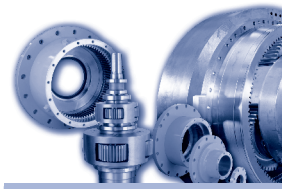
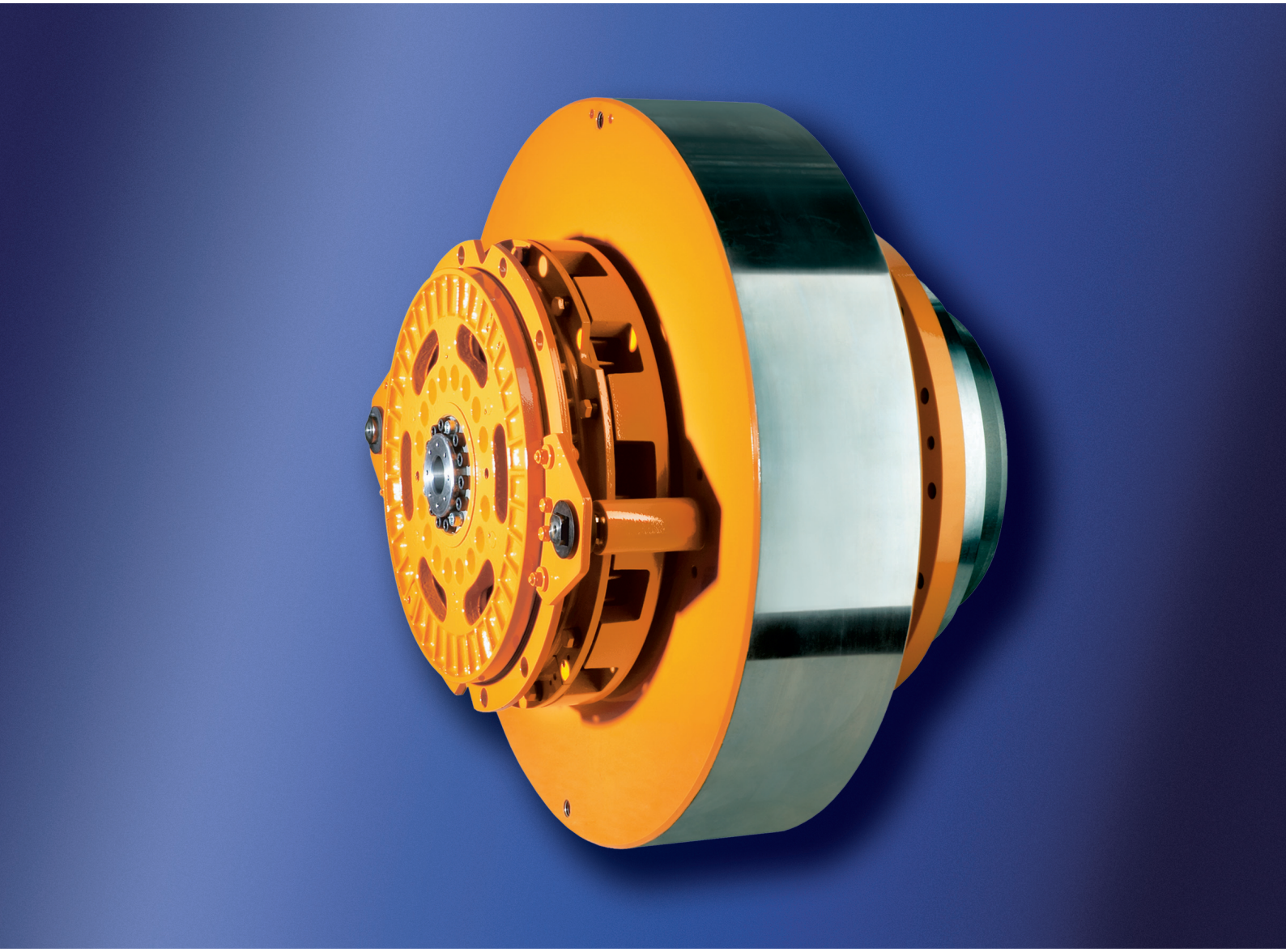
WHEN FULL POWER IS NEEDED

