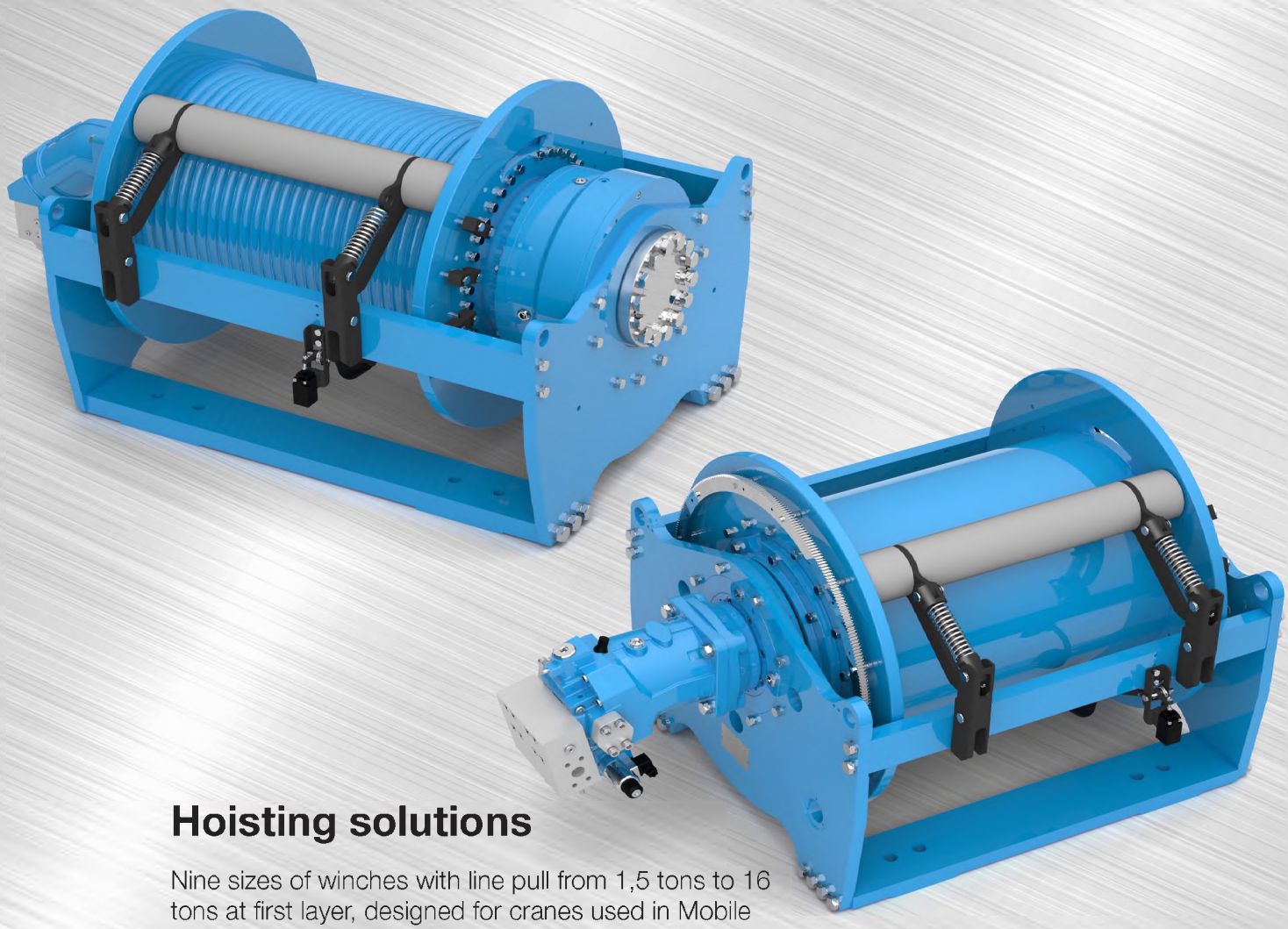
DANA BREVINI Motion Systems

Brevini® Evolution™ Series
Hoisting Winches

The new Winch Series for Mobile and Industrial Markets



Hoisting solutions

Nine sizes of winches with line pull from 1,5 tons to 16 tons at first layer, designed for cranes used in Mobile and Industrial market. The winches are equipped with High Speed Brevini® Hydraulic Motor and a wide range of controls ensure safety, avoid damage to the winch, the crane, and most importantly, people on job site.

