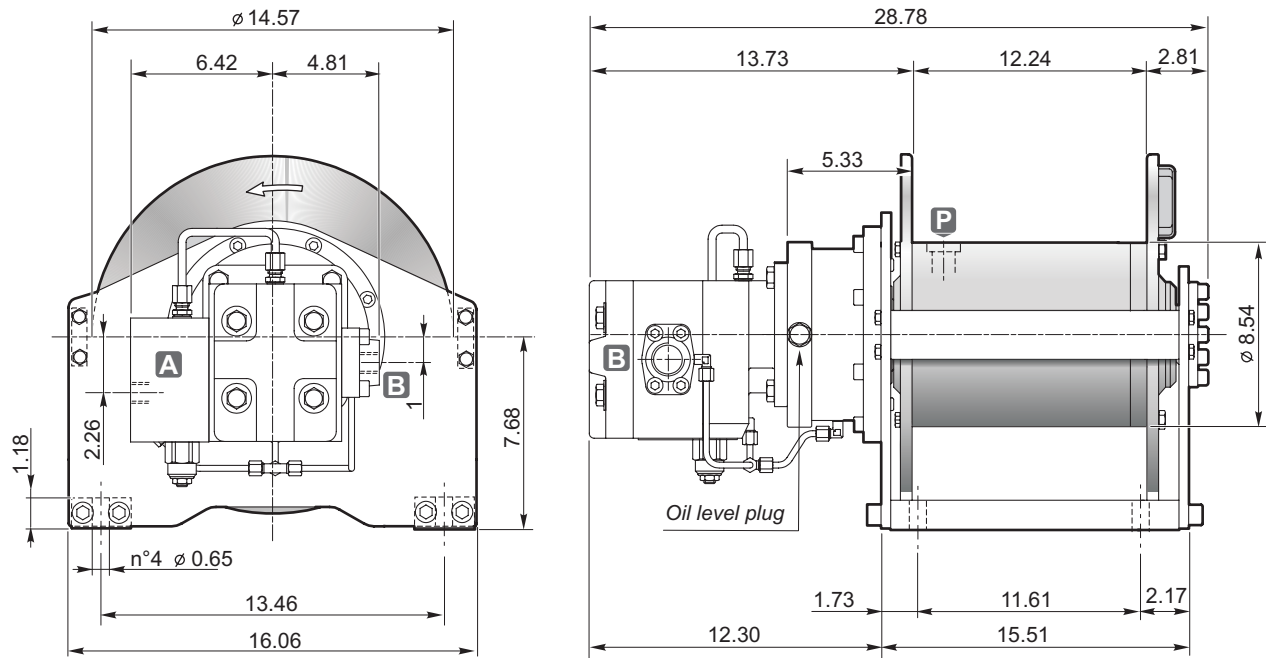
Rope Dia. [in]	Rope storage capacity [FT]						D/d
	Layer						
	1	2	3	4	5	6	
7/16"	63	132	208	290	377	472*	20.4
1/2"	55	117	184	258	338	424*	18.0

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is counterclockwise (clockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 361 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.75 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

PERSONNEL HANDLING APPLICATIONS ON REQUEST


A81-6



Performance info: 21:1 ratio - 6.42 cu.in. disp. - 2500 PSI

Layer	n	1	2	3	4	5	6
Line pull	[lbs]	8000	7200	6500	6000	5500	5100
Line speed @ 45 GPM	[fpm]	163	181	199	217	236	254
Line speed @ 65 GPM	[fpm]	235	262	289	315	340	367

Above specifications based on 1/2" wire rope diameter

A Hoisting port	1" 5/16-12 THD SAE-16 ORB	P Lubrication oil plug	3/8" BSP	 Weight	330
B Lowering port					