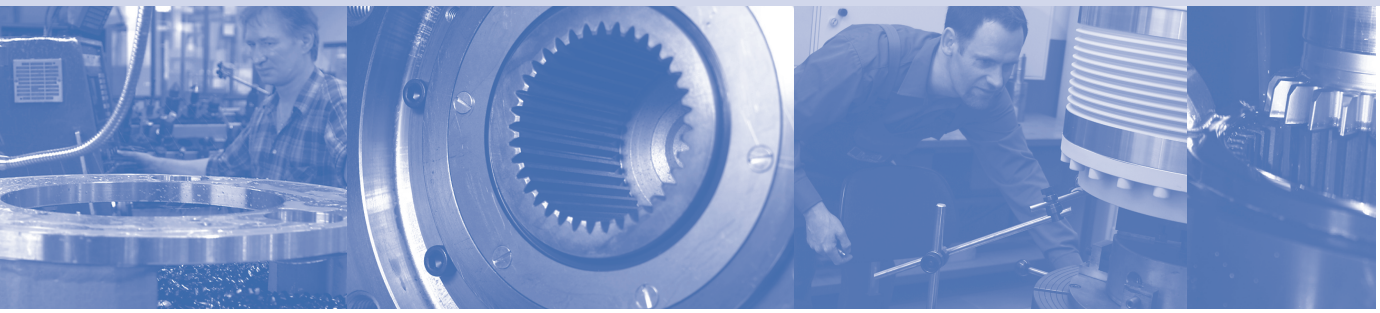
DESCH
DRIVE TECHNOLOGY



DESCH Complete Press Drive



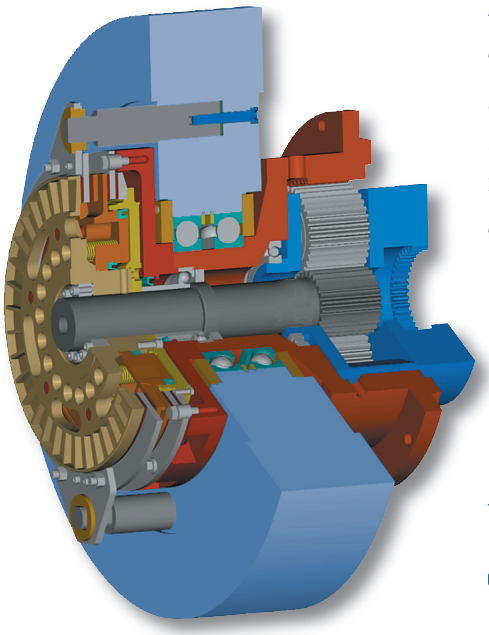
Technology KA-E 06



DESCH Standard Complete Press Drive

over 20 years of experience

Over this period of time DESCH has built more than one thousand two hundred complete drive units with a torque range from 1.6 kNm to 1600 kNm.



DESCH
Complete Press Drive KA

Application Areas

The KA replaces the entire spur gear transmission or one transmission stage on automatic punching machines, eccentric presses and knuckle-joint presses or similar machines where the power required by the machine is taken from a fast-moving flywheel.

The new DESCH standard complete drives cover a torque range of 16 kNm to 160 kNm with gear ratios 4 and 6.

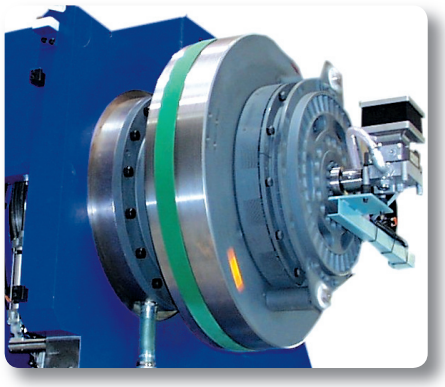
The unit which is ready to be installed consists of a single-stage high performance planetary gear, a flywheel as power accumulator as well as a pneumatically or hydraulically actuated clutch/brake combination.

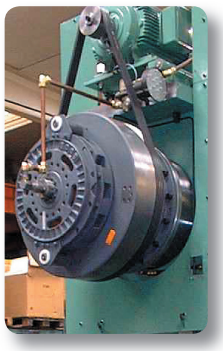
Your Benefits

- Compact prefinished unit which considerably reduces assembly time and costs, without the necessity of costs for design and manufacture
- Same connection measurements for gear ratios 4 and 6
- Extremely low moment of inertia, which means
  - very small braking angle = high level of operational safety
  - high stroke frequencies = increased productivity
  - less wear
  - lower energy costs
- High working capacity at a low number of revolutions
- Service friendly because of the high level of available spare parts
- Short delivery times as a result of standardised components
- Design test certificate issued by the liability association
- Environmentally friendly! Low noise level
- The press stand can be designed smaller, without any reduction in working capacity of the machine, which means it can be produced at a considerably lower price

