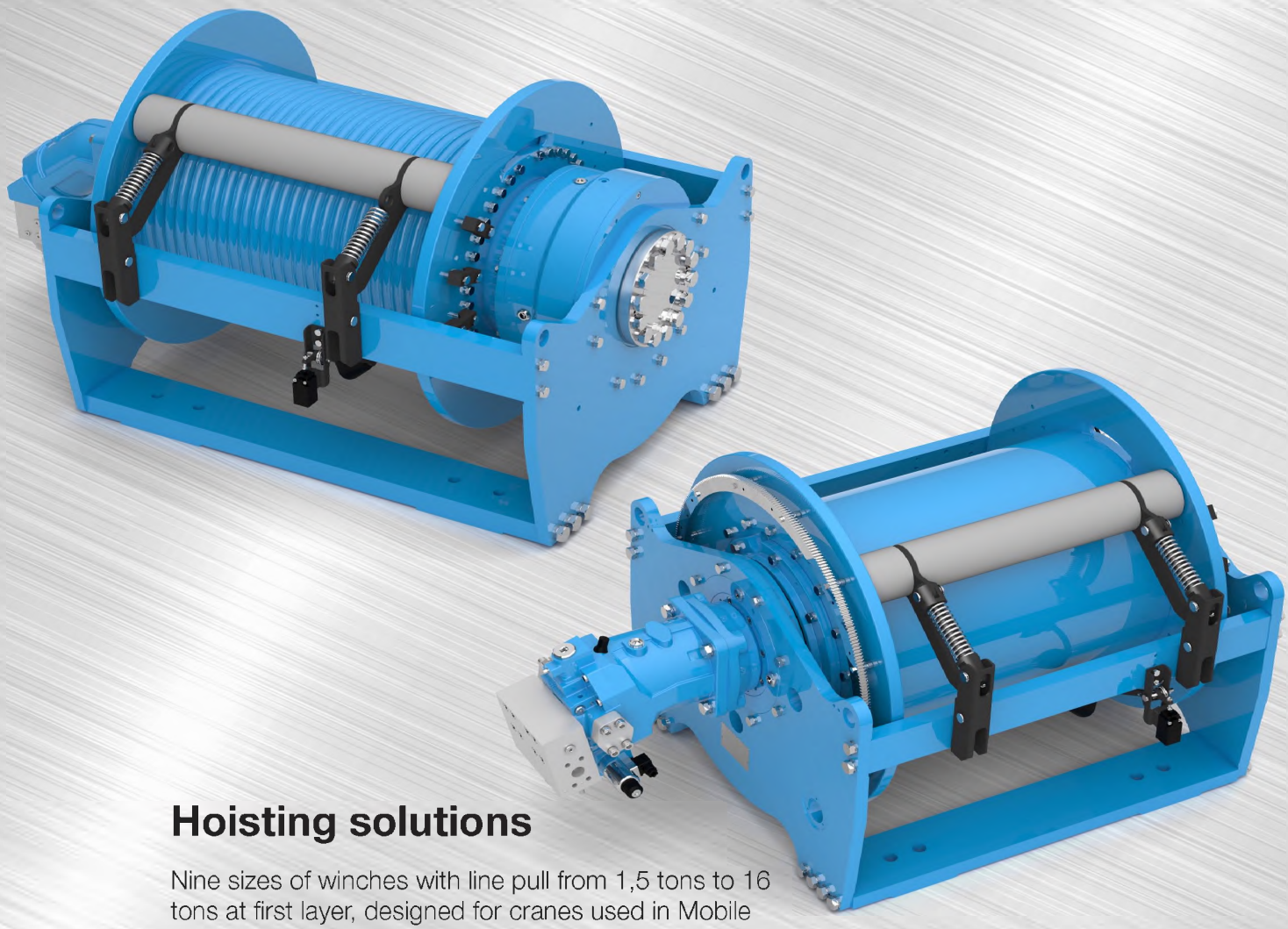
DANA BREVINI Motion Systems

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.

