

## DESCH COMPLETE PRESS DRIVE ECO-KA



## The new DESCH ECO-KA

is a high-quality complete press drive (KA) with a planetary gearbox, flywheel and pneumatically operated clutch/brake combination (CBC) that is standardized to the following main components:

- a fast-running standard flywheel from which large amounts of energy can be extracted even at very low output speed
- a high-performance planetary gearbox with a gear ratio of  $i = 5.7$ , with a effectivity over 98% and extremely low moments of inertia
- a tried and tested pneumatically operated clutch-brake combination for permanent, low-wear operation with a clamping set connection to the clutch shaft and options that allow you to adapt to difficult operating conditions.

The ECO-KA series covers the torque range between 1 and 125 kNm.

### Which machines is the ECO-KA intended for?

For machines in continuous single-stroke operation which: accelerate the drive train; provide the working capacity from a flywheel as the energy store that is necessary for the work process; machine stop again. It is mainly used in presses, sheers, stamping presses, etc. in a torque range up to 125 kNm, which are to be fitted with a **high-quality, powerful drive**.

In this connection, the designs below are particularly suitable for:

- High-quality C-frame presses,
- 1- and 2-point presses with longitudinal shaft arrangement,
- 2-point presses with transverse shaft arrangement with the ECO KA as the gearbox input stage
- increase performance by changing over with used flywheel machines

### Why this drive of all the others?

DESCH has developed the drive concept of the KA and is the market leader in this drive sector. More than 2,500 complete drives in the torque range between 1,600 and 1,600,000 Nm are sold all over the world. 30 years production of complete drives and more than 60 years experience in development of planetary gearboxes, clutches and brakes led to the design of the ECO-KA. This also results in high quality standards, smooth running and very high service life. We achieve this by using high-quality materials that we process with the greatest of care. This means, for example, that the planetary gears and ring gears are hardened and grinded and the high-speed flywheel and CBC components are balanced dynamically. Finally, every drive is tested extensively on our own test rig.

**The ECO-KA is powerful, economic and has a long time life.**

### Your benefits

Rigorous simplification and limitation to the key functions has led to a standard drive that is extremely competitively priced and has very short delivery times. And of course it complies with DESCH's exacting quality standards. Apart from this, the drive stands out due to its very low moment of inertia, which has been reduced even further compared to the previous series.

This results in:

- a shorter braking angle, which leads to more safety and higher productivity
- a lower energy requirement and less wear, since the system does not need to accelerate and decelerate as much mass resulting in less friction work per switching operation.

**This means that it is better value for money, safer, more economical and more productive.**

The basic benefits provided by the KA of a ready-to-install unit including, for example:

- no design work,
- a drive structure is not necessary,
- purchasing and installing the drive components are not necessary,

simplification of the machine no assembly, frame apply to the ECO-KA of course.

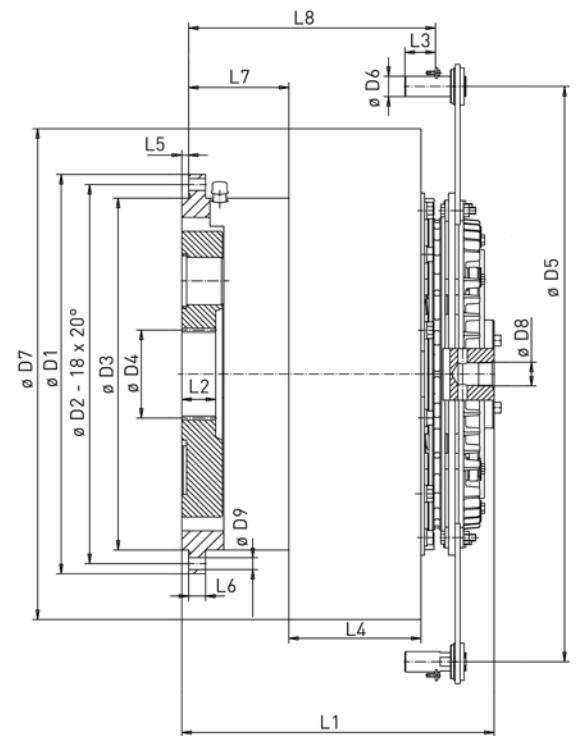
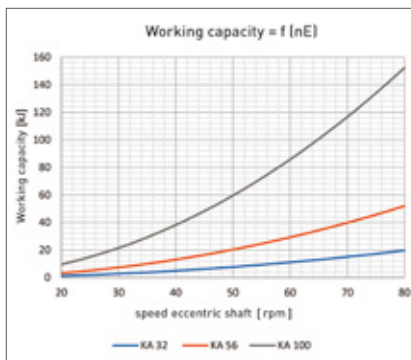
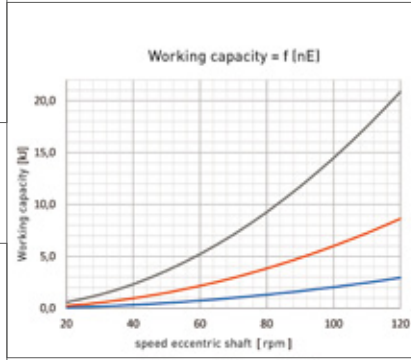
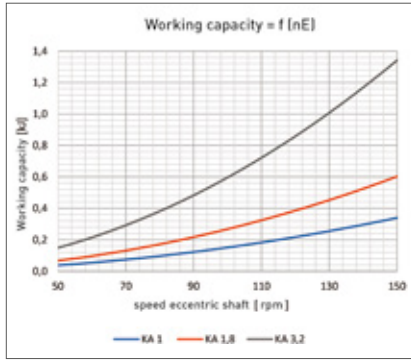
### What is the benefit to your customer?