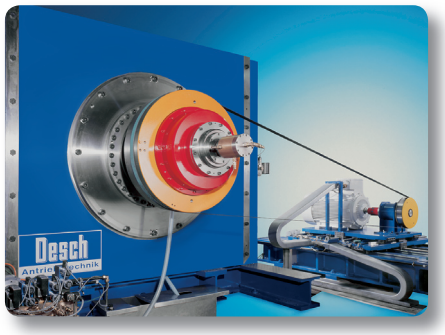
DESCH
DRIVE TECHNOLOGY

All-in-one-hand





DESCH
Complete Press Drive



DESCH Test Rig for
Complete Drives

DESCH Know How

DESCH offers you extensive product know how, starting with planning work right up to the final test run on our modern test rig.

DESCH Flywheel Modul

The flywheel runs on a hub which transfers weight and running forces directly to the machine stand.

Careful dimensioning of the roller bearing guarantees long service life of the flywheel bearings. Various diameters of flywheels are available for optimum adjustment to your machine.

DESCH Lutex® Clutch/ Brake Combination LKB

For decades now the pneumatically actuated DESCH Lutex®-LKB has been successfully used in press drives thousands of times all over the world. The allocation of clutch size is based on an air pressure level of 5.5 bar.

The LKB complies with the valid safety regulations.

DESCH Lutex® Clutch/ Brake Combination HKB

The hydraulically engaged DESCH Lutex®-HKB has successfully been used for decades in presses, punching machines, shears ore similar machines.

The drive is dimensioned by DESCH to determine the need of pressure, lubrication and cooling oil for your application. Planetary gearbox and HKB are sealed against another and can be supplied with different oil qualities (installation example see page 6).

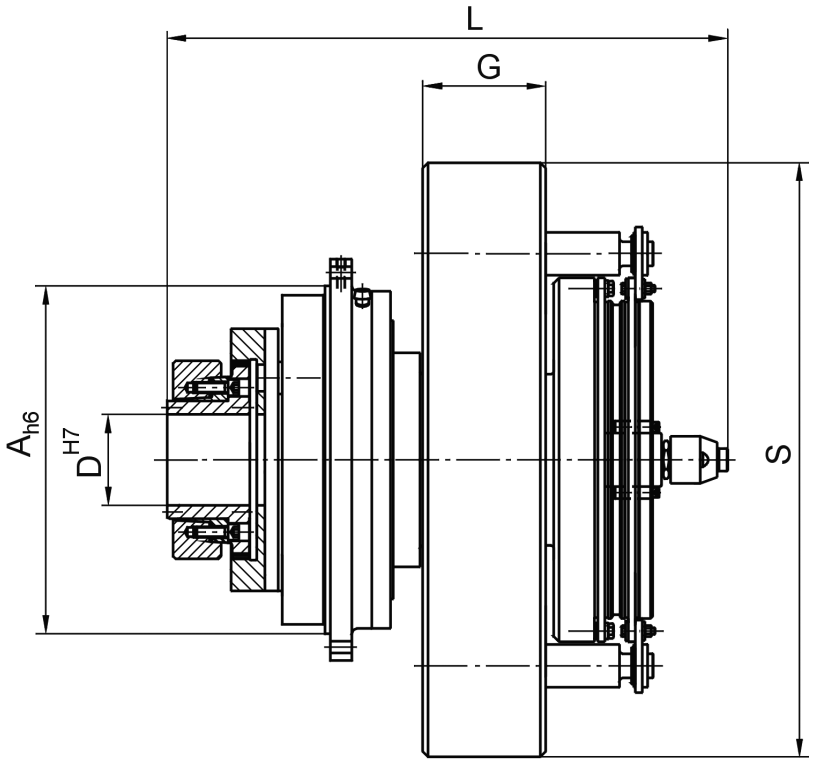
DESCH High Performance Planetary Gear

For over 50 years DESCH has been building planetary gears and as early as 1984 we were the first to integrate planetary gears into press drives. Since then, they have become a more permanent and tried and tested component of modern press technology.

Due to the power distribution to several gears a high torque can be transferred under tight spatial conditions. The moved masses are much smaller in comparison to conventional spur gear reducers. This considerable physical advantage allows essentially shorter brake angles or a considerably more favourable energy balance under a high switching frequency.