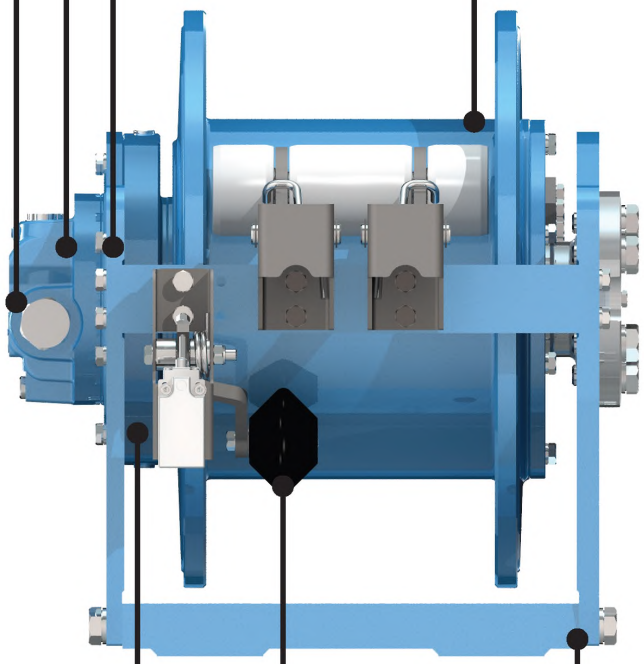
Line Pull at first Layer up to:
5.500 [kg]
12.100 [lbf]

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

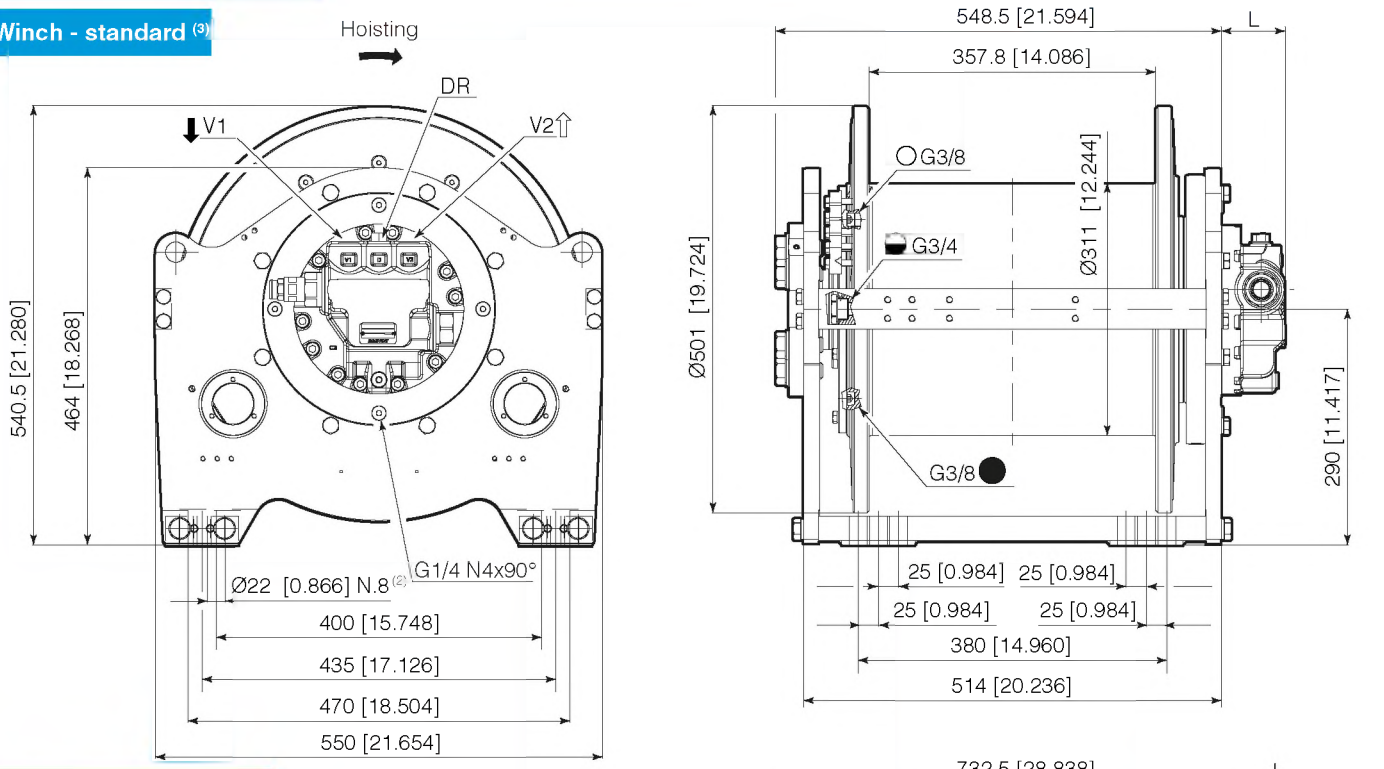
Accessories
Pressure Roller
Electric or Hydraulic Limit Switch
Electric or Hydraulic Rotary Limit Switch
Speed Sensor (proximity)

