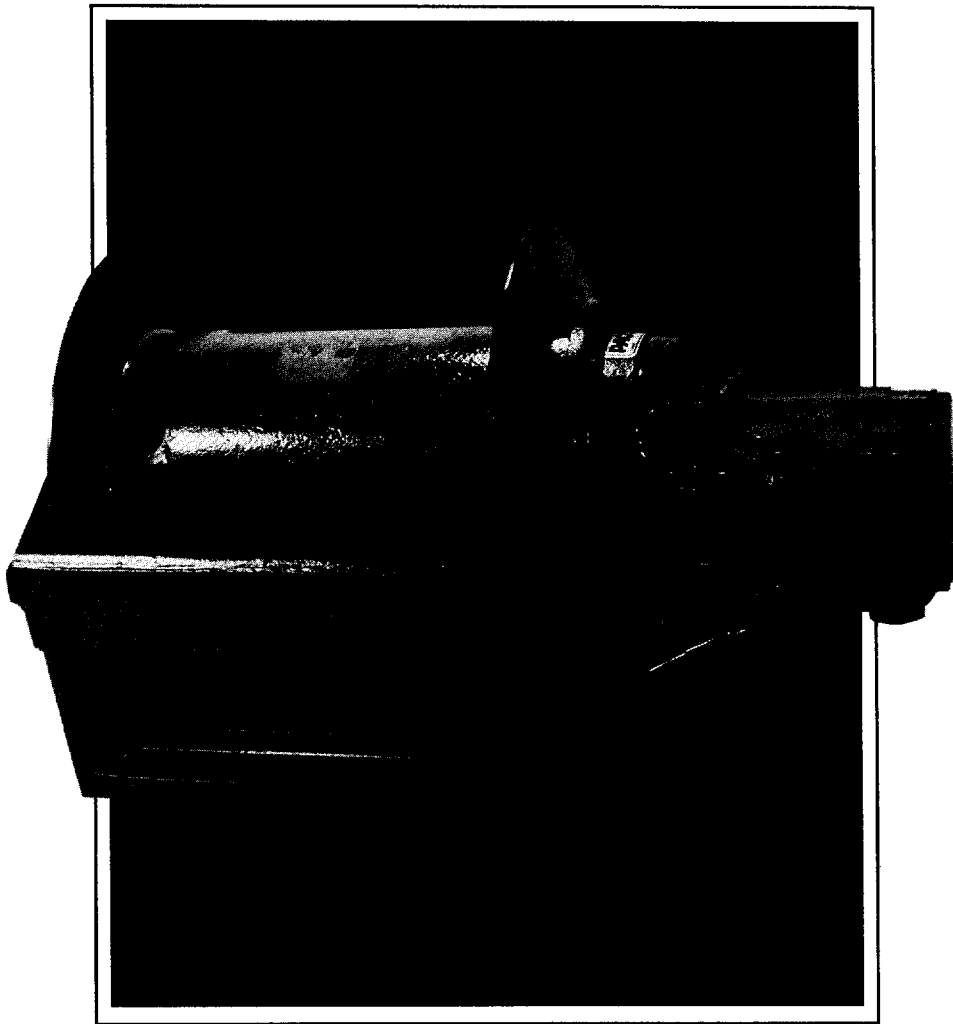


BRADEN[®]
Gearmatic[®]

MODEL BG8



**HYDRAULIC
PLANETARY WINCH**

FIRST LAYER LINE PULLS UP TO 8,000 LBS.

PACCAR WINCH DIVISIONS

P.O. BOX 547 • BROKEN ARROW, OK U.S.A. 74013
PHONE (918) 251-8511 • FAX (918) 258-4822

BG8 FEATURES

The **BG8A** Series planetary winch is a second generation evolution of the **Braden PD7A** and **Gearmatic GH7** winches. Improvements to the gear train and drum sealing have resulted in greater line pulls on equal speed models and improved reliability for the entire series.

