



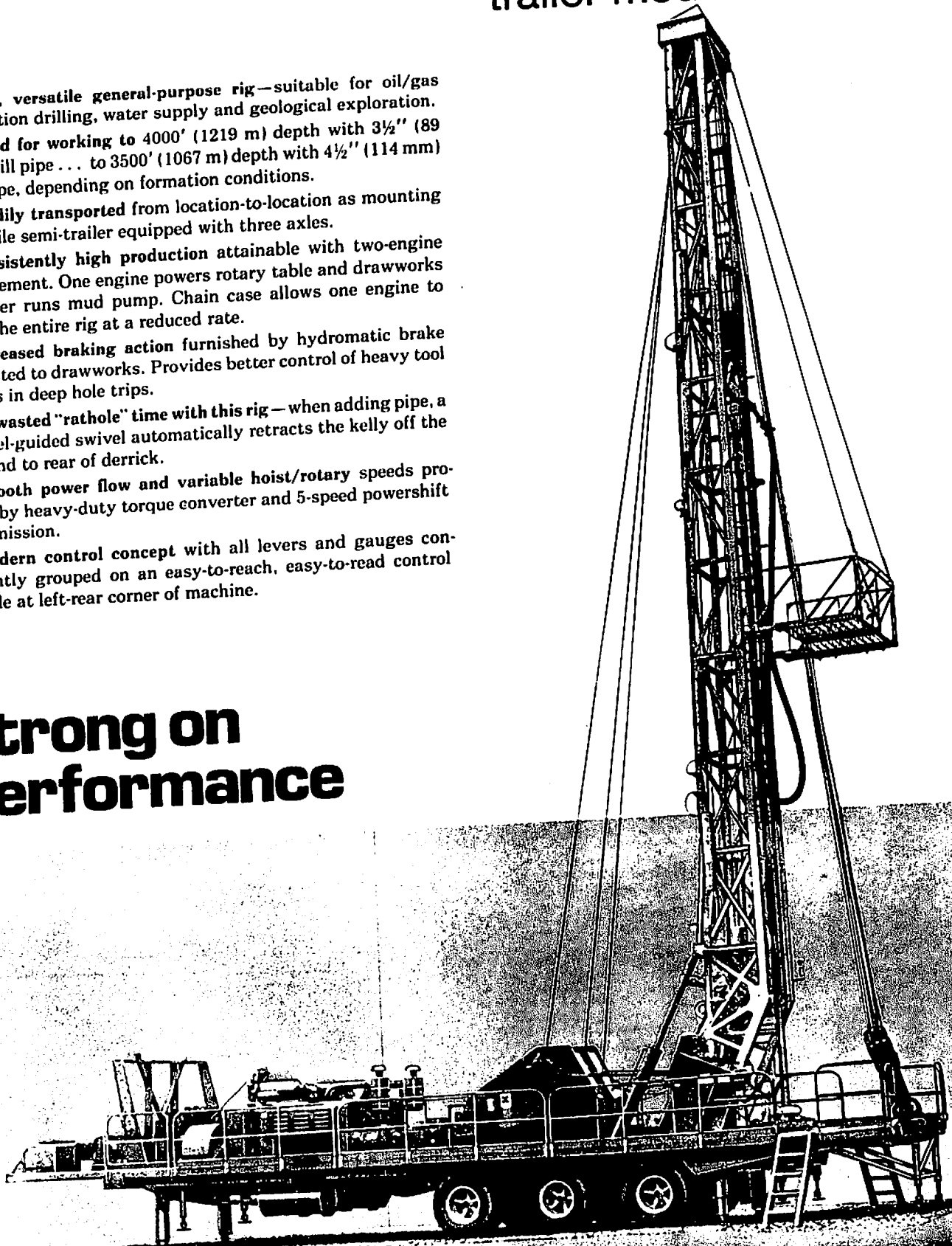
SPEEDSTAR

SPEEDSTAR SS-40

trailer-mounted rotary drill

- Fast, versatile general-purpose rig—suitable for oil/gas production drilling, water supply and geological exploration.
- Rated for working to 4000' (1219 m) depth with 3½" (89 mm) drill pipe . . . to 3500' (1067 m) depth with 4½" (114 mm) drill pipe, depending on formation conditions.
- Readily transported from location-to-location as mounting is mobile semi-trailer equipped with three axles.
- Consistently high production attainable with two-engine arrangement. One engine powers rotary table and drawworks . . . other runs mud pump. Chain case allows one engine to drive the entire rig at a reduced rate.
- Increased braking action furnished by hydromatic brake connected to drawworks. Provides better control of heavy tool strings in deep hole trips.
- No wasted "rathole" time with this rig—when adding pipe, a channel-guided swivel automatically retracts the kelly off the hole and to rear of derrick.
- Smooth power flow and variable hoist/rotary speeds provided by heavy-duty torque converter and 5-speed powershift transmission.
- Modern control concept with all levers and gauges conveniently grouped on an easy-to-reach, easy-to-read control console at left-rear corner of machine.

