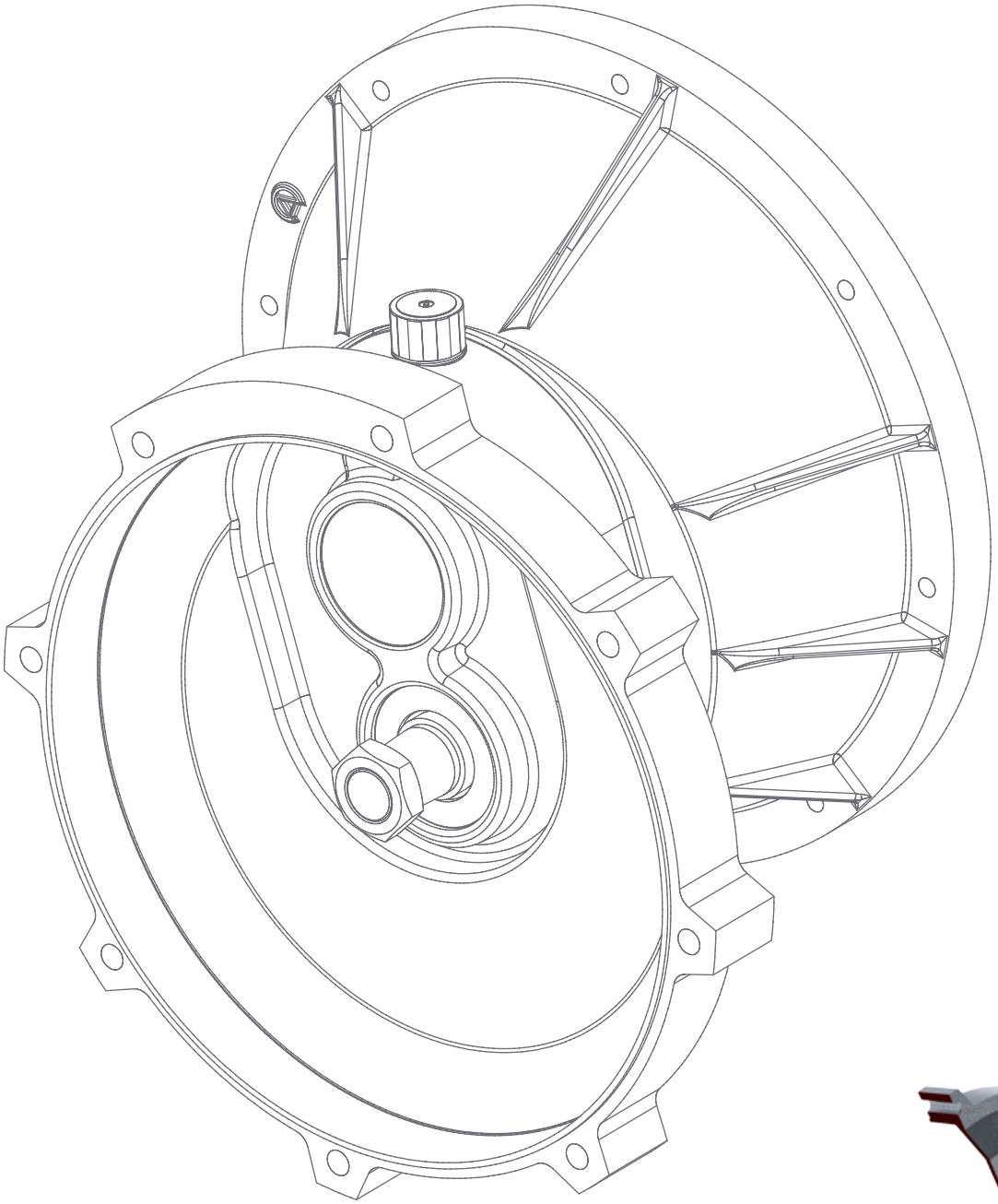
AMSBECK

Maschinentechnik



Controlled dynamics

Gearboxes

Experts in our field since 1982.

Strong gearboxes for small powers – Torque is our passion!

Amsbeck Maschinentechnik GmbH manufactures reduction gearboxes in the power range of up to 40 KW.

Since 1982 we have been developing and customising a variety of single and double-stage gearboxes with transmission ratios of i=1.6:1 to 10: 1. Our gearboxes are primarily used as speed-reduction gearboxes for engines with a torque that is too low for the driven machine.

