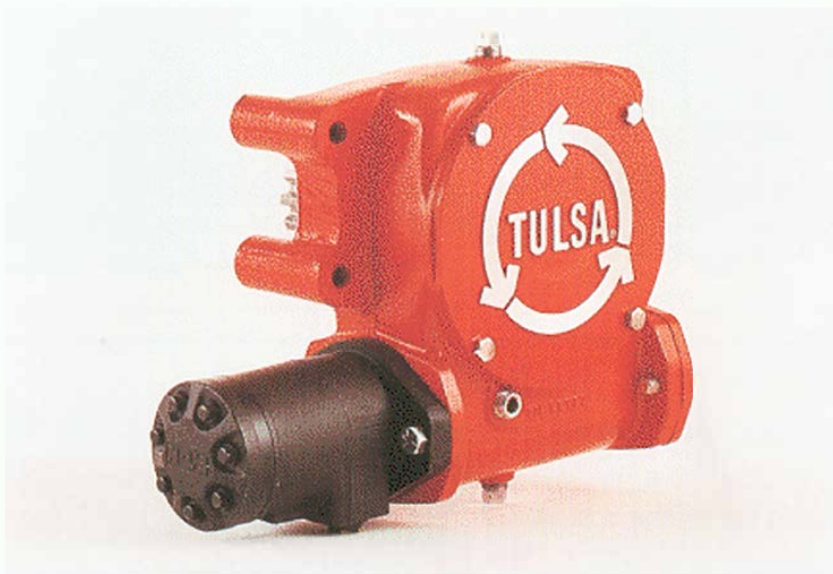




Tulsa Winch

FLANGE MOUNT SPEED REDUCERS



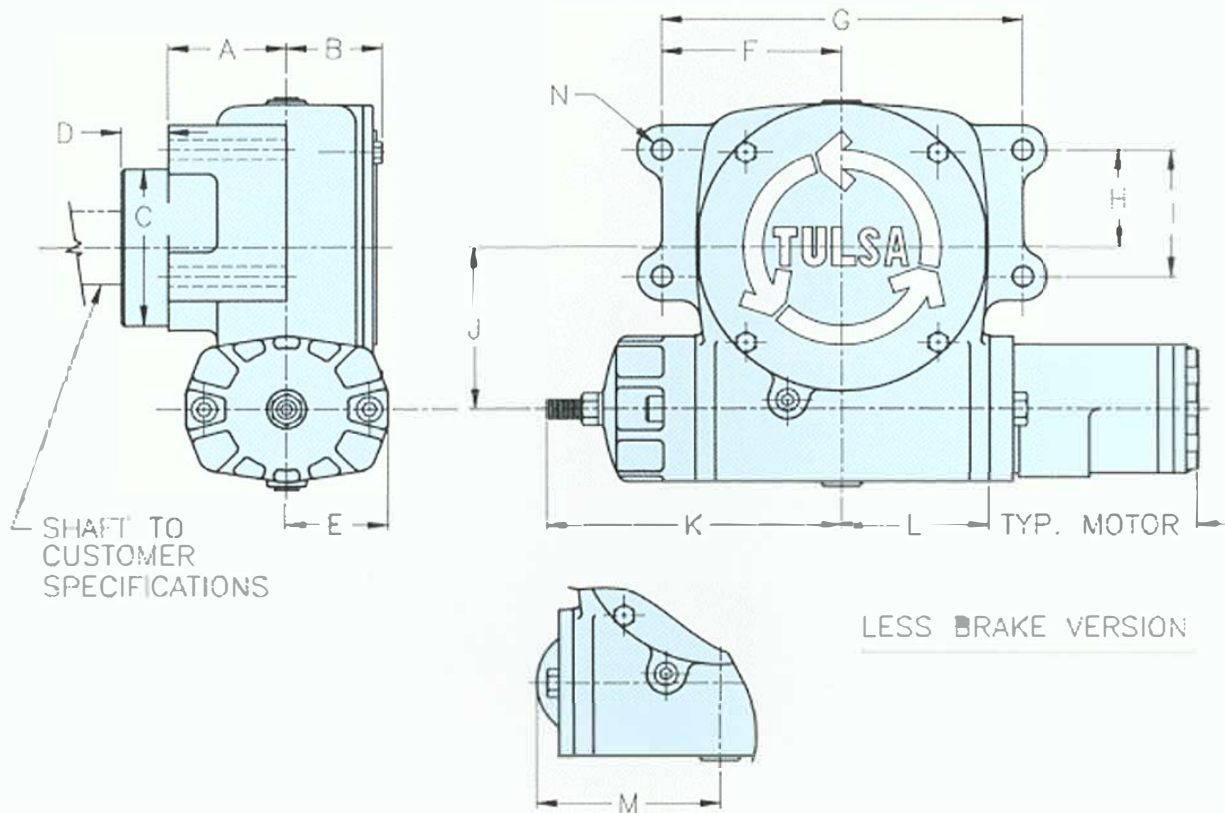
Tulsa Winches and Speed Reducers have been proven on the job – where it counts – for 60 years. The very first flange mounted speed reducer in the mobile crane market was a Tulsa G6, developed over 25 years ago and still used by many mobile equipment manufacturers today. With the development of four new models in the past two years, Tulsa now has the most complete line of flange mounted speed reducers in the industry. Applications include: Winch drives on digger derricks, material handling aerial devices, drill rigs and truck mounted cranes, swing drives on digger derricks, aerial devices, and truck mounted cranes, conveyor drives for intermittent conveyors, Boom Extension Drives for aerial devices and cranes.