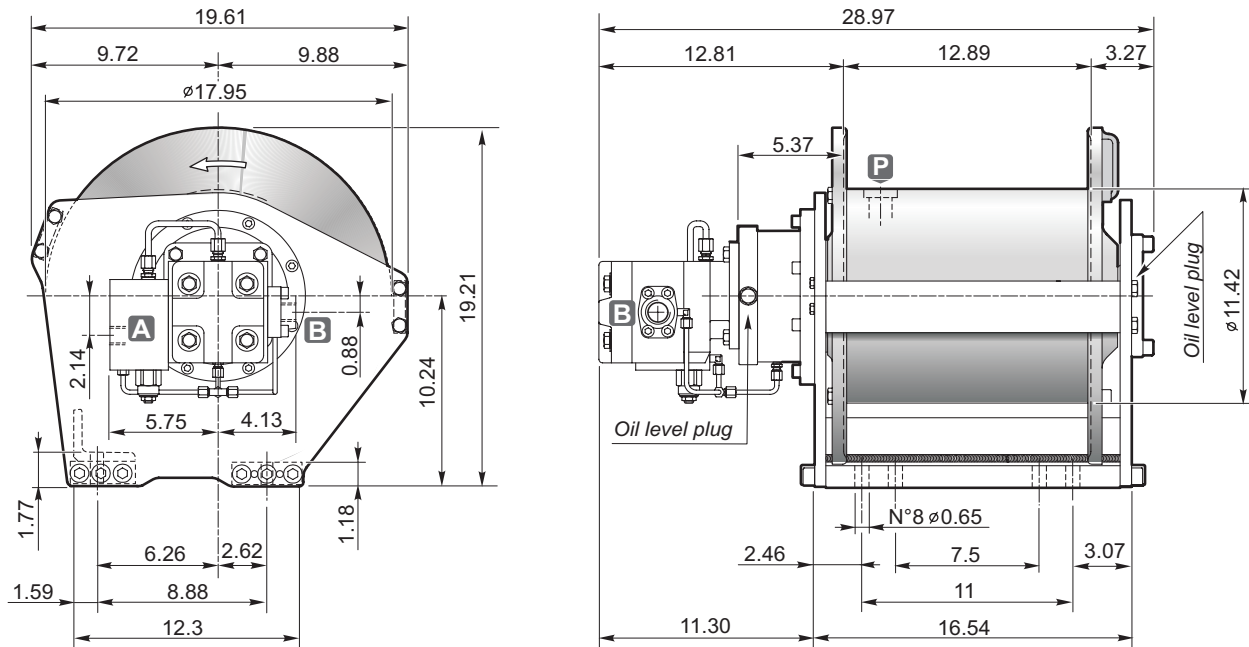
Rope Dia. [in]	Rope storage capacity [FT]						D/d
	Layer						
	1	2	3	4	5	6	
7/16"	63	132	208	290	377	472*	20.4
1/2"	55	117	184	258	338	424*	18.0

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is counterclockwise (clockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 361 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 0.75 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

PERSONNEL HANDLING APPLICATIONS ON REQUEST

A120-4



Performance info: 64.1 :1 ratio - 4.0 cu.in. disp. - 2570 PSI

Layer	n	1	2	3	4	5	6
Line pull	[lbs]	12000	10970	10100	9360	8720	8160
Line speed @ 45 GPM	[fpm]	114	125	135	146	157	168
Line speed @ 65 GPM	[fpm]	165	180	196	211	227	242

Above specifications based on 9/16" wire rope diameter

A Hoisting port	1" 5/16-12 THD SAE-16 ORB	P Lubrication oil plug	3/8" BSP	Weight 520
B Lowering port				