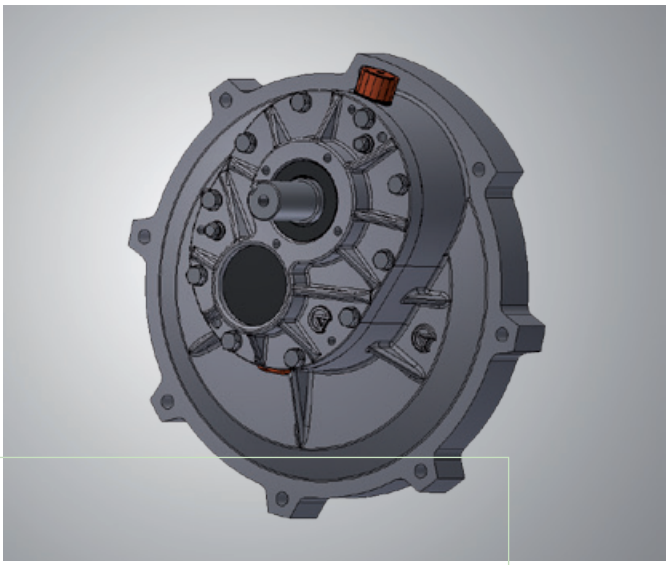
Our team of highly qualified and experienced employees produces and sells gearboxes all over the world from the Everswinkel location in the heart of the Münsterland region.

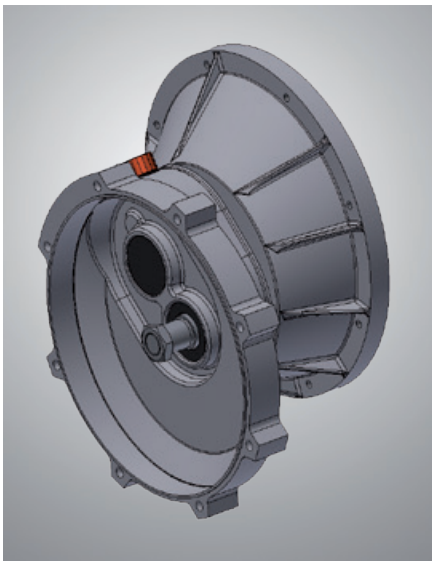
We offer advanced, tried-and-tested and long-lasting drive solutions at extremely good value for money and for various different markets. Our products stand for dynamics and safety.

Tell us what you require – and we will provide the solution swiftly and competently.

Susanne Weritz, manageress

Flange-mounted gearbox





Series 901 (i=1.6:1 to 2:1)

You have a choice of two versions of cover for the output side of the gearbox: Cover with passage for different output shafts (picture on left) and cover with cast-on SAE 5 flange (picture on right).

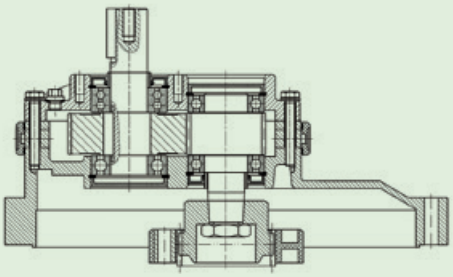
The flange-mounted gearboxes of the series 901 stand out for their compact and slim design. Moreover, the slight shaft misalignment resulting from its design makes it particularly effective for pump, compressor and generator drives.

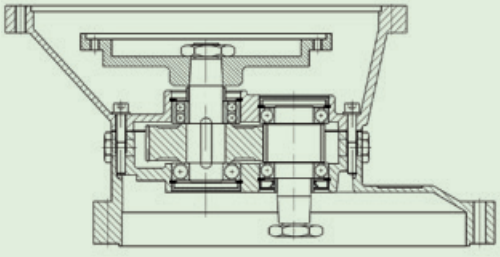
The torque-transmitting components of the gearbox consist of high-strength and hardened special steel. Furthermore, inserted helical gearing in the gearwheels facilitates a smooth and low-noise running as well as the optimal torque transmission. The housing components are made of a high-strength yet light aluminium alloy, leading to a small total weight of the gearbox. In addition, the double-row bearing ensures a stable output.

The gearboxes of the series 901 have a cast-on SAE 5 flange on the engine side as standard. This means the gearboxes can attached to the engine directly. Adapter flanges for other connecting dimensions are also available.

