



## KOAX-ROTODIFF®

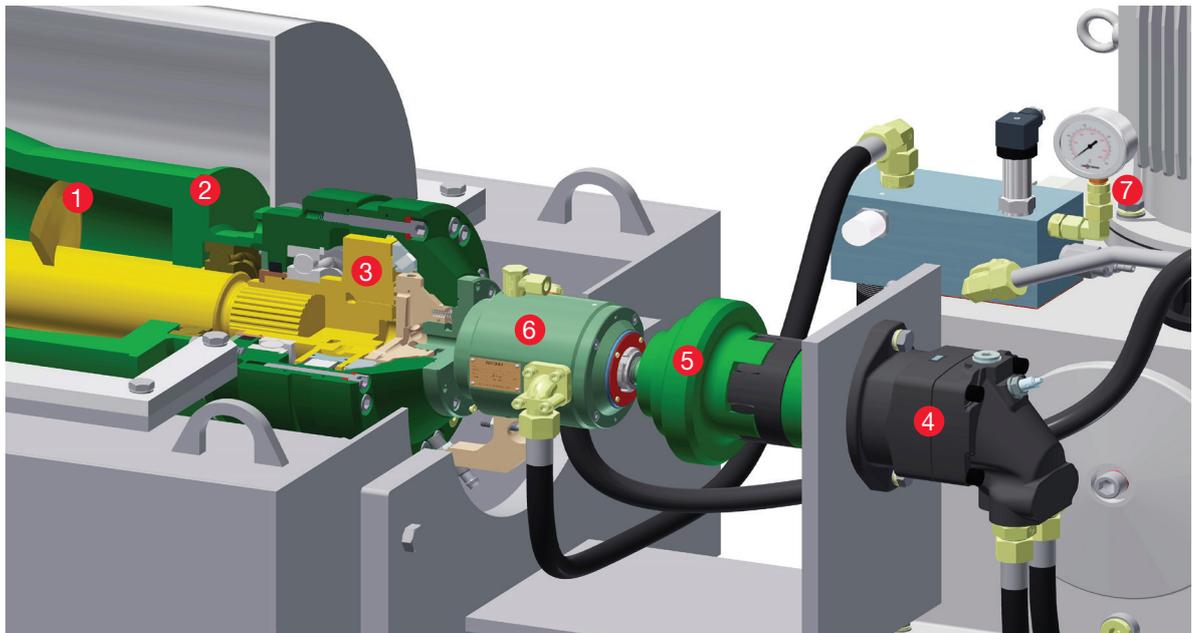
### VISCOTHERM® «In-Line» Centrifuge Drive System

Compact hydraulic KOAX-ROTODIFF Scroll & Main Drive «In-Line design».  
Design System with Full Hydraulic Drive System (optional VFD controlled).

- **State of the Art Design: KOAX - ROTODIFF®**  
Compact Centrifuge Scroll and Bowl Drive
  - NO V-BELTS!
  - INDEPENDENTLY CONTROLLED SCROLL AND BOWL DRIVE!
  - ATEX ZONE 1, CERTIFIED!
- **Reduced installation and operating cost**  
Optimized power installation and lower power consumption. Highest torque capacity allows for higher dry cake solids (DS), together with mostly an improved throughput capacity. The lower weight of the ROTODIFF® allows higher bowl speed and therefore increased G-force. Reduced vibration levels causing less stress on the main bearings and thus lead to an increased lifetime.
- **Overload protection and operation safety**  
A safety relief valve protects all mechanical components. A main advantage is the design of the hydraulic drive, which has by far less moving parts than a gearbox. The controlled cooling system prevents overheating, guarantees a long lifetime, and reduces maintenance cost. The operational reliability and control of the separation process is decisively improved.  
Ex-proof application areas, ATEX certified.

#### KOAX - ROTODIFF®

Scroll & Bowl Drive Design



1. Centrifuge scroll
2. Centrifuge bowl
3. Hydraulic scroll drive /KOAX-ROTODIFF®
4. Hydraulic bowl drive

5. Drive shaft bowl with coupling
6. Connection block scroll drive
7. Hydraulic pump unit



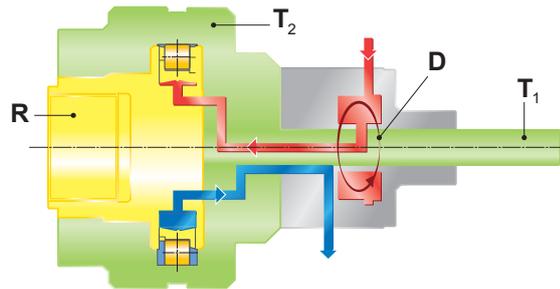
## HYDROSTATIC DRIVE SYSTEM FOR DECANTER CENTRIFUGES

### Function Scroll Drive KOAX-ROTODIFF®

A decanter centrifuge with KOAX-ROTODIFF scroll drive produces a rotational differential speed between the bowl and the scroll. It is a slow-speed hydraulic motor. The bowl drive shaft ( $T_1$ ) is connected to the housing of the hydraulic motor ( $T_2$ ) and the housing is fixed directly to the bowl of the centrifuge. Therefore the bowl can be driven directly on the drive shaft ( $T_1$ ).

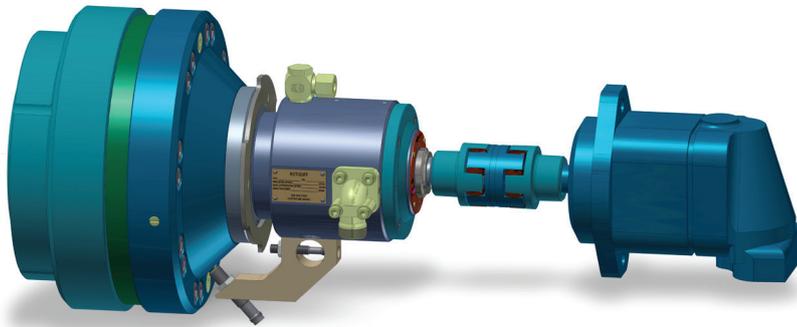
The rotor output shaft (R) is joined with the conveyor drive shaft and powers the conveyor independently of the bowl.

The hydraulic oil is fed from the stationary to the rotating part of the motor by means of a pressurized transfer seal (D).



### In-Line Bowl and Scroll Drive (Hydraulic Control)

- Bowl Drive – direct NO V-BELTS
- Scroll Drive – direct with KOAX-ROTODIFF®



### In-Line Bowl and Scroll Drive (VFD Control)

- Bowl Drive – direct NO V-BELTS
- Scroll Drive – direct with KOAX-ROTODIFF®

