

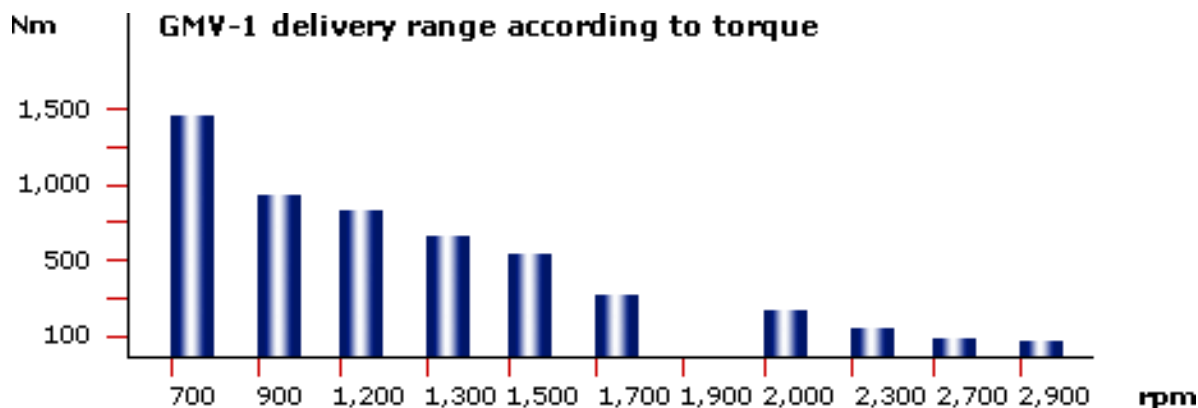
Direct-Current Shunt-Wound Motors Type GMV-1 (Small Machines)

GMV-1 (fully laminated, compensated)		Conventional applications
Cooling method:	IC 06, IC 37, IC 86 W, IC 0666 and IC 410	Steel and aluminum rolling mills Mixers and kneaders in the rubber industry Paper industry Foil production systems
Degree of protection:	IP 23 to IP 55	

As of frame size 71 – quality to attractive prices !

Helmke DC drives offer reliability and safety and their solid type of construction makes them particularly suitable even for extreme requirements.

All drives fulfill common standards (IEC, DIN/VDE, EN). In addition, the machines are fully laminated, in compact design and laid out for temperature class H.



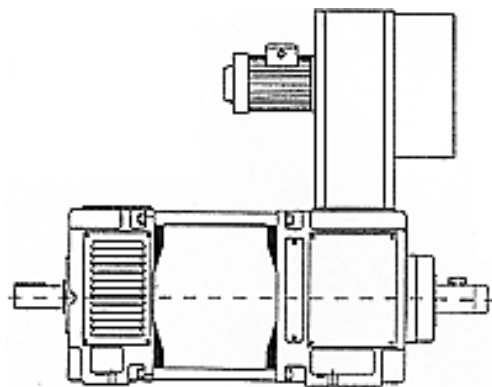
Modifications

Helmke DC Technology Current series, brand-new

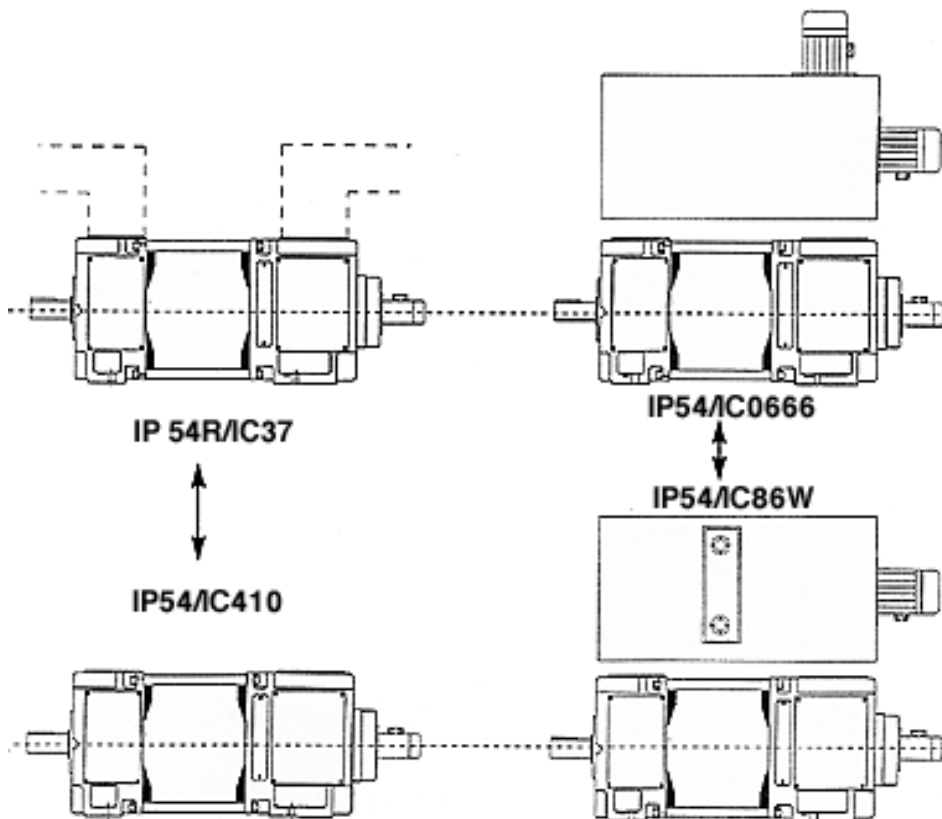
All drives are in standard version in stock. Fully laminated motors in rectangular design, with attached external filter fan, degree of protection IP 23, frame type B3 (or B3 / B5), temperature monitoring, cooling method IC 06, tachogenerator 60 V/1,000 rpm