Form the output side the torque is transmitted via a tooth coupling which is attached to the driven shaft by means of a shrink disc. The gear unit has to be equipped with an oil circulation lubrication system.

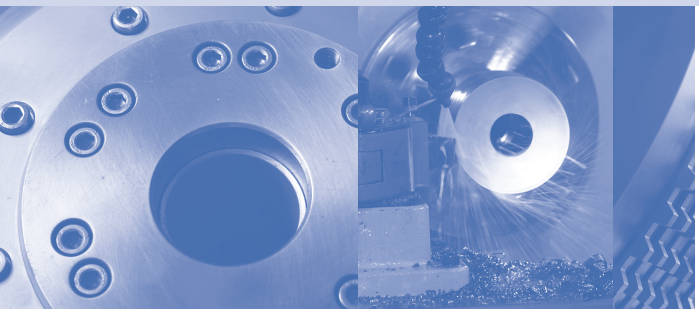
Dimensions



Standard Complete Press Drives with LKB

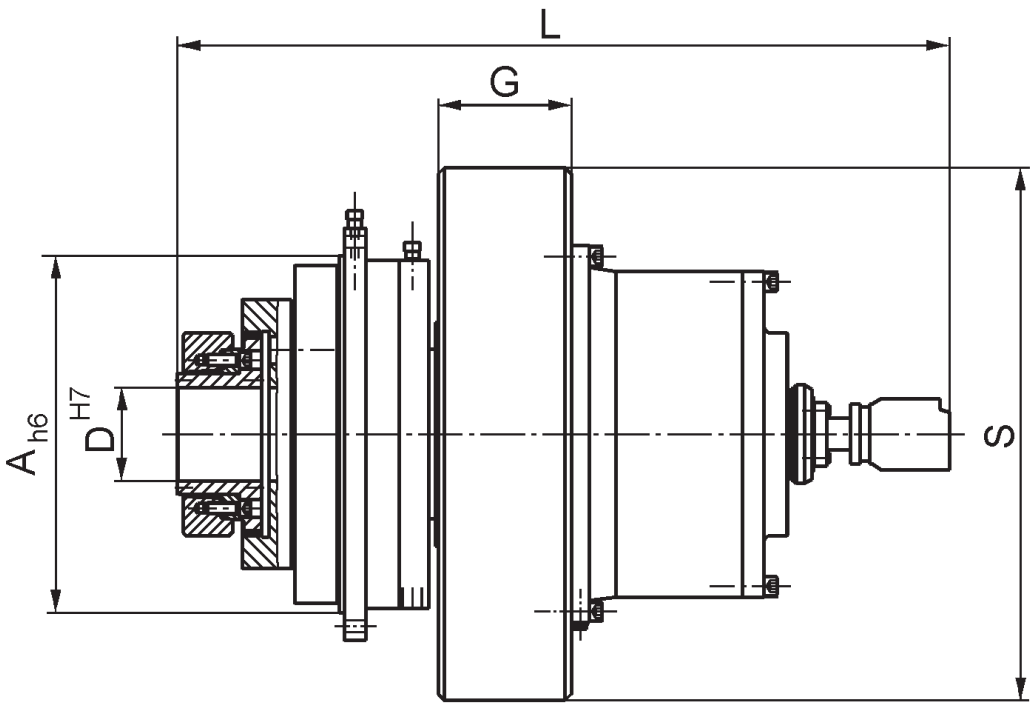
KA	T_{ab} Nm	A h6	D H7	G mm	L ~ i=4 i=6 mm	Primary flywheel diameter S with allocated moment of inertia J									
						S mm	J kgm²	S mm	J kgm²	S mm	J kgm²	S mm	J kgm²	S mm	J kgm²
16	16 000	430	120	180	783 763	780	50	995	135	1120	217	1210	297	1280	372
25	25 000	510	130	200	837 822	800	62	1015	162	1150	268	1250	375	1330	481
40	40 000	580	150	220	993 917	905	111	1065	215	1175	320	1260	424	1330	528
63	63 000	650	170	230	1107 1093	1060	218	1250	427	1380	637	1480	845	1565	1058
100	100 000	730	190	270	1217 1197	1205	431	1355	694	1465	951	1555	1209	1635	1479
160	160 000	820	220	300	1337 1314	1180	431	1325	696	1430	950	1520	1217	1595	1479

An oil circulation lubrication system must be provided for the gearbox. CLP gear oil (DIN 51517 T.3) according to ISO-VG 100 (DIN 51519 T.2) is to be used. Oil quantity in accordance to the calculation of DESCH.



