

# DESCH Planox<sup>®</sup> Friction Clutches

Type PH – hydraulically actuated



PH 11 – GB

# DESCH Planox® Friction Clutches

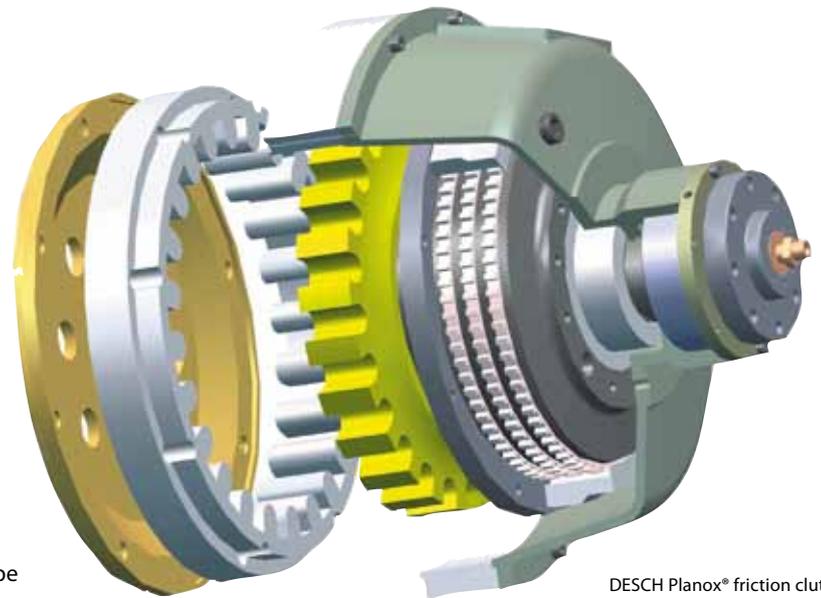
The DESCH Planox® friction clutches are engageable resp. disengageable dry-friction clutches which transmit torque by friction.

These clutches permit rapid acceleration of the driven machines or machinery groups as well as reliable torque transmission. Machines connected with friction clutches are protected against damage which can occur through peak torques during operation or during the engaging/disengaging process.

## Hydraulically actuated

Hydraulically actuated Planox® clutches, type PH, have the design and mode operation as the pneumatically actuated Planox® clutches. The oil is supplied axially by a rotary union.

The torque indicated in the list is configured for an oil pressure of 35 bar. Special ventilation springs enable safe operation even when the machine is inclined. All versions of the clutch can be equipped with an additional flexible



DESCH Planox® friction clutch  
Type PH-143/1-SZ  
with highly flexible coupling

clutch for reducing the torsional vibrations. For the use of hydraulic pumps, we provide complete drive units comprised of pump drive and Planox® clutch.