Structure
Robust steel frame
Suitable for low temperature applications

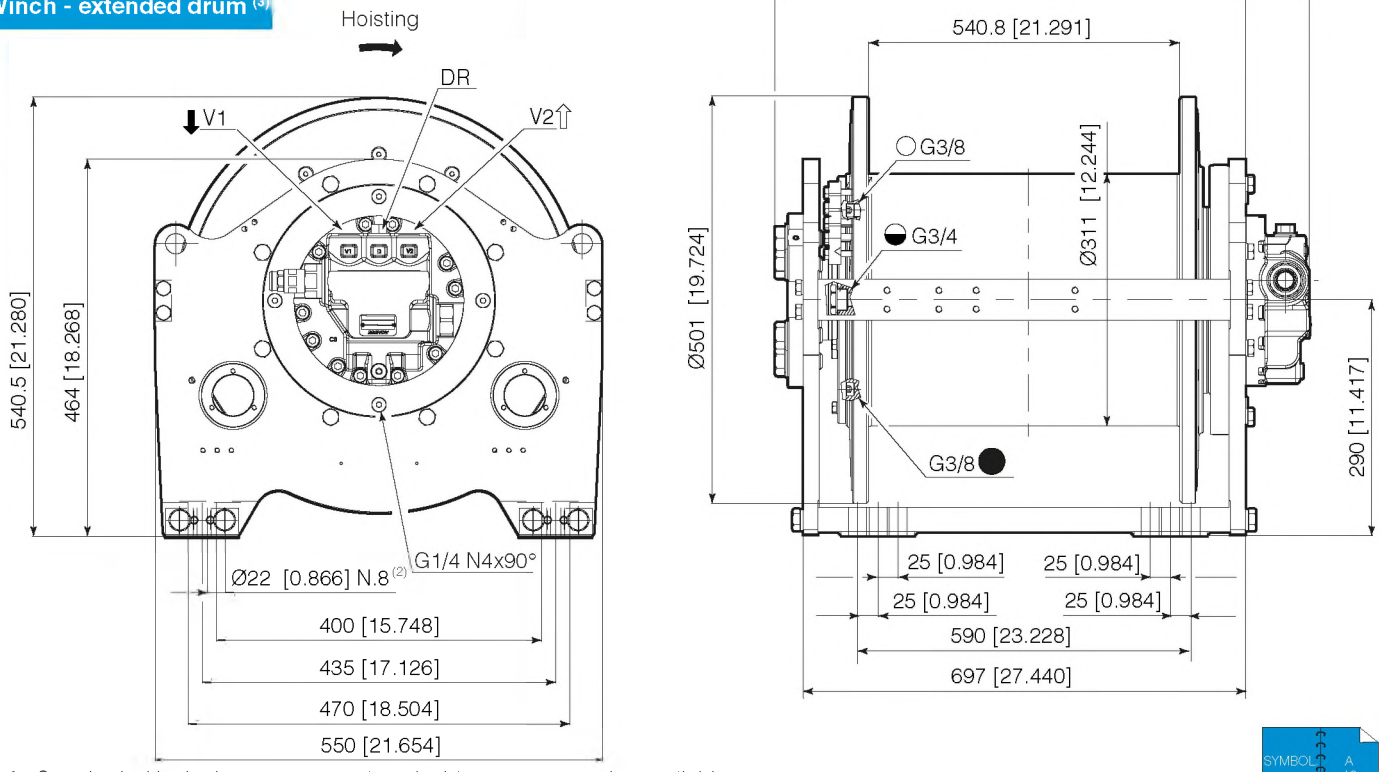
Brevini® Hydraulic Motor

	Motor type	Displacement	L
Fixed Displacement	B5VA068 (1)	68 cm³/rev [4.14 in³/rev]	78.5 mm [3.858 in]
Fixed Displacement	HR160 (1)	160 cm³/rev [9.72 in³/rev]	242.6 mm [9.551in]
Fixed Displacement	SH11CR090 (1)	90 cm³/rev [5.47 in³/rev]	239 mm [9.409 in]
Variable Displacement	SH9V085 (1)	85 cm³/rev [5.17 in³/rev]	352 mm [13.858 in]