Brevini® Evolution™ Series Hoisting Winches

The brand new series of high-performance Brevini® Evolution™ Series winches for construction and material-handling vehicles, marine, off-shore and many other mobile or stationary applications are the result of years of experience in Engineering and Manufacturing of winches.

With 9 sizes available, BWE015, BWE025, BWE035, BWE055, BWE070, BWE085, BWE105, BWE125 and BWE160 whiches offer a lifting capacity from 1,5 ton to 16 ton (3,300 lbf to 35,200 lbf) we will enhance the product range and give us the opportunity to better serve our customers.

Brevini® Evolution™ Series Winches feature the Brevini® high-speed piston motor, fixed or variable displacement.
Introducing the nine piston motor technology as a standard option we are able to provide ideal balance and smooth control even at very low speed keeping high performance level. Electric motor are also available on request.

The new winch series has a strong modular design that makes the winch able to meet customer specification in terms of performances as well as customer needs in term of accessories.

For all sizes are available grooved drum made by the special groove profile which improve the spooling performances, rope capacity as well as rope lifetime.

A wide range of accessories are available to improve safety and control of all winch function.

For all sizes are available pressure roller, hydraulic or electric limit switch as last safety wraps indicator, electric or hydraulic rotary limit switch as minimum and maximum rope capacity indicator, speed sensor, torque/overlaoad sensor to have better control on spooling and other winch operation.

For all sizes is available the “Personnel Lifting” version due to a secondary brake directly connected to the drum which assure safety and control in all working condition.

Other accessories like rope, hook and shackle are available to meet customer requirements.

The new winch series are suitable for marine environment due to many technical features which makes the winch the perfect solution for this application, drum and frame in steel, pressure roller made in stainless steel, marine painting.

The winches are designed to meet safety certification standards for major international organizations governing these applications.
Brevini® winches are suitable for ambient working Temperature between -20°C to +40°C. In case of ambient working temperature lower than -20°C has to be approved by Engineering.
Different working condition on request.

More than 40 years of winches experience makes this new winch series an innovative and high-performance products ideal for the new generation of machine.

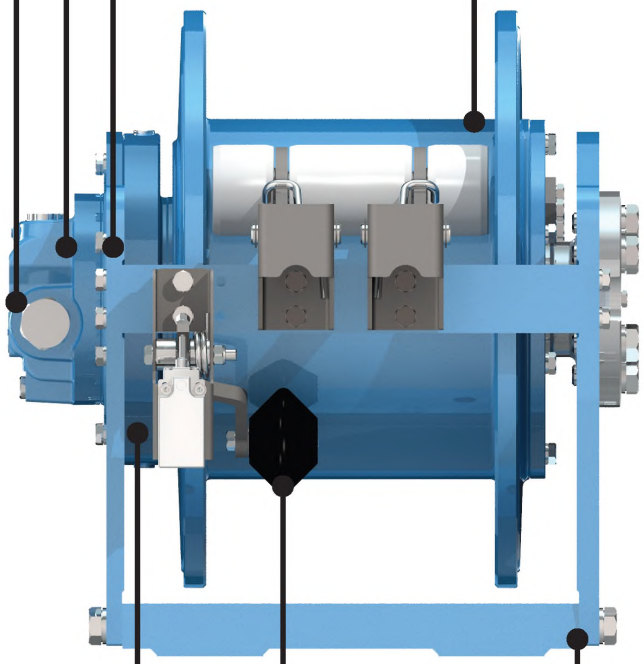
Line Pull at first Layer up to:
2.500 [kg]
5.500 [lbf]

Control Valve
To ensure safe operation with
enhanced control during Load Lowering

Hydraulic Motor
Fixed or Variable displacement Brevini®
High speed Axial piston motor

