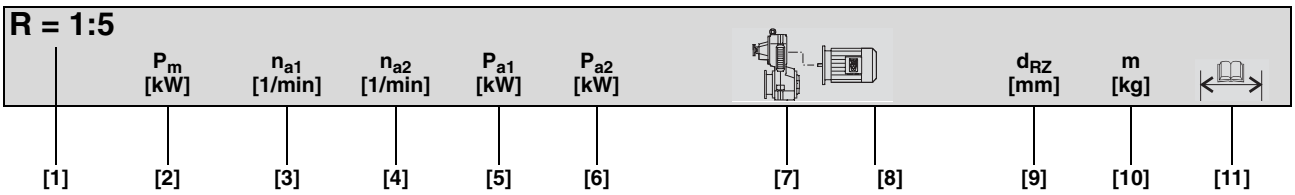
7 Important Information, Tables and Dimension Sheets

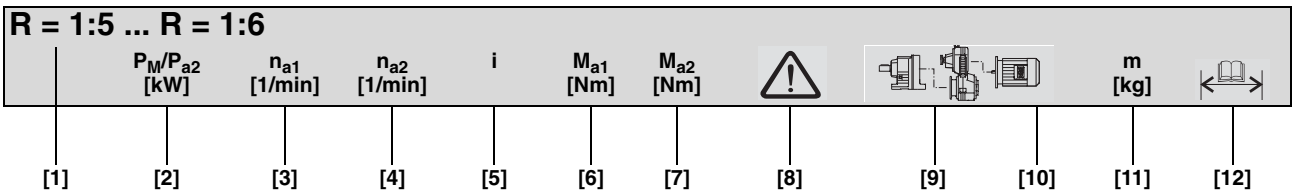
7.1 Structure of the selection tables

Example: Selection table for solo variable speed geared motors:



[1] Setting range
[2] Rated power of driving motor
[3] Minimum output speed
[4] Maximum output speed
[5] Output power at n_{a1}
[6] Output power at n_{a2}
[7] Variable speed gear unit type
[8] Motor type
[9] Diameter of pinion spigot
[10] Weight
[11] Dimension sheet page number

Example: Selection table for R, F, K and S variable speed gearmotors:



[1] Setting range
[2] Rated power of driving motor / output power at n_{a2} (only for R, F and K gear units)
[3] Minimum output speed
[4] Maximum output speed
[5] Gear unit reduction ratio (* Finite gear unit reduction ratio)
[6] Output torque at n_{a1}
[7] Output torque at n_{a2}
[8] Please refer to Sec. "Thermal limit power for variable speed gearmotors"
[9] Gear unit and variable speed gear unit size
[10] Motor type
[11] Weight
[12] Dimension sheet page number

Thermal limit power for variable speed gearmotors

The power values given in the selection tables for variable speed gearmotors are mechanical power limits. Depending on the mounting position, however, gear units may become thermally overloaded before they reach the mechanical power limit. For mineral oils, corresponding cases are indicated in the selection tables by having the mounting position specified (see the column shown in the illustration below).

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Please contact SEW if the mounting position you require is the same as one of those indicated. By considering the actual operating conditions, it will then be possible to recalculate the thermal limit rating based on the specific application. Alternatively, suitable measures can be taken (e.g. using a synthetic lubricant with higher thermal stability) to increase the thermal limit rating of the gear unit. The following data are required for recalculation:

Gear unit type .....

Output speed range [n_{a1} -n_{a2}] ..... 1/min **Gear ratio i** .....

Ambient temperature ..... °C **Cyclic duration factor cdf** ..... %

Power drawn [P] ..... kW

Installation location:.....
...in small, enclosed rooms
...in large rooms, halls
...in the open

Installation situation: .....
e.g. steel foundation, concrete foundation

7.2 Dimension sheet information

Scope of delivery

= Standard parts supplied by SEW.

= Standard parts not supplied by SEW.

Tolerances

Shaft heights

The following tolerances apply to the dimensions given:

h	≤ 250 mm	→ -0.5 mm
h	> 250 mm	→ -1 mm

Foot-mounted gear units: Check the mounted motor because it may project below the mounting surface.