Design Features

- Manganese bronze alloy gears for smoother operation-less "slip-stick"
- One-piece ground worms provide durability, smoothness
- Output configurations to meet any customer requirements
- Housings either of lightweight 356T6 aluminum or ductile iron
- Wide variety of input options allow proper motor selection for your application
- Oil-immersed multiple disc brakes available for all models
- One-year warranty on all reducers



Installation Dimensions



| | A | B | C | D | E | F | G |
|----------|------|------|------|-------|------|------|-------|
| HFG338 | 2.75 | 2.33 | — | — | — | 4.29 | 8.58 |
| HFG430 | 2.63 | 2.38 | 4.00 | 0.89 | 2.38 | 3.75 | 7.50 |
| HFG938 | 3.00 | 2.41 | 4.00 | 1.19 | 2.56 | 4.56 | 9.13 |
| HFG938D | 2.66 | 2.52 | 4.00 | 1.19 | 2.56 | 4.56 | 9.13 |
| G6 | 2.00 | 2.75 | 3.00 | 0.53 | — | 5.00 | 10.00 |
| G9 | 2.25 | 2.60 | 3.50 | 0.50 | — | 5.00 | 10.00 |
| HFG1542 | 3.00 | 3.00 | 3.75 | 0.94 | 2.56 | 5.00 | 10.00 |
| HFG1542D | 3.62 | 3.17 | 3.75 | 0.94 | 2.56 | 5.00 | 10.00 |
| HFG1754 | 3.00 | 2.71 | 5.00 | 0.50 | 3.00 | 5.00 | 10.00 |
| HFG2030 | 4.85 | 3.48 | 5.69 | 0.94 | — | 6.00 | 12.00 |
| | H | I | J | K | L | M | N |
| HFG338 | 1.12 | 1.12 | 2.75 | 7.59 | 5.75 | 3.11 | 0.53 |
| HFG430 | 2.25 | 1.81 | 2.73 | 4.31 | 4.75 | 2.73 | 0.62 |
| HFG938 | 2.50 | 3.25 | 4.14 | 7.50 | 3.72 | 4.66 | 0.53 |
| HFG938D | 2.50 | 3.25 | 4.14 | — | 3.72 | 5.03 | 0.62 |
| G6 | 2.00 | 4.00 | 4.44 | 3.93 | 6.50 | 4.62 | 0.53 |
| G9 | 2.00 | 4.00 | 4.50 | 8.40 | 7.62 | 5.29 | 0.53 |
| HFG1542 | 2.00 | 4.00 | 4.44 | 8.78 | 5.00 | 5.93 | 0.66 |
| HFG1542D | 2.00 | 4.00 | 4.44 | — | 5.88 | 7.25 | 0.66 |
| HFG1754 | 2.00 | 4.00 | 5.39 | 9.47 | 5.70 | — | 0.66 |
| HFG2030 | 2.19 | 4.38 | 5.98 | 11.25 | 6.00 | 6.66 | 0.66 |

Dimensions shown are representative only. Contact Tulsa Winch Engineering for dimensional information for specific units.