The **BG8A** is powered by a high efficiency gear motor designed specifically for winch applications to provide smooth operation. All rotating components are supported by anti-friction bearings and run in oil to minimize frictional losses. Load control when lowering or paying-out cable is maintained by the patented **Braden Brake Valve** known for its smooth operation. The brake valve not only provides smooth load control, but also adapts well to most hydraulic systems. The dynamic brake on the high speed reverse option allows the operator to lower full rated loads at three times the hoisting speed.*

An internal, automatic, multi-disc safety brake backs up the brake valve while lowering a load, and firmly holds the load when the winch is not being powered. An over-running clutch permits free rotation through the fully applied brake to haul-in cable, but immediately locks up when the hoisting operation is completed. The load is held firm, even if the engine stalls or a hydraulic line breaks.

Continuing product development programs at both **Braden** and **Gearmatic** have led the industry with innovative, quality products serving a wide range of markets. The **BG8A** Series winch is a result of that development effort and is supported by a comprehensive warranty.

* Refer to note on page 5 and 6.

FULL LOAD ANCHOR* -- for additional safety. One anchor wedge fits 7/16 - 1/2 - 9/16 wire rope, optional wedge for 7/8 & 1" poly rope.

PLANETARY GEARING -- Highly efficient computer-aided designed gear sets with optional ratios to optimize performance for individual applications.

MULTI-DISC BRAKE -- Spring applied, hydraulically released brake will hold load even if engine dies or hydraulic line breaks.

ANTI-FRICTION BEARINGS -- Used throughout the winch for maximum efficiency.

PATENTED BRAKE VALVE -- BRADEN Brake Valve known for precise lowering control.

HIGH EFFICIENCY MOTOR -- High efficiency hydraulic motor with optional displacements to tailor winch to individual hydraulic systems.

EASY SERVICE -- Fill, level, and drain plugs in convenient locations.

CAST DRUM AND BASE -- Rigid one piece cast high strength ductile iron drum and base.

EXTRA BRAKE CAPACITY -- Brake retains minimum 3:1 safety factor even with system back-pressure of 150 PSI.

* Consult Installation, Maintenance, and Service Manual for proper installation. The Braden designed wire rope anchors are capable of supporting the rated load, but for additional safety, always maintain a minimum of five (5) wraps of cable on the drum.

RATIO AND MOTOR SELECTION

The graphs on page 4 will help establish the best combination of gear ratio and motor displacement for a particular hydraulic system or application requirement. Sometimes winch performance is limited by the amount of power the hydraulic system can provide, but the proper winch selection can optimize the combination of line pull and line speed required to get the job done.

The mid-range 34:1 reduction is the best all-around gear reduction for most applications giving good line speed and load control.

The high reduction 59:1 option gives the best load control and is normally best suited for low horsepower hydraulic systems.

The low reduction 23:1 option is well suited for high line speed applications where precise load control is not important. This ratio works well with high horsepower hydraulic systems.