**strong on
performance**



SPEEDSTAR[®] SS-40

trailer-mounted rotary drill

**Rated Capacity: Drill Pipe Size Max. Depth*
6 Lines**

3½" (89 mm)	4,000' (1219 m)
4½" (114 mm)	3,500' (1067 m)

Maximum hook load: 90,000 lbs. (40 823 kg)

* These rated capacities based on favorable drilling conditions.

Power Units (2): Two deck-mounted diesel engines, 175 hp (130.6 kW) continuous duty @ 1800 rpm.

Engine Transmissions: Two heavy-duty torque converters with 5-speed powershift transmissions direct-coupled to each power unit.

Chain Drive Case: Pressure lube case consisting of high speed roller chains running on sprockets mounted on a divided output shaft.

Main Drive Case: Bevel gear case transfers power to drawworks chain drive and rotary table. Oil-bath construction with spiral cut heat-treated gears mounted on ball and roller bearings.

Drawworks: Heavy-duty triple drum with drumshafts mounted on anti-friction bearings. Each main drum equipped with Lebus spooler and replaceable brake drum flanges.

	Kelly Drum & Hoisting Drum	Auxiliary Drum
Drum dia. & length	15" dia. x 15¼" long (381 x 387 mm)	7½" dia. x 23½" long (191 x 597 mm)
Max. single line pull, bare drum	18,000 lbs. (8165 kg)	7,000 lbs. (3175 kg)
Brakes	8" wide x 26" dia. (203 x 660 mm); double band	6" wide x 22" dia. (152 x 559 mm) single band
Net braking area	1,137 sq. in. (7335 cm ²)	360 sq. in. (2323 cm ²)
Clutch	18" (457 mm) 2-plate, air	14" (356 mm) single plate, air
Spooling capacity	795' of ¾" line (242 m/19mm)	4,000' of ¾" line (1219 m/9.5 mm) 2,850' of ⅝" line (869 m/11 mm) 2,262' of ½" line (689 m/13 mm)

Catheads: Two air-operated units, mounted on auxiliary drumshaft, for breakout and spinning. Suitable rollers provided on drill to guide spinning chains.

Rotary Table: Enclosed oil-bath type; spiral cut gears; powered through U-joint torque tube and 11" (279 mm) 2-plate clutch. 18" (457 mm) opening with API master bushing removed. Can be hinged forward to provide 27" (686 mm) square opening.

Mast: 60' (18 m) working height above rotary table. 108,000 lbs. (48 988 kg) rated working capacity. Hydraulically raised and lowered. Equipped with ladder and channel guide tracks for swivel.

Crown Block: Heavy structural steel frame, electrically welded. Equipped with anti-friction mounted sheaves to accommodate two 6-line triple sheave traveling blocks with weight indicator line, auxiliary line sheaves, and catline rope sheaves. Main crown sheaves 24" (610 mm) dia. Multiple line sheaves 18" (457 mm) dia.

Swivel: 3" (76 mm) water course—std.

Frame: Drill frame integral with semi-trailer frame. Structural steel, reinforced and electrically welded. Walkway platform, covered with skid-resistant deck plate, and ladders provide easy access to all rig components.

Pipe Platform: Large hinged or removable platform, equipped with screw jacks, mounted at rear of drill. Covered with creosote timbers for standing drill pipe.

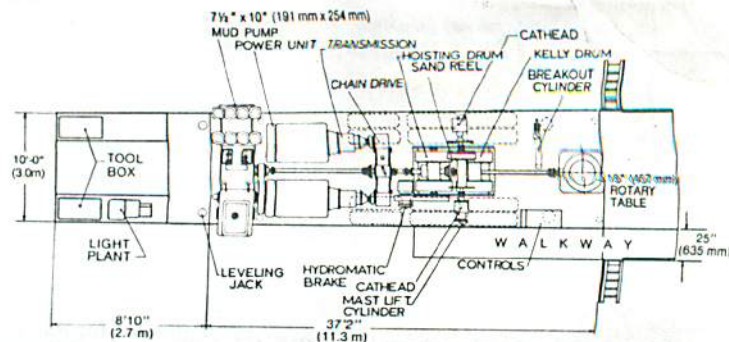
Controls: Grouped in pedestal-type console at left rear of machine, immediately behind the drawworks. Complete with instrument panel for convenient operation.

Leveling Jacks: Four hydraulic jacks—two at front with 48" (1219 mm) stroke... two at rear with 18" (457 mm) stroke. Equipped with large stabilizing tubes, ball-type swivel base, and lock checks to prevent leak-off. Two large frame-mounted screw jacks also included.

