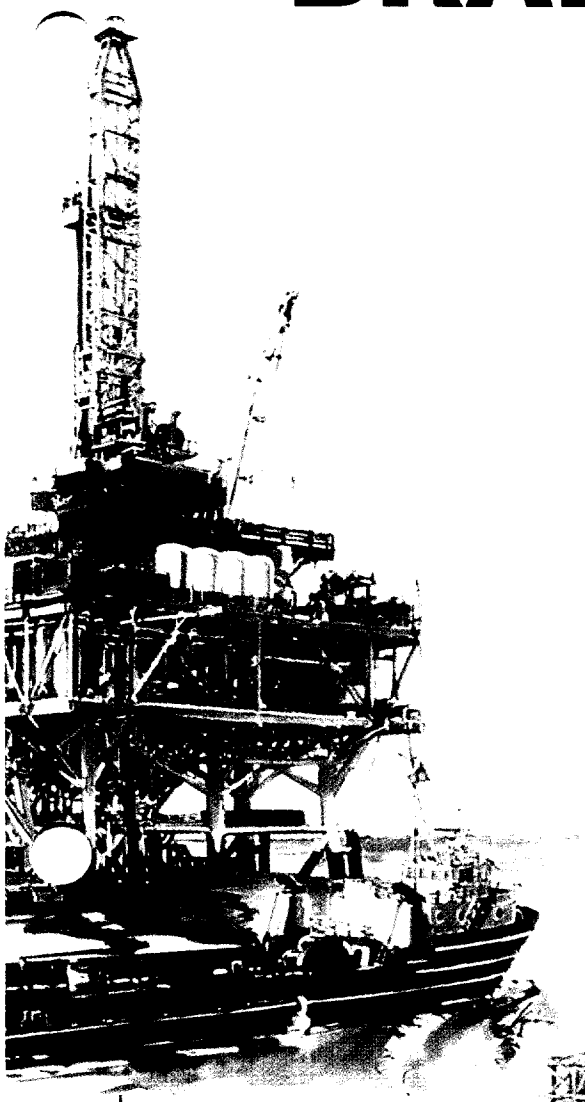
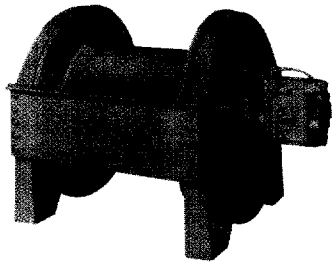
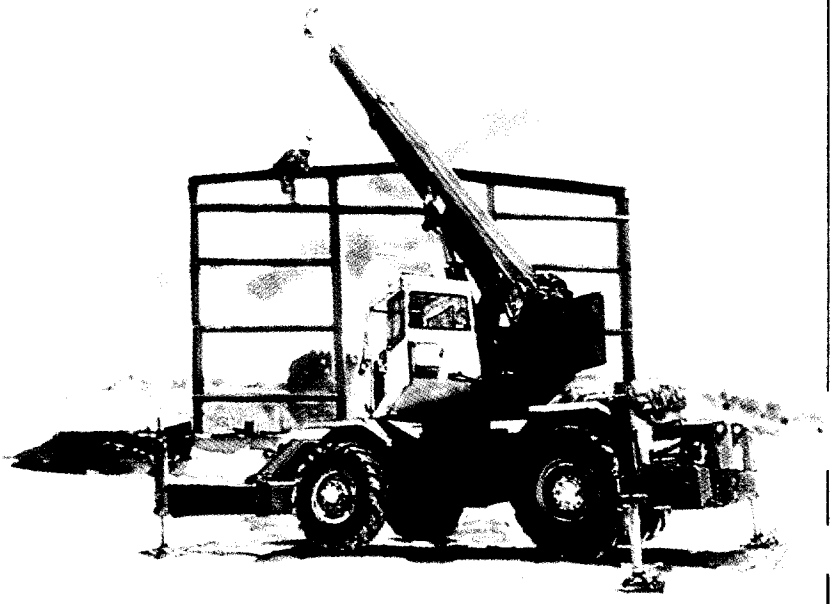
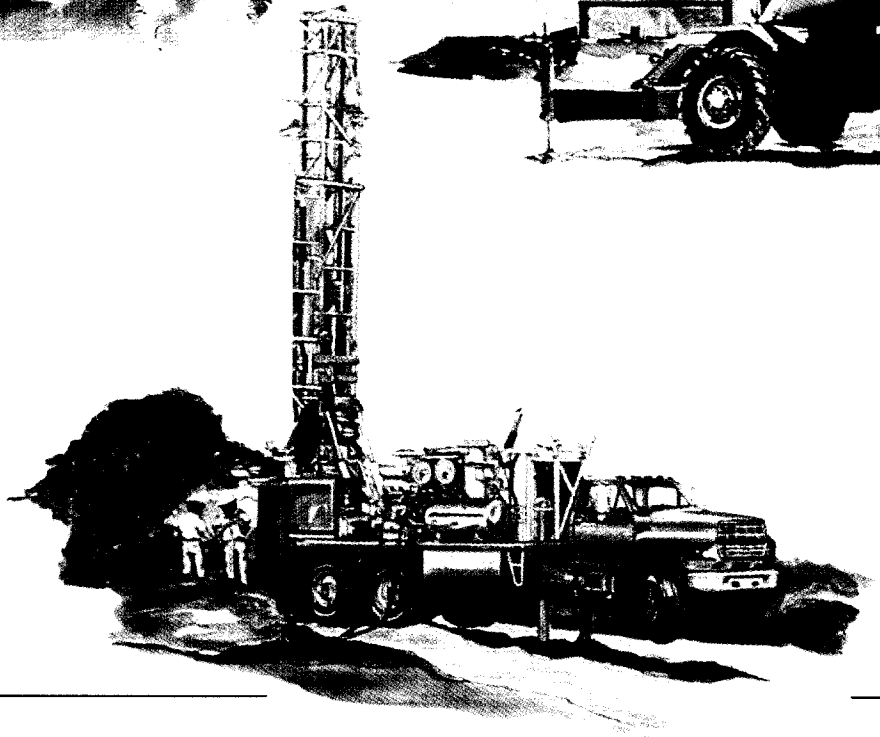
BRADEN WINCH