With NO Motor	Universal Input Flange 00	-	5.5 mm [0.216 in]

Winch - standard (3)



Winch - extended drum (3)

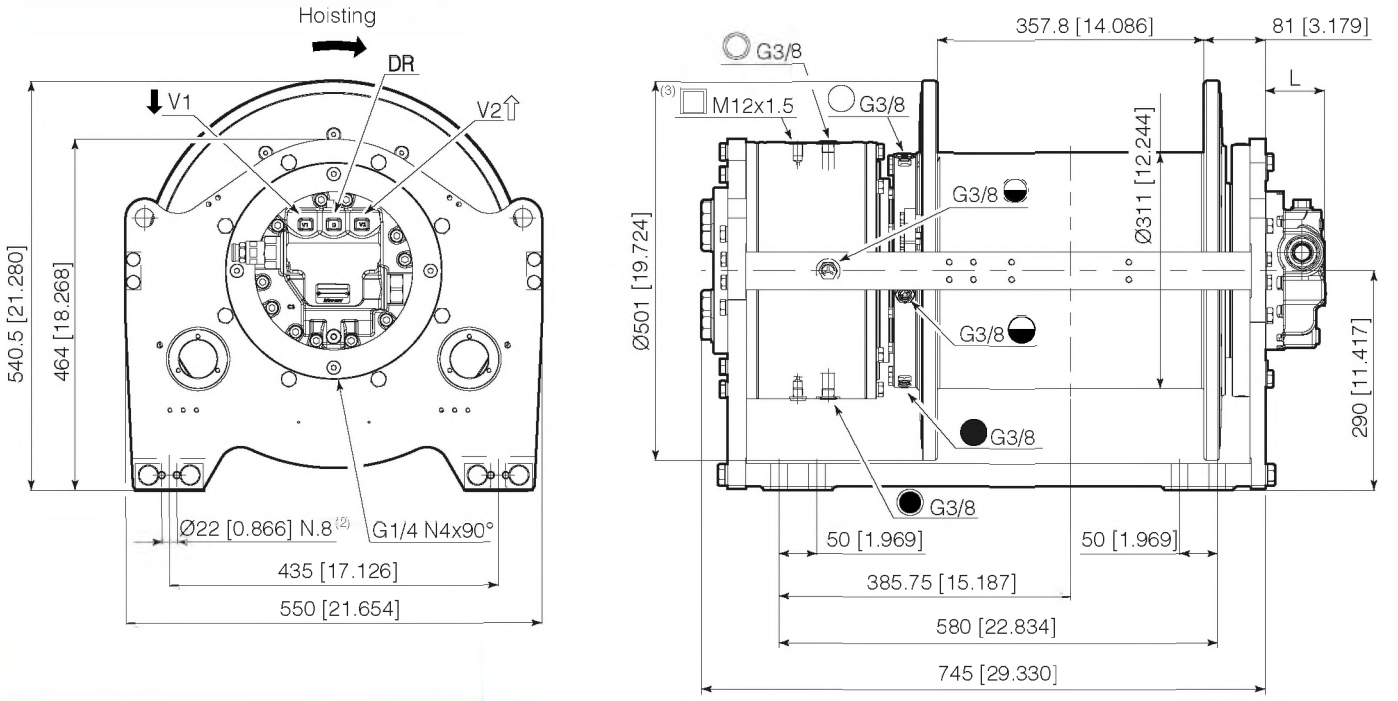


(1) As Standard with single overcenter valve, double overcenter valve available on request.
(2) N. 8 bolts for ABS certified version only. N. 4 bolts for other versions.
(3) Catalogue dimensions only for reference, see dimensional drawing for detailed information

