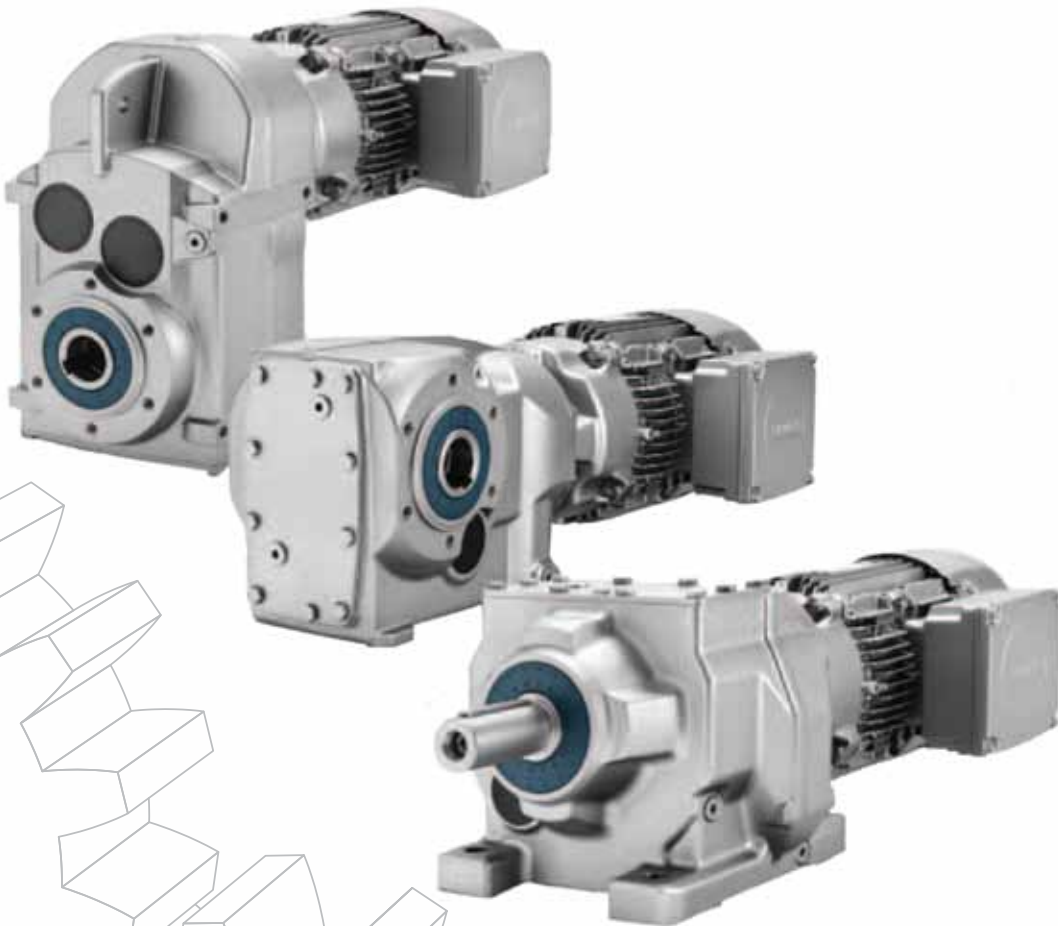


# Simogear





# Simogear

**SIMOGEAR is new design of geared motors that replaces the Flender Motox gear.**

**SIMOGEAR is 100% compatible with the Flender Motox gears as well as other leading brands.**

**SIMOGEAR offers the highest possible energy efficiency and compact design.**

**Simogear fulfill all applicable international regulations.**

**To ensure that your plants and systems run efficiently, we provide**

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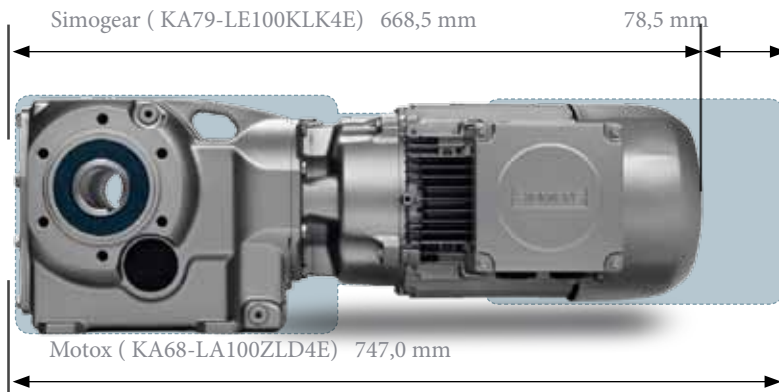
## Powerpack for the environment

High efficiency Electric Motors and Gear Boxes.  
Optimized operations when combined with the  
new generations of Frequency Inverters.

# Simogear Advantages

Max power

Minimum space required



## More power in less space!

An integrated motor DE bearing shield forms the interface to the gear unit. This forms a compact design and reduces the number of interface and sealing locations. For bevel gear units, the bevel pinion shaft bearing has been optimized.