2ND GENERATION
"CH" SERIES
PLANETARY HOISTS





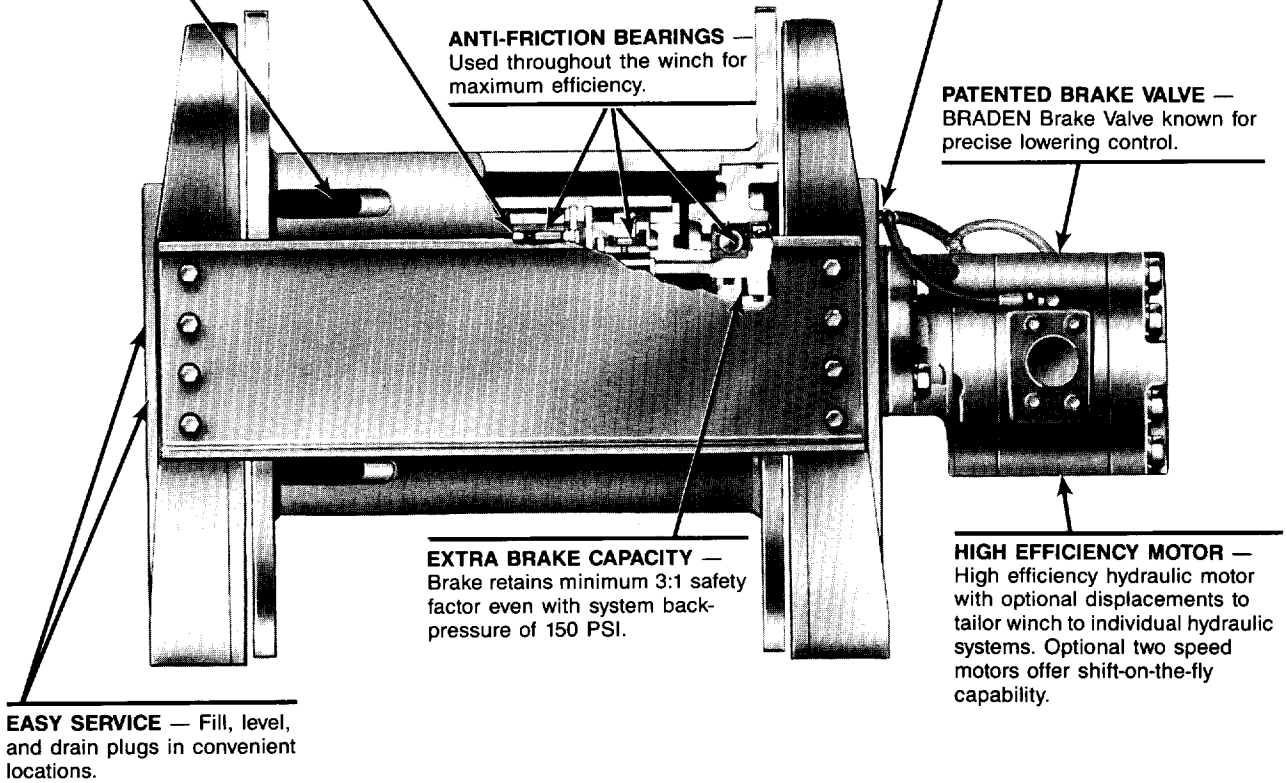




2ND GENERATION CH SERIES FEATURES

The 2nd Generation CH Series planetary winch family is designed to provide excellent performance and long service life. These winches are powered by high efficiency gear motors designed specifically for winch applications that demand smooth operation. The motor torque is multiplied by the highly efficient computer-aided designed gear train and transmitted to the winch drum. All rotating components are supported by anti-friction bearings and run in oil to minimize any frictional losses. Load control when lowering is maintained by the patented Braden Brake Valve known for its smooth performance. The Braden Brake Valve not only provides smooth load control but also adapts well to most hydraulic systems. The Braden Brake Valve is backed up by an internal automatic multi-disc spring applied hydraulic released safety brake. An over-running clutch permits free rotation through the brake in the hoisting direction but immediately locks up when the hoisting operation is complete. The load is held firm, even if the engine dies or a hydraulic line breaks.

Since 1924 Braden's on-going product development programs have led the industry with innovative, quality products serving a wide range of markets. Braden supports their products with a comprehensive warranty.



**Consult Installation, Maintenance and Service Manual for proper installation.*

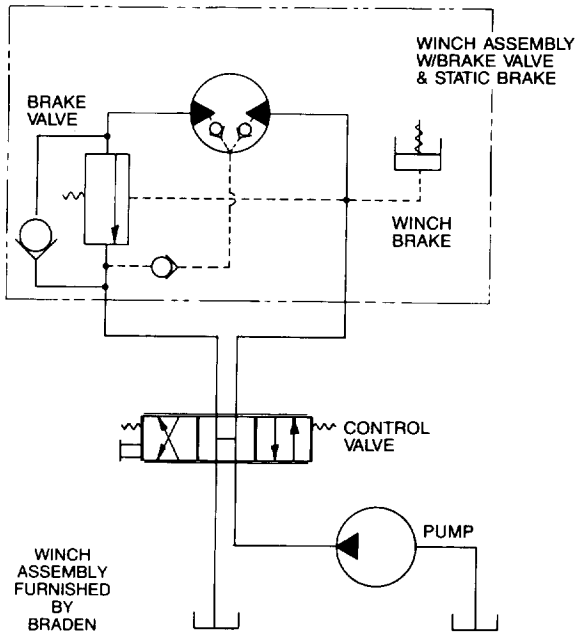
EXPLANATION OF MODEL NUMBER

CH	150	A	-	23	090	-	01
CONSTRUCTION HOIST	MAX RATING	DESIGN MODEL		GEAR RATIO	MOTOR SIZE		DRUM SIZE

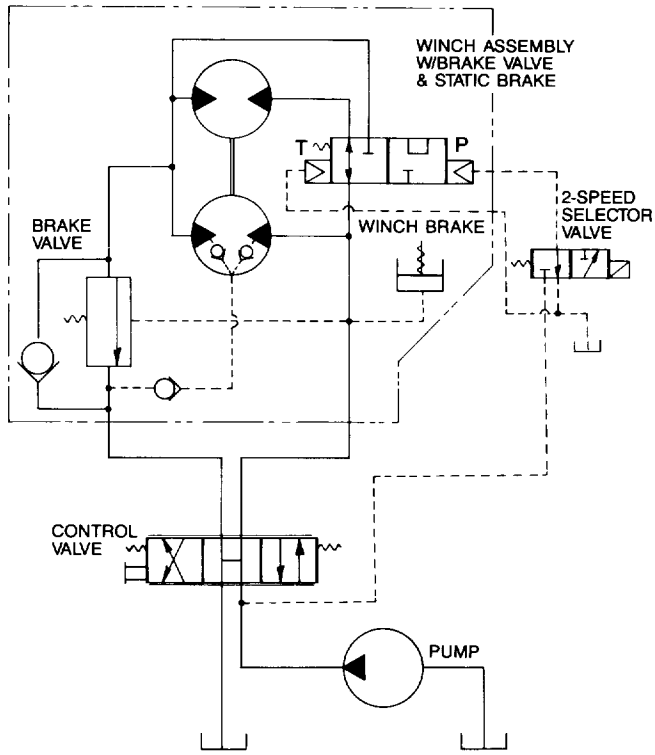
CH DESIGNATES CONSTRUCTION HOIST (C2H DESIGNATES TWO SPEED).
150 DESIGNATES 15,000 LB FIRST LAYER LINE PULL
A DESIGNATES THE MODEL SERIES RELATING TO DESIGN CHANGES
23 DESIGNATES TOTAL GEAR REDUCTION
090 DESIGNATES HYDRAULIC MOTOR DISPLACEMENT IN CU IN/REV (DECIMAL POINT ELIMINATED. EXAMPLE 090 = 9.0 CU IN/REV)
01 DESIGNATES THE DRUM OPTION

HYDRAULIC CIRCUITS

SINGLE SPEED CIRCUIT



2 SPEED CIRCUIT



PERFORMANCE DATA

CH150A

SINGLE SPEED 23:1 RATIO WEIGHT 01 DRUM 930 LBS.