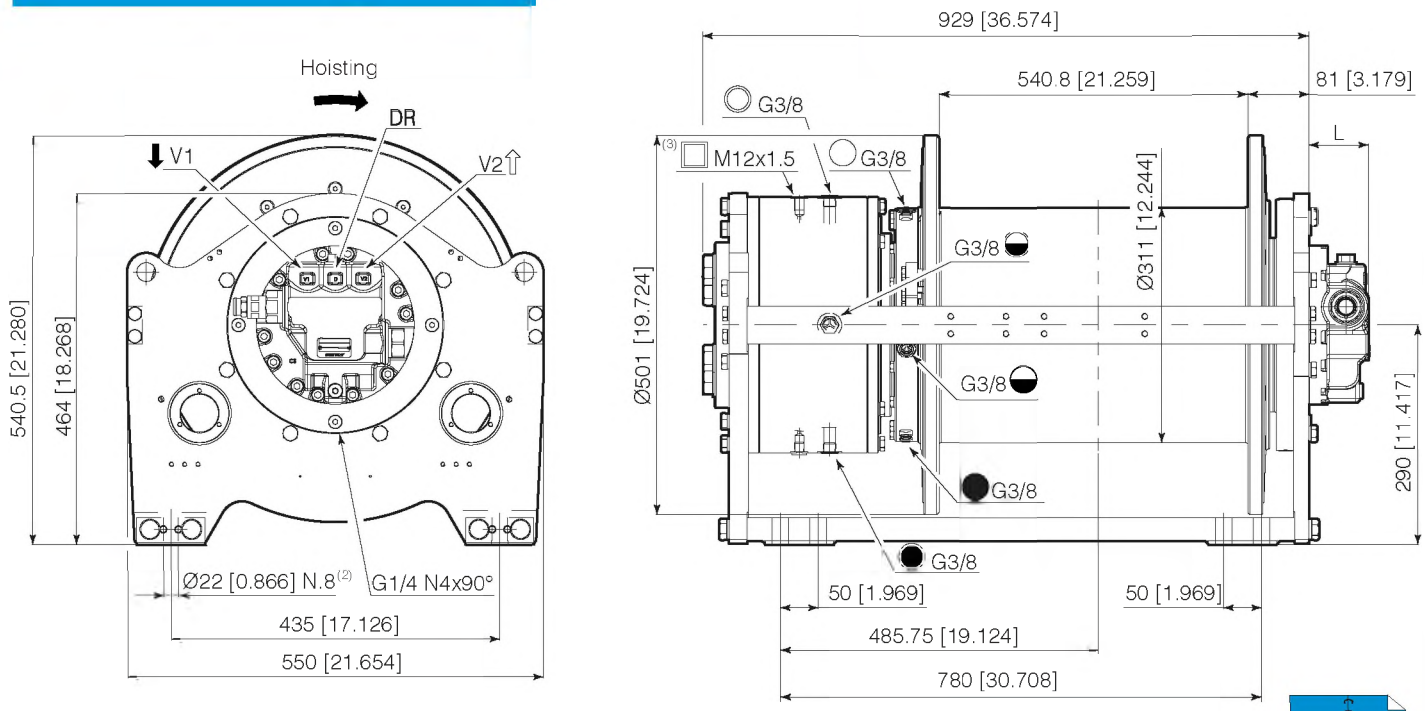
Brevini® Hydraulic Motor for Lifting of Personnel Winches

	Motor type	Displacement	L
Fixed Displacement	B5VA068 (1)	68 cm³/rev [4.14 in³/rev]	78.5 mm [3.858 in]
Fixed Displacement	HR160 (1)	160 cm³/rev [9.72 in³/rev]	242.6 mm [9.551in]
Fixed Displacement	SH11CR090 (1)	90 cm³/rev [5.47 in³/rev]	239 mm [9.409 in]
Variable Displacement	SH9V085 (1)	85 cm³/rev [5.17 in³/rev]	352 mm [13.858 in]
With NO Motor	Universal Input Flange 00	-	5.5 mm [0.216 in]