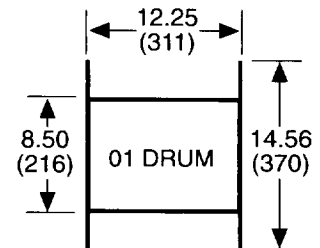
EXPLANATION OF MODEL NUMBER

BG	8	A	34	039	- 01	U	- 1
BRADEN GEARMATIC	MAX RATING	DESIGN MODEL	GEAR RATIO	MOTOR SIZE	DRUM SIZE	OPTION	OPTION

- BG** DESIGNATES BRADEN GEARMATIC
- 8** DESIGNATES 8,000 LB. FIRST LAYER LINE PULL
- A** DESIGNATES THE MODEL SERIES RELATING TO DESIGN CHANGES
- 34** DESIGNATES TOTAL GEAR REDUCTION
(23 = 23.06:1; 34 = 34.2:1; 59 = 59.06:1; 69/23 $\left\{ \begin{array}{l} 69.19:1 \text{ Hoist} \\ 23.06:1 \text{ Lower} \end{array} \right.$)
- 039** DESIGNATES HYDRAULIC MOTOR DISPLACEMENT IN CU IN/REV
(DECIMAL POINT ELIMINATED (039 = 3.9 CU IN/REV))
- 01** DESIGNATES THE DRUM
- U** DESIGNATES CLOCKWISE DRUM ROTATION TO HOIST. STANDARD DRUM ROTATION TO HOIST IS COUNTERCLOCKWISE (VIEWED FROM MOTOR END).
- 1** PERMITS TESTING AND INSPECTION PER API2C FOR OFFSHORE CRANES

ACCUMULATIVE ROPE CAPACITY

ROPE SIZE	LAYER — FEET (METERS)											
	1	2	3	4	5	6	7	8	9	10	11	12
1/4" (6)	112 (36)	230 (74)	355 (114)	486 (156)	623 (199)	767 (244)	917 (291)	1074 (340)	1237 (391)	1406 (444)	1582 (499)	1764 (556)
5/16" (8)	90 (27)	186 (56)	289 (87)	398 (120)	513 (155)	635 (192)	763 (231)	898 (272)	1039 (314)			
3/8" (10)	75 (22)	157 (46)	245 (71)	340 (98)	441 (127)	548 (158)	662 (191)	782				
7/16" (11)	65 (20)	136 (42)	214 (66)	298 (92)	389 (119)	486 (148)						
1/2" (13)	57 (17)	121 (36)	191 (57)	267 (80)	350 (105)	439						
9/16" (14)	51 (16)	109 (34)	173 (53)	243 (74)	320 (97)							
5/8"† (16)	46 (14)	99 (30)	158 (48)	224 (68)								
3/4"† (19)	39 (12)	84 (26)	136 (41)	194 (58)								