ROPE SIZE (IN.)	LAYER	090 MOTOR 9.02 CU. IN. DISP. 3000 PSI @ 125 GPM		110 MOTOR 11.03 CU. IN. DISP. 3000 PSI @ 155 GPM		120 MOTOR 12.03 CU. IN. DISP. 2850 PSI @ 170 GPM		ROPE CAPACITY (FEET)
		LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	
9/16	1	11,405	437	14,340	443	15,000	446	105
	2	10,515	474	13,225	481	13,830	483	220
	3	9,755	511	12,270	518	12,830	521	343
	4	9,100	548	11,440	556	11,965	559	475
	5	8,525	585	10,720	593	11,210	596	616
	6	8,015	622	10,080	630	10,545	634	765
	7	7,570	659	9,520	668	9,955	672	924
	8*	7,165	696	9,010	705	9,425	709	1,092
5/8	1	11,350	439	14,275	445	15,000	448	95
	2	10,380	480	13,055	487	13,715	490	199
	3	9,565	521	12,030	529	12,640	531	312
	4	8,865	562	11,150	570	11,715	573	434
	5	8,260	603	10,390	612	10,920	615	565
	6	7,735	644	9,730	653	10,220	657	705
	7	7,270	685	9,150	695	9,610	699	853
	8*	6,860	726	8,630	737	9,070	741	1,011
3/4	1	11,245	443	14,145	449	15,000	452	80
	2	10,120	492	12,730	499	13,500	502	169
	3	9,200	542	11,570	549	12,270	553	267
	4	8,435	591	10,610	599	11,250	603	374
	5	7,785	640	9,790	649	10,385	653	490
	6	7,230	689	9,090	699	9,640	703	614

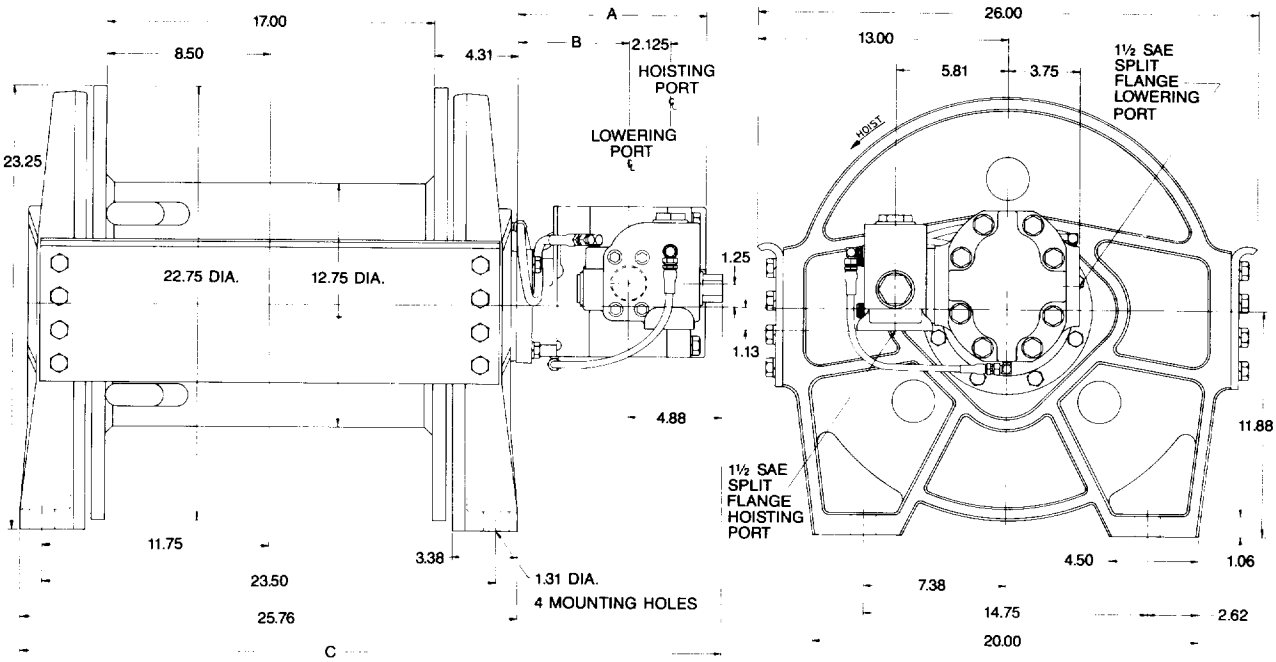
C2H150A

127 2-SPEED MOTOR 23:1 RATIO 2750 PSI @ 85 GPM WEIGHT 01 DRUM 940 LBS.

ROPE SIZE (IN.)	LAYER	LOW SPEED 12.74 CU. IN. DISP.		HIGH SPEED 6.37 CU. IN. DISP.		ROPE CAPACITY (FEET)
		LINE PULL (LBS.	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	
9/16	1	15,000	210	6,170	420	105
	2	13,830	227	5,690	455	220
	3	12,830	245	5,280	491	343
	4	11,960	263	4,920	527	475
	5	11,210	281	4,610	562	616
	6	10,540	299	4,340	598	765
	7	9,950	316	4,090	633	924
	8*	9,420	334	3,880	669	1,092
5/8	1	15,000	211	6,130	422	95
	2	13,720	230	5,610	461	199
	3	12,640	250	5,160	501	312
	4	11,720	270	4,790	540	433
	5	10,920	290	4,460	580	565
	6	10,220	309	4,180	619	705
	7	9,610	329	3,930	659	853
	8*	9,070	349	3,710	698	1,011
3/4	1	15,000	213	6,080	426	80
	2	13,500	236	5,470	473	169
	3	12,270	260	4,970	521	267
	4	11,250	284	4,560	568	374
	5	10,380	307	4,210	615	490
	6	9,640	331	3,910	663	614

*This layer does not comply with ANSI standard B-30.5 for ½" exposed flange.

DIMENSIONAL DATA



VARIABLES

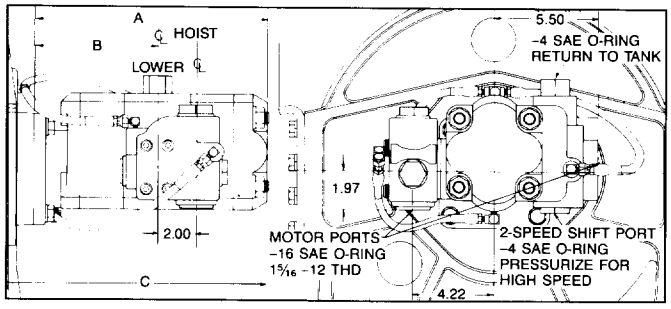
DIMENSION ▶		A	B	C
MOTOR	090	9.00	5.38	35.95
	110	9.50	5.63	36.20
	120	9.75	5.75	36.32
(2-SPD) ▶	127	15.00	8.56	40.69

MINIMUM GPM RECOMMENDATION FOR SMOOTH OPERATION*

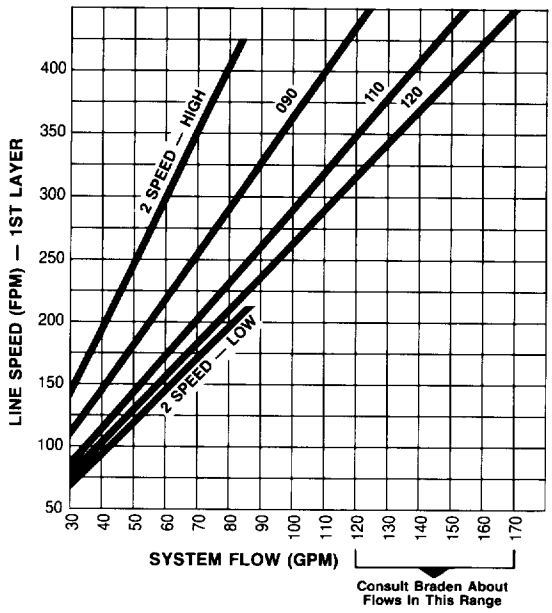
MOTOR 120 — 28 GPM
MOTOR 110 — 27 GPM
MOTOR 090 — 24 GPM
MOTOR 127 — 24 GPM

*RECOMMENDED MINIMUM *SYSTEM* FLOW SHOULD BE 2X THESE VALUES.

