## **RATING CHART APS "SILENCER SERIES" BOOSTER PUMP**

RATED FROM 250 GPM @ 150 PSI TO 500 GPM @ 150 PSI SINGLE STAGE PUMP- 7-1/2" (19,05 CM) IMPELLER

MAXIMUM ELEVATION AT WHICH THE PUMP WILL PERFORM THE RATING WITH STANDARD TEST CONDITIONS OF 10 FT LIFT. 20 FT. OF SUCTION HOSE & STRAINER. STANDARD TEST CONDITIONS AND MAXIMUM ELEVATION DO NOT INCLUDE TRUCK PIPING LOSSES.

APS25 3 IN. HOSE, 9600 FEET (2930 M) APS45 4-1/2 IN. HOSE, 5400 FEET (1650 M) APS30 3 IN. HOSE, 5400 FEET (1650 M) APS50 4 IN. HOSE, 2000 FEET (600 M) 4 IN. HOSE, 9900 FEET (3020 M) APS35 APS50 4-1/2 IN HOSE, 3150 FEET (960 M) APS45 4 IN. HOSE, 4400 FEET (1340 M)

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RATED CAPACITY (US GPM)	CAPACITY (US GPM)	PRESSURE (PSIG) **	HORSEPOWER REQUIRED	3.74	TORQUE (LBS-FT)	2.91	TORQUE (LBS-FT)	2.60	TORQUE (LBS-FT)	2.33	TORQUE (LBS-FT)	1.64	TORQUE (LBS-FT)				HALE PRODUCIS, INC.	Conshohocken, PA 19428 USA	SCALE
	PUMP MODEL			APS25-37		APS25-29		APS25-26		APS25-23		APS25-16				1 }	۲ ۲	7 ₹	SIZE
250	250	150	44	1230	188	1590	145	1770	131	1980	117	2810	82			13	2 5	ğ F	
	250	165	48	1290	195	1660	152	1860	136	2070	122	2940	86			] [	<u>7</u> 4	DATE <b>10-08-04</b>	
	175	200	54	1410	201	1810	157	2030	140	2260	125	3220	88			] :	¥ :	_ 5	
	125	250	66	1580	219	2020	172	2260	153	2530	137	3590	97			▋ .	- <	ίğ	DRAWN ERB
	PUMP MODEL			APS	30-37	APS30-29		APS30-26		APS30-23		APS30-16						U	DRAWN
300	300	150	48	1250	202	1610	157	1800	140	2000	126	2850	88				(A)		D TO INERY
	300	165	53	1310	212	1680	166	1880	148	2100	133	2980	93			1			OR USE
	210	200	57	1420	211	1820	164	2040	147	2270	132	3220	93			1 ((			SIGHT 6 DUCED
	150	250	68	1590	225	2040	175	2280	157	2550	140	3610	99			I			COPYRIGHT © NOTTO BE REPRODUCED OR USED TO MAKE OTHER DRAWINGS OR MACHINERY
	PUMP MODEL		APS35-37		APS35-29		APS35-26		APS35-23		APS35-16							TTO BE	
350	350	150	52	1270	215	1630	168	1820	150	2030	135	2890	94						N 4M
	350	165	58	1350	226	1730	176	1940	157	2160	141	3070	99			APVD	MAL	MAL	
	245	200	60	1420	222	1830	172	2040	154	2280	138	3240	97			+	L.,		++
	175	250	70	1590	231	2040	180	2280	161	2550	144	3620	102			DATE	10/8/200	11/8/2006	
450		PUMP MODEL		APS45-37			45-29		40-26	· -	40-23	<del></del>	40-16			۵	10/	11/	++
	450	150	62	1320	247	1690	193	1890	172	2110	154	2990	109			₽	ERB	MJP	
	450	165	69	1360	266	1750	207	1960	185	2180	166	3100	117				ш	-	$\bot \bot$
	315	200	67	1430	246	1840	191	2060	171	2290	154	3260	108			-			
	225	250	76		1600 249		2050 195		2300 174		2560 156		3640 110			4			
500		PUMP MODEL		APS50-37		APS50-29		APS50-26		APS50-23		APS50-16				1		3	
	500	150	75	1400	281	1800	219	2020	195	2250	175	3200	123			-	NO	2.3	
	500	165	81	1460	291	1870	227	2090	204	2330	183	3310	129			1	OR DOCUMENTAION	0 TC	
	350	200	74	1500	259	1930	201	2150	181	2400	162	3410	114			Σ	ME)	TIO FROM 2.30 TO 2.33	
* ENGINE	250 E SDEE	250	79 T NOT	1630	255 MFR'S M	2090	199	2340	177	2610 BEED	159	3700	112			ANGED FROM	CO	RON	
_	_			_	WIFK S IV UDE LIFT	_			VINED 2	FEED.						MGED	R DC	IO F	
*** TUE DI	11.40.10	04040	0-			UDE DE		NOT OU	314/81 4/	OT	DT 4 14 1 4 D			10111 5 1	-	Æ	Ō	ĒΙ	1 1