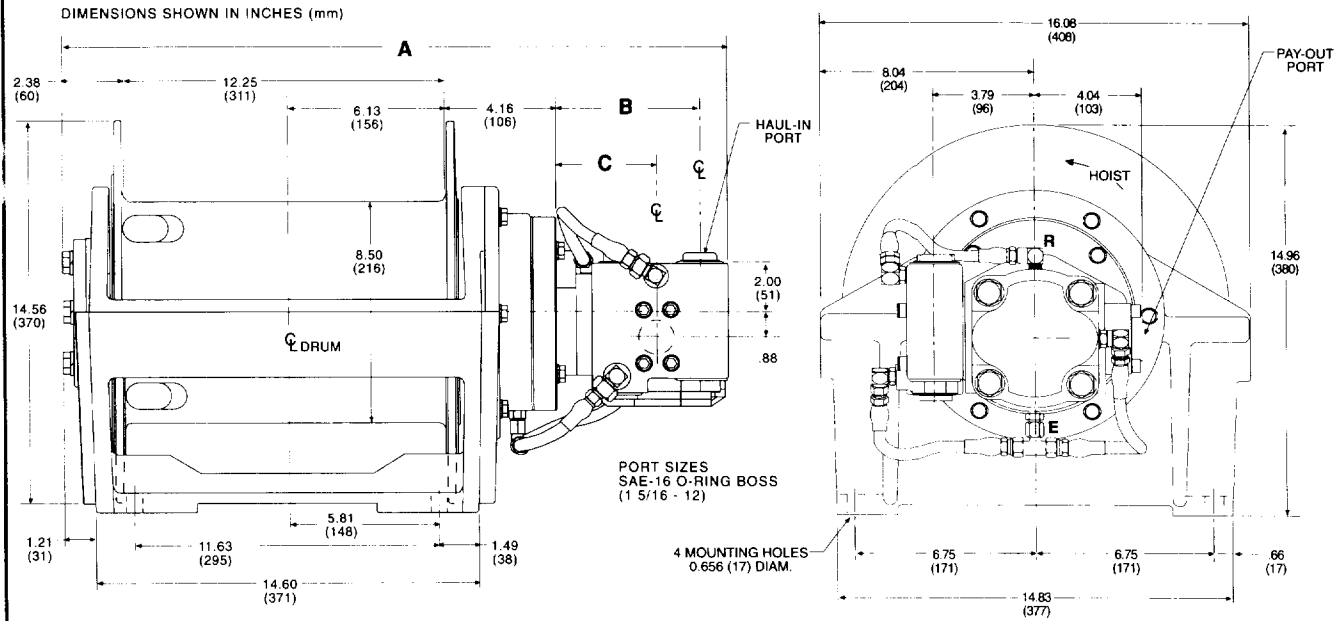


DIMENSIONS IN PARENTHESIS ARE IN MILLIMETERS.

*REQUIRES SPECIAL WIRE ROPE ANCHOR, PART NO. 24119

†RECOMMENDED FOR POLY ROPE ONLY, USE ANCHOR PART NO. 26095

DIMENSIONAL DATA



MOTOR	A	B	C
020	25.33 (643)	5.47 (139)	3.81 (97)
029	25.73 (654)	5.72 (145)	4.06 (103)
039	26.23 (666)	5.97 (152)	4.31 (109)
071	22.71 (577)		

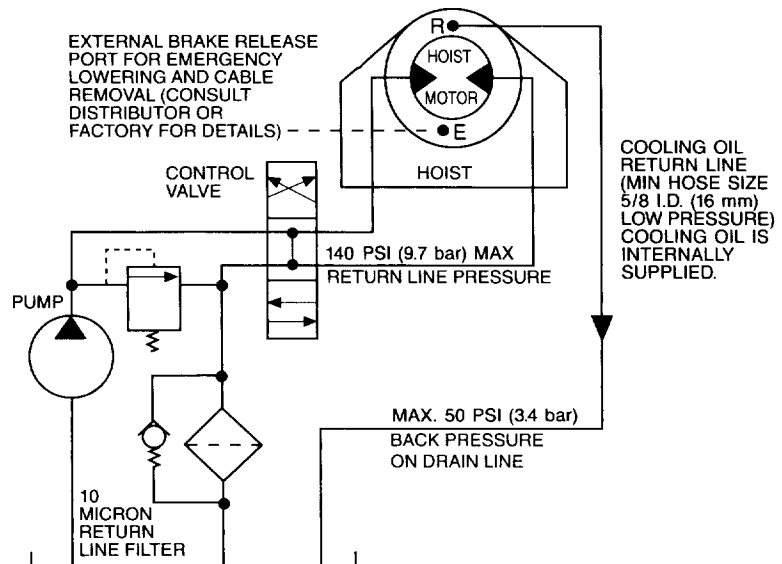
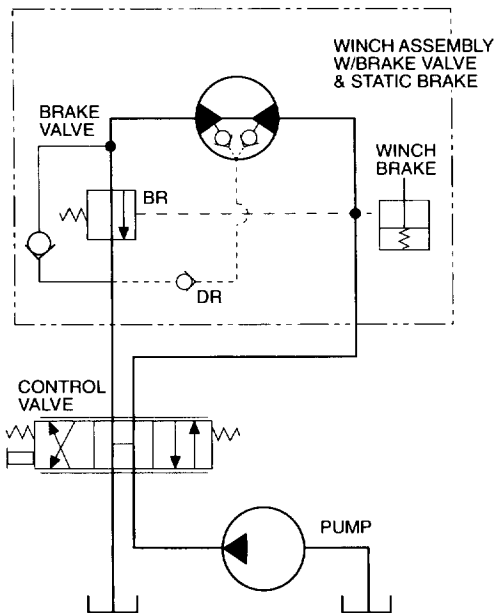
HIGH SPEED REVERSE NOTES

- Units not equipped with brake valve and external plumbing.
- H.S.R. option available with 020 and 029 motors.
- Add 2.35 in. (60 mm) to dimension "A".
- Use port "R" (3/8-18 NPTF) for cooling oil return.
- Use port "E" (3/8-18 NPTF) for external brake release.
- Motor ports are 1" SAE split flange.