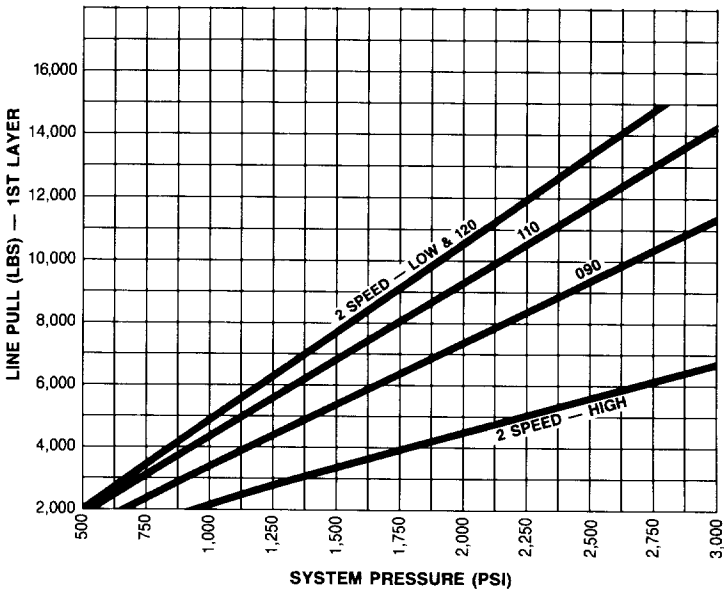
2-SPEED MOTOR



LINE SPEED VS. GPM



LINE PULL VS. PSI



CH150A

PERFORMANCE DATA

CH175A

SINGLE SPEED 23:1 RATIO WEIGHT 01 DRUM 710 LBS.

ROPE SIZE (IN.)	LAYER	090 MOTOR 9.02 CU. IN. DISP. 3000 PSI @ 125 GPM		110 MOTOR 11.03 CU. IN. DISP. 3000 PSI @ 155 GPM		120 MOTOR 12.03 CU. IN. DISP. 2850 PSI @ 170 GPM		ROPE CAPACITY (FEET)
		LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	
9/16	1	13,420	371	16,880	377	17,500	378	84
	2	12,210	408	15,350	414	15,915	416	177
	3	11,195	445	14,080	452	14,595	454	278
	4	10,340	482	13,000	489	13,480	492	387
	5	9,600	519	12,075	527	12,520	529	505
	6	8,965	556	11,270	564	11,690	567	631
	7*	8,405	593	10,570	601	10,960	605	765
5/8	1	13,345	373	16,785	379	17,500	381	76
	2	12,025	414	15,125	420	15,765	423	161
	3	10,940	456	13,760	462	14,345	465	254
	4	10,035	497	12,625	504	13,160	506	355
	5	9,270	538	11,660	545	12,155	548	465
	6	8,615	579	10,835	587	11,295	590	583
3/4	1	13,200	378	16,600	383	17,500	385	64
	2	11,680	427	14,690	433	15,480	435	137
	3	10,470	476	13,170	483	13,880	485	218
	4	9,490	525	11,935	533	12,580	536	307
	5	8,675	575	10,910	583	11,500	586	405

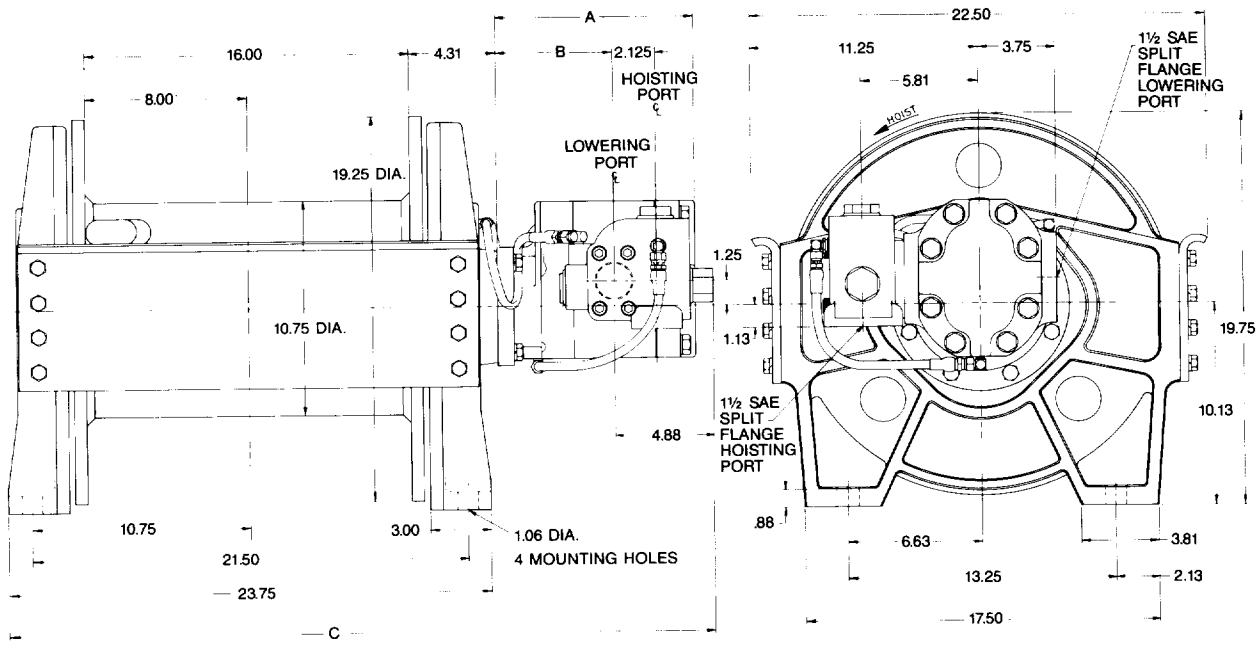
C2H175A

127 2-SPEED MOTOR 23:1 RATIO 2720 PSI @ 85 GPM WEIGHT 01 DRUM 720 LBS.

ROPE SIZE IN.	LAYER	LOW SPEED 12.74 CU. IN. DISP.		HIGH SPEED 6.37 CU. IN. DISP.		ROPE CAPACITY (FEET)
		LINE PULL (LBS.	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	
9/16	1	17,500	178	7,150	357	84
	2	15,920	196	6,500	392	177
	3	14,590	214	5,960	428	278
	4	13,480	231	5,510	463	387
	5	12,520	249	5,120	499	505
	6	11,680	267	4,780	535	631
	7*	10,960	285	4,480	570	765
5/8	1	17,500	179	7,110	359	76
	2	15,770	199	6,410	398	161
	3	14,350	219	5,830	438	254
	4	13,160	238	5,350	477	355
	5	12,160	258	4,940	517	465
	6	11,290	278	4,590	556	583
3/4	1	17,500	181	7,030	363	64
	2	15,480	205	6,220	410	137
	3	13,880	228	5,580	457	218
	4	12,580	252	5,050	505	307
	5	11,500	276	4,620	552	405

*This layer does not comply with ANSI standard B-30.5 for ½" exposed flange.