As a consequence, total length and weight is reduced compared to previous models. Important advantage: The frame size stays the same when changing from efficiency class IE2 to IE3.



New gearing concept



Plug-in pinion design

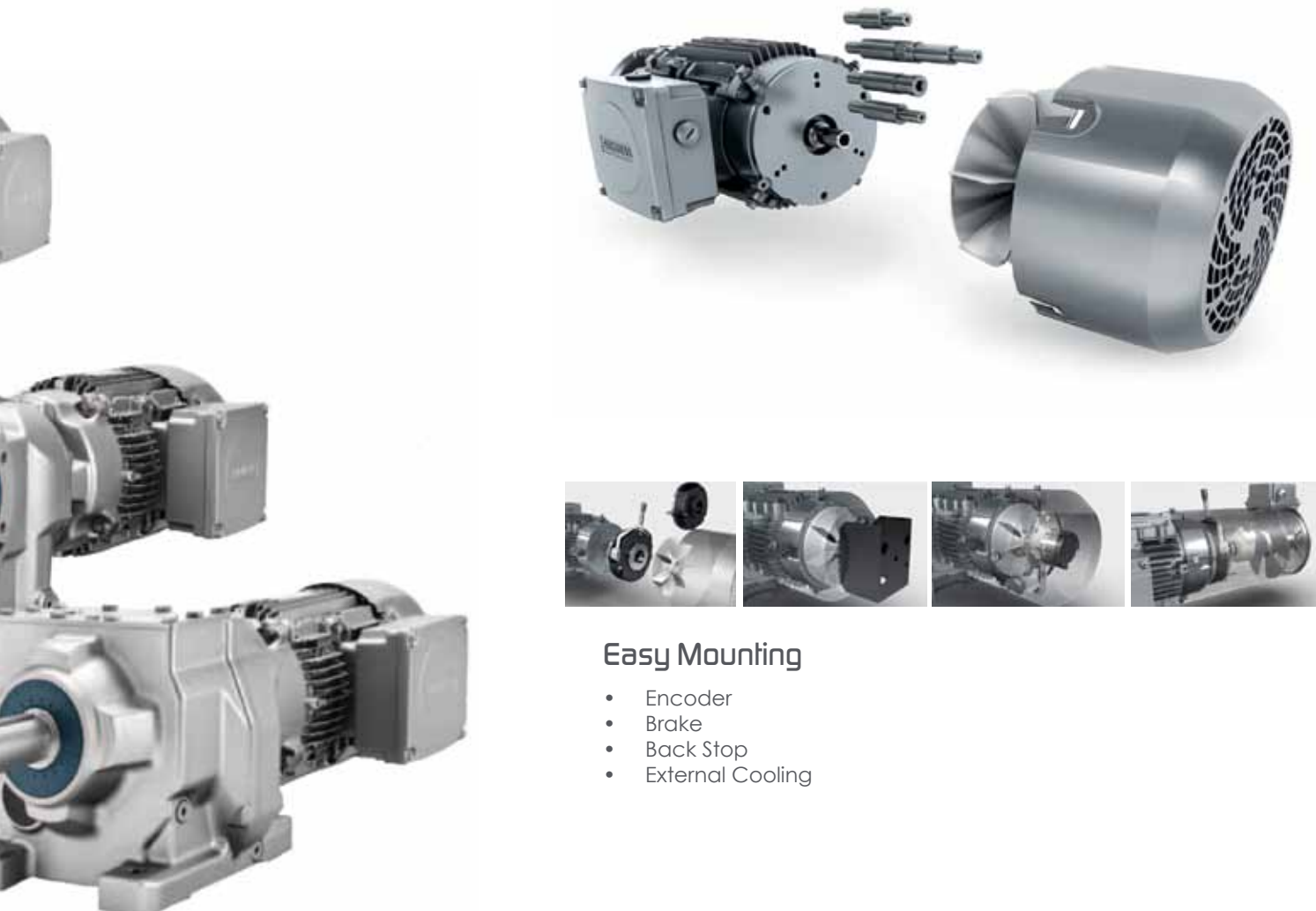
## Lower noise levels!

SIMOGEAR gear motors are quiet. The noise level is significantly reduced as a result of the lower circumferential velocity of the first gear unit stage, due to the plug-in pinions design.

Further, the noise is lowered with standard noise-dampening fan covers. In case of a motor with brake, this is optionally encapsulated to reduce the noise.

## Compatibility means cost saving!

SIMOGEAR gear motors are 1:1 compatible with other leading brands on the market. They are simply integrated into existing or new machines and systems. A balanced portfolio with finely graduated frame sizes ensures a high plant or system availability.

