

Strength Data

CONNECTION	1-13/16 WILSON FJ	1-1/4 API REG	2-3/8 API REG	2-7/8 API REG	2-3/8 API IF	2-3/8 EUE	2-7/8 API IF
OUTSIDE DIAMETER	1-13/16	2-1/4	3-1/8	3-3/4	3-3/4	3-3/4	4-1/4
INSIDE DIAMETER	3/8	3/8	1	1-1/4	1-1/2	1-7/8	1-15/16
STROKE LENGTH	10	10	15-1/2	15-1/2	15-1/2	15-1/2	15-1/2
COMPLETE ASSEMBLY	Logan Part No.	607-181	607-225	607-312	607-375	607-376	607-377
	Bowen No.	54781	41490	43501	43509	43470	43521
							607-425
							43531
TENSILE STRENGTH (LBS)	75,400	116,415	239,070	363,780	300,750	291,735	397,650
BUMPER SUB YIELD TORQUE (FT-LBS)	480	1,740	3,400	7,100	7,100	4,920	9,260
MAX OPERATING TORQUE (FT-LBS)	240	870	1,700	3,550	3,550	2,460	4,630

CONNECTION	2-7/8 EUE	3-1/2 API IF OR FH	3-1/2 API IF	4-1/2 API FH	4-1/2 API IF OR FH	5-1/2 API REG	6-5/8 API REG
OUTSIDE DIAMETER	4-1/2	4-3/4	4-3/4	6	6-1/4	6-3/4	7-3/4
INSIDE DIAMETER	2-3/8	2	2-1/4	2-13/16	3-1/8	2-3/4	3-1/2
STROKE LENGTH	15-1/2	15-1/2	15-1/2	18	18	18	18
COMPLETE ASSEMBLY	Logan Part No.	607-450	607-475	607-476	607-600	607-625	607-675
	Bowen No.	42700	39727	...	39732	39737	39778
				39732	39737	39778	39752
TENSILE STRENGTH (LBS)	388,650	484,650	433,000	622,295	777,150	1,130,400	1,276,950
BUMPER SUB YIELD TORQUE (FT-LBS)	7,100	11,030	15,000	23,000	32,600	43,200	62,400
MAX OPERATING TORQUE (FT-LBS)	3,550	5,518	7,500	11,500	16,300	21,600	31,200

The tensile strengths listed above are calculated theoretical yield strengths and are considered accurate to $\pm 20\%$.

Operating torques are set at 50% of the calculated theoretical yield torque and are the maximum recommended operating torques.

These figures do not constitute a guarantee, actual or implied. They are meant to serve as a guide only, and an appropriate safety allowance must be made in use.

SUPERIOR HYDRAULIC FISHING JAR & ENERGIZER SPECIFICATIONS, STRENGTH AND TEST DATA

CHART A — SPECIFICATIONS

COMPLETE ASSEMBLY - JAR	611-306	611-312	611-313	611-375	611-377	611-376
COMPLETE ASSEMBLY - ENERGIZER	614-306	614-312	614-313	614-375	614-377	614-376
OUTSIDE DIAMETER (INCHES)	3-1/16	3-1/8	3-1/8	3-3/4	3-3/4	3-3/4
INSIDE DIAMETER (INCHES)	1-1/2	1	1-1/2	1-1/2	1-1/4	1-7/8
CONNECTION	2-3/8 API EUE	2-3/8 API REG	2-7/8 PAC	2-3/8 API IF	2-7/8 API REG	2-3/8 API EUE
LENGTH (FEET & INCHES)	10' - 0"	10' - 0"	10' - 0"	12' - 8"	12' - 8"	12' - 8"
STROKE (INCHES)	10	10	10	10	10	10
FLOATER POSITION (INCHES)	MEASURED DISTANCE FROM FLOATER TO END OF FLOATER BODY					
STANDARD TEMPERATURE	8	8	8	9	9	8-3/4
HIGH TEMPERATURE	9-3/4	9-3/4	9-3/4	11	11	10-3/4
DRILL COLLAR WEIGHT RANGE (LBS)	300 - 4,000	300 - 4,000	300 - 4,000	400 - 6,000	400 - 6,000	400 - 6,000
PUMP OPEN AREA (SQ IN)	3	3	3	4	4	4

COMPLETE ASSEMBLY - JAR	611-425	611-450	611-475	611-625	611-775
COMPLETE ASSEMBLY - ENERGIZER	614-425	614-450	614-475	614-625	614-775
OUTSIDE DIAMETER (INCHES)	4-1/4	4-1/2	4-3/4	6-1/4	7-3/4
INSIDE DIAMETER (INCHES)	2	2-3/8	2-1/4	2-1/4	3
CONNECTION	2-7/8 API IF	2-7/8 API EUE	3-1/2 API IF	4-1/2 API IF	6-5/8 API REG
LENGTH (FEET & INCHES)	13' - 6"	13' - 6"	13' - 6"	13' - 6"	15' - 0"
STROKE (INCHES)	12	12	12	12	12
FLOATER POSITION (INCHES)	MEASURED DISTANCE FROM FLOATER TO END OF FLOATER BODY				
STANDARD TEMPERATURE	9	9	10-3/4	10-3/4	11
HIGH TEMPERATURE	11	11	11-1/2	11-1/2	12-1/2
DRILL COLLAR WEIGHT RANGE (LBS)	400 - 6,000	400 - 8,000	500 - 8,000	8,500 - 15,000	12,200 - 21,000
PUMP OPEN AREA (SQ IN)	6	7-1/2	7	11	16

