

# Right angle helical gearbox

Size XS

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## E15

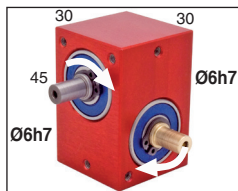
## Torque up to 2.53Nm

- Ratios from 1 :1 to 40:1
- Single piece construction
- Output backlash :  $\leq 45'$  (0,75°)
- Max input speed : up to 4000rpm
- Materials :

Casing: anodised aluminium

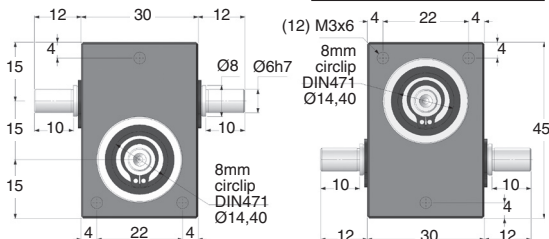
Gears/worms : high carbon steel

- Ratios 1: to 5:1, input and output: high carbon steel
- Ratios  $\geq 8:1$ , input :high carbon steel, Output : bronze
- Weight: 0.255 kg



### Option

- Can be modified to your specifications



### OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
3000	0,40	0,40	0,40	0,40	0,40	-	-	-	-
2000	0,46	0,46	0,46	0,46	0,46	0,69	0,79	0,90	1,00
1000	0,66	0,66	0,66	0,66	0,86	0,86	0,97	1,08	1,19
500	0,92	0,92	0,92	0,92	0,92	1,27	1,37	1,47	1,56
100	1,19	1,19	1,19	1,19	1,19	1,72	1,78	1,87	1,95
50	1,25	1,25	1,25	1,25	1,25	1,95	2,07	2,18	2,24
10	1,32	1,32	1,32	1,32	1,32	2,39	2,44	2,51	2,53

### DISCOUNTS

Qty	1+	2+	4+	10+
Disc.	List -10%	-15%	On request	On request

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max input speed (rpm)	Reflected inertia at input (kg.m <sup>2</sup> )	Self-locking output	Price each
E15-1	1:1	Helical	A	88%	4000	3,762 x 10 <sup>-6</sup>	NO	368,92 €
E15-2	2:1	Helical	A	86%	4000	2,349 x 10 <sup>-6</sup>	NO	368,92 €
E15-3	3:1	Helical	A	85%	4000	2,011 x 10 <sup>-6</sup>	NO	368,92 €
E15-4	4:1	Helical	A	84%	4000	1,986 x 10 <sup>-6</sup>	NO	368,92 €
E15-5	5:1	Helical	A	80%	4000	1,544 x 10 <sup>-6</sup>	NO	368,92 €
E15-8	8:1	Worm+wheel	A	80%	2000	1,622 x 10 <sup>-6</sup>	NO	368,92 €
E15-10	10:1	Worm+wheel	A	73%	2000	1,609 x 10 <sup>-6</sup>	NO	368,92 €
E15-20	20:1	Worm+wheel	A	67%	2000	1,593 x 10 <sup>-6</sup>	YES	368,92 €
E15-40	40:1	Worm+wheel	A	60%	2000	1,589 x 10 <sup>-6</sup>	YES	368,92 €
E15-SP	1:1 - 40:1	Ratio from 1:1 to 40:1						On request
E15-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$						On request
E15-SPLH	1:1 - 40:1	Left handed						On request

Dimensions in mm

# Right angle helical gearbox



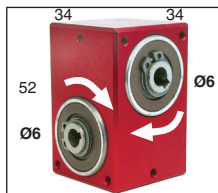
## E20

## Torque up to 3.84Nm

- Ratios from 1:1 to 40:1
- Single piece construction
- Output backlash  $\leq 45'$  (0,75°)
- Max. input speed up to 4000 rpm
- Materials:

Casing: anodised aluminium  
gears and worms: case-hardened steel

- Ratios 1:1 to 5:1, input and output: case-hardened steel
- Ratios  $\geq 8:1$ ,  
input: case-hardened steel  
output: bronze
- Weight: 0.255 kg



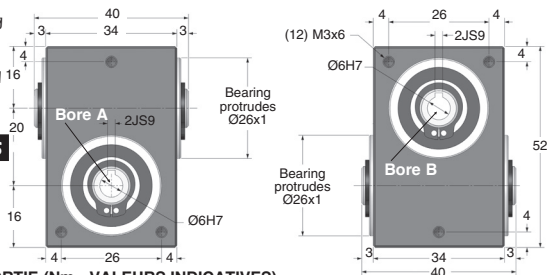
### Options

- Can be modified to your specifications

### Accessories

- Input or output shafts

E-X and E-DX



### COUPLE DE SORTIE (Nm : VALEURS INDICATIVES)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
3000	0,60	0,60	0,60	0,60	0,60	-	-	-	-
2000	0,70	0,70	0,70	0,70	0,70	1,05	1,20	1,36	1,52
1000	1,00	1,00	1,00	1,00	1,00	1,31	1,47	1,63	1,80
INPUT SPEED (RPM)	500	1,40	1,40	1,40	1,40	1,93	2,08	2,22	2,37
	100	1,80	1,80	1,80	1,80	2,60	2,70	2,83	2,95
	50	1,90	1,90	1,90	1,90	2,95	3,13	3,31	3,40
	10	2,00	2,00	2,00	2,00	3,62	3,70	3,80	3,84