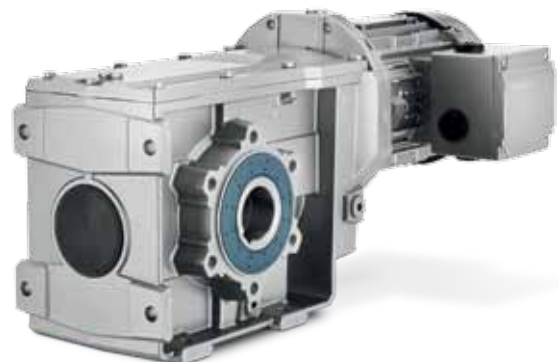


### Easy Mounting

- Encoder
- Brake
- Back Stop
- External Cooling

## High Efficiency - lower operating costs!

The 2-stage bevel gear unit is specifically designed for conveyor applications, with more than 96% efficiency and ratios extending up to  $i=60$ . The efficiency of 2-stage SIMOGEAR gear units is actually comparable with the efficiency of competing gear boxes that are implemented as 3-stage units!



# Helical Geared Motors



## Features

- High gear ratios (plug in pinion)
- Very economic performance
- Very energy efficient (efficiency of 97% per stage)
- High power range

## Mechanical construction

- Stages: 2 or 3
- Mounting: foot and flange-mounting version
- Shaft: solid shaft

## Typical Applications

- Conveyor belt
- Transport of packaged goods
- Vertical Conveyor

### Helical Geared Motors Technical data

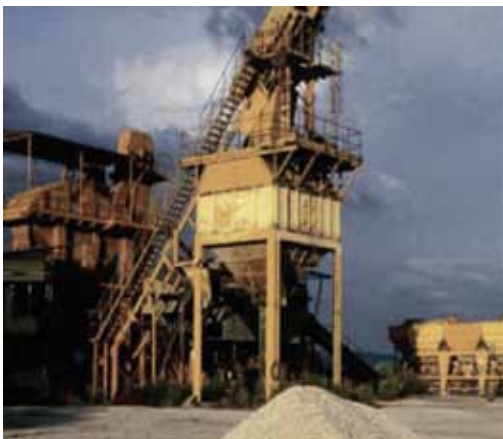
Gear Title	Z19...Z129 (2-stage) D19...D129 (3-stage)
Sizes	10 (2-3-stage)
Torque Range [Nm]	100...5,000
Ratio	3.40...60.97 (2-stage) 39.34...330.23 (3-stage)
Motor Power Range [kW]	30

# Helical Geared Motors Overview Table

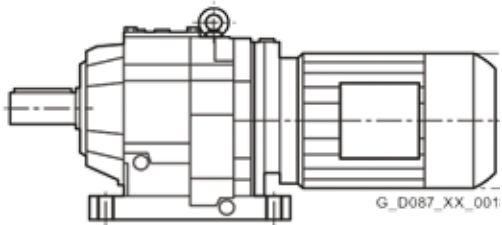
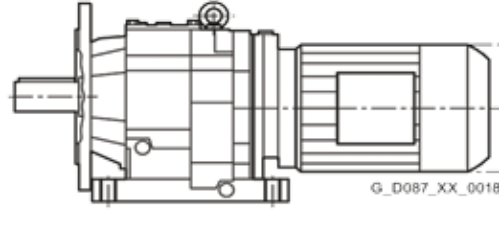
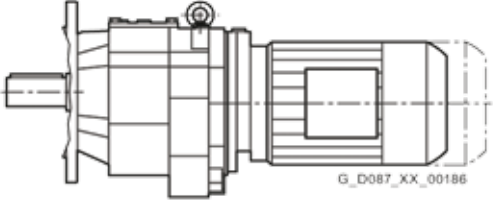
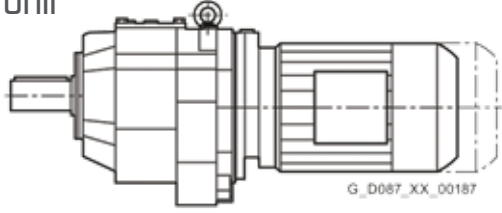
Helical Geared Motors overview				
Type	Input Power [kW]	Output Speed [rpm]	Shaft dimension D [mm]	Output Torque [Nm] Sf=1
Z19 / D19	0,09 - 1,1	9,5 - 812	20x40	100
Z29 / D29	0,09 - 3,0	6,2 - 833	25x50	150
Z39 / D39	0,09 - 4,0	5,7 - 833	25x50	200
Z49 / D49	0,09 - 5,5	3,0 - 835	30x60	320
Z59 / D59	0,09 - 5,5	2,8 - 750	35x70	450
Z69 / D69	0,09 - 9,2	2,5 - 740	35x70	600
Z79 / D79	0,18 - 18,5	2,6 - 747	40x80	840
Z89 / D89	0,55 - 22,0	3,1 - 740	50x100	1680
Z109 / D109	1,10 - 30,0	2,8 - 651	60x120	3100
Z129 / D129	1,10 - 30,0	2,5 - 590	70x140	5000

## Expansion of the Helical Geared line in progress.

Three new sizes will complement the existing line of helical bevel geared motors, extending the power and output torque up to 19.000 Nm.