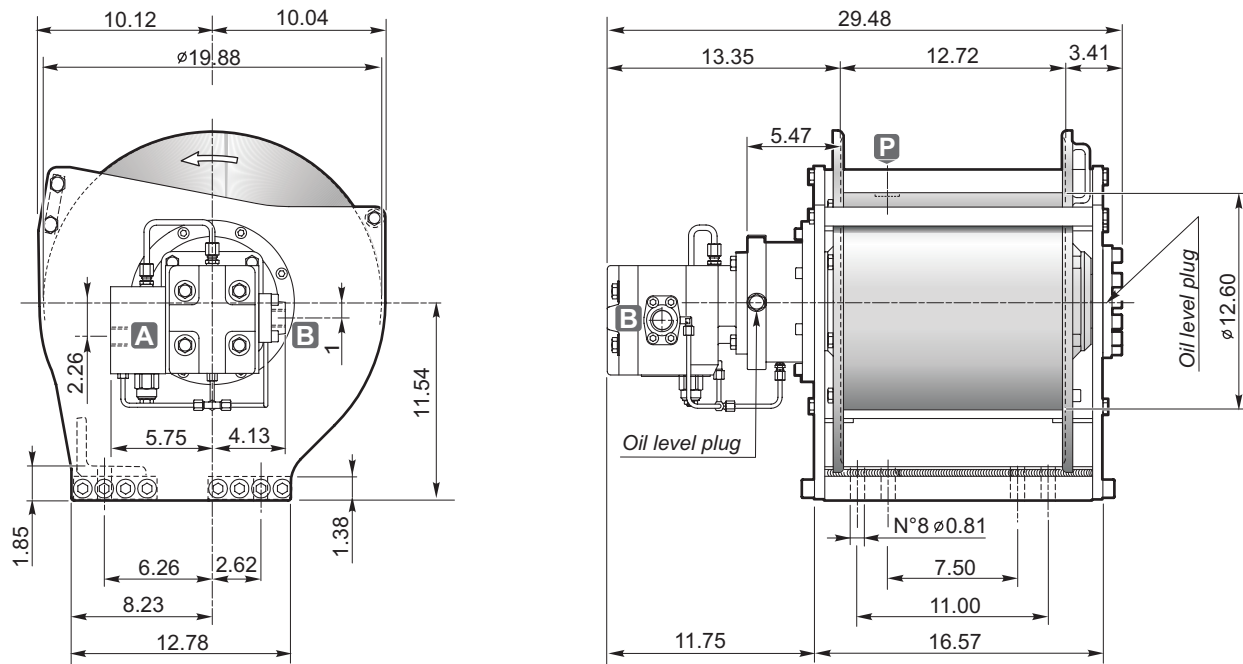
Rope Dia. [in]	Rope storage capacity [FT]						D/d
	Layer						
	1	2	3	4	5	6	
1/2"	77	161	251	349	450	550*	23.8
9/16"	68	143	225	313	407	508*	21.3
5/8	62	130	205	285	373*		19.2

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is counterclockwise (clockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 361 ft-lbs.
- Maximum back pressure on the return line : 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 1.8 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

PERSONNEL HANDLING APPLICATIONS ON REQUEST

A150-5



Performance info: 62.7:1 ratio - 5.14 cu.in. disp. - 2550 PSI

Layer	n	1	2	3	4	5	6
Line pull	[lbs]	15000	13700	12600	11700	10900	10200
Line speed @ 45 GPM	[fpm]	103	113	123	133	143	153
Line speed @ 80 GPM	[fpm]	185	202	220	237	255	272

Above specifications based on 5/8" wire rope diameter

A Hoisting port	1" 5/16-12 THD SAE-16 ORB	P Lubrication oil plug	3/8" BSP	Weight	730
B Lowering port					

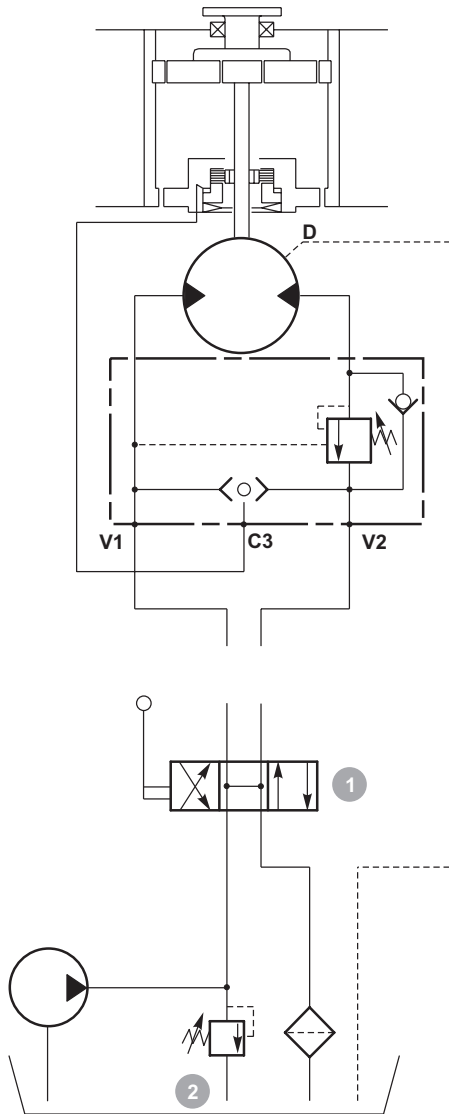
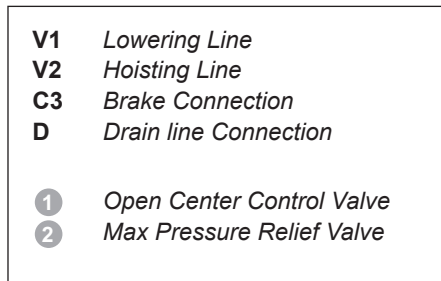
Rope Dia. [in]	Rope storage capacity [FT]						D/d
	Layer						
	1	2	3	4	5	6	
9/16"	75	155	242	336	436	542*	23.8
5/8"	67	140	220	306	400	498*	21.3