DIMENSIONAL DATA



VARIABLES

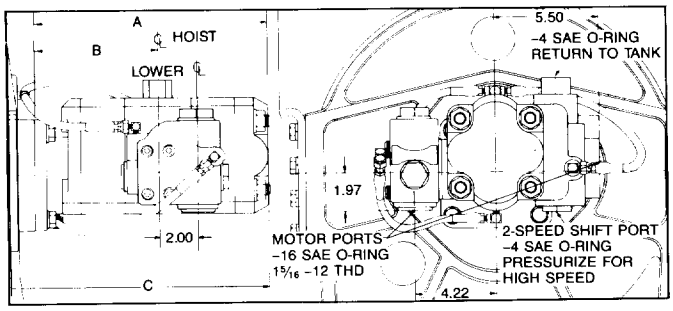
DIMENSION ▶		A	B	C
MOTOR	090	9.00	5.38	34.45
	110	9.50	5.63	34.70
	120	9.75	5.75	34.82
(2-SPD) ▶	127	15.00	8.56	39.19

MINIMUM GPM RECOMMENDATION FOR SMOOTH OPERATION*

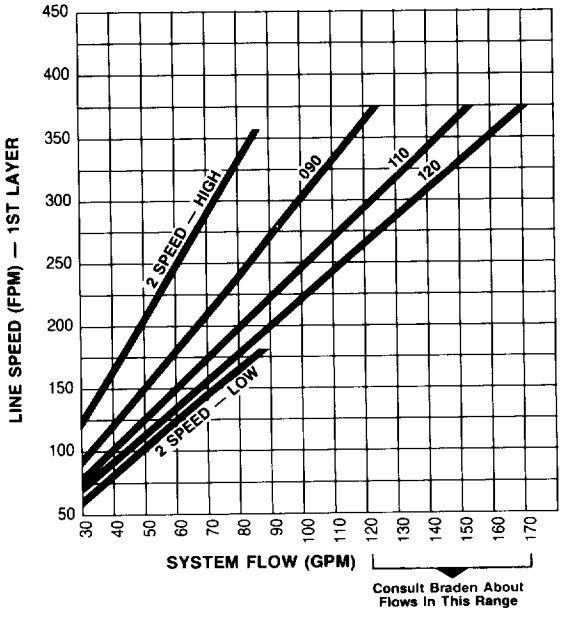
MOTOR 120 — 28 GPM
MOTOR 110 — 27 GPM
MOTOR 090 — 24 GPM
MOTOR 127 — 24 GPM

*RECOMMENDED MINIMUM *SYSTEM* FLOW SHOULD BE 2X THESE VALUES.

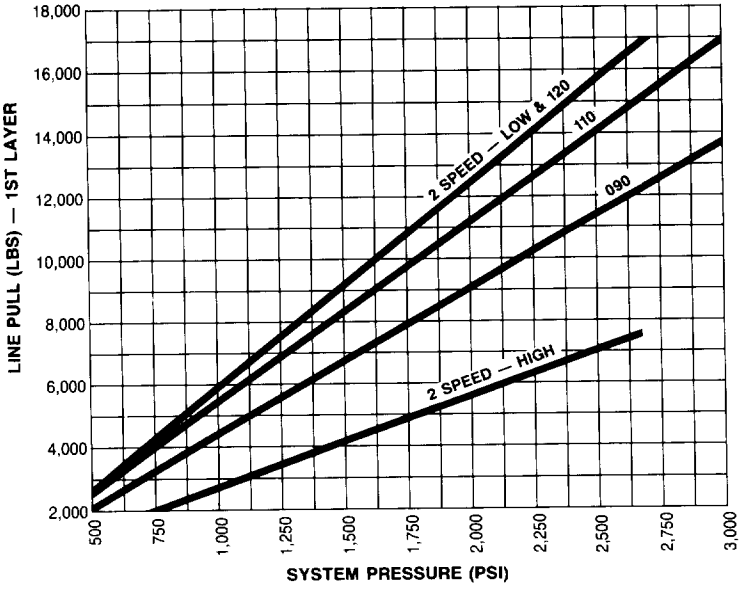
2-SPEED MOTOR



LINE SPEED VS. GPM



LINE PULL VS. PSI



CH175A

PERFORMANCE DATA

CH185A

SINGLE SPEED 36:1 RATIO WEIGHT 01 DRUM 1,225 LBS.; 02 DRUM 1,350 LBS.

ROPE SIZE (IN.)	LAYER	090 MOTOR 9.02 CU. IN. DISP. 3000 PSI @ 125 GPM		110 MOTOR 11.03 CU. IN. DISP. 3000 PSI @ 155 GPM		120 MOTOR 12.03 CU. IN. DISP. 2900 PSI @ 170 GPM		ROPE CAPACITY (FEET)	
		LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	01 DRUM	02 DRUM
5/8	1	14,000	356	17,605	361	18,500	363	139	222
	2	13,020	383	16,375	388	17,205	390	289	461
	3	12,170	410	15,305	415	16,080	418	449	717
	4	11,420	436	14,365	443	15,095	445	620	990
	5	10,760	463	13,535	470	14,220	472	801	1,279
	6	10,175	490	12,795	497	13,445	500	992	1,585
	7	9,645	517	12,130	524	12,750	527	1,195	1,908
	8	9,170	543	11,535	551	12,120	554	1,407	2,248
	9*	8,740	570	10,995	578	11,550	580	1,630	2,604
3/4	1	13,890	359	17,470	363	18,500	366	117	187
	2	12,750	391	16,040	396	16,980	399	244	389
	3	11,780	423	14,820	428	15,690	431	382	610
	4	10,950	455	13,770	461	14,580	464	530	847
	5	10,230	487	12,870	494	13,620	497	689	1,101
	6	9,600	519	12,070	526	12,780	530	858	1,371
	7	9,040	552	11,370	559	12,035	562	1,038	1,658
7/8	1	13,790	361	17,340	366	18,500	369	101	161
	2	12,500	399	15,710	404	16,760	407	212	339
	3	11,420	436	14,370	443	15,320	445	334	534
	4	10,520	474	13,230	481	14,110	483	467	745
	5	9,750	511	12,260	519	13,075	521	609	973
	6	9,080	549	11,420	557	12,180	560	763	1,218