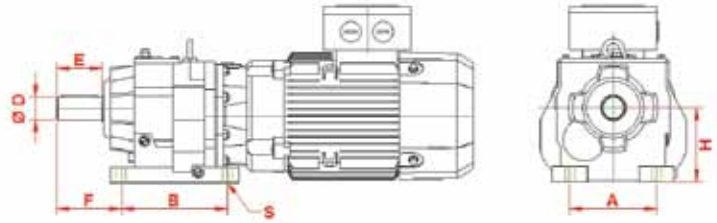
# Helical Geared Motors Mounting Options

Helical Geared Motors Mounting Options	
Representation	Gearbox type
<b>Foot</b> 	D/Z19
	D/Z29
	D/Z39
	D/Z49
	D/Z59
	D/Z69
	D/Z79
	D/Z89
	D/Z109
	D/Z129
<b>Foot/Flange</b> 	DB/ZB29
	DB/ZB39
	DB/ZB49
	DB/ZB59
	DB/ZB69
	DB/ZB79
	DB/ZB89
	DB/ZB109
	DB/ZB129
	<b>Flange</b> 
DF/ZF29	
DF/ZF39	
DF/ZF49	
DF/ZF59	
DF/ZF69	
DF/ZF79	
DF/ZF89	
DF/DZ109	
DF/ZF129	
<b>Housing unit</b> 	DZ/ZZ19
	DZ/ZZ29
	DZ/ZZ39
	DZ/ZZ49
	DZ/ZZ59
	DZ/ZZ69
	DZ/ZZ79
	DZ/ZZ89
	DZ/ZZ109
	DZ/ZZ129

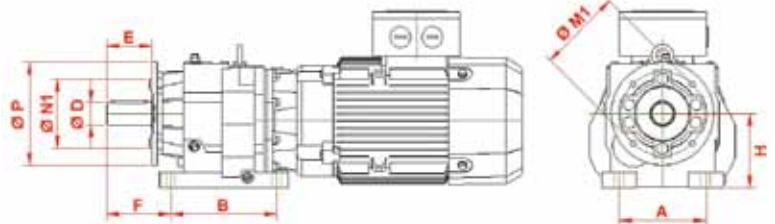


# Helical Geared Motors Dimensions

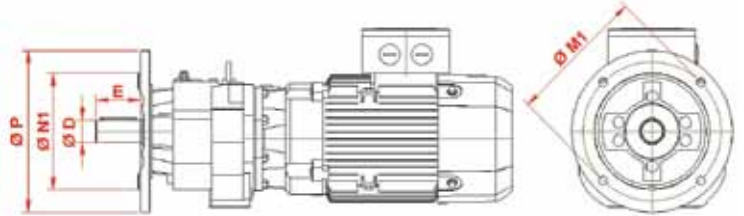
Foot mounted helical gear



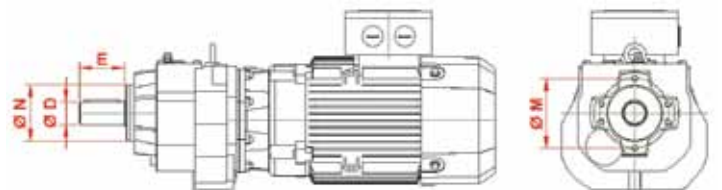
Foot/Flange mounted helical gear



Flange mounted helical gear



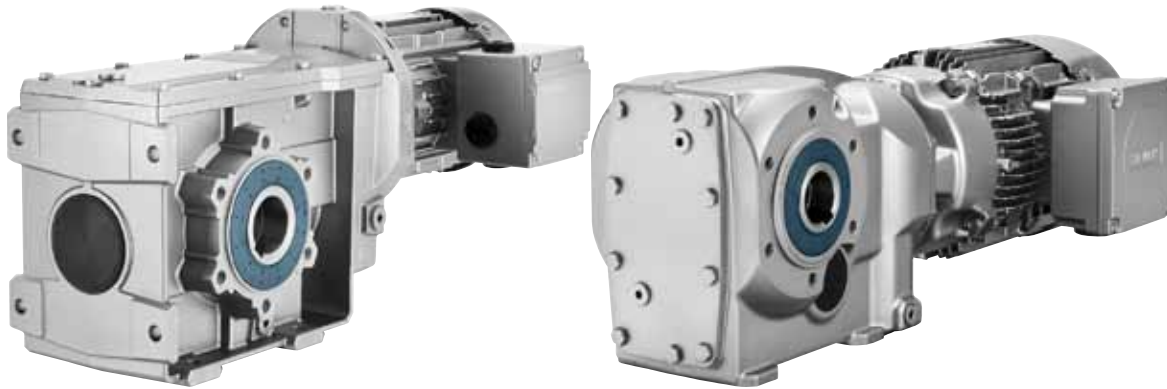
Housing unit helical gear



## Main Dimensions Helical Geared Motors

Type/Size	ØD [mm]	E [mm]	F [mm]	H [mm]	BxA [mm]	ØS [mm]	N [mm]	M [mm]	P [mm]	N1 [mm]	M1 [mm]
Z19 / D19	20	40	58	75	110x110	9	48	60	120/140/160	80/95/110	100/115/130
Z29 / D29	25	50	75	90	130x110	9	58	68	120/140/160	80/95/110	100/115/130
Z39 / D39	25	50	75	90	130x110	9	68	82	120/160/200	80/110/130	100/130/165
Z49 / D49	30	60	90	115	165x135	13,5	77	95	140/160/200	95/110/130	115/130/165
Z59 / D59	35	70	100	115	165x135	14	87	108	160/200/250	110/130/180	130/165/215
Z69 / D69	35	70	100	130	195x150	13,5	105	125	200/250	130/180	165/215
Z79 / D79	40	80	115	140	205x170	18	114	135	250/300	180/230	215/265
Z89 / D89	50	100	140	180	260x215	17,5	140	165	300/350	230/250	265/300
Z109/D109	60	120	160	225	310x250	22	150	185	350/450	250/350	300/400
Z129 / D129	70	140	185	250	370x290	26	170	215	350/450	250/350	300/400