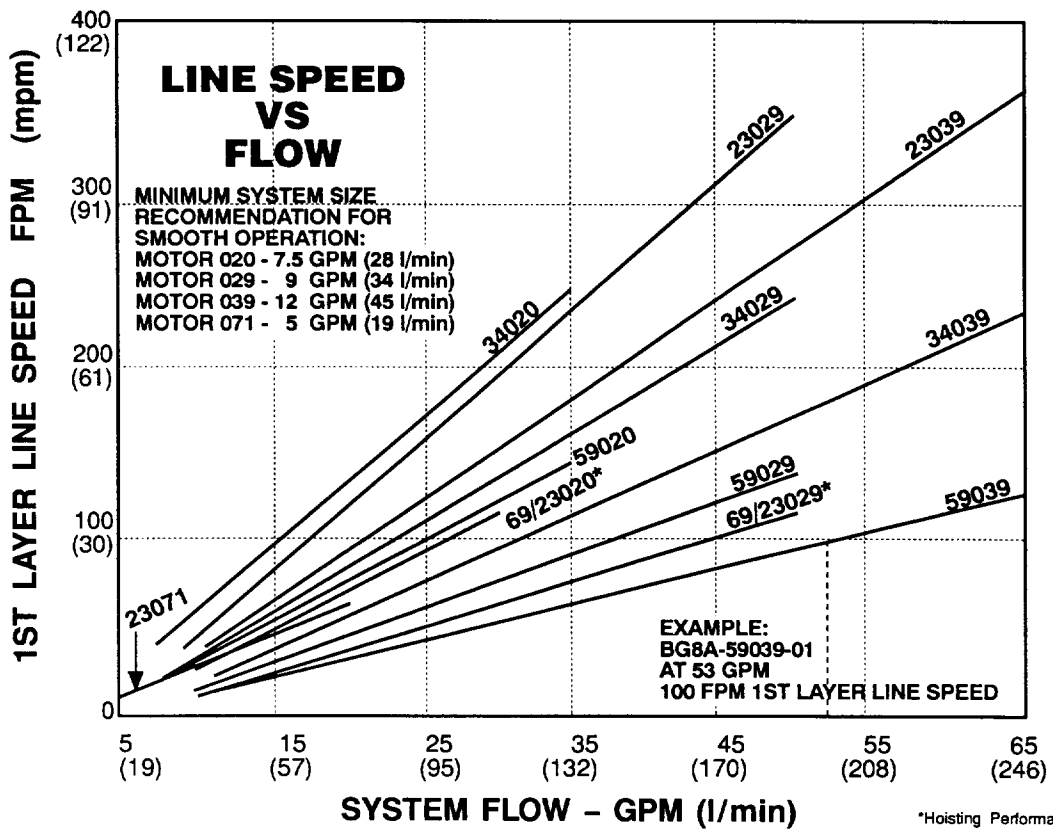
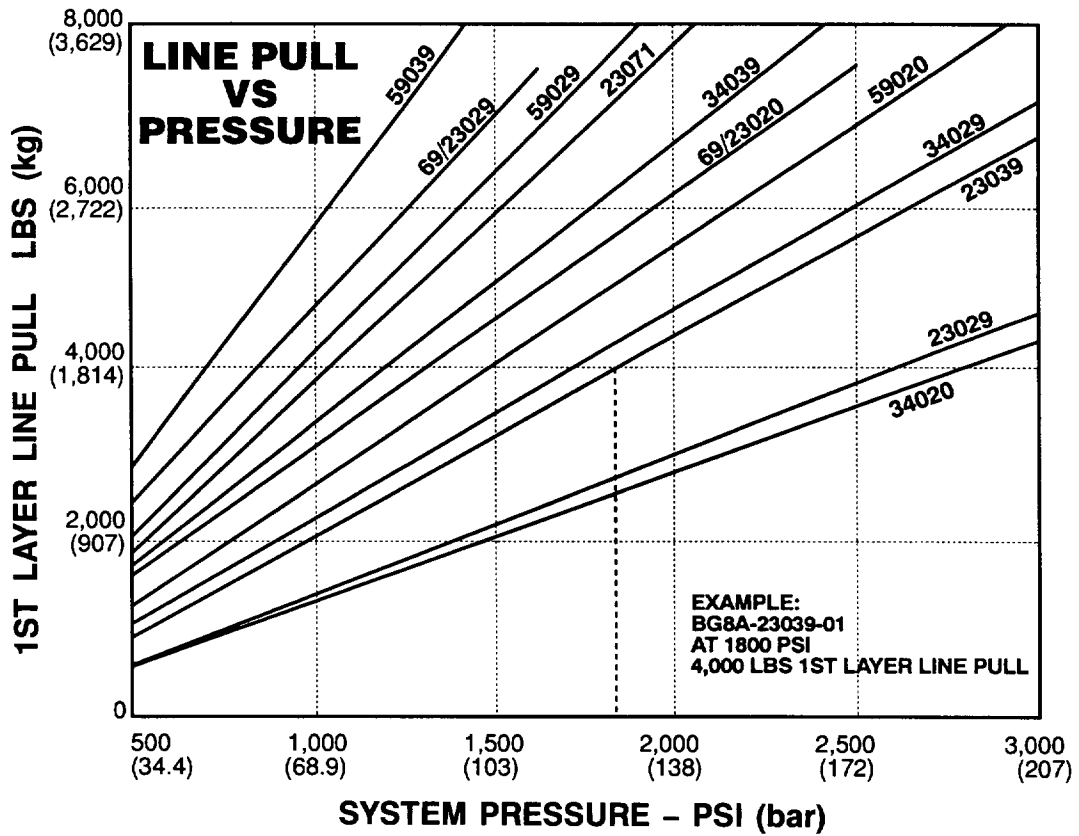
HYDRAULIC CIRCUIT