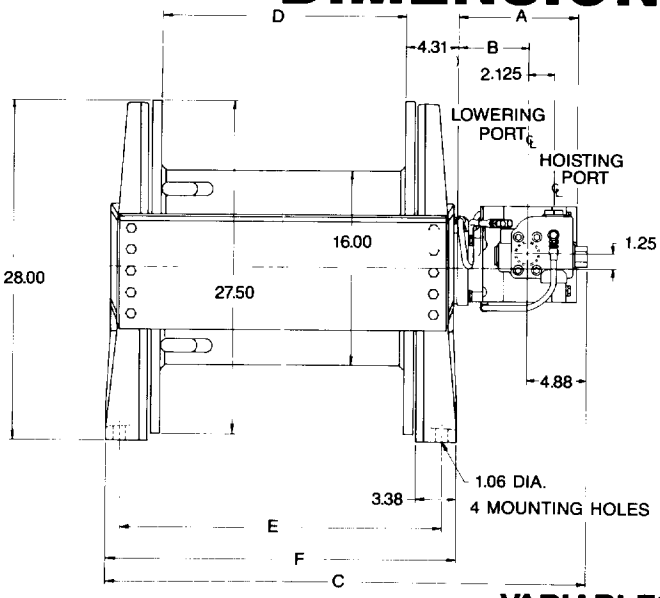
C2H185A

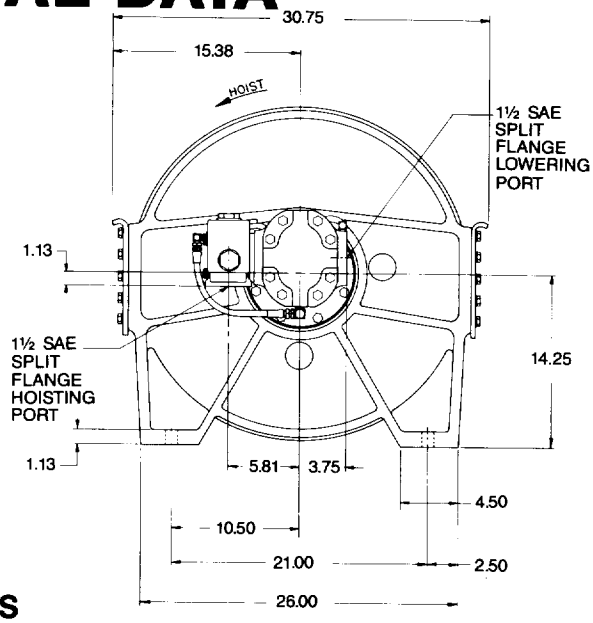
127 2-SPEED MOTOR 36:1 RATIO 2700 PSI @ 85 GPM WEIGHT 01 DRUM 1,215 LBS. 02 DRUM 1,360 LBS.

ROPE SIZE (IN.)	LAYER	LOW SPEED 12.74 CU. IN. DISP.		HIGH SPEED 6.37 CU. IN. DISP.		ROPE CAPACITY (FEET)	
		LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	01 DRUM	02 DRUM
5/8	1	18,500	167	7,400	335	139	222
	2	17,210	180	6,880	360	289	461
	3	16,080	192	6,430	385	449	717
	4	15,100	205	6,040	411	620	990
	5	14,220	218	5,690	436	801	1,279
	6	13,450	230	5,380	461	992	1,585
	7	12,750	243	5,100	486	1,195	1,908
	8	12,120	255	4,850	511	1,407	2,248
	9*	11,550	268	4,620	537	1,630	2,604
3/4	1	18,500	168	7,330	337	117	187
	2	16,980	184	6,730	368	244	389
	3	15,690	199	6,220	398	382	610
	4	14,580	214	5,780	428	530	847
	5	13,620	229	5,400	458	689	1,101
	6	12,780	244	5,060	489	858	1,371
	7	12,030	259	4,770	519	1,038	1,658
7/8	1	18,500	170	7,270	340	101	161
	2	16,760	187	6,590	375	212	339
	3	15,320	205	6,020	411	334	534
	4	14,110	223	5,540	446	467	745
	5	13,080	240	5,140	481	609	973
	6	12,180	258	4,790	518	763	1,218

*This layer does not comply with ANSI standard B-30.5 for ½" exposed flange.

DIMENSIONAL DATA





VARIABLES

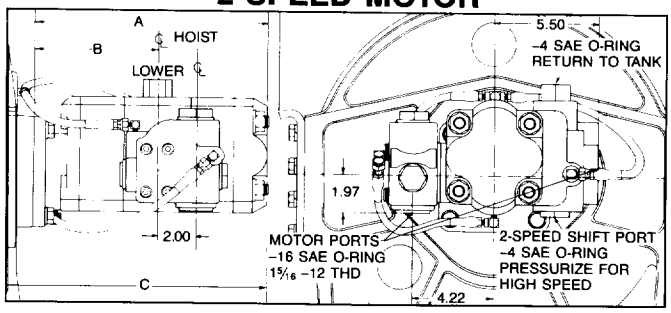
DIMENSION		A		B		C		D		E		F	
DRUM ▶		01	02	01	02	01	02	01	02	01	02	01	02
MOTOR	090	9.00		5.38		38.95	50.95	20.00	32.00	26.37	38.37	28.77	40.77
	110	9.50		5.63		39.20	51.20						
	120	9.75		5.75		39.32	51.32						
(2-SPD) ▶	127	15.00		8.56		43.69	55.69						

MINIMUM GPM RECOMMENDATION FOR SMOOTH OPERATION*

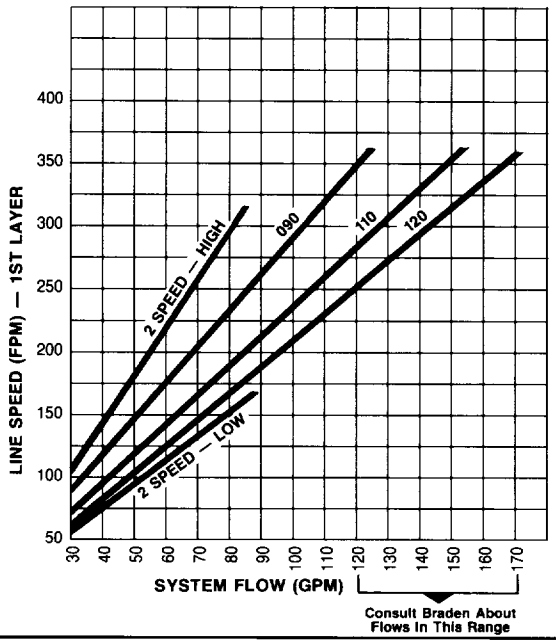
MOTOR 120 — 28 GPM
MOTOR 110 — 27 GPM
MOTOR 090 — 24 GPM
MOTOR 127 — 24 GPM

*RECOMMENDED MINIMUM *SYSTEM* FLOW SHOULD BE 2X THESE VALUES.

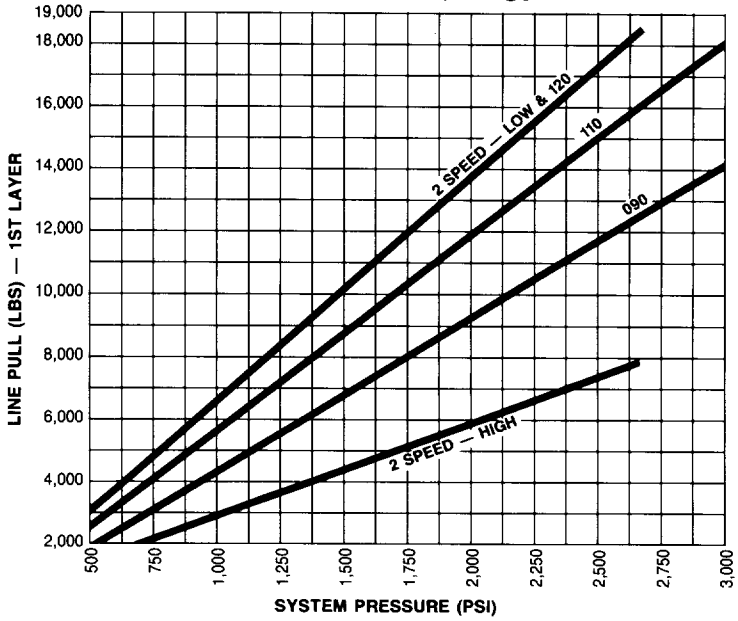
2-SPEED MOTOR



LINE SPEED VS. GPM



LINE PULL VS. PSI



CH185A

PERFORMANCE DATA

CH230A

SINGLE SPEED 36:1 RATIO WEIGHT 01 DRUM 955 LBS.