Lifting of Personnel Winch - standard (4)



Lifting of Personnel Winch - extended drum (4)

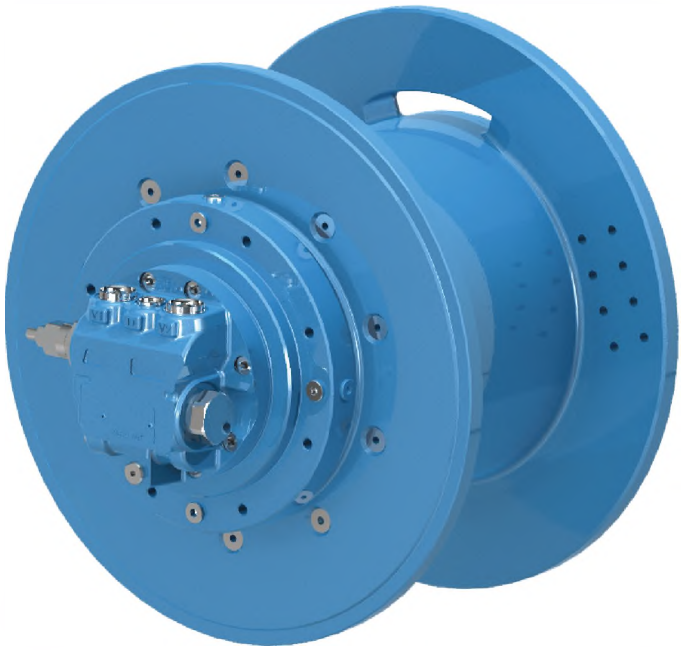


(1) As Standard with single overcenter valve, double overcenter valve available on request.
(2) N. 8 bolts for ABS certified version only. N. 4 bolts for other versions.
(3) Lifting of personnel brake release pressure (Release / Max) 27/315 bar [392/4570 psi]
(4) Catalogue dimensions only for reference, 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	**B5VA068**	68 [cm³/rev]	4.14 [in³/rev]
	HR160	160 [cm³/rev]	9.74 [in³/rev]
	SH11CR090	90 [cm³/rev]	5.47 [in³/rev]
Hydraulic Motor Variable Displacement	**SH9V085**	85 [cm³/rev]	5.17 [in³/rev]
Ratio		33.6	
		22.9	
Drum	**standard**	Smooth Drum Special Grooved Drum (1)	
	extended	Smooth Drum Special Grooved Drum (1)	
Rope		Ø 14 [mm] Ø 16 [mm] Ø 18 [mm]	Ø 0.55 [in] Ø 0.63 [in] Ø 0.71 [in]

(1) Left hand grooving as Standard only with rope diameter Ø 16 mm [0.63 in]. Right hand grooving on request. Other rope diameter available on request.

International System of Units: SI

BWE055-SD16..-01-22.9-APF090

Working layer		1	2	3	4	5	6 Storage length
Line pull	[kg]	5500	5070	4710	4390	4120	-
Rope speed	[m/min]	73	79	85	91	97	-
Rope length	[m]	22	44	70	97	126	156

Brevini® Motor	SH11CR090		Advised rope diameter	16	[mm]
Starting lifting pressure	385	[bar]	Oil fill / drain plug	G3/8	T
Operating pressure	325	[bar]	Lifting / Lowering port	G1	V1 / V2
Operating oil flow at the motor	150	[l/min]	Motor drain port	G1/2	DR
Minimum oil flow at the motor	6.0	[l/min]	Static braking torque (1)	778	[Nm]
Gear ratio	22.9	[i]	Brake release pressure (Release / Max)	31 / 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
BWE055/B5VA068	Standard	310	436	4.9	6.1
	Extended drum	362	480	9	10.2

United States Customary Units: USC

BWE055-SD16..-01-22.9-APF090

Working layer		1	2	3	4	5	6 Storage length
Line pull	[lbf]	12100	11190	10390	9690	9090	-
Rope speed	[fpm]	240	260	280	300	321	-
Rope length	[ft]	72	147	231	318	415	513