Multidisc static Brake
Specifically designed for
Winch applications

Drum
Spheroidal graphite cast iron,
available in grooved or smooth options



High performance Gears
Low noise and longer life time

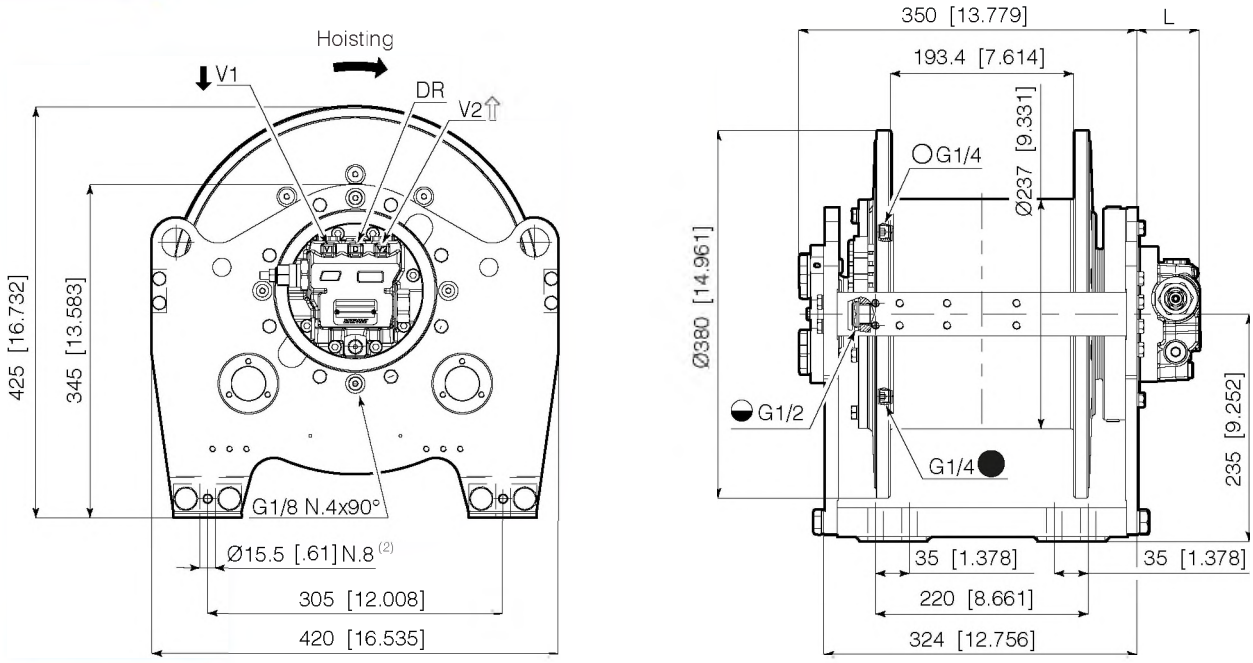
Accessories
Pressure Roller
Electric or Hydraulic Limit Switch
Electric or Hydraulic Rotary Limit Switch
Speed Sensor (proximity)