PERFORMANCE DATA

| MODEL | WINCH RATING (in.lb.) | SWING RATING (in.lb.) | OVERHUNG LOADS | RATIO | STATIC EFF. % | DYNAMIC EFF. % | MAX. INPUT SPEED (rpm) | WEIGHT (lbs.) |
|---------|-----------------------|-----------------------|----------------|-------|---------------|----------------|------------------------|---------------|
| HFG338 | 7,000 | N/A | No | 38:1 | 32 | 49 | 1200 | 23 |
| HFG430 | N/A | 6,000 | Yes | 30:1 | 34 | 51 | 1200 | 41 |
| HFG938 | 22,000 | 12,000 | No | 38:1 | 36 | 53 | 1200 | 42 |
| HFG938D | 22,000 | 15,000 | Yes | 38:1 | 36 | 53 | 1200 | 63 |
| G6 | 21,000 | 14,000 | No | 60:1 | 34 | 51 | 1200 | 46 |
| G9 | 30,000 | 20,000 | No | 42:1 | 36 | 53 | 800 | 76 |
| HFG1542 | 32,000 | 18,000 | No | 42:1 | 36 | 53 | 800 | 61 |
| HF1542D | 32,000 | 25,000 | Yes | 42:1 | 36 | 53 | 800 | 98 |
| HFG1754 | 45,000 | 24,000 | No | 54:1 | 36 | 53 | 800 | 66 |
| HFG2030 | 72,000 | 48,000 | Yes | 30:1 | 44 | 62 | 500 | 183 |

Application Notes

Ratings in the chart above are based on intermittent service only (less than six minutes out of every thirty).

Winches made from Tulsa flange mount speed reducers are not to be used to lift or move people.

Swing ratings and gearboxes marked "Yes" for Overhung Loads are based on typical pinions mounted as close to the gearbox as possible. In all overhung load applications, including swing drives, the pilot of the gearbox must be supported by a close fit hole in the customer's mounting base.

There are several ratios available in most of these models which are not shown. If your application requires a ratio other than shown, contact Tulsa sales for additional information.

Units with efficiencies of less than 55% tend not to backdrive. However, they are not guaranteed to be self-locking. If your application requires a "no backdrive" condition, automatic worm brakes are available from Tulsa for most of these units. Also, on hydraulic drive units, counterbalance or "brake" valves can be used to prevent back-driving.

Static and dynamic efficiencies listed are averages and actual results can vary up to three to five percentage points either side of those listed. New units which have not been run in will have lower efficiencies than shown also. Dynamic efficiencies shown are not reached until the input speed nears 400 rpm. If your application requires operation at very low speeds, contact Tulsa Winch for performance data.

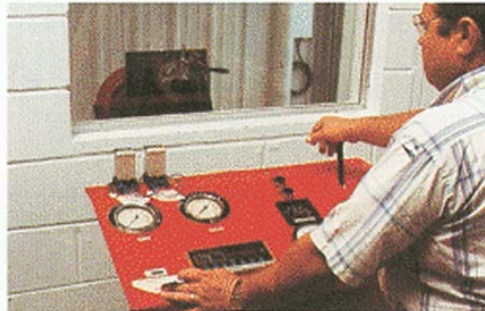
Maximum input speeds shown are at rated output torque. If your application requires less than rated torque and you need faster input shaft speeds, contact Tulsa Winch.

Weights shown are approximate only for typical units. Different output pinion/shaft configurations, the addition of worm brakes, and other variables will affect the weight of the unit.



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Winches and Speed Reducers Known Around the World for Quality



Since its first winch went into service in 1929, Tulsa Winch has built a national and international reputation for top quality winches and speed reducers.

Today, the company manufactures and markets a wide variety of products from a modern 53,000-square-foot plant in Tulsa, Oklahoma. To maintain its high standards, the company has invested heavily in state-of-the-art inspection equipment to assure that every part is made to exacting specifications. Its formal quality assurance program also includes inspection and calibration for both company and employee-owned gauges. Even more significant is the fact that every employee, regardless of job title, is assigned responsibility as a Quality Inspector.

The Tulsa Winch plant utilizes a unique "cell concept" which allows parts to be moved from one machine to another without unnecessary handling and delays. The company has an aggressive machine tool acquisition program and utilizes the latest in computerized machining technology to enhance its customer service capabilities.

In-house computer-aided design and drafting capabilities allow the company to produce the highest quality products possible while being unusually responsive to customer requests for modifications.

Tulsa's test facility features a 100-HP hydraulic power supply, electronic linepull and linespeed measuring devices and other specialized pieces of equipment. Its 35-foot tower, which is capable of 110,000-pound lifts, also helps assure that every Tulsa Winch product meets the very highest standards.



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