(EQUAL SPEED)

(HIGH SPEED REVERSE)



PERFORMANCE GRAPHS



*Hoisting Performance

PERFORMANCE CHARTS

ROPE SIZE (IN.)	LAYER	LINE PULL (LBS.)	59:1 RATIO			34:1 RATIO	23:1 RATIO
			020 MOTOR 1.96 CU. IN. DISP. 2900 PSI @ 35 GPM	029 MOTOR 2.94 CU. IN. DISP. 1900 PSI @ 50 GPM	039 MOTOR 3.92 CU. IN. DISP. 1400 PSI @ 65 GPM	039 MOTOR 3.92 CU. IN. DISP. 2400 PSI @ 65 GPM	071 MOTOR † 7.1 CU. IN. DISP. 2100 PSI @ 20 GPM
			LINE SPEED (FPM)	LINE SPEED (FPM)	LINE SPEED (FPM)	LINE SPEED (FPM)	LINE SPEED (FPM)
7/16 .438	1	8,000	144	140	139	241	59
	2	7,290	158	153	153	265	65
	3	6,690	173	167	166	289	71
	4	6,180	187	181	180	312	76
	5	5,750	201	194	193	336	82
	6*	5,370	215	208	207	360	88
1/2 .500	1	8,000	145	141	140	243	59
	2	7,200	161	156	155	270	66
	3	6,550	178	172	171	297	73
	4	6,000	194	188	187	324	79
	5	5,540	210	203	202	351	86
	6*	5,140	226	219	218	378	93

†Low speed, high torque orbit type motor.