Structure
Robust steel frame
Suitable for low temperature applications

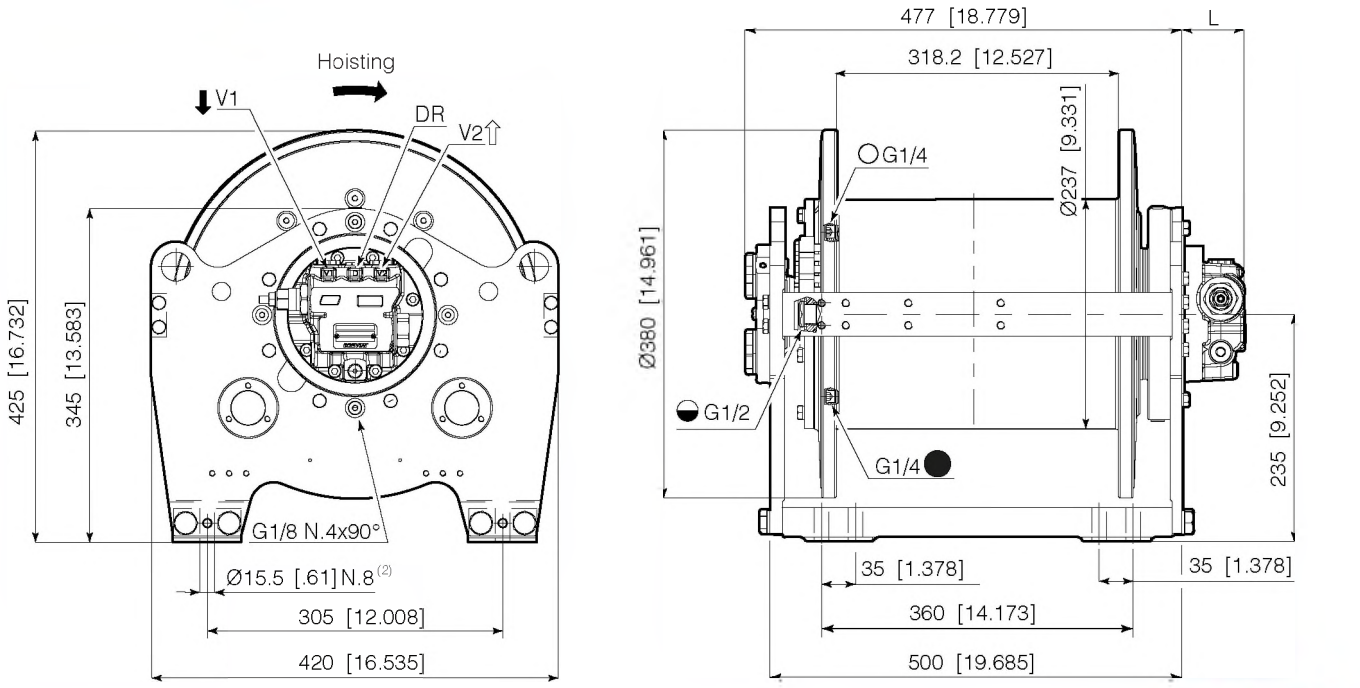
Brevini® Hydraulic Motor

	Motor type	Displacement	L
Fixed Displacement	B5VA021 (1)	21 cm³/rev [1.28 in³/rev]	64.0 mm [2.519 in]
Fixed Displacement	BRZV250 (1)	250 cm³/rev [15.24 in³/rev]	105 mm [4.133 in]
With NO Motor	Universal Input Flange 00	-	22.5 mm [0.886 in]

Winch - standard (3)



Winch - extended drum (3)