DESCH
DRIVE TECHNOLOGY

Dimensions



Standard Complete Press Drives with HKB

KA	T_{ab} Nm	A h6	D H7	G mm	L ~ i=4 i=6 mm	Primary flywheel diameter S with allocated moment of inertia J									
						S mm	J kgm²	S mm	J kgm²	S mm	J kgm²	S mm	J kgm²	S mm	J kgm²
16	16 000	430	120	180	940 925	780	50	995	135	1120	217	1210	297	1280	372
25	25 000	510	130	200	1000 980	800	62	1015	162	1150	268	1250	375	1330	481
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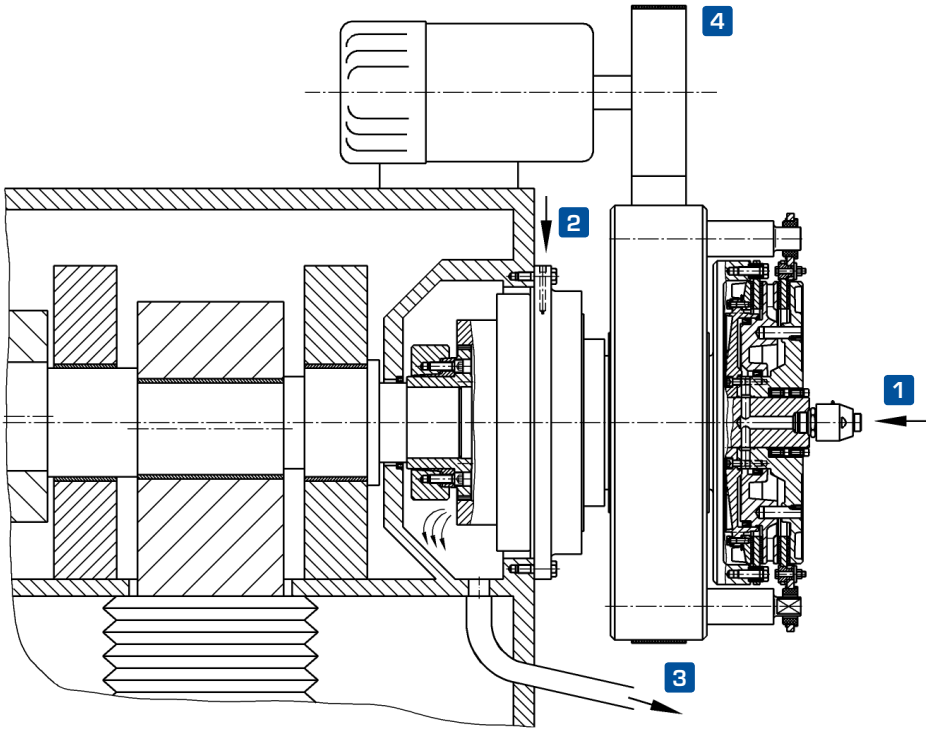
160	160 000	820	220	300	1540 1508	1180	431	1325	696	1430	950	1520	1217	1595	1479

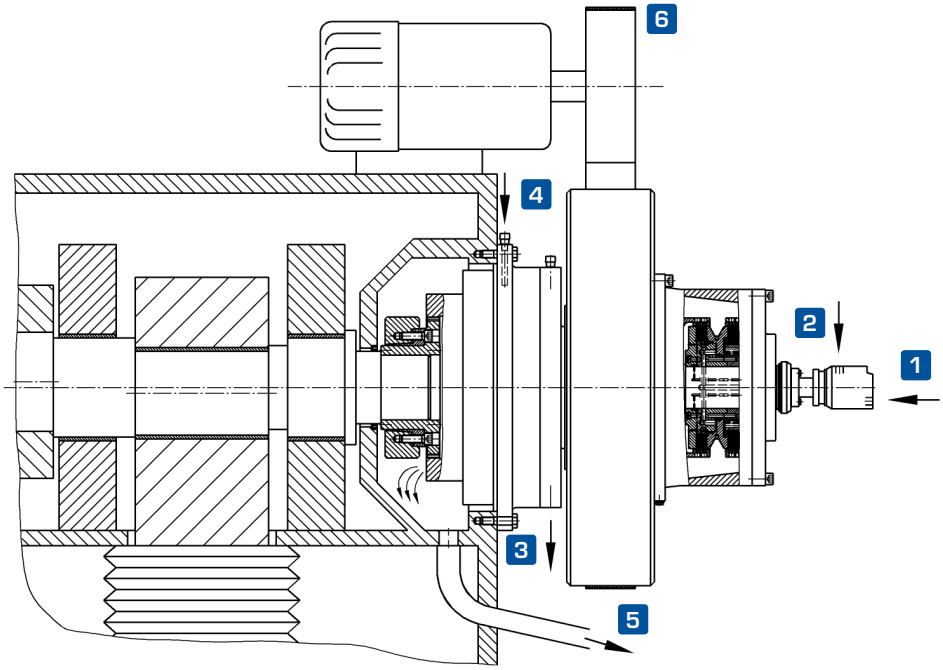
An oil circulation lubrication system must be provided for the gearbox. CLP gear oil (DIN 51517 T.3) according to ISO-VG 100 (DIN 51519 T.2) is to be used. Oil quantity in accordance to the calculation of DESCH.
Complete press drives with differing performance characteristics upon request.