## Examples

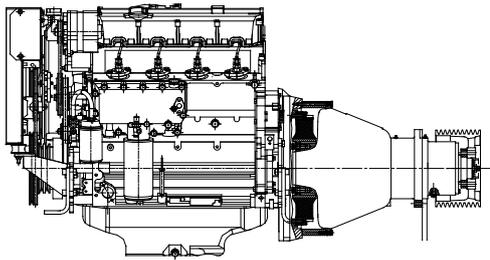


Road Milling Machine



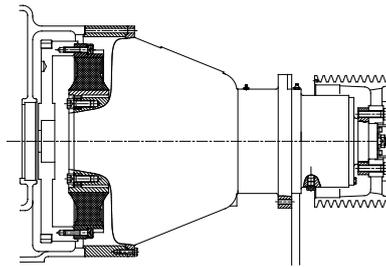
# Technology

## Drive system 1

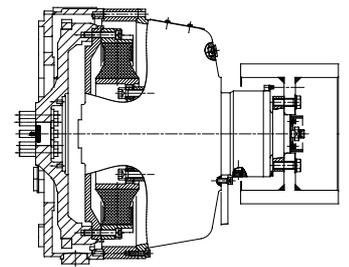


directly mounted on motor

## Examples of drive system 1

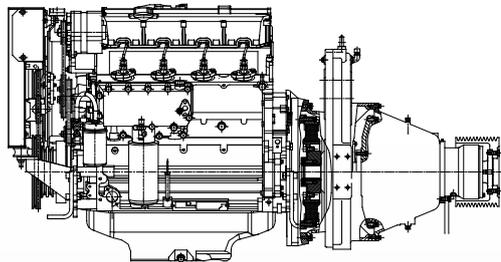


stable bearing support without pilot bearing



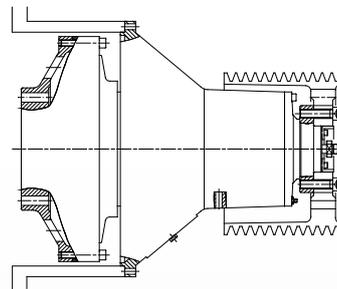
with pilot bearing

## Drive system 2



mounted on pump drive gear box

## Example of drive system 2



mounting at PVG



Shredder



Crusher

## Technical data

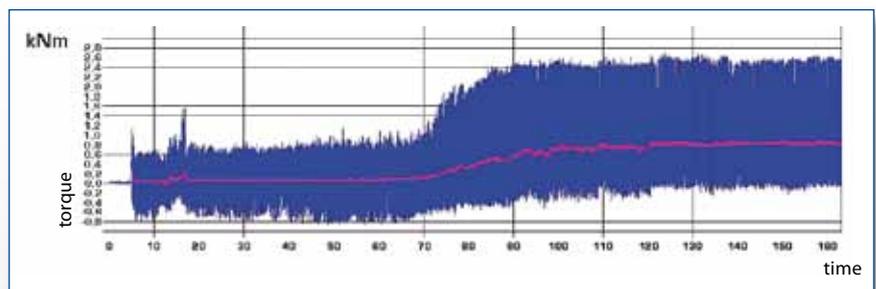
size	torque $T_0$ at 35 bar Nm	max. speed PHA rpm	need of oil per actuation		dimensions of installation	
			with new	with worn	SAE J 617 housing size	SAE J 620d, J 621 flywheel size
			friction discs			
			L	L		
81	765	3200	0,021	0,039	5-4-3	8"
101	1260	3000	0,035	0,064	4-3-2-1	10"
111	1420	2850	0,035	0,064	4-3-2-1	11½"
112	2870	2850	0,035	0,092	3-2-1-0	11½"
113	4240	2850	0,035	0,092	3-2-1-0	11½"
142	5240	2500	0,058	0,145	1-0-00	14"
143	7500	2500	0,058	0,189	1-0-00	14"
163	11100	2200	0,073	0,279	0-00	16"
183	13600	1960	0,080	0,308	0-00	18"
213	17300	1600	0,087	0,398	00	21"

## Measurements under operating conditions

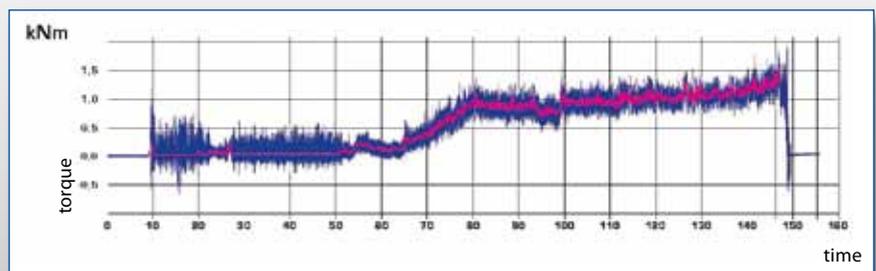
Reduction of torsional vibrations using a combination of Planox® clutch and flexible coupling.



Measurement of vibration and torque through telemetry at side

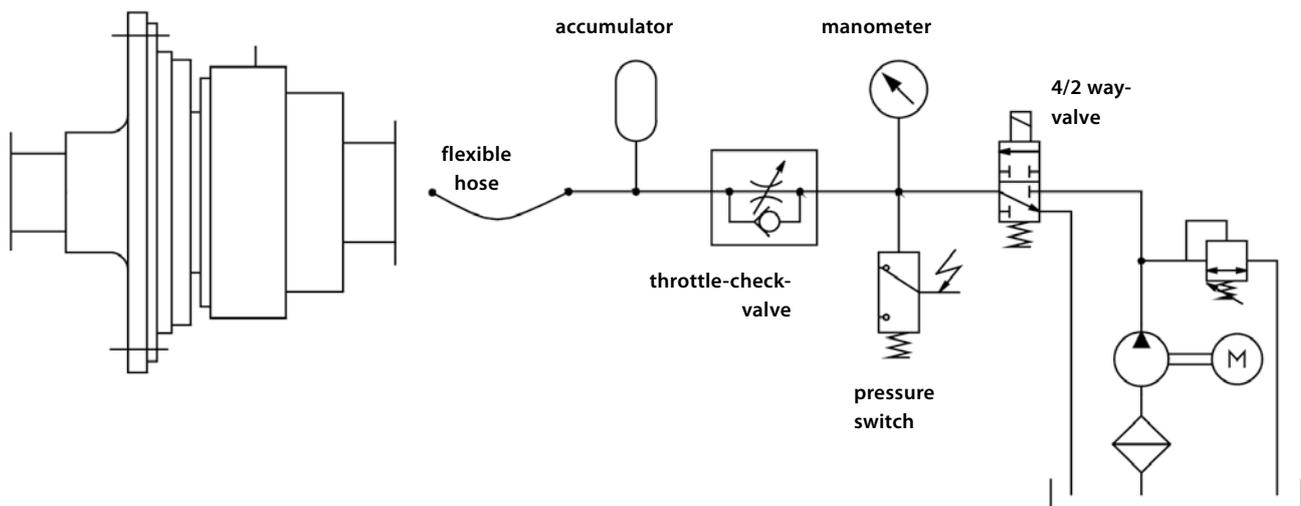


Torsional vibrations measured without flexible coupling.



Torsional vibrations measured with flexible coupling.

## Example of hydraulic actuating device



The hydraulic control of the clutch in the example consists of a 4/2-way-valve, an adjustable throttle-check-valve and an accumulator. A manometer and pressure switch are used for pressure monitoring. The clutch is connected to the hydraulic unit by a rotary union and a short flexible hose. To ensure a smooth engagement, the pressure build-up can be controlled via the throttle-check-valve.

The accumulator is used to absorb pressure peaks and adjust pressure fluctuations. For disengagement the oil is to be led back pressure free into the tank.

Alternatively, the DESCHcontrol.S system can be used for synchronising large masses.



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