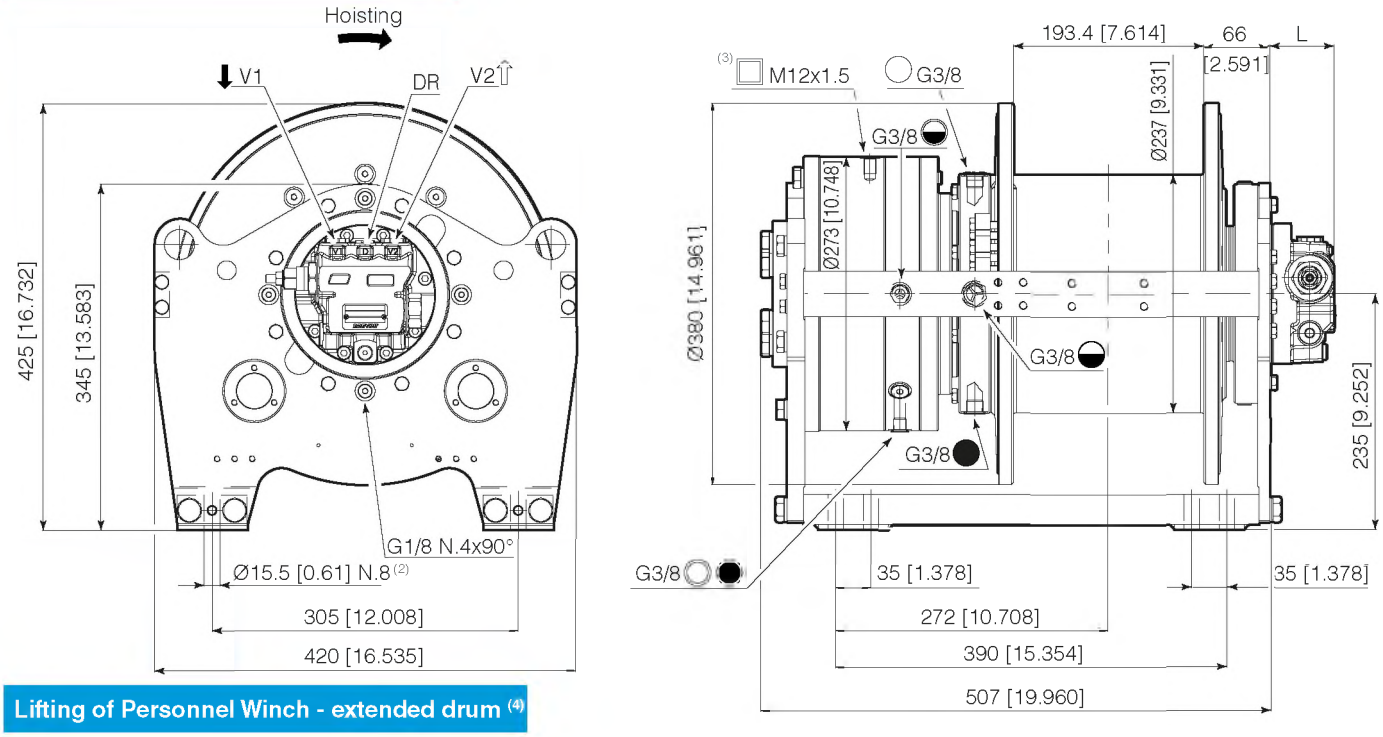


(1) As Standard with single overcenter valve, double overcenter valve available on request.
(2) N. 8 bolts for ABS certified version only. N. 4 bolts for other versions.
(3) Catalogue dimensions only for reference, see dimensional drawing for detailed information

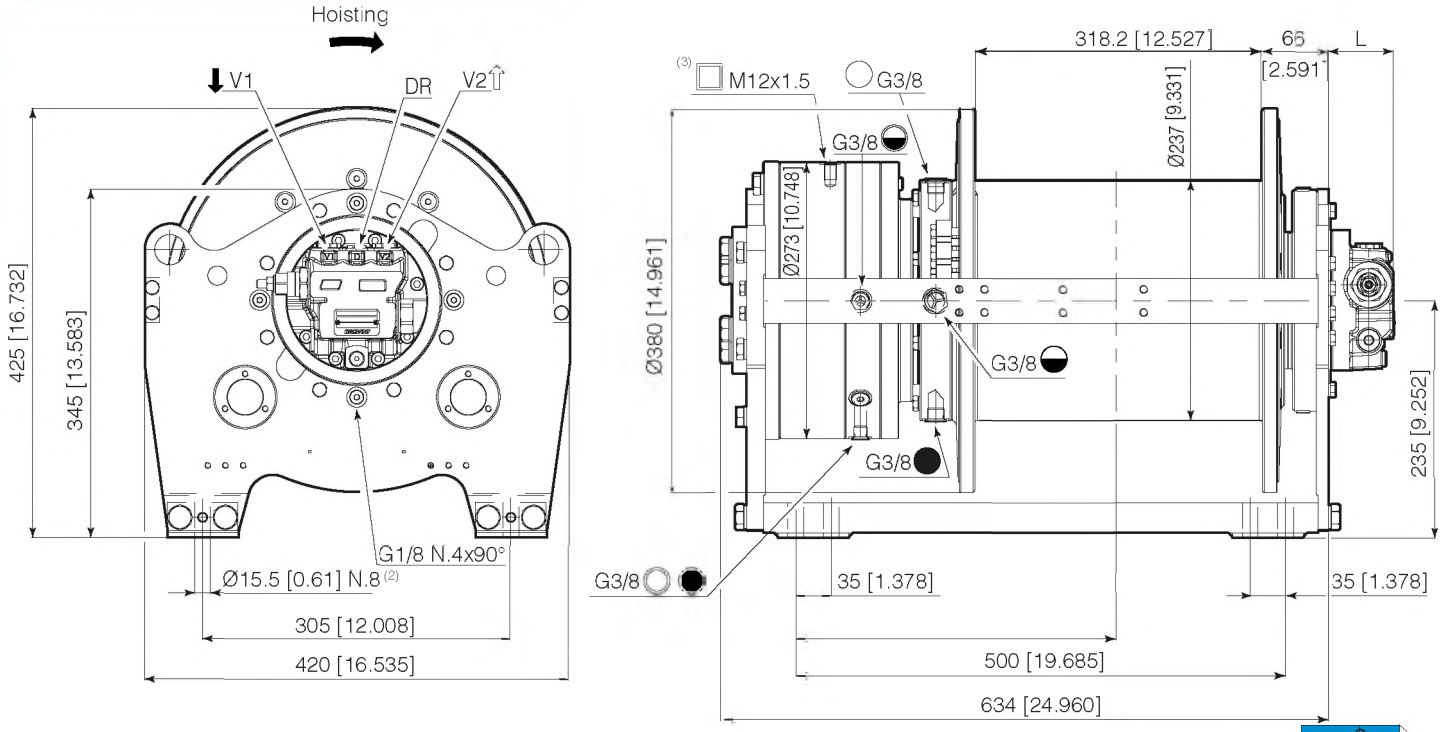
Brevini® Hydraulic Motor for Lifting of Personnel Winches

