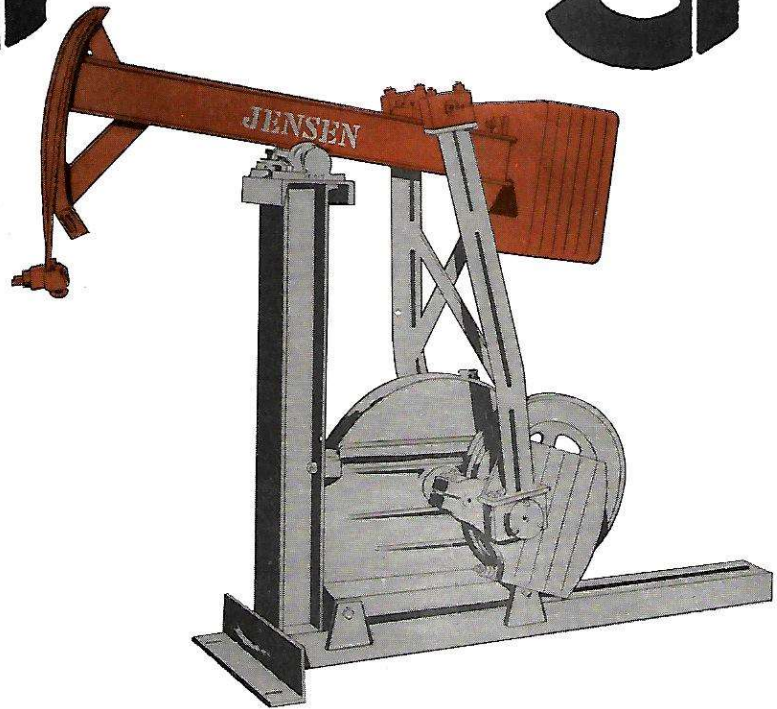


Box 1  
File 18

# JENSEN JACKS

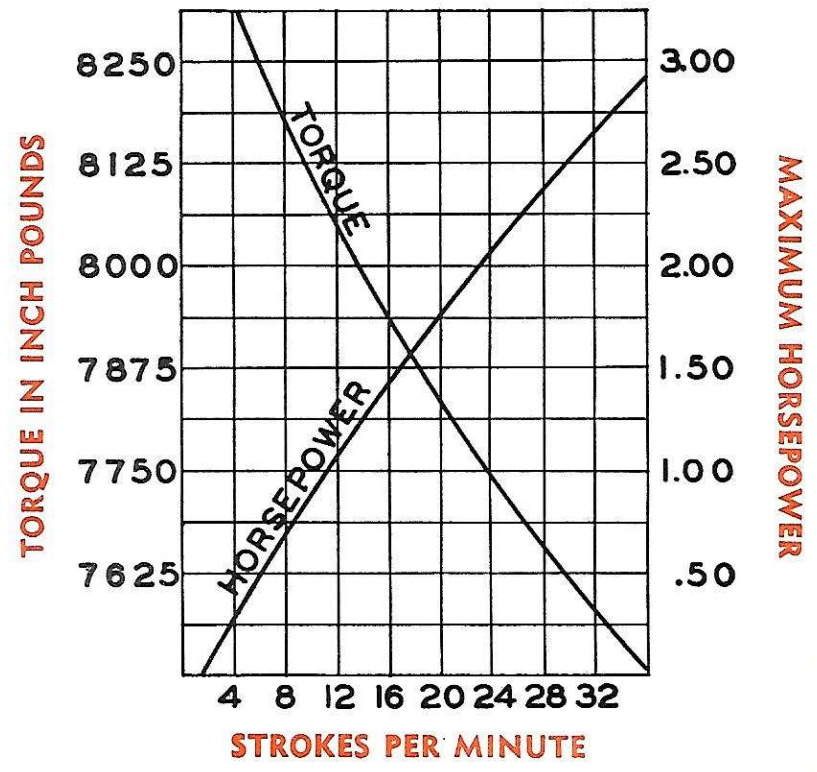


**"S" Is for Single Reduction -- "D" Is for Double**

## SPECIFICATIONS

	2S7	2S7L
Recommended Horsepower	.75	.75
H.P. Capacity at 20 SPM (API)	1.62	1.62
Peak Torque of Gear Reduction (AP <sub>1</sub> )	7,820"*	7,820"*
Single Reduction Pulley Diameter	18"	18"
Number of Grooves & Section	1 AB	1 AB
Double Reduction Pulley Diameter	18"	18"
Number of Grooves & Section	1 A	1 A
Single Reduction Gear Ratio	10.7:1	10.7:1
Double Reduction Gear Ratio	40.9:1	40.9:1
Single Reduction Main Gear P.D.	19.200"	19.200"
and Face Width	1½"	1½"
Double Reduction First Stage Gear P.D.	6.340"	6.340"
and Face Width	1"	1"
Oil for Gear Case	2 qt.	2 qt.
Walking Beam Size & Wt. (Silicon)	6" x 4" x 12"	6" x 4" x 12"
Walking Beam Centers	1' - 4 7/8"	1' - 3 3/8"
Working Center Well End	1' - 3 3/8"	1' - 11 1/4"
Walking Beam Rating (API)	4,020*	2,620*
Recommended Peak Load at Polished Rod (Frame & Beam Only)	1,100*	1,100*
Beam Weight Capacity	405*	450*
Saddle Bearing Projected Area	4"	4"
Tail Bearing Projected Area	6.3"	6.3"
Segment Crank Weights (Each)	15*	15*
Master Crank Weights (Pair)	35*	35*
Segment Weights, Full Set (Number)	6	6
Polished Rod Stroke	12"	18"
Weight of Bare Jack	650*	650*