# Helical Bevel Geared Motors



## Features

- Can be used even in narrow construction space
- High gear ratios
- Very energy efficient (efficiency of 98% per stage)
- High power density

## Mechanical construction

- Stages: 2-3
- Mounting: foot or flange-mounting versions, torque bracket
- Shaft: Solid shaft, Hollow shaft
- Option: Hollow shaft design with feather key, splined shaft or shrink disc.

## Typical Applications

- Baggage conveyor
- Transport of packaged goods
- Rope lifter (Warehouse logistics)
- Carriage drives
- Mixer

Helical Bevel Geared Motors Technical Data		
	2-stage	3-stage
Gear title	B19...B49	K39...K129
Sizes	4	7
Torque Range [Nm]	110...450	220...4.400
Ratio	3.47...59.28 (2-stage)	5.17...244.25 (3-stage)
Motor Power Range [kW]	7,5	30

# Helical Bevel Geared Motors Overview Table

Helical Bevel Gear 2-stage				
Type	Input power [kW]	Output speed [rpm]	Hollow Shaft dimension [mm]	Output Torque [Nm] Sf=1
B19	0,09 - 0,75	22,0 - 792	20	50
B29	0,09 - 3,0	20,5 - 783	*20/25	100
B39	0,09 - 4,0	17 - 916	*30/35/40	250
B49	0,09 - 7,5	17- 916	40	450

Helical Bevel Gear 2-stage				
Type	Input power [kW]	Output speed [rpm]	Hollow Shaft dimension [mm]	Output Torque [Nm] Sf=1
K39	0,09 - 4,0	6,2 - 538	30	250
K49	0,09 - 7,5	5,7 - 538	35	450
K69	0,09 - 7,5	4,88 - 552	40	600
K79	0,09 - 7,5	3,93 - 491	40	800
K89	0,25 - 15,0	4,15 - 572	50	1650
K109	0,55 - 22,0	4,22 - 572	60	3000
K129	1,1 - 30,0	4,29 - 347	70	4700

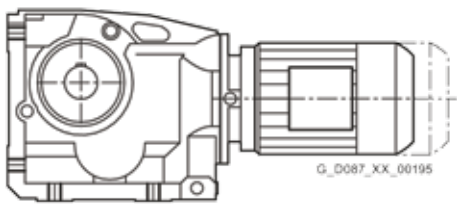
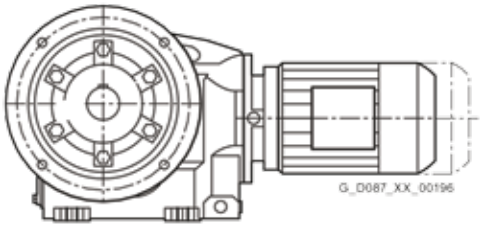
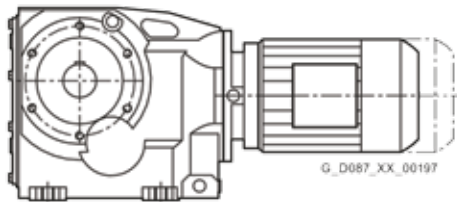
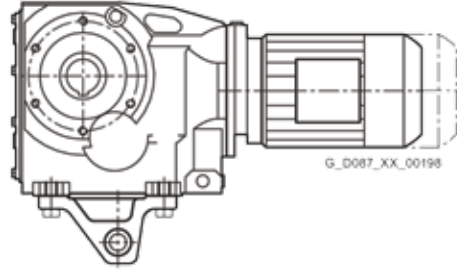
\* Standard dimension.

## Expansion of the Helical Bevel Geared line in progress.

Three new sizes will complement the existing line of helical bevel geared motors, extending the power and output torque up to 20.000 Nm.