Shaft ends

Diameter tolerance:

∅	≤ 50 mm	→ ISO k6
∅	> 50 mm	→ ISO m6

Center bores according to DIN 332, shape DR:

∅	= 7...10 mm	→ M3
∅	> 10...13 mm	→ M4
∅	> 13...16 mm	→ M5
∅	> 16...21 mm	→ M6
∅	> 21...24 mm	→ M8
∅	> 24...30 mm	→ M10
∅	> 30...38 mm	→ M12
∅	> 38...50 mm	→ M16
∅	> 50...85 mm	→ M20
∅	> 85...130 mm	→ M24
∅	> 130 mm	→ M30

Keys: according to DIN 6885 (domed type)

Hollow shafts

Diameter tolerance:

∅	→ ISO H7 measured with plug gauge

Multiple-spline shafts

Dm	= Measuring roller diameter
Me	= Check size

Flanges

Centering shoulder tolerance:

∅	≤ 230 mm (flange sizes A120...A300)	→ ISO j6
∅	> 230 mm (flange sizes A350...A660)	→ ISO h6

Up to three different flange dimensions are available for each size of VARIBLOC®, VARIMOT®, helical gear unit, AC (brake) motor and explosion-proof AC (brake) motor. Flange dimensions available for each size. The possible flanges per size are indicated in the relevant dimension sheets.

Lifting eyebolts, suspension eye lugs

The gear units and motors listed in the overview below are equipped with cast-on suspension eye lugs, screw-on suspension eye lugs or screw-on lifting eyebolts. All other gear unit or motor sizes are supplied without any special transport fixtures.

Gear unit/motor type	Screw-on,		cast-on suspension eye lugs
	lifting eyebolts	Eyebolts	
R..37-R..57	-	•	-
R..67-R..167	•	-	-
RX57-RX67	-	•	-
RX77-RX107	•	-	-
F..27-F..157	-	-	•
K..37-K..157	-	-	•
K..167-K..187	•	-	-
S..37-S..47	-	•	-
S..57-S..97	-	-	•
≥ DV112	•	-	-

Breather valves

The gear unit dimension drawings are always shown with screw plugs. The corresponding screw plug is replaced by an activated breather valve at the factory depending on the ordered mounting position M1...M6. This means the contour dimensions may be slightly different.

Shrink disc connection

Hollow shaft gear unit with shrink disc connection: If required, please request a detailed data sheet on shrink discs from SEW-EURODRIVE, data sheet no. 33 753 ..95.

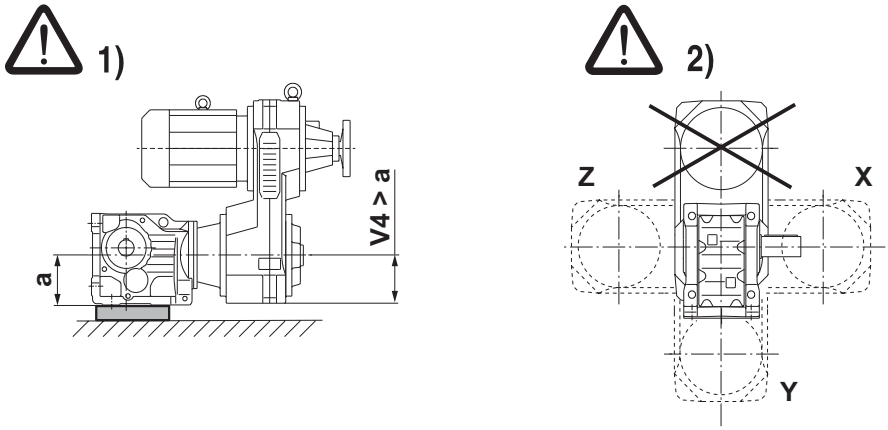
Splined hollow shaft

FV.. hollow shaft gear units in sizes 37 ... 107 and KV.. in sizes 37 ... 107 are delivered with a splined hollow shaft according to DIN 5480.

Rubber buffer for FA/FH/FV

f = Spring travel at $M_{a\ max}$

The following cases are identified in the dimension sheets for the variable speed gearmotors:



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1) Gear unit must be supported (dimension V4 ≥ shaft height a of the gear unit)
2) Only the specified inclined mounting positions are permitted

Motor dimensions

Brake motors

In brake motors, dimensions G1B apply instead of G1 and KB instead of K.

Special designs

The dimensions of the terminal box on special designs such as KS or CSA may deviate from the standard dimensions.

EN 50347

European standard EN 50347 became effective in August 2001. This standard adopts the dimension designations for three-phase AC motors of sizes 56 to 315M and flange sizes 65 to 740 from the IEC 72-1 standard.