	Motor type	Displacement	L
Fixed Displacement	B5VA021 (1)	21 cm³/rev [1.28 in³/rev]	64.0 mm [2.519 in]
Fixed Displacement	BRZV250 (1)	250 cm³/rev [15.24 in³/rev]	105 mm [4.133 in]
With NO Motor	Universal Input Flange 00	-	22.5 mm [0.886 in]

Lifting of Personnel Winch - standard (4)



Lifting of Personnel Winch - extended drum (4)

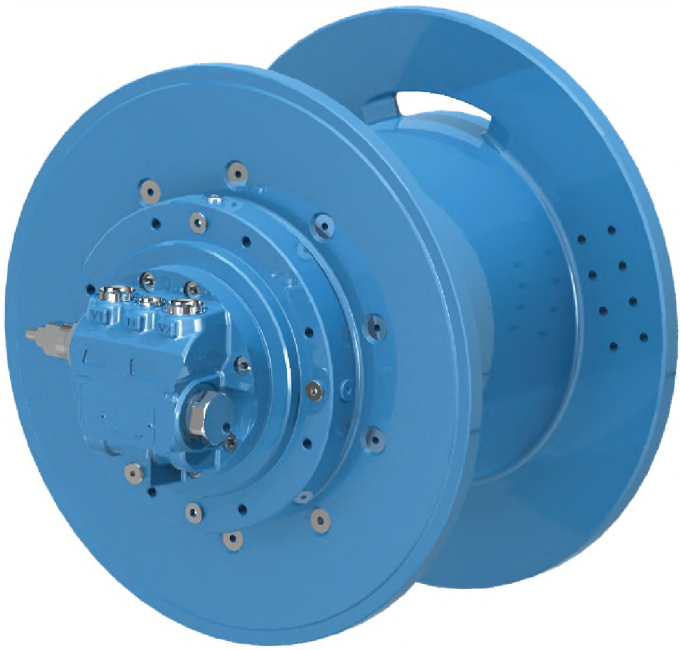


(1) As Standard with single overcenter valve, double overcenter valve available on request.
(2) N. 8 bolts for ABS certified version only. N. 4 bolts for other versions.
(3) Lifting of personnel brake release pressure (Release / Max) 27/315 bar [392/4570 psi]
(4) Catalogue dimensions only for reference, see dimensional drawing for detailed information

Motor Drum Winch

Available on request .

- with or without motor
- smooth or grooved drum
- customized drum lenght
- different rope diameter



Our Standard Configurations

Hydraulic Motor Fixed Displacement	**B5VA021**	21 [cm³/rev]	1.28 [in³/rev]
	BRZV250	250 [cm³/rev]	15.24 [in³/rev]
Ratio		37.4	
		5.53	
Drum	**standard**	Smooth Drum Special Grooved Drum (1)	
	extended	Smooth Drum Special Grooved Drum (1)	
Rope		Ø 10 [mm] Ø 12 [mm] Ø 14 [mm]	Ø 0.39 [in] Ø 0.47 [in] Ø 0.55 [in]

(1) Left hand grooving as Standard only with rope diameter Ø 12 mm [0.47 in]. Right hand grooving on request. Other rope diameter available on request.