ROPE SIZE (IN.)	LAYER	090 MOTOR 9.02 CU. IN. DISP. 3000 PSI @ 125 GPM		110 MOTOR 11.03 CU. IN. DISP. 3000 PSI @ 155 GPM		120 MOTOR 12.03 CU. IN. DISP. 2900 PSI @ 170 GPM		ROPE CAPACITY (FEET)
		LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	
5/8	1	17,400	286	21,885	290	23,000	292	95
	2	15,916	313	20,015	318	21,035	319	199
	3	14,660	340	18,435	345	19,380	347	312
	4	13,590	367	17,090	372	17,965	374	434
	5	12,665	394	15,930	399	16,740	401	565
	6	11,860	420	14,915	426	15,675	429	705
	7	11,150	447	14,020	453	14,735	456	853
	8*	10,520	474	13,230	481	13,905	483	1,011
3/4	1	17,240	289	21,680	293	23,000	295	80
	2	15,515	321	19,510	326	20,700	328	169
	3	14,105	353	17,740	358	18,820	360	267
	4	12,930	386	16,260	391	17,250	393	374
	5	11,935	418	15,010	424	15,925	426	490
	6	11,080	450	13,940	456	14,785	459	614
7/8	1	17,080	292	21,480	296	23,000	298	69
	2	15,135	329	19,035	334	20,380	336	148
	3	13,590	367	17,090	372	18,300	374	235
	4	12,330	404	15,505	410	16,600	412	331
	5	11,285	442	14,190	448	15,195	450	436

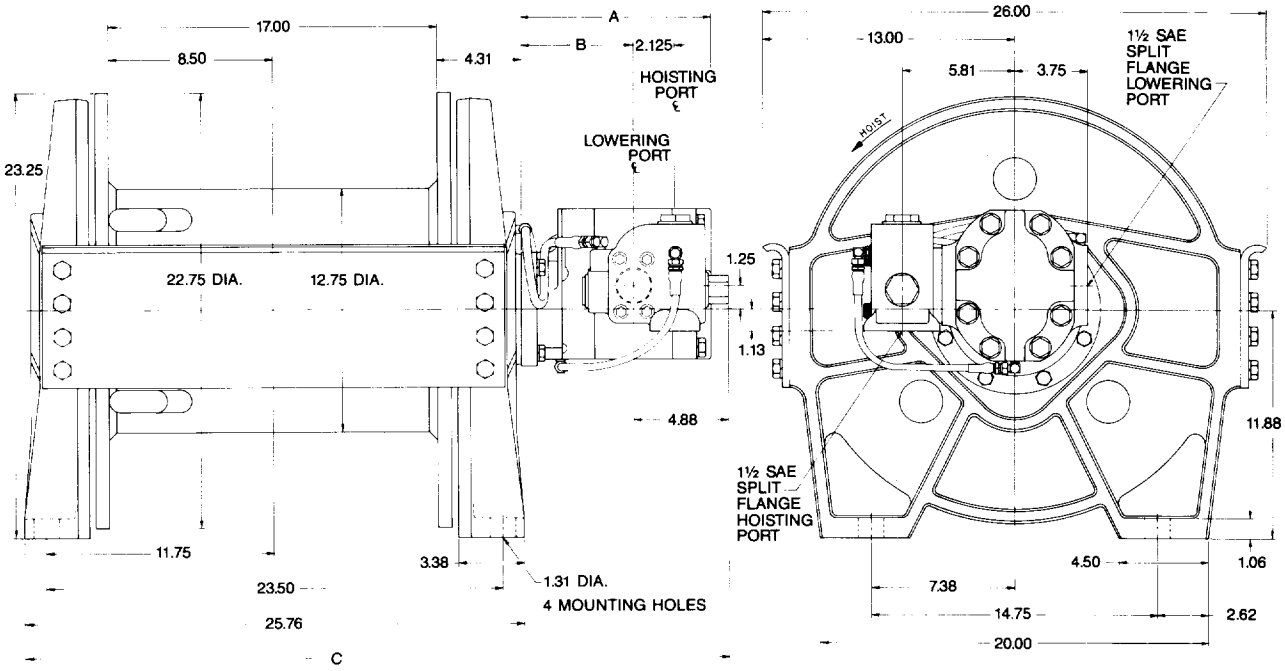
C2H230A

127 2-SPEED MOTOR 36:1 RATIO 2710 PSI @ 85 GPM WEIGHT 01 DRUM 960 LBS.

ROPE SIZE (IN.)	LAYER	LOW SPEED 12.74 CU. IN. DISP.		HIGH SPEED 6.37 CU. IN. DISP.		ROPE CAPACITY (FEET)
		LINE PULL (LBS.	LINE SPEED (FPM)	LINE PULL (LBS.)	LINE SPEED (FPM)	
5/8	1	23,000	134	9,220	269	95
	2	21,030	147	8,430	295	199
	3	19,380	160	7,770	320	312
	4	17,960	172	7,200	345	434
	5	16,740	185	6,710	370	565
	6	15,680	197	6,280	395	705
	7	14,740	210	5,910	421	853
	8*	13,900	223	5,570	446	1,011
3/4	1	23,000	136	9,130	272	80
	2	20,700	151	8,220	302	169
	3	18,820	166	7,470	332	267
	4	17,250	181	6,850	363	374
	5	15,920	196	6,320	393	490
	6	14,790	211	5,870	423	614
7/8	1	23,000	137	9,050	274	69
	2	20,380	155	8,020	310	148
	3	18,300	172	7,200	345	235
	4	16,600	190	6,530	380	331
	5	15,190	208	5,980	416	436

*This layer does not comply with ANSI standard B-30.5 for ½" exposed flange.

DIMENSIONAL DATA



VARIABLES

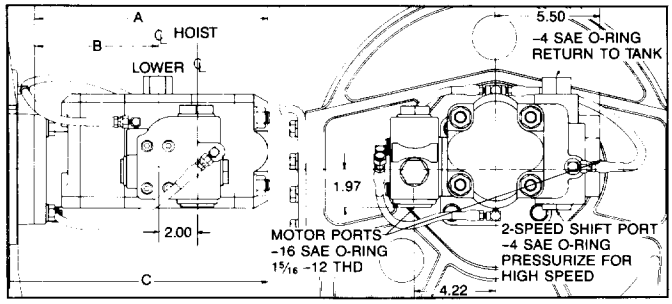
DIMENSION ▶		A	B	C
MOTOR	090	9.00	5.38	35.95
	110	9.50	5.63	36.20
	120	9.75	5.75	36.32
(2-SPD) ▶	127	15.00	8.56	40.69

MINIMUM GPM RECOMMENDATION FOR SMOOTH OPERATION*

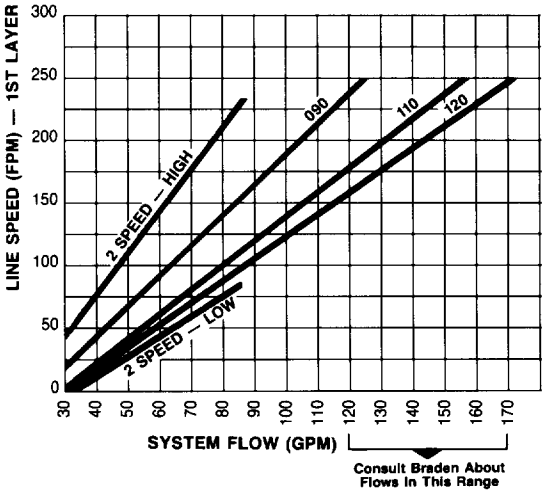
MOTOR 120 — 28 GPM
MOTOR 110 — 27 GPM
MOTOR 090 — 24 GPM
MOTOR 127 — 24 GPM

*RECOMMENDED MINIMUM *SYSTEM* FLOW SHOULD BE 2X THESE VALUES.