## GEAR REDUCTION ONLY





## BALANCED LOAD ON POLISHED ROD

	2S7 & 2D7	2S7L & 2D7L
Cranks Alone	105%	95%
Cranks and (2) Master Weights	160%	150%
Cranks, 2 Segment Weights, and Master Weights	220%	205%
Cranks, 4 Segment Weights, and Master Weights	290%	270%
Cranks, 6 Segment Weights, and Master Weights	365%	335%
Cranks Only and Beam Weights, Full Set of Beam Weights	885%	565%
Cranks, (6) Segments, (2) Master, and Full Set of Beam Weights	1145%	805%
Each 45% Beam Weight Will Balance at Polished Rod	85%	45%

Example: The load to be counterbalanced is 800%. From the above table it is found that "Cranks, 6 Segment Weights, and Master Weights", will counterbalance 365%. This leaves 435% to be balanced. Divide 435% by 85% (the amount that one 45% beam weight will balance) obtaining a result of 5 (the number of beam weights required).

Therefore the balance weights required are 6 segment weights, 2 master weights, and 5 beam weights.

## COMPARATIVE MAXIMUM DEPTHS WITH FLUID, H. P. & PRODUCTION

			2S7 and 2D7 AT 20 - 12" S.P.M.							2S7L and 2D7L AT 20 - 18" S.P.M.						
Pump I. D.	Tubing	Rods	Depth of Pump	Static Load	Peak PRL	Load to be Counterbal'd	H. P.	Prod at 100%		Depth of Pump	Static Load	Peak PRL	Load to be Counterbal'd	H. P.	Prod at 100%	
								Bbls/D	G.P.H.						Bbls/D	G.P.H.
1-1/8"	2"	5/8"	730'	1055%	1100%	900%	.23	35	60	655'	950%	1015%	805%	.31	50	90
1-1/4"	2"	5/8"	675'	1055%	1100%	870%	.27	45	75	625'	975%	1040%	805%	.37	65	115
1-1/2"	2"	5/8"	590'	1055%	1100%	825%	.34	60	105	575'	1025%	1095%	805%	.49	90	160
1-3/4"	2"	5/8"	510'	1055%	1100%	785%	.39	85	145	500'	1030%	1100%	770%	.58	125	220
1-3/4"	2-1/2"	3/4"	415'	1055%	1100%	835%	.32	85	145	400'	1015%	1080%	805%	.46	125	220
2"	2-1/2"	5/8"	445'	1055%	1100%	755%	.45	110	190	435'	1030%	1100%	740%	.66	165	285
2-1/4"	2-1/2"	5/8"	385'	1055%	1100%	725%	.49	140	240	375'	1030%	1100%	705%	.72	210	365
2-1/4"	2-1/2"	3/4"	325'	1055%	1100%	765%	.41	140	240	320'	1030%	1100%	755%	.61	210	365
2-3/4"	3"	5/8"	295'	1055%	1100%	680%	.56	210	365	260'	935%	995%	600%	.75	315	550
2-3/4"	3"	3/4"	260'	1055%	1100%	725%	.50	210	365	255'	1030%	1100%	710%	.73	315	550

## PULLEY DIMENSIONS

"AB" Section Grooves

Jack	Motor Speed	STROKES PER MINUTE										
		4	6	8	10	12	14	16	17	18	19	20
2S7 2S7L	1160							2.56	2.72	2.88	3.04	3.21
	865					2.58	3.00	3.44	3.64	3.86	4.07	4.30
2D7 2D7L	1750		2.44	3.25	4.07	4.88	5.70	6.50	6.92	7.31	7.73	8.13
	1160	2.46	3.68	4.91	6.14	7.36	8.59	9.81	10.4	11.1	11.7	12.3
	865	3.29	4.94	6.57	8.23	9.87	11.5	13.2	14.0	14.8	15.6	16.5

All dimensions are P. D.—Add 3/8" to get "A" section O. D.  
Add 1/2" to get "B" section O. D.

### FORMULAS FOR BELT LENGTH AND MOTOR PULLEY SIZE

Belt Length = [(Pitch Dia. Jack Pulley + Pitch Dia. Motor Pulley) × 1.57] + (2 × Center Distance).  
Pitch Dia. Motor Pulley = (Pitch Dia. Jack Pulley × Gear Ratio × S. P. M.) ÷ R. P. M. Motor.  
Pitch Dia. Jack Pulley is 17 1/2"

Center Distance for electric motors and small single cylinder gas engines is 20" for 2S7 & 2S7L—16" for 2D7 & 2D7L.

Examples: Find motor pulley size and belt length of a No. 2D7 Jack operating at 8 S.P.M. with a 2000 R.P.M. gasoline engine at 18" center distance.

Pitch Dia. Motor Pulley = (17 1/2 × 40.7 × 8) ÷ 2000 = 2.85". Belt Length = [(17.5 + 2.85) × 1.57] + (2 × 18) = 67.9".

Find motor pulley size and belt length of a No. 2S7 Jack operating at 20 S.P.M. with a 1160 R.P.M. electric motor.

Pitch Dia. Motor Pulley from the chart is 3.21". Belt Length = [(17.5 + 3.21) × 1.57] + (2 × 20) = 72.5".

All dimensions and specifications subject to change without notice.

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