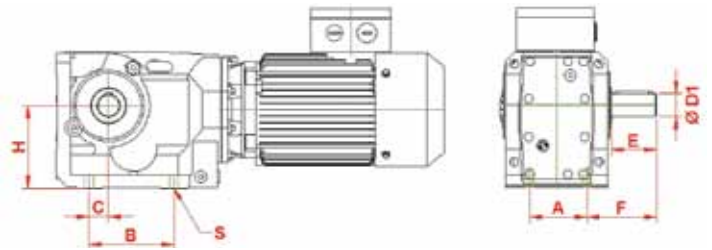


# Helical Bevel Geared Motors Mounting Options

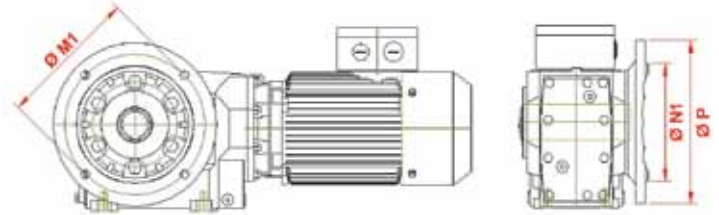
Helical Bevel Geared Motors Mounting Options	
Representation	Gearbox Type
<b>Foot</b>  	B..29
	B..39
	B..49
	K..39
	K..49
	K..69
	K..79
	K..89
	K..109
	K..129
	<b>Flange</b>  
B.F.39	
B.F.49	
K.F.39	
K.F.49	
K.F.69	
K.F.79	
K.F.89	
K.F.109	
K.F.129	
<b>Housing unit</b>  	
	B.Z.39
	B.Z.49
	K.Z.39
	K.Z.49
	K.Z.69
	K.Z.79
	K.Z.89
	K.Z.109
	K.Z.129
	<b>Torque arm</b>  
BAD.39	
BAD.49	
KAD.39	
KAD.49	
KAD.69	
KAD.79	
KAD.89	
KAD.109	
KAD.129	

# Helical Bevel Geared Motors Dimensions

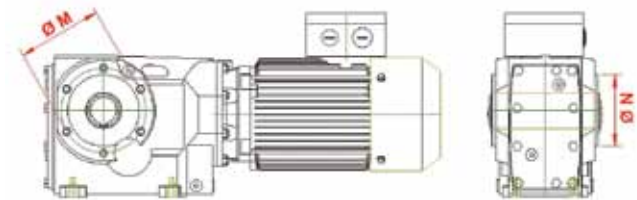
Foot mounted helical bevel gear



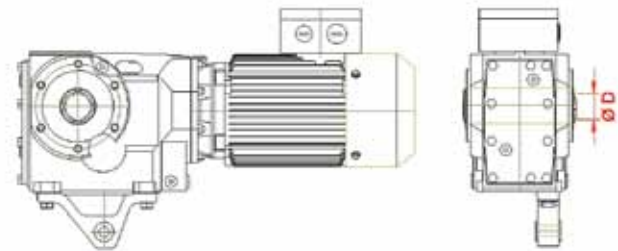
Flange mounted helical bevel gear



Housing unit helical bevel gear



Torque arm mounted helical bevel gear



**Main Dimensions Helical Bevel Geared Motors**

Type/Size	D [mm]	D1xE [mm]	F [mm]	H [mm]	C [mm]	BxA [mm]	Ø S [mm]	N [mm]	M [mm]	P [mm]	N1 [mm]	M1 [mm]
<b>2-stage</b>												
B19	20	20x40	52,5	50	30	60x75	6,6	65	70	120	80	100
B29	*20/25	20x40	55	63	35	70x90	9	74	86	120/160	80/110	100/130
B39	*30/35/40	30x60	80	80	50	100x100	9	95	115	160/200	110/130	130/165
B49	40	35x70	92,5	100	60	120x125	11	95	115	200	130	165
<b>3-Stage</b>												
K39	30	25x50	60	100	28	110x100	11	80	100	160	110	130
K49	35	30x60	75	112	35	130x120	11	95	115	200	130	165
K69	40	35x70	88	132	30	130x130	13,5	110	130	250	180	215
K79	40	40x80	100	140	30	120x140	13,5	110	130	250	180	215
K89	50	50x100	122,5	180	40	150x165	18	130	165	300	230	265
K109	60	60x120	150	212	55	225x155	22	180	215	350	250	300
K129	70	70x140	170	265	75	240x240	26	180	215	450	350	400

\* Standard dimension.

# Parallel Shaft Geared Motors



## Features

- Can be used even in narrow construction space
- High gear ratios (plug in pinions)
- Hollow shaft on both sides possible
- Very energy efficient ( efficiency of 98% per stage)

## Mechanical construction

- Stages: 2 or 3
- Mounting: foot or flange-mounting versions (B5, B14, mixers, extruders) torque bracket
- Shaft: Solid shaft, Hollow shaft
- Option: Hollow shaft design with feather key, splined shaft or shrink disc.

## Typical Applications

- Baggage conveyor
- Transport of packaged goods
- Rope lifter (Warehouse logistics)
- Carriage drives
- Mixers

Parallel Shaft Geared Motors Technical Data	
Gear Title	FZ29 ... FZ129 (2-stage) FD29 ... FD129 (3-stage)
Sizes	8
Torque Range [Nm]	150 ... 4,850
Ratio	3.57 ... 65.21 (2-stage) 46.36 ... 357.00 (3-stage)
Motor Power Range [kW]	30