Tool Box: Two large tool boxes integral with drill frame, one on each side.

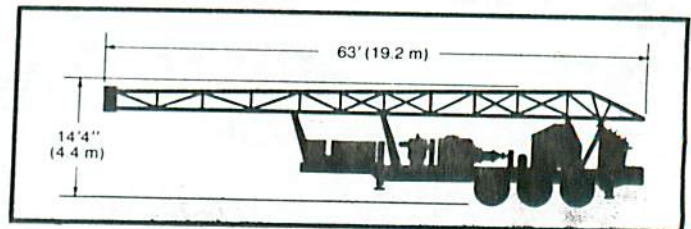
Mounting: Mobile 3-axle semi-trailer with air brakes and highway lighting.

Trailer Capacities: Rear axles (3)—25,000 lbs. (11 340 kg) each.



OPTIONAL EQUIPMENT:

- Hydromatic brake connected to drawworks through 1¼" (32 mm) pitch triple chain and high torque air clutch.
- 7½" x 10" (191 x 254 mm) mud pump equipped for slush service. Output of 487 gpm (1843 l/min) @ 255 psi (1758 kPa) @ 65 strokes/min.
- 5" x 10" (127 x 254 mm) mud pump equipped for slush service. Output of 211 gpm (799 l/min) @ 574 psi (3957 kPa) @ 65 strokes/min.
- 7½" x 10" (191 x 254 mm) mud pump equipped for slush service with 6" (152 mm) pistons/liners. Output of 308 gpm (1166 l/min) @ 308 psi (2123 kPa) @ 65 strokes/min.
- Kelly: 3½" (8.9 cm) square x 39' (11.9 m) long with roller bushing and swivel adapter sub.
- Kelly: 4¼" (10.8 cm) square x 39' (11.9 m) long with roller bushing and swivel adapter sub.
- Kelly: 5¼" (13.3 cm) dia. fluted x 38' (11.6 m) long with bushing and swivel adapter sub.
- Hydraulic makeup and breakout cylinder with cable.
- Hydraulically-powered pulldown, chain-feed type. Provides infinitely variable pulldown speed and pressure. Equipped with disconnect jaw clutch for hoisting or gravity feeding. Feed rate variable from 0 to 10 fpm (0 to 3m/min). Pulldown weight adjustable from 0 to 30,000 lbs. (0 to 13 608 kg). Pulldown limited to 12,500 lbs. (5670 kg) with 3½" (8.9 cm) kelly.
- Six-part Pipe line with 17" (432 mm) triple sheave, 50 ton (45 mt) traveling block, 525' (160 m) pipe line, and additional sheave in crown block.
- Six-part Kelly line with 17" (432 mm) triple sheave, 50 ton (45 mt) traveling block, 525' (160 m) Kelly line, and additional sheave in crown block.
- Four-part Pipe line with 17" (432 mm) double sheave, 40 ton (36 mt) traveling block, and 400' (122 m) pipe line.
- Four-part Kelly line with 17" (432 mm) double sheave, 40 ton (36 mt) traveling block, and 400' (122 m) Kelly line.
- Pipe racking board is folding type with the following capacities for double 20' (6.1 m) or single 30' (9.1 m) lengths...
 - 4,000' of 3½" pipe (1219 m/89 mm)
 - 3,500' of 4½" pipe (1067 m/114 mm)
- Weight indicator with metric or English dial.
- Backup/Breakout tongs: Manually-operated. Furnished with latch lug jaws. One type, with torque rating of 25,000 ft. lbs. (33 900 J) for gripping pipe from 2½" through 8½" (60-219 mm) OD... second type, with torque rating of 16,000 ft. lbs. (21 696 J) for 2½" through 7" (60-178 mm) OD pipe.
- Water injection system: Maximum output of 18 gpm (68 l/min)... 8.3 gpm (31.4 l/min) minimum.
- Lighting system: Has diesel-driven electric generator that delivers 4500 watts of AC power at 220 volts. Drill is equipped with seven 48" (1219 mm) fluorescent lights, each having two 60-watt lamps; plus three 500-watt quartz floodlights.



Shipping Data:

Length:	Width:	Height:	Cubic Feet:
63' 0" (19.2 m)	10' 0" (3 m)	14' 4" (4.4 m)	9,030 (253 m ³)

Approx. Weight: 85,000 lbs. (38 555 kg)
(incl. rig, trailer & std. operating equip.)

WE RESERVE THE RIGHT TO AMEND THESE SPECIFICATIONS AT ANY TIME WITHOUT NOTICE. THE ONLY WARRANTY APPLICABLE IS OUR STANDARD WRITTEN WARRANTY APPLICABLE TO THE PARTICULAR PRODUCT AND SALE. WE MAKE NO OTHER WARRANTY, EXPRESSED OR IMPLIED.



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