International System of Units: SI

BWE025-SD12..-01-37.4-APF021

Working layer		1	2	3	4	5	6 Storage length
Line pull	[kg]	2500	2310	2150	2000	1880	-
Rope speed	[m/min]	46	50	54	58	62	-
Rope length	[m]	12	24	38	52	68	84

Brevini® Motor	B5VA021		Advised rope diameter	12	[mm]
Starting lifting pressure	335	[bar]	Oil fill / drain plug	G1/4	T
Operating pressure	285	[bar]	Lifting / Lowering port	G1/2	V1 / V2
Operating oil flow at the motor	50	[l/min]	Motor drain port	G1/4	DR
Minimum oil flow at the motor	5.0	[l/min]	Static braking torque (1)	180	[Nm]
Gear ratio	37.4	[i]	Brake release pressure (Release / Max)	34 / 350	[bar]

Winch mechanisms classification in agreement with F.E.M. (1.001) (Third edition revised on 01.10.1998) M5 (T5-L2) n_2=15 [rpm]

		Weight [kg]		Oil [l]	
		Cargo	LoP	Cargo	LoP
BWE025/B5VA021	Standard	122	177	1.4	2.2
	Extended drum	136	194	3.3	4.2

United States Customary Units: USC

BWE025-SD12..-01-37.4-APF021

Working layer		1	2	3	4	5	6 Storage length
Line pull	[lbf]	5500	5100	4740	4420	4150	-
Rope speed	[fpm]	153	166	178	191	204	-
Rope length	[ft]	39	80	126	172	225	278

Brevini® Motor	B5VA021		Advised rope diameter	0.47	[in]
Starting lifting pressure	4915	[psi]	Oil fill / drain plug	G1/4	T
Operating pressure	4100	[psi]	Lifting / Lowering port	G1/2	V1 / V2
Operating oil flow at the motor	13	[gpm]	Motor drain port	G1/4	DR
Minimum oil flow at the motor	1.32	[gpm]	Static braking torque (1)	132	[ft·lbf]
Gear ratio	37.4	[i]	Brake release pressure (Release / Max)	495 / 5080	[psi]

Winch mechanisms classification in agreement with F.E.M. (1.001) (Third edition revised on 01.10.1998) M5 (T5-L2) n_2=15 [rpm]

		Weight [lbs]		Oil [gal]	
		Cargo	LoP	Cargo	LoP
BWE025/B5VA021	Standard	269	390	0.37	0.58
	Extended drum	300	428	0.87	1.11

Note:
- For safety reasons always keep at least 3 wraps of rope wrapped on the drum.
- Technical features may change with no previous notice from the manufacturer.
- The MBL of the Rope must be verified according to the requested Safety Factors.
- All data shown in this page are ONLY FOR INFORMATION. The actual data will be issued according to Customer application and Duty Cycle.

(1) Static braking torque does not affect the winch maximum static line pull which must be considered 125% of the nominal line pull at first layer.

Line pull for Certified Winch Version: SI

Rope Diameter	Line Pull (according to DNVGL) [kg]				Line Pull (according to ABS) [kg]			
	Cargo Winch		Lifting of Personnell Winch		Cargo Winch		Lifting of Personnell Winch	
	Last Layer	First Layer	Last Layer	First Layer	Last Layer	First Layer	Last Layer	First Layer
Ø 10 [mm]	1332 (5) (1)	1700	509 (5) (1)	650	1332 (5) (1)	1700	627 (5) (1)	800
Ø 12 [mm]	1844 (4) (1)	2300	521 (4) (1)	650	1764 (4) (1)	2200	642 (4) (1)	800
Ø 14 [mm]	1932 (3) (1)	2300	546 (3) (1)	650	1848 (3) (1)	2200	672 (3) (1)	800

Line pull for Certified Winch Version: USC

Rope Diameter	Line Pull (according to DNVGL) [lbf]				Line Pull (according to ABS) [lbf]			
	Cargo Winch		Lifting of Personnell Winch		Cargo Winch		Lifting of Personnell Winch	
	Last Layer	First Layer	Last Layer	First Layer	Last Layer	First Layer	Last Layer	First Layer
Ø 0.39 [in]	2936 (5) (1)	3778	1122 (5) (1)	1445	2936 (5) (1)	3778	1382 (5) (1)	1778
Ø 0.47 [in]	4064 (4) (1)	5112	1148 (4) (1)	1445	3888 (4) (1)	4890	1415 (4) (1)	1778
Ø 0.55 [in]	4258 (3) (1)	5112	1203 (3) (1)	1445	4073 (3) (1)	4890	1482 (3) (1)	1778

The line pull listed above are just for reference, for this application is strongly recommended to fill up the Winch Apllication Data Form available at the end of this catalogue and consult the Dana area contact person for final selection and validation.