THIS CHART IS TO BE USED TO SELECT THE PROPER PUMP GEARBOX RATIO. THE INPUT SPEED AND HORSEPOWER REQUIREMENTS SHOWN ARE NOMINAL ±5% FIGURES. WHEN USING THIS CHART, IT IS IMPORTANT TO OBTAIN THE NET HORSEPOWER OUTPUT OF THE ENGINE. THE ENGINE MANUFACTURER'S PUBLISHED CURVE MAY NOT REPRESENT A TRUE NET HORSEPOWER WHEN TOTALING ALL THE POWER DEDUCTIONS THAT MAY BE ENCOUNTERED FOR THE RATING. THE DEDUCTIONS COULD BE ENGINE AND VEHICLE ACCESSORIES, ELEVATION, TEMPERATURE, BAROMETER, ETC. CHECK WITH THE ENGINE MANUFACTURER FOR THEIR RECOMMENDATION AND APPROVAL OF THE NET HORSEPOWER CURVE.

THE PUMPING TORQUE REQUIREMENTS MIGHT EXCEED THE TRUCK'S TRANSMISSION CASE, POWER TAKE-OFF AND DRIVELINE COMPONENT LIMITS. CONTACT THE RESPECTIVE EQUIPMENT MANUFACTURER FOR THEIR APPROVAL OF THE PUMPING APPLICATION.

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ECO NO. 04-242 472

<sup>\*\*</sup> THE PUMP IS CAPABLE OF THE HIGH PRESSURE PERFORMANCE SHOWN. ACTUAL OBTAINABLE PRESSURE SHOULD BE CHECKED IN ADVANCE, AND IS GOVERNED BY THE ENGINE SPEED, AVAILABLE HORSEPOWER, AND PUMP RATIO.

## METRIC RATING CHART APS "SILENCER SERIES" BOOSTER PUMP

## RATED FROM 1000 LPM @ 1000 kPa TO 2000 LPM @ 1000 kPa SINGLE STAGE PUMP- 19,05 CM (7-1/2 IN) IMPELLER

MAXIMUM ELEVATION AT WHICH THE PUMP WILL PERFORM THE RATING WITH STANDARD TEST CONDITIONS OF 3 M LIFT, 6 M OF SUCTION HOSE & STRAINER. STANDARD TEST CONDITIONS AND MAXIMUM ELEVATION DO NOT INCLUDE TRUCK PIPING LOSSES.

 APS100M
 75 MM HOSE, 3000 METERS (9840 FT)
 APS170M

 APS110M
 75 MM HOSE, 1600 METERS (5250 FT)
 APS200M

 APS130M
 100 MM HOSE, 3000 METERS (9840 FT)
 APS200M

 APS170M
 100 MM HOSE, 1350 METERS (4430 FT)