ROPE SIZE (IN.)	LAYER	34:1 RATIO				23:1 RATIO				01 DRUM ROPE CAPACITY (FT.)
		020 MOTOR 1.96 CU. IN. DISP. 3000 PSI @ 35 GPM		029 MOTOR 2.94 CU. IN. DISP. 3000 PSI @ 50 GPM		029 MOTOR 2.94 CU. IN. DISP. 3000 PSI @ 50 GPM		039 MOTOR 3.92 CU. IN. DISP. 3000 PSI @ 65 GPM		
		LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	
7/16 .438	1	4,760	249	7,240	241	4,880	358	6,685	358	65
	2	4,340	274	6,600	265	4,440	393	6,090	393	136
	3	3,980	298	6,060	289	4,080	429	5,590	429	214
	4	3,680	323	5,600	312	3,770	464	5,170	464	298
	5	3,420	347	5,200	336	3,510	499	4,800	499	389
	6*	3,200	372	4,860	360	3,280	534	4,490	534	486
1/2 .500	1	4,760	251	7,240	243	4,880	361	6,685	361	57
	2	4,280	279	6,520	270	4,390	401	6,020	401	121
	3	3,900	307	5,920	297	3,990	441	5,470	441	191
	4	3,570	335	5,430	324	3,660	481	5,010	481	267
	5	3,300	363	5,010	351	3,380	521	4,630	521	350
	6*	3,060	391	4,650	378	3,140	561	4,300	561	439

HIGH SPEED REVERSE PERFORMANCE

69.19:1 RATIO (HOISTING)

23.06:1 RATIO (LOWERING)

MOTOR CODE: 029	} OR {	020	HIGH SPEED REVERSE LOWERS THREE TIMES FASTER THAN HOIST SPEED WITH MAXIMUM LOAD		
DISPLACEMENT: 2.94 CU. IN.		1.96 CU. IN.	NOTE: The BG8A High Speed Reverse Unit is capable of lowering a maximum rated load at maximum line speed on an intermittent basis only. For continuous maximum line speed lowering, the line pull should be no more than 50% of the load shown in the chart below. For applications exceeding these limits, consult factory.		
PRESSURE: 1650 PSI		2500 PSI			
FLOW: 48 GPM		33 GPM			
DRUM SPEED: 50 RPM HOISTING 150 RPM LOWERING					
ROPE SIZE (IN.)	LAYER	LINE PULL (LBS.)	LINE SPEED (FPM)		ROPE CAPACITY (FT.)
			HOISTING	LOWERING	
7/16 .438	1	7,500	117	351	65
	2	6,830	128	385	136
	3	6,270	140	420	214
	4	5,800	151	454	298
	5	5,390	163	488	389
	6*	5,040	174	523	486
1/2 .500	1	7,500	118	354	57
	2	6,750	131	393	121
	3	6,140	144	432	191
	4	5,630	157	471	267
	5	5,190	170	510	350
	6*	4,820	183	550	439

*This layer does not comply with ANSI Spec. 5-132a2c for 1/2" exposed flange.

NOTE: FOR WINCH PERFORMANCE AT PRESSURES AND FLOWS LESS THAN MAXIMUM SHOWN, CONSULT GRAPHS ON PAGE 4.

PERFORMANCE CHARTS

(METRIC)

ROPE SIZE (CM.)	LAYER	LINE PULL (KG.)	59:1 RATIO			34:1 RATIO	23:1 RATIO
			020 MOTOR 32 cm ³ DISP. 200 bar @ 132 l/min.	029 MOTOR 48 cm ³ DISP. 131 bar @ 189 l/min.	039 MOTOR 64 cm ³ DISP. 97 bar @ 246 l/min.	039 MOTOR 64 cm ³ DISP. 165 bar @ 246 l/min.	071 MOTOR† 116 cm ³ DISP. 145 bar @ 76 l/min.
			LINE SPEED (MPM)	LINE SPEED (MPM)	LINE SPEED (MPM)	LINE SPEED (MPM)	LINE SPEED (MPM)
11	1	3,630	44	42	42	73	12
	2	3,310	48	46	46	80	13
	3	3,040	52	50	50	87	14
	4	2,810	56	55	55	95	15
	5	2,620	61	59	59	102	17
	6*	2,450	65	63	63	109	18
13	1	3,630	44	43	43	74	12
	2	3,260	49	47	47	82	13
	3	2,960	54	52	52	91	15
	4	2,710	59	57	57	99	16
	5*	2,500	64	62	62	108	17