# Parallel Shaft Geared Motors Overview Table

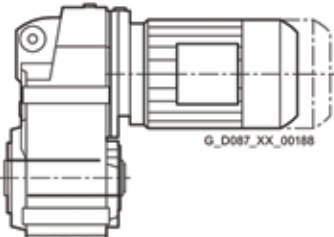
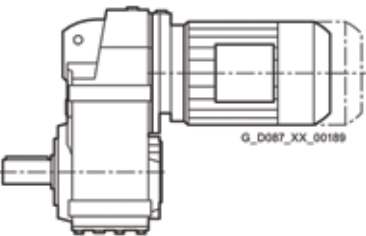
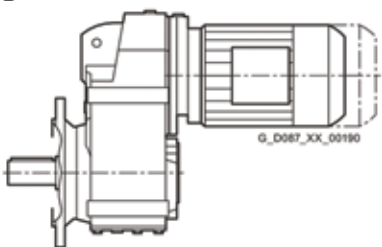
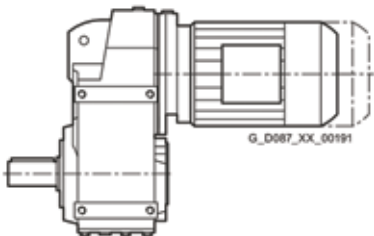
Parallel Shaft Geared Motors Overview				
Type	Input power [kW]	Output speed [rpm]	Hollow Shaft Dimension D [mm]	Output Torque [Nm] Sf=1
FZ29 / FD29	0,09 - 3,0	3,2 - 712	25	150
FZ39 / FD39	0,09 - 4,0	3,5 - 800	30	290
FZ49 / FD49	0,09 - 7,5	2,9 - 612	35	480/540
FZ69 / FD69	0,09 - 7,5	2,7 - 580	40	600
FZ79 / FD79	0,25 - 15,0	2,7 - 560	40	1000
FZ89 / FD89	0,55 - 22,0	2,9 - 760	50	1850
FZ109 / FD109	1,1 - 30,0	2,3 - 595	60	3400
FZ129 / FD129	1,1 - 30,0	2 - 583	70	5700

## Expansion of the Parallel Shaft line in progress.

Five new sizes will complement the existing line of parallel shaft geared motors extending the power and output torque up to 50.000 Nm.



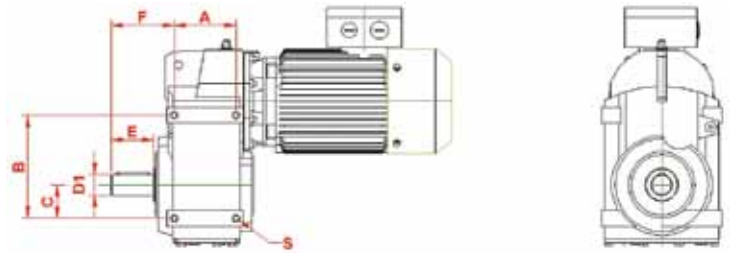
# Parallel Shaft Geared Motors Mounting Options

Helical Bevel Geared Motors Mounting Options	
Representation	Gearbox type
Shaft mounted with torque arm 	FDAD./FZAD.29
	FDAD./FZAD.39
	FDAD./FZAD.49
	FDAD./FZAD.69
	FDAD./FZAD.79
	FDAD./FZAD.89
	FDAD./FZAD.109
	FDAD./FZAD.129
Foot mounted with output shaft 	FD.Z./FZ.Z..29
	FD.Z./FZ.Z..39
	FD.Z./FZ.Z..49
	FD.Z./FZ.Z..69
	FD.Z./FZ.Z..79
	FD.Z./FZ.Z..89
	FD.Z./FZ.Z..109
	FD.Z./FZ.Z..129
Flange mounted 	FD.F./F.Z.F.29
	FD.F./F.Z.F.39
	FD.F./F.Z.F.49
	FD.F./F.Z.F.69
	FD.F./F.Z.F.79
	FD.F./F.Z.F.89
	FD.F./F.Z.F.109
	FD.F./F.Z.F.129
Housing 	FD../FZ..29
	FD../FZ..39
	FD../FZ..49
	FD../FZ..69
	FD../FZ.79
	FD../FZ..89
	FD../FZ..109
	FD../FZ..129