Installation Examples



Installation example with DESCH Lutex® LKB

1. Compressed air for clutch
2. Input lubrication oil gearbox
3. Output lubrication oil gearbox
4. Belt execution depends on speed of belt and should be located in the center of the flywheel



Installation example with DESCH Lutex® HKB

1. Pressure oil for clutch
2. Input cooling oil clutch
3. Output cooling oil clutch
4. Input lubrication oil gearbox
5. Output lubrication oil gearbox
6. Belt execution depends on speed of belt and should be located in the center of the flywheel

DESCH
DRIVE TECHNOLOGY

Questionnaire to Fax +49 (0) 29 32 - 3 00-811

Complete Drive Selection

Please give us the necessary information from the questionnaire to prepare an offer. We can specify the driving torque, the gear ratio, the size of the flywheel and the type of clutch.

Questionnaire for Determination of Complete Press Drives KA

Customer: City Code, City:

Name: Telephone:

Department: Fax:

Street: E-Mail:

Kind of Machine:

Working Conditions: ☐ Permanent Stroke ☐ Single Stroke

Data of the machine:

Max. Press force				F	=		kN
Required working way				a	=		mm
Angle before bottom dead centre				a	=		°
crank radius				r	=		mm
Lenght of connection rod				L	=		mm
Max. speed of crank shaft				nE	=		rpm
Max. speed of the eccenter shaft at single stroke operation							
Inching speed	nE_E =		max. operating cylces with	z	=		rpm
Working speed	nE_A =		max. operating cylces with	z	=		rpm
Speed of clutch shaft				nK	=		rpm
Output speed of KA				nAB	=		rpm
Mass moment of inertia of the machine reduced to the output shaft of the KA				Jfr	=		kgm^2
Required brake angular				c	=		°
Reaction time of valve + electr. system				tst+tv	=		s

Data for flywheel determination

Required working capacity	W_{max}	=			kJ
At minimum speed of eccenter shaft	nE	=			rpm
At max. loss of speed of	i nE	=			%
Position of motor pulley to flywhee (e.g. position at 2 ó clock = 60°)	b	=			°
Belt force	F_R	=			kN

Additional Data

DESCH
DRIVE TECHNOLOGY

Product Range

Friction Clutches

Planox® friction clutches
Conax® friction clutches
Centrex® centrifugal clutches

Flexible Couplings

Hadeflex® couplings
Habix® couplings
Orpex® couplings
DESCH Flex couplings
DESCH HRC couplings

Rigid Couplings

Press Drives

Lutex® clutch/brake combinations

Complete press drives

Gears

Planetary gears
Special gears

Complete Transmission Solutions

Flywheel back gears for no-delay units
Drive stations for stretcher
Levelling units
Back gears with engageable/
disengageable clutches

Belt Drives

V-belt pulley drives
Timing belt drives
Flat belt drives
V-belt pulley drives
with taper bushes
V-belt pulley and flywheels
to customers' specification
V-belts and timings belts
Bolt-on-hubs
Weld-on-hubs

Bearings

Grease lubricated plain bearings

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DCT DESCH Clutch Technology	+49 (0) 29 32	300-169	300-50
DGP DESCH Gearbox and Press Drives	+49 (0) 29 32	300-153	300-811

DESCH is a member

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