* This layer does not comply with ANSI spec. B30.7

- Standard hoisting drum rotation is counterclockwise (clockwise on request). Winch rotation is defined when viewing the motor.
- Load control when lowering is achieved by the overcentre brake valve to ensure smooth performance.
- Operation of the internal negative static multi disc brake is automatic. Static brake torque is: 361 ft-lbs.
- Maximum back pressure on the return line: 72.5 PSI.
- Always keep at least 4 wraps of cable on the drum for safety reasons.
- Gear lubrication is achieved by splash oil bath.
- Gear lubricant - hydraulic oil 2.5 gal.
- Technical Specifications are subject to change without prior notice from manufacturer.

PERSONNEL HANDLING APPLICATIONS ON REQUEST

HYDRAULIC WINCH SYSTEM

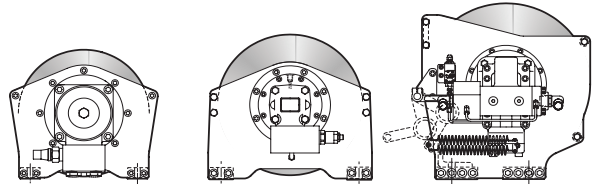


INSTALLATION

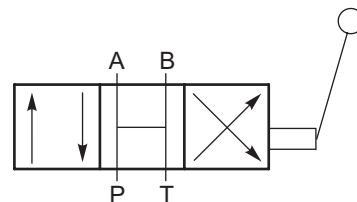
- 1) Mount the winch on a surface of adequate thickness and flatness and shim if over 0.020" out.
- 2) Select the delivery, return and drain line sizes proportional to the oil flow.
- 3) Connection ports on the valve are marked as follows:

A V2 = Hoisting Line

B V1 = Lowering Line; max. allowable back pressure must be > 14.5 PSI and < 72.5 PSI.



- 4) Hoisting rotation must be specified on your order. It is forbidden and dangerous to invert the A and B lines to adjust the hoisting rotation.
- 5) **D** D = drain line where stated, must always be connected directly to tank.
- 6) To ensure correct cable installation onto the drum, follow the instructions in the installation manual.
- 7) Use only open centre control valves to operate the winch. If a stack valve is used, use the valve closest to the return line to tank to control the winch. Connect V2 to the A port on the open centre control valve (as shown in the picture). V1 connects to the B port.



- 8) Proper hydraulic oil filtration must be provided to ensure correct winch operation. (suggested oil filtration 10 micron, max 25).
- 9) It is recommended to operate the winch, without load for 5 minutes with max flow and no cable during the start up period. Carry out the first lift under load to a max height of 3 feet.
- 10) Follow technical data stated in DINAMIC OIL documentation.
- 11) The system pressure relief valve must be set 435 PSI over the working pressure value shown on the technical data sheet for each winch.
- 12) Winches are not intended to lift people.
- 13) If the specifications and recommendations above are not adhered to, we will decline all warranty claims.