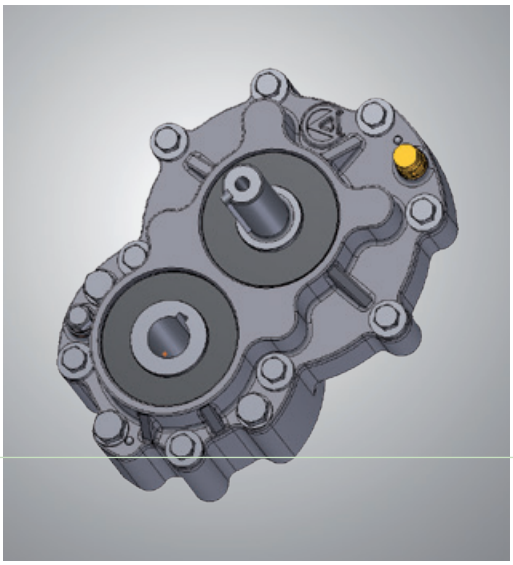
Centrifugal clutches for the no-load starting of the engine are part of the optional equipment, as are torsionally flexible couplings, which can be integrated into the entire drive concept so as to prevent torsional vibrations. This additional equipment has no influence on the overall length of the combination of engine and gearbox.

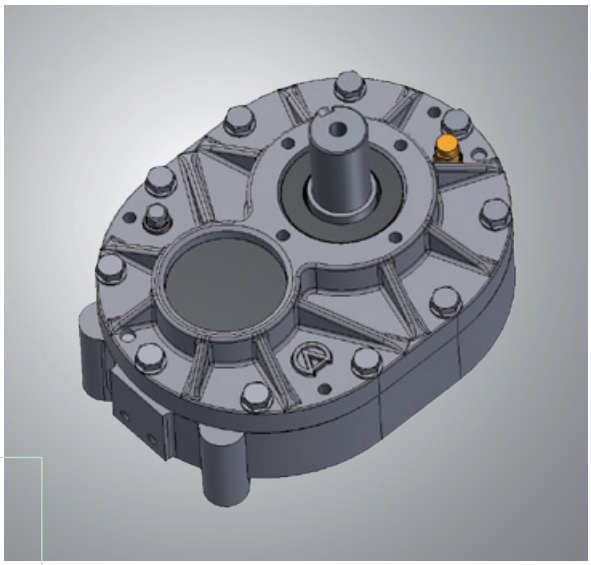
Three shafts with different diameters are available as output shafts: Cylindrical Ø 25.4 mm; Cylindrical Ø 30 mm; Conical Ø 30, Taper 1:10 – a connecting flange SAE 6 ½ is available for this directly. Thus the gearbox can be connected directly with a generator or pump.





Shaft-mounted gearbox





Series 902 (i=2:1 to 3:1)

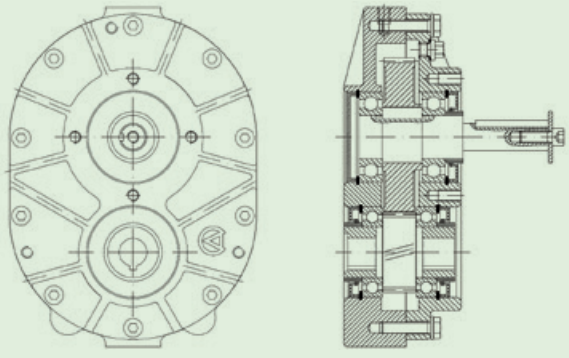
The gearboxes are available in two different executions: slim execution i=2: 1 (picture on left) and broad execution i=3: 1 (picture on right).

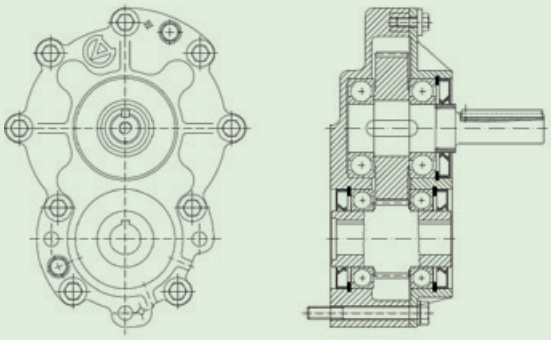
The gearboxes of the series 902 are designed as shaft-mounted gearboxes. They are predominantly used for engines that have a shaft journal. The gearboxes are merely pushed onto the shaft and axially secured. The power of the engine is transmitted to the gearbox via a feather key.

For both gearbox versions, you can choose the hollow pinion shaft with cylindrical borehole in diameter Ø 25.4 mm or in diameter Ø 19.05 mm.

For the gearbox with transmission ratio i=2:1, you have just a cylindrical output shaft with diameter Ø 19.05 mm available to you. The broad gearbox i=3:1 however is available with different output shafts in the diameter cyl. Ø 25.4 mm, cyl. Ø 30 mm and conical Ø 30 mm with a taper ratio of 1:10.

Different centrifugal clutches, which can be switched between the engine and the gearbox, are available as accessories for the shaft-mounted gearboxes of this series.