Machines that are fitted with an ECO-KA score heavily with all the advantages of a DESCH press drive:

- low-noise, low-vibration operation
- a powerful machine using tried and tested technology
- a durable quality product that is tested by the manufacturer
- low operating costs for energy and servicing
- greater safety and higher productivity due to the shorter braking angle
- high spare part availability
- professional DESCH 24-hour service team
- Modular components – due to the modular structure of the pneumatic CBC that is used, it is possible to adapt it to new demands, like heavy impact loading in the working process, or shorter braking angles, for example, by retrofitting rather than having to dismount the drive.

### How is the ECO-KA attached to the machine?

- Push planet carrier onto the appropriately machined DIN 5480 teeth of the shaft to be driven and secure them with retaining ring.
- Carefully mounting of the spline into the teeth of the planetary gears, push it via the teeth to the machine base and bolt the gearbox flange to the machine base
- Mount the lubricating oil feed
- Put on the drive belt for the flywheel
- Fasten the brake disc
- Attach the rotary connection for the compressed air supply



KA size		KA 1	KA 1,8	KA 3,2	KA 5,6	KA 10	KA 18	KA 32	KA 56	KA 100
Output torque at 5 bar operating pressure	Nm	1.000	1.800	3.200	5.600	10.000	18.000	32.000	56.000	100.000
Max. output torque at 5,5 bar operating pressure	Nm	1.250	2.250	4.000	7.000	12.500	22.500	40.000	70.000	125.000
Max. output speed V-belt flywheel drive	rpm	475	431	369	290	234	194	167	137	110
Max. speed at 42 m/s V-belt velocity	rpm	2.700	2.450	2.100	1.650	1.330	1.100	950	780	625
Mass moment of inertia of flywheel	kgm <sup>2</sup>	0,31	0,54	1,2	4,2	12,2	29,5	62,3	165	484
<b>Diameter</b>										
D1 Gearbox flange	mm		310		425		590		850	
D2 TK-Gear screw connection	mm		290		400		560		800	
D3 Centering h <sub>6</sub>	mm		265		370		520		740	
D4 Spline profile acc. to DIN 5480	mm		70x2x34		100x2x48		150x3x48		200x5x38	
D5 Pin distance	mm		375		550		850		1160	
D6 Pin	mm		14		14		30		40	
D7 Flywheel	mm		324		487		725		1026	
D8 Rotary union	mm		M16		M35x1,5		M35x1,5		M50x1,5	
D9 Through bore 18 x 20°	mm		9		13,5		17,5		26	
<b>Lengths</b>										
L1 Total length	mm		244		350		460		660	
L2 Spline length	mm		28		35		50		90	
L3 Pin length for 2-point suspension	mm		20		20		45		50	
L4 Flywheel width	mm		90		140		195		260	
L5 Centering	mm		10		10		10		10	
L6 Flange width	mm		15		20		25		40	



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