HYDRAULIC SYSTEMS FOR TRAILING SUCTION HOPPER DREDGERS
**INTRODUCTION**

With more than 40 years of experience Hycom has developed many hydraulic systems for trailing suction hopper dredgers. Because of the engineering experience and the practical know-how of hydraulic components and systems, Hycom can deliver the best possible solution for each system, standard or customised.

Hycom has developed special techniques for all equipment on board of a trailing suction hopper dredger that is hydraulically driven, like for example: bottom doors, suction pipe gantries, swell compensators, sluice valves, overflows and winches.

---

**EXAMPLE OF TECHNICAL SPECIFICATIONS**

The hydraulic power unit on board of the TSHD, used as an example, is equipped with two main pump sections, each driven by an electric motor with a power of 200 kW. By means of the HPU following equipment is driven:

- Trunnion winch and gantry cylinder bore of 220 mm, piston rod of 125 mm and a stroke of 1.675 mm
- Intermediate winch and gantry cylinder with bore of 280 mm, piston rod of 160 mm and a stroke of 2.215 mm
- Draghead winch and gantry cylinder with bore of 280 mm, piston rod of 160 mm and a stroke of 2.215 mm
- 8 bottom doors with cylinders with a bore of 360 mm, piston rod of 180 mm and a stroke of 1.100 mm. The cylinders are equipped with an absolute length measuring device
- Overflow
- Bow connection unit
- 16 dredge valves
- 27 flushing and gland water valves
- Waterflap and visor cylinders
- Swell compensation cylinder with plunger diameter of 340 mm and a stroke of 2 meters. This cylinder is also equipped with an absolute length measuring device
- Anchor winches
- Mooring winches