110 MM HOSE, 1650 METERS (5410 FT) 100 MM HOSE, 600 METERS (2000 FT) 110 MM HOSE, 950 METERS (3120 FT)

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RATED CAPACITY (LPM)	CAPACITY (LPM)	PRESSURI (kPa) **	POWER (kW) REQUIRED	3.74	TORQUE (N-m)	2.91	TORQUE (N-m)	2.60	TORQUE (N-m)	2.33	TORQUE (N-m)	1.64	TORQUE (N-m)			HALE PRODUCTS, INC.	A Unit of IDEA Corporation Conshohocken, PA 19428 USA	SCALE
1000	PUMP MODEL			APS100M-37		APS100M-29		APS100M-26		APS100M-23		APS100M-16				J M × A		SIZE
	1000	1000	33	1230	256	1590	198	1770	178	1980	159	2810	112			<u> </u>	<u> </u>	40
	1000	1100	36	1290	267	1660	207	1860	185	2070	166	2940	117			Д 7	5 2	DATE 10-08-04
	700	1400	40	1410	271	1810	211	2030	188	2260	169	3220	119			₹	탏	
	500	1700	49	1580	296	2020	232	2260	207	2530	185	3590	130			⊥ <	۲ ä	DRAWN ERB
	PUMP MODEL			APS110M-37		APS110M-29		APS110M-26		APS110M-23		APS110M-16				41	ш 🦳	DIRAWN
	1100	1000	36	1250	275	1610	214	1800	191	2000	172	2850	121			4	ш	O TO
1100	1100	1100	40	1310	292	1680	227	1880	203	2100	182	2980	128			/		OR USED
	770	1400	43	1420	289	1820	226	2040	201	2270	181	3220	128		(		1 ]]	BUCED O
	550	1700	51	1590	306	2040	239	2280	214	2550	191	3610	135			1		COPYF REPRO
	PUMP MODEL			APS13	30M-37	APS130M-29		APS130M-26		APS130M-23		APS130M-16				-		COPYRIGHT ® NOT TO BE REPRODUCED OR USED TO MAKE OTHER DR WINGS OR MACHINERY
1300	1300	1000	39	1270	293	1630	228	1820	205	2030	183	2890	129					NAM
	1300	1100	43	1350	304	1730	237	1940	212	2160	190	3070	134		APVD	MAL	MAL	
	910	1400	45	1420	303	1830	235	2040	211	2280	188	3240	133		Ą			
	650 1700 52				2040 243		2280 218		2550 195		3620 137			DATE	10/8/2004	11/8/2000		
	PUMP MODEL		APS1	70M-37	APS1	70M-29	APS1	70M-26	APS1	70M-23	APS1	70M-16		۵	10/8	11/8		
	1700	1000	46	1320	333	1690	260	1890	232	2110	208	2990	147		₩	ERB	MJP	
1700	1700	1100	51	1360	358	1750	278	1960	248	2180	223	3100	157			ш	2	$\perp \perp$
	1190	1400	50	1430	334	1840	260	2060	232	2290	209	3260	146					
	850	1700	57	1600	340	2050	266	2300	237	2560	213	3640	150					
	PUMP MODEL				00M-37		00M-29		00M-26		00M-23		00M-16					
	2000	1000	56	1400	382	1800	297	2020	265	2250	238	3200	167			z	2.33	
2000	2000	1100	60	1460	392	1870	306	2090	274	2330	246	3310	173			ATIC	5	
	1400	1400	55	1500	350	1930	272	2150	244	2400	219	3410	154			ĒN	2.30	
	1000	1700	59	1630	346	2090	270	2340	241	2610	216	3700	152		FRO.	N.	MO	
* ENGINE SPEED MUST NOT EXCEED MFR'S MAXIMUM NO-LOAD GOVERNED SPEED.  ** GAUGE PRESSURE DOES NOT INCLUDE LIFT OR SUCTION LOSSES.  *** THE PUMP IS CAPABLE OF THE HIGH PRESSURE PERFORMANCE SHOWN. ACTUAL OBTAINABLE PRESSURE SHOULD BE CHECKED IN ADVANCE, AND IS GOVERNED BY THE ENGINE SPEED, AVAILABLE HORSEPOWER, AND PUMP RATIO.  THIS CHART IS TO BE USED TO SELECT THE PROPER PUMP GEARBOX RATIO. THE INPUT SPEED AND HORSEPOWER REQUIREMENTS SHOWN ARE NOMINAL ±5% FIGURES. WHEN USING THIS CHART, IT IS IMPORTANT TO OBTAIN THE NET HORSEPOWER OUTPUT OF THE ENGINE. THE ENGINE MANUFACTURER'S PUBLISHED CURVE MAY NOT REPRESENT A TRUE NET HORSEPOWER WHEN TOTALING ALL THE POWER DEDUCTIONS THAT MAY BE ENCOUNTERED FOR THE RATING. THE DEDUCTIONS COULD BE ENGINE AND VEHICLE ACCESSORIES, ELEVATION, TEMPERATURE, BAROMETER, ETC. CHECK WITH THE ENGINE														S/ CHANGED FROM	RELEASE FOR DOCUMENTATION	CHANGED RATIO FROM 2.30 TO 2.33		
MANUFACTURER FOR THEIR RECOMMENDATION AND APPROVAL OF THE NET HORSEPOWER CURVE.  THE PUMPING TORQUE REQUIREMENTS MIGHT EXCEED THE TRUCK'S TRANSMISSION CASE, POWER TAKE-OFF AND												REV	٨	Ф				
DRIVELINE COMPONENT LIMITS. CONTACT THE RESPECTIVE EQUIPMENT MANUFACTURER FOR THEIR APPROVAL OF THE PUMPING APPLICATION.											ECO NO.	04-242	472					
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