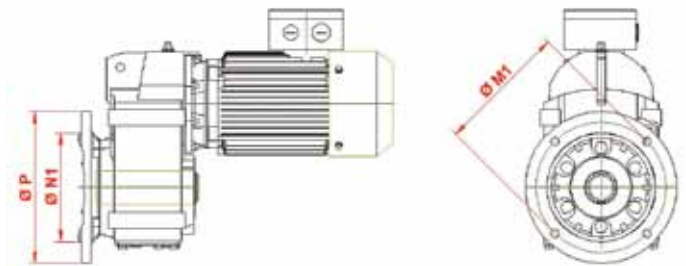


# Parallel Shaft Geared Motors Dimensions

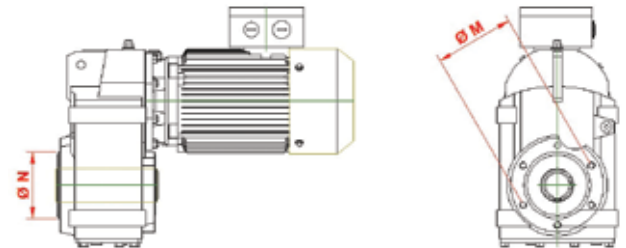
Foot mounted parallel gear



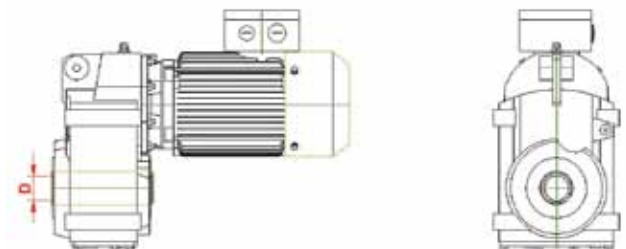
Flange mounted parallel gear



Housing unit parallel gear



Torque arm mounted parallel gear



**Main Dimensions Parallel Shaft Geared Motors**

Type/Size	D [mm]	D1xE [mm]	F [mm]	C [mm]	BxA [mm]	S	N [mm]	M [mm]	P [mm]	N1 [mm]	M1 [mm]
FZ29/FD29	25	25 x 50	71,5	31	100 x 65	M8x16	74	86	120/160	80/110	100/130
FZ39/FD39	30	25 x 50	72,5	31	115 x 77	M8x14	80	100	160	110	130
FZ49/FD49	35	30 x 60	91	43	145 x 93	M10x17	95	115	200	130	165
FZ69/FD69	40	35 x 70	103,5	55	170 x 102	M12x20	100	130	250	180	215
FZ79/FD79	40	40 x 80	117,5	60	190 x 112	M12x20	110	130	250	180	215
FZ89/FD89	50	50 x 100	136,5	70	240 x 140	M16x25	130	165	300	230	265
FZ109/FD109	60	60 x 120	163	100	310 x 165	M16x25	180	215	350	250	300
FZ129/FD129	70	70 x 140	188,5	120	350 x 20	M20x31	180	215	450	350	400

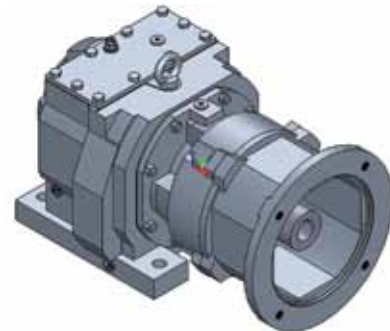
# Geared Motors with adapter

## IEC-adapter

Two options:

**K2** – Long adapter with flexible coupling for high input torques and shock loads.

**Size from: IEC80 to IEC160 – B5 flange**



**K4** – Short adapter with stiff shaft between motor shaft and pinion on 1.stage

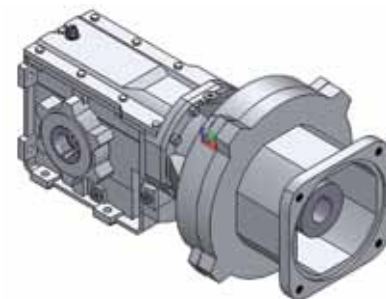
**Size from: IEC 63 to IEC 160 – B5 flange**



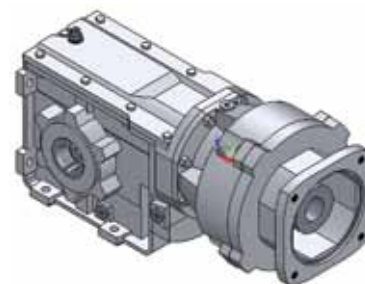
## Servo adapter

Two options:

**KQ** – Servo adapter with flexible coupling for motors similar to 1FK7/1FT7, size from 703 to 710.



**K8** – Stiff coupling for motors similar to 1PH8, size 808 and 810.



## Other:

NEMA standard flanges are also available from sizes 56 to 250.

## Lönne Workshop provides quick supply!

The pre-assembled IEC adapter is picked from stock.  
Lifted in position and mounted on to the gearbox.  
The IEC Motor is lifted into the correct position.  
Quick fix with the bolts.  
Simogear geared motors ready for quick supply!



## How to pick the correct Geared Motor?

Lönne holds a large stock of different kinds of geared motors. Besides the Simogear product group, there are worm geared motors, planetary gears and others. Contact Lönne staff to get skilled help in picking the right model for your solution!

## Lönne One Stop Shop!

The Lönne Group is a leading, European Supplier within Drive Technology. Lönne keeps a large stock of more than 25.000 components. Electric motors, frequency inverters, gear boxes, bearings and open transmissions can be picked from the shelves for immediate inhouse tailor make and quick supply. For easy orders, try Lönne Webshop.

## Lönne Solutions

Lönne is recognized as one of the real specialists within drive solutions for rotating machinery. Lönne operates globally, with a strong reputation as an experienced supplier of products, solutions and services.

## Lönne Services

The Lönne Group is present in the Nordic area, with several sales departments, express warehouses and Lönne Service workshops. Lönne Service is a specialist within condition monitoring, overhaul and repair of electric motors, Ex motors, propulsion motors, generators, mud pumps, ventilation fans etc.



**Keeps your machinery running!**

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