Other Ropes available - standard

Working layer			1	2	3	4	5	6
Rope Diameter Ø 10 [mm]	Rope length	[m]	14	29	45	61	80	98
Rope Diameter Ø 14 [mm]	Rope length	[m]	10	21	33	46	60	-

Working layer			1	2	3	4	5	6
Rope Diameter Ø 0.39 [in]	Rope length	[ft]	47	95	149	203	263	323
Rope Diameter Ø 0.55 [in]	Rope length	[ft]	34	69	110	150	198	-

Last indicated Layer is intended only as Storage

Other Ropes available - extended

Working layer			1	2	3	4	5	6
Rope Diameter Ø 10 [mm]	Rope length	[m]	23	48	75	103	133	164
Rope Diameter Ø 12 [mm]	Rope length	[m]	19	40	63	87	114	141
Rope Diameter Ø 14 [mm]	Rope length	[m]	17	35	55	76	100	-

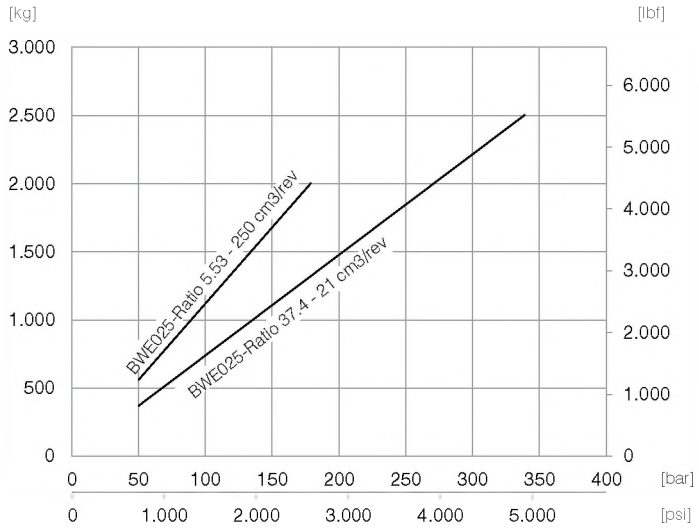
Working layer			1	2	3	4	5	6
Rope Diameter Ø 0,39 [in]	Rope length	[ft]	77	158	247	338	437	538
Rope Diameter Ø 0,47 [in]	Rope length	[ft]	65	133	209	288	375	463
Rope Diameter Ø 0,55 [in]	Rope length	[ft]	56	115	182	252	330	-

Last indicated Layer is intended only as Storage

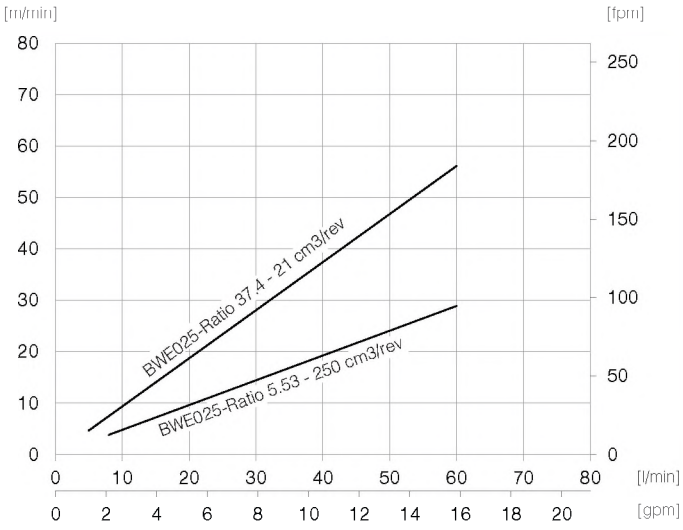
(1) Last working layer

Axial Piston Motor Fixed Displacement

Maximum Line pull at first layer



Maximum Speed at first layer



Note:

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