†Low speed, high torque orbit type motor.

ROPE SIZE (CM.)	LAYER	34:1 RATIO				23:1 RATIO				01 DRUM ROPE CAPACITY (M)
		020 MOTOR 32 cm ³ DISP. 207 bar @ 132 l/min.		029 MOTOR 48 cm ³ DISP. 207 bar @ 189 l/min.		029 MOTOR 48 cm ³ DISP. 207 bar @ 189 l/min.		039 MOTOR 64 cm ³ DISP. 207 bar @ 246 l/min.		
		LINE PULL (KG)	LINE SPEED (MPM)	LINE PULL (KG)	LINE SPEED (MPM)	LINE PULL (KG)	LINE SPEED (MPM)	LINE PULL (KG)	LINE SPEED (MPM)	
11	1	2,160	76	3,280	73	2,210	109	3,030	109	20
	2	1,970	83	2,990	80	2,020	119	2,760	119	42
	3	1,810	90	2,750	87	1,850	130	2,540	130	66
	4	1,670	98	2,540	95	1,710	141	2,350	141	92
	5	1,560	105	2,360	102	1,590	151	2,180	151	119
	6*	1,460	113	2,210	109	1,490	162	2,040	162	148
13	1	2,160	76	3,280	74	2,210	110	3,030	110	17
	2	1,940	85	2,950	82	1,990	122	2,720	122	36
	3	1,760	94	2,670	91	1,800	135	2,470	135	57
	4	1,610	103	2,450	99	1,650	147	2,260	147	80
	5*	1,490	111	2,260	108	1,520	160	2,080	160	105

HIGH SPEED REVERSE PERFORMANCE

69.19:1 RATIO (HOISTING)

23.06:1 RATIO (LOWERING)

MOTOR CODE: DISPLACEMENT: PRESSURE: FLOW:	029 48 cm ³ 114 bar 182 l/min	} OR {	020 32 cm ³ 172 bar 125 l/min	HIGH SPEED REVERSE LOWERS THREE TIMES FASTER THAN HOIST SPEED WITH MAXIMUM LOAD NOTE: The BG8A High Speed Reverse Unit is capable of lowering a maximum rated load at maximum line speed on an intermittent basis only. For continuous maximum line speed lowering, the line pull should be no more than 50% of the load shown in the chart below. For applications exceeding these limits, consult factory.		
DRUM SPEED:	50 RPM HOISTING 150 RPM LOWERING					
ROPE SIZE (MM)	LAYER	LINE PULL (KG)	LINE SPEED (MPM)		ROPE CAPACITY (M)	
			HOISTING	LOWERING		
11	1	3,400	36	107	20	
	2	3,100	39	117	42	
	3	2,840	43	128	66	
	4	2,630	46	138	92	
	5	2,450	50	149	119	
	6*	2,290	53	159	148	
13	1	3,400	36	108	17	
	2	3,060	40	120	36	
	3	2,790	44	132	57	
	4	2,550	48	144	80	
	5*	2,350	52	155	105	

*This layer does not comply with ANSI Spec. 5-132a2c for 1/2" exposed flange.

NOTE: FOR WINCH PERFORMANCE AT PRESSURES AND FLOWS LESS THAN MAXIMUM SHOWN, CONSULT GRAPHS ON PAGE 4.