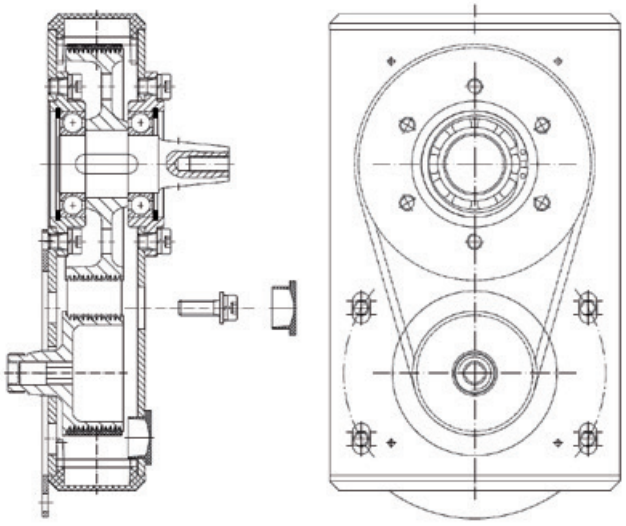
Belt gearbox

Series 903: (i=2:1)

The gearboxes of the series 903 are belt gearboxes where the power is transmitted via Poly V belts. A separate tensioning unit can be left out for reasons of costs and space. The gearbox is attached by means of slotted holes via which the belt is also tensioned. The crankshaft bearing already in the engine is used to support the drive shaft of the gearbox. The shaft is therefore screwed directly into the crankshaft prepared for it. This means that these gearboxes do not require their own bearing. The main components of these gearboxes, such as the housing and the bearing flanges of the output shafts, are made of high-strength aluminium alloys. This also has a positive effect on keeping the total weight of the gearbox low.

The assembly openings on the drive side and at the pipe ends are closed up by plastic bushings. This means the gearbox is dust-tight and splash-proof. The gearbox can be installed on the engine either horizontally or vertically.

The gearbox 903-5992 shown here was developed especially for the Hatz diesel engine of the series 1B20.



Sawing technology

Selected applications

Our various fields of application

– Generator applications
– Pump applications
– Compressor applications
– Sawing technology
– Drilling applications
– Racing

Drilling applications

Pump applications

Compressor applications

Amsbeck Maschinentechnik GmbH
Boschweg 15 | 48351 Everswinkel
Phone +49 (0)2582 66812-0
Fax +49 (0)2582 66812-101
info@amsbeck-mt.de
www.amsbeck-mt.de

Quote request for gearboxes

Quote request from company: _____

Contact: _____

Telephone: _____ Fax: _____

Email: _____ Website: _____

Desired transmission ☐ 1.6:1 ☐ 2.0:1 ☐ 2.5:1 ☐ 3.0:1 ☐ Other: _____

Drive speed [rpm]: _____ Drive power: ☐ kW ☐ HP _____

Application factor k_A: _____ Output power: ☐ kW ☐ HP _____

Running time: _____

Driven by: ☐ 1-cylinder combustion engine ☐ Multi-cylinder combustion engine ☐ Electric motor

Manufacturer, engine type: _____

Driven machine: _____ Manufacturer, machine type: _____

Application factor k_A:

An equivalent torque is taken as the basis for designing a gearbox. The necessary gearbox size is coordinated to the respective application by means of application factors. Using these application factors means the boundary conditions of the driving and working machine are given sufficient consideration.

Application factor Operating conditions k_B:

Working machine	Functioning of the working machine		
	Steady	Average shocks	Strong shocks
Electric motor	1.0	1.5	1.75
Combustion engine 1–2 cyl.	1.25	1.75	2.0
Combustion engine 3–6 cyl.	1.1	1.6	1.8
Hydraulic motor	1.25	1.75	2.0

Application factor Switching frequency k_S:

Functioning of the working machine	Starts per hour		
	< 10	10 – 60	> 60
Application factor	1.0	1.2	1.3

Application factor Duty cycle k_E:

Functioning of the working machine	Operating time per day		
	8 h	16 h	24 h
Steady	1.0	1.25	1.5
Average shocks	1.25	1.5	1.75
Strong shocks	1.5	1.75	2.0

The application factor kA is the multiplication of the individual application factors: $k_A = k_B \times k_S \times k_E$

Do you need special solutions?

We like a new challenge – please contact us.

Further product information available

Find out also about our:

Centrifugal clutches | Centrifugal brakes | Hydraulic multiple disc clutches | Electromagnetic multiple disc clutches

Amsbeck Maschinentechnik GmbH
Boschweg 15 | 48351 Everswinkel

Phone +49 (0)2582 66812-0
Fax +49 (0)2582 66812-101

info@amsbeck-mt.de
www.amsbeck-mt.de

We are certified in accordance with:
Testing standard ISO 9001:2008
Certificate reg. no.: 09 100 50 59