Brevini® Motor	SH11CR090		Advised rope diameter	0.62	[in]
Starting lifting pressure	5640	[psi]	Oil fill / drain plug	G3/8	T
Operating pressure	4705	[psi]	Lifting / Lowering port	G1	V1 / V2
Operating oil flow at the motor	40	[gpm]	Motor drain port	G1/2	DR
Minimum oil flow at the motor	1,58	[gpm]	Static braking torque (1)	573	[ft·lbf]
Gear ratio	22.9	[i]	Brake release pressure (Release / Max)	450 / 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
BWE055/B5VA068	Standard	683	961	1.29	1.61
	Extended drum	798	1058	2.38	2.69

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 14 [mm]	3013 (5) (1)	3900	1159 (5) (1)	1500	3013 (5) (1)	3900	1429 (5) (1)	1850
Ø 16 [mm]	3998 (4) (1)	5000	1199 (4) (1)	1500	3518 (4) (1)	4400	1479 (4) (1)	1850
Ø 18 [mm]	4213 (3) (1)	5000	1264 (3) (1)	1500	3707 (3) (1)	4400	1559 (3) (1)	1850

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 0.55 [in]	6696 (5) (1)	8667	2576 (5) (1)	3333	6696 (5) (1)	8667	3150 (5) (1)	4111
Ø 0.63 [in]	8884 (4) (1)	11111	2664 (4) (1)	3333	7818 (4) (1)	9778	3261 (4) (1)	4111
Ø 0.71 [in]	9362 (3) (1)	11111	2808 (3) (1)	3333	8238 (3) (1)	9778	3437 (3) (1)	4111

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 14 [mm]	Rope length	[m]	25	50	79	109	141	174
Rope Diameter Ø 18 [mm]	Rope length	[m]	19	40	63	87	114	-

Working layer			1	2	3	4	5	6
Rope Diameter Ø 0.55 [in]	Rope length	[ft]	82	167	261	357	464	572
Rope Diameter Ø 0.71 [in]	Rope length	[ft]	64	131	208	287	376	-

Last indicated Layer is intended only as Storage

Other Ropes available - extended

Working layer			1	2	3	4	5	6
Rope Diameter Ø 14 [mm]	Rope length	[m]	37	77	121	166	215	265
Rope Diameter Ø 16 [mm]	Rope length	[m]	33	68	107	147	192	238
Rope Diameter Ø 18 [mm]	Rope length	[m]	29	61	96	133	174	-

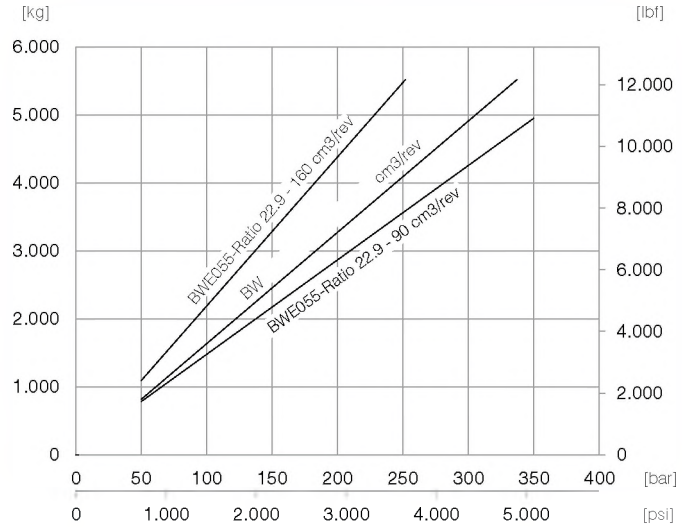
Working layer			1	2	3	4	5	6
Rope Diameter Ø 0.55 [in]	Rope length	[ft]	124	254	397	544	705	871
Rope Diameter Ø 0.63 [in]	Rope length	[ft]	109	224	352	485	631	781
Rope Diameter Ø 0.71 [in]	Rope length	[ft]	97	201	317	438	573	-

