



ECOLOGICALLY FRIENDLY GRABS

Opened valve example:
material dropping during grab's transport



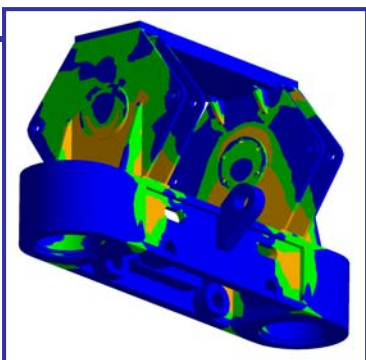
Closed valve example:
ecologically friendly grab



- The ecologically friendly models **avoid any risk of material dropping** during their transport.
- **Double elastic closing** between the lips of the valves for **materials in powder**.

DESIGN AND SIMULATION

- Our design office develops each design according to **F.E.M. 1001 Section I:1998, UNE-58132 and UNE-EN 13155** using the latest 3D and CAD/CAM tools.
- Each new design is validated and optimised using **Finite Elements Analysis technique** in the way to analyse fatigue effects and warranty **2.000.000 cycles** for components' and machines' working life.



ELECTRO-HYDRAULIC SYSTEM FUNCTIONING

MOTOR REVERSAL		ELECTRICALLY OPERATED VALVE	
Wire quantity:	4	Wire quantity:	7
Pump type:	Piston pump (fix flow)	Pump type:	Gear pump (fix flow)
			Piston pump (fix flow)
			Piston pump (variable flow)

VARIABLE FLOW HYDRAULIC UNITS

- Electrically operated valve hydraulic units that use **variable flow piston pumps** warranty hydraulic components' working life increase **in more than 300%** in comparison with fix flow pump's functioning.
- This system **avoids oils overheating (4 times minor than with fix flow pumps)** due to Load-Sensing control. This way pumps' plate is continuously adapting its inclination in the way to **optimise the penetration force and minimise power demand (40% minor than fix flow pumps)** and increase grab's overall efficiency.



MATERIALS

- Structure manufactured in **S355 J2G3** rolled steel (elastic yield 510-610 N/mm²).
- It is possible to **install interchangeable manganese wear resistant teeth** (up to 500 HB) into grab's valves in the way to **improve machine's penetration** into the material.
- For grabs in contact with **abrasive materials** we normally recommend to manufacture valves plates in **wear resistant steel** (hardness up to 475 HBW).

CERTIFICATION

- Possibility to certify any model in **ATEX 0/20, 1/21 or 2/22 zones** for explosive atmospheres.