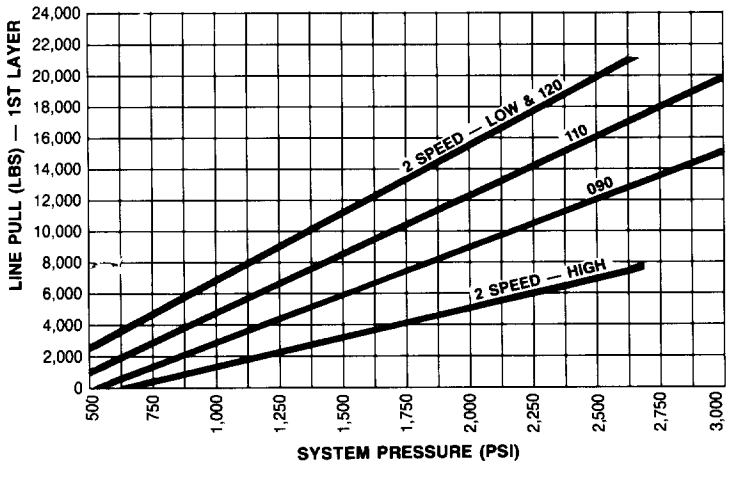
2-SPEED MOTOR



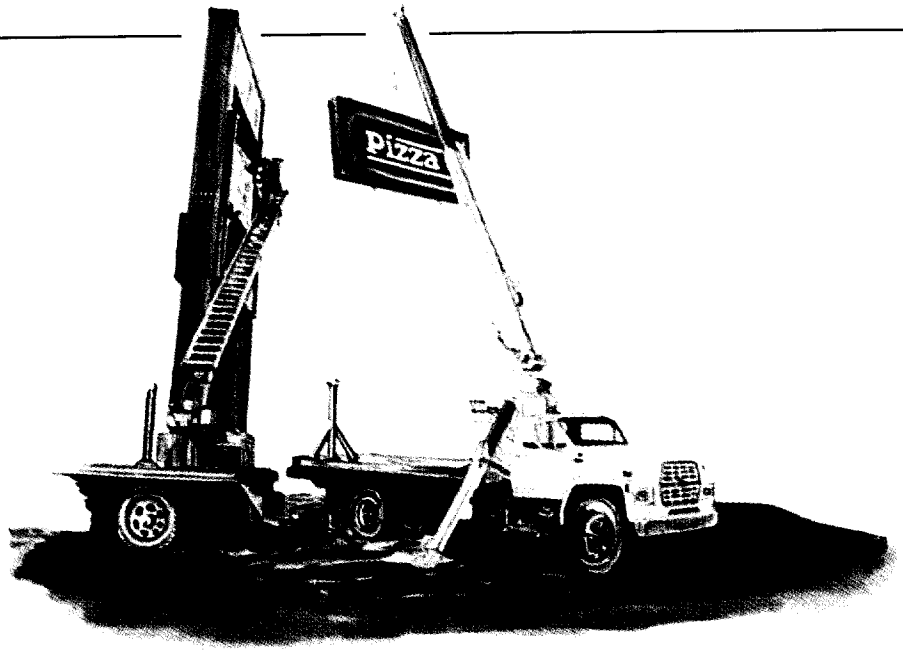
LINE SPEED VS. GPM

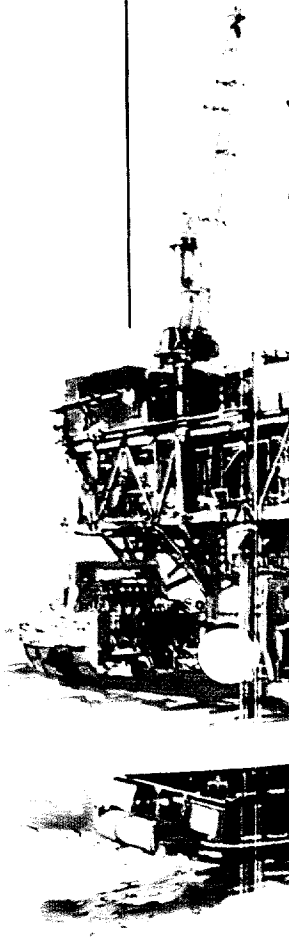


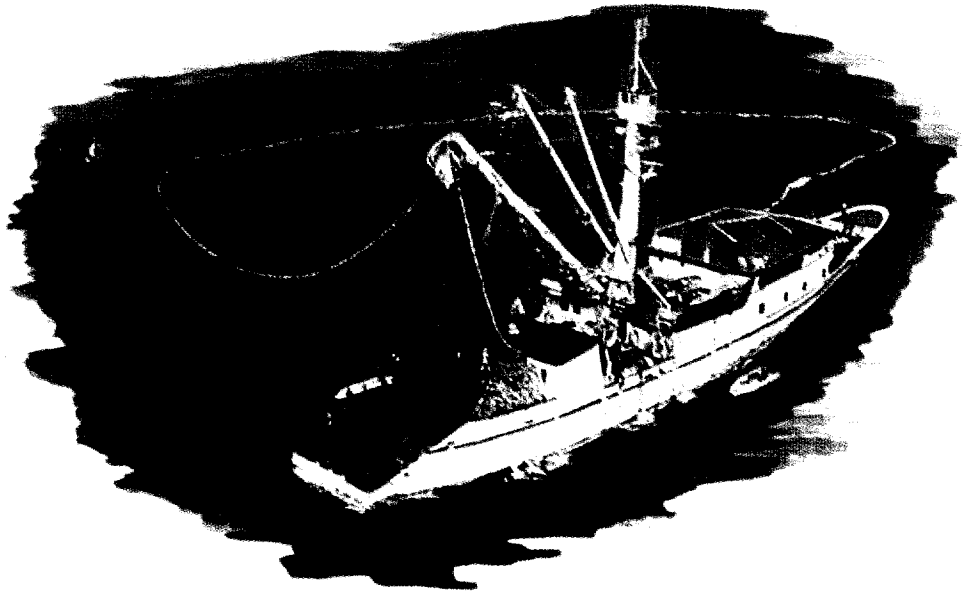
LINE PULL VS. PSI



CH230A







PACCAR WINCH DIVISIONS

P.O. BOX 547 • BROKEN ARROW, OK 74013
PHONE: (918) 251-8511 • FAX: (918) 259-1575

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