Last indicated Layer is intended only as Storage

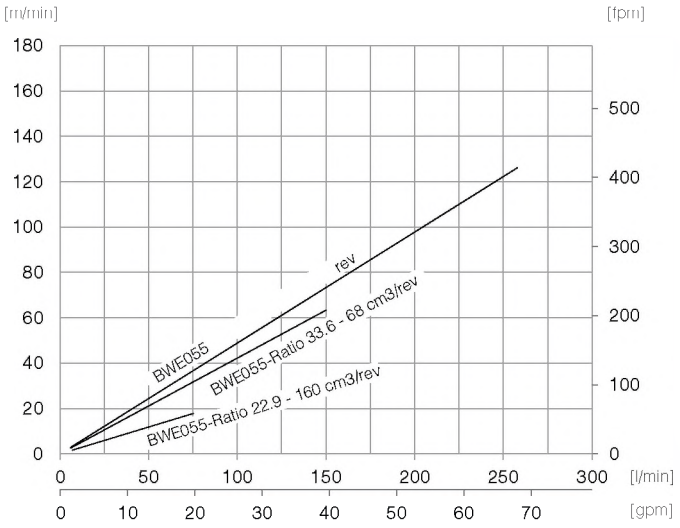
(1) Last working layer

Axial Piston Motor Fixed Displacement

Maximum Line pull at first layer

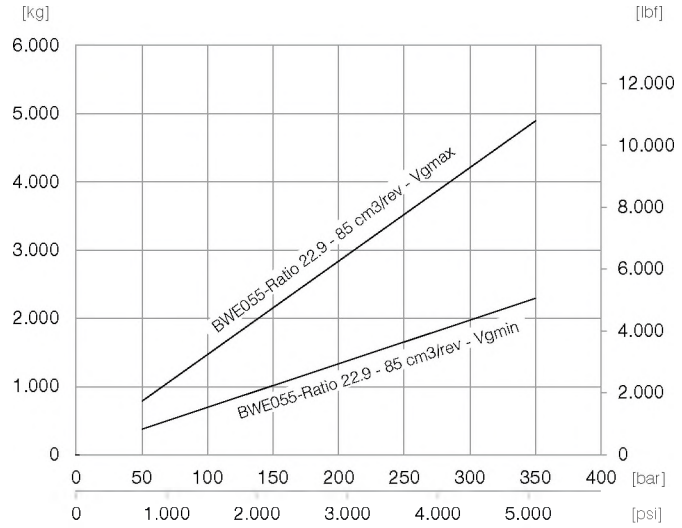


Maximum Speed at first layer



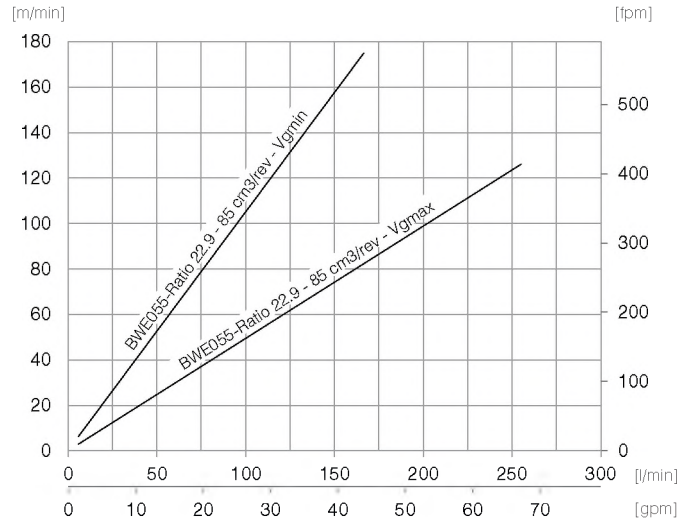
Axial Piston Motor Variable Displacement

Maximum Line pull at first layer



Vg_{max} = 85 cm³/rev [5.17 in³/rev]
Vg_{min} = 40 cm³/rev [2.43 in³/rev]

Maximum Speed at first layer



Vg_{max} = 85 cm³/rev [5.17 in³/rev] - Max 255 l/min [67 gpm] allowed
Vg_{min} = 40 cm³/rev [2.43 in³/rev] - Max 166 l/min [44 gpm] allowed

Note:
- All data shown in this page are ONLY FOR INFORMATION. The actual data will be issued according to Customer application and Duty Cycle.