CHART B — STRENGTH AND TEST DATA

COMPLETE ASSEMBLY - JAR	611-306	611-312	611-313	611-375	611-377	611-376
COMPLETE ASSEMBLY - ENERGIZER	614-306	614-312	614-313	614-375	614-377	614-376
JAR TESTER LOW TEST PULL LOAD MINIMUM / MAXIMUM (LBS)	7,000/12,000	9,000/12,000	7,000/12,000	12,000/18,000	12,000/16,000	12,000/16,000
JAR TESTER STANDARD PULL TEST (LBS)	18,000	30,000	18,000	35,000	35,000	35,000
FIELD LOAD — MAX PULL LOAD	36,000	55,000	36,000	72,000	72,000	51,000
LIFT LOAD AFTER JARRING						
JAR FULLY EXTENDED, TENSILE @ YIELD (LBS)	185,000	253,000	185,000	330,000	330,000	285,000
TORQUE @ YIELD (FT-LBS)	4,200	7,500	4,200	14,500	14,500	9,650

COMPLETE ASSEMBLY - JAR	611-425	611-450	611-475	611-625	611-775
COMPLETE ASSEMBLY - ENERGIZER	614-425	614-450	614-475	614-625	614-775
JAR TESTER LOW TEST PULL LOAD MINIMUM / MAXIMUM (LBS)	12,000/16,000	12,000/16,000	15,000/20,000	18,000/26,000	18,000/26,000
JAR TESTER STANDARD PULL TEST (LBS)	35,000	30,000	50,000	100,000	100,000
FIELD LOAD — MAX PULL LOAD	75,000	60,000	100,000	200,000	275,000
LIFT LOAD AFTER JARRING					
JAR FULLY EXTENDED, TENSILE @ YIELD (LBS)	375,000	360,000	505,000	1,000,000	1,600,000
TORQUE @ YIELD (FT-LBS)	18,500	12,000	18,100	40,800	79,000

SUPERIOR HYDRAULIC FISHING JAR & ENERGIZER TIGHTENING TORQUES

CHART C — RECOMMENDED TIGHTENING TORQUES (FT-LBS)

TOOL JOINT CONNECTION	2-3/8 EUE	2-3/8 API Reg	2-7/8 PAC	2-3/8 API IF	2-7/8 API Reg	2-3/8 EUE
OUTSIDE DIAMETER — INCHES	3-1/16	3-1/8	3-1/8	3-3/4	3-3/4	3-3/4
INSIDE DIAMETER — INCHES	1-1/2	1	1-1/2	1-1/2	1-1/4	1-7/8
COMPLETE ASSEMBLY — JAR	611-306	611-312	611-313	611-375	611-377	611-378
COMPLETE ASSEMBLY — ENERGIZER	614-306	614-312	614-313	614-375	614-377	614-378
SPLINE BODY TO BALANCE BODY	2,100	2,700	2,100	3,500	3,650	3,500
BALANCE BODY TO CONNECTOR BODY	2,100	2,700	2,100	3,500	3,650	3,500
CONNECTOR BODY TO PRESSURE BODY	2,100	2,700	2,100	3,500	3,650	3,500
MANDREL TO MANDREL EXTENSION	500	600	500	700	700	700
PRESSURE BODY TO FLOATER BODY	2,100	2,700	2,100	3,500	3,650	3,500
MANDREL EXTENSION TO WASHPIPE	500	600	500	700	700	700
FLOATER BODY TO WASHPIPE BODY	2,100	2,700	2,100	3,500	3,650	3,500

TOOL JOINT CONNECTION	2-7/8 API IF	2-7/8 EUE	3-1/2 API IF	4-1/2 API IF	2-7/8 API Reg
OUTSIDE DIAMETER — INCHES	4-1/4	4-1/2	4-3/4	6-1/4	3-3/4
INSIDE DIAMETER — INCHES	2	2-3/8	2-1/4	2-1/4	1-1/4
COMPLETE ASSEMBLY — JAR	611-425	611-450	611-475	611-625	611-775
COMPLETE ASSEMBLY — ENERGIZER	614-425	614-450	614-475	614-625	614-775
SPLINE BODY TO BALANCE BODY	5,000	5,000	9,090	20,000	39,000
BALANCE BODY TO CONNECTOR BODY	5,000	5,000	9,090	20,000	39,000
CONNECTOR BODY TO PRESSURE BODY	5,000	5,000	9,090	20,000	39,000
MANDREL TO MANDREL EXTENSION	1,500	1,500	1,800	7,000	12,500
PRESSURE BODY TO FLOATER BODY	5,000	5,000	9,090	20,000	39,000
MANDREL EXTENSION TO WASHPIPE	1,500	1,500	1,000	4,800	10,500
FLOATER BODY TO WASHPIPE BODY	5,000	5,000	9,090	20,000	39,000