These motors can be modified as follows:





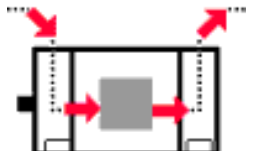



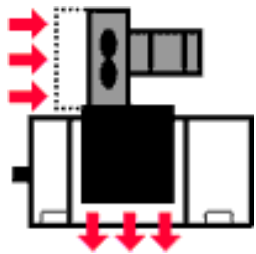

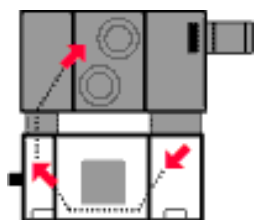

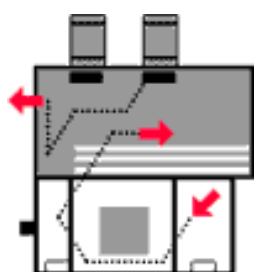

- electrical adaptation and testing in our testing stations
- mechanical reinforcement
- special mounting-foot holes, shafts, flanges, etc.
- tachogenerators and pulse sensors in another version ex stock
- retrofitting of monitoring equipment
- construction to customers' requirements with acceptance test



Modifications can be carried out in view of cooling method and degree of protection.



Cooling methods

IEC-Code		Degree of protection	Description	Efficiency with regard to basic data
IC 06		IP 23	Internally cooled by separate cooling fan with three-phase fan motor	 100 %
IC 17		IP 23	Internally cooled; air inlet through external air duct; air-outlet through louver plates	 100 %
IC 37		IP 54/55	Internally cooled through external and closed air duct system	 100 %
IC 410		IP 54/55	Internally cooled closed machine, convection cooling.	 17,5 %
IC 416		IP 54/55	Housing cooled by separate cooling fan only for smaller machines up to approx. frame size 180	 33,5 %
IC 86W		IP 54/55	Top-mounted air / water-heat exchanger	 100 %
IC 666		IP 54/55	Top-mounted air / air-heat exchanger	 62,2%

Static converters

Helmke is able to supply thyristor static converter switchboards of 140 up to 1,500 amperes in four-quadrant version, ready for installation, ex stock.

These are mainly ABB-standard-switchboards ("Easy Drive-Concept with DCS 500 static converter").

Static converter module with reactor, control unit and choke are also in stock as well as four-quadrant apparatus from ABB, series DCS 400 and 500.

Not only motors but also static converter switchboards can be hired from stock.



Complete motor-static converter-units and field static converters up to 35 amperes provide a fast and modern replacement, instead of three-phase commutator motors.

Rolling mill motors

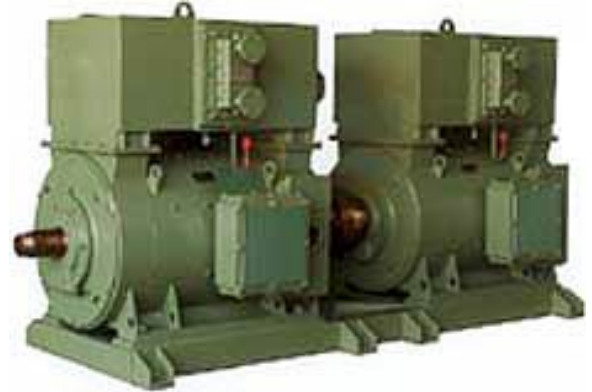
These include large direct drives for rolling mills up to a weight of 150 tons.

(Send us your [inquiry](#) and we will offer our possibilities within the new and used sector.)

Furthermore, Helmke supplies mill motors according to the American A.I.S.E. standards 600, 800 and 1,000.

In addition, a further focus is reproduction of European mill motors from Siemens, AEG, BBC and Elin. Fully exchangeable motors are offered as well in this sector.

This product range is completed by DC roller table motors in single or series production.



Example: Tandem drive consisting of two DC mill motors, GMV 624 - 082, 370 kW, 440 V, 340 rpm

Complete motor-static converter-units and field static converters up to 35 amperes provide a fast and modern replacement in stead of three-phase commutator motors.

Special motors (reproductions)

Helmke – Special motors (reproductions)

If older drives have to be replaced or a replacement motor have to be obtained, manufacturers frequently are no longer able to supply or only to extremely high prices.

Due to a comprehensive archive, which includes documents of various manufacturers, Helmke is also able to check the data for older series and is therefore in the position to offer appropriately modified drives within a normal delivery period.

Examples:

- fully interchangeable DC motors as replacement for Siemens motors of VG series produced during the sixties
 - interchangeable replacement motors for ASEA motors with air/water cooler
 - delivery of a replacement motor, adapted electrically and mechanically with a baseframe for 12 identical drives purchased in 1970 for a rolling mill
 - delivery of DC crane drives, which can be replaced immediately without changes to already existing supply and control equipments
 - delivery of a complete Leonhard set for special applications in mining
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Special drives for specific branches

These include

- rib-cooled DC motors with a high degree of protection for applications as battery powered emergency drives, crane drives and marine drives
- explosion proofed motors in EEx-d and EEx-p
- DC gear motors
- traction motors
- special generators