### DISCOUNTS

Qty	1+	2+	4+	10+
Disc.	List -10%	-15%	On request	

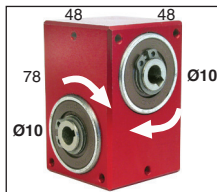
Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m <sup>2</sup> )	Self-locking output	Stock*	Price each
E20-1	1:1	Helical	A	88%	4000	3,762 x 10 <sup>-6</sup>	NO	✓	408,87 €
E20-2	2:1	Helical	A	86%	4000	2,349 x 10 <sup>-6</sup>	NO	✓	408,87 €
E20-3	3:1	Helical	A	85%	4000	2,011 x 10 <sup>-6</sup>	NO	-	408,87 €
E20-4	4:1	Helical	A	84%	4000	1,986 x 10 <sup>-6</sup>	NO	-	408,87 €
E20-5	5:1	Helical	A	80%	4000	1,544 x 10 <sup>-6</sup>	NO	-	408,87 €
E20-8	8:1	Worm+wheel	A	80%	2000	1,622 x 10 <sup>-6</sup>	NO	✓	408,87 €
E20-10	10:1	Worm+wheel	A	73%	2000	1,609 x 10 <sup>-6</sup>	NO	-	408,87 €
E20-20	20:1	Worm+wheel	A	67%	2000	1,593 x 10 <sup>-6</sup>	YES	✓	408,87 €
E20-40	40:1	Worm+wheel	A	60%	2000	1,589 x 10 <sup>-6</sup>	YES	✓	408,87 €
E20-SP	1:1 - 40:1	Ratio from 1:1 to 40:1						-	On request
E20-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$						-	On request
E20-SPLH	1:1 - 40:1	Left handed						-	On request

\*Depending on availability - Dimensions in mm

- Ratios from 1:1 to 40:1
- Single piece construction
- Output backlash  $\leq 45'$  (0,75°)
- Max. input speed up to 3000 rpm
- Materials:

Casing: anodised aluminium  
gears and worms: case-hardened steel

- Ratios 1:1 to 5:1, input and output: case-hardened steel
- Ratios  $\geq 8:1$ ,  
input: case-hardened steel  
output: bronze
- Weight: 0.72 kg

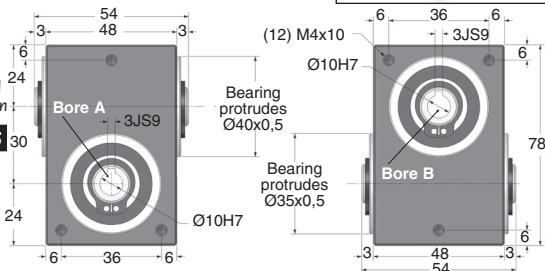


### Options

- Can be modified  
your specification

### Accessories

- Input or output  
shafts  
E-X and E-DX



### OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
3000	1,5	1,5	1,5	1,5	1,5	-	-	-	-
2000	2,0	2,0	2,0	2,0	2,0	-	-	-	-
1000	2,5	2,5	2,5	2,5	2,5	3,6	4,2	4,7	5,0
INPUT SPEED (RPM)	500	3,0	3,0	3,0	3,0	4,9	5,3	5,6	6,0
100	4,0	4,0	4,0	4,0	4,0	6,5	7,0	7,1	7,3
50	4,5	4,5	4,5	4,5	4,5	7,9	8,4	8,5	8,6
10	5,0	5,0	5,0	5,0	5,0	8,5	8,7	8,9	9,0

### DISCOUNTS

Qty	1+	2+	4+	10+
Disc.	List -10%	-15%	On request	On request

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m <sup>2</sup> )	Self-locking output	Stock	Price each
E30-1	1:1	Helical	B	90%	3000	2,867 x 10 <sup>-6</sup>	NO	✓	469,34 €
E30-2	2:1	Helical	A	88%	3000	1,362 x 10 <sup>-6</sup>	NO	✓	469,34 €
E30-3	3:1	Helical	A	87%	3000	1,071 x 10 <sup>-6</sup>	NO	✓	469,34 €
E30-4	4:1	Helical	A	86%	3000	1,032 x 10 <sup>-6</sup>	NO	✓	469,34 €
E30-5	5:1	Helical	A	80%	3000	9,372 x 10 <sup>-6</sup>	NO	✓	469,34 €
E30-8	8:1	Worm+wheel	A	80%	1000	1,115 x 10 <sup>-6</sup>	NO	✓	469,34 €
E30-10	10:1	Worm+wheel	A	73%	1000	1,106 x 10 <sup>-6</sup>	NO	✓	469,34 €
E30-20	20:1	Worm+wheel	A	67%	1000	1,094 x 10 <sup>-6</sup>	YES	✓	469,34 €
E30-40	40:1	Worm+wheel	A	60%	1000	1,091 x 10 <sup>-6</sup>	YES	✓	469,34 €
E30-SP	1:1 - 40:1	<b>Ratio from 1:1 to 40:1</b>							On request
E30-SPA	1:1 - 40:1	<b>Reduced output backlash <math>\leq 30'</math></b>							On request
E30-SPLH	1:1 - 40:1	<b>Left handed</b>							On request

\*Depending on availability - Dimensions in mm

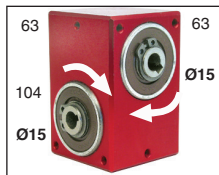
# Right angle helical gearbox



## E40

## Torque up to 20Nm

- Ratios from 1:1 to 40:1
- Single piece construction
- Output backlash  $\leq 45'$  (0,75°)
- Max. input speed up to 3000 rpm
- Materials:



Casing: anodised aluminium

gears and worms: case-hardened steel

- Ratios 1:1 to 5:1, input and output: case-hardened steel

- Ratios  $\geq 8:1$ , input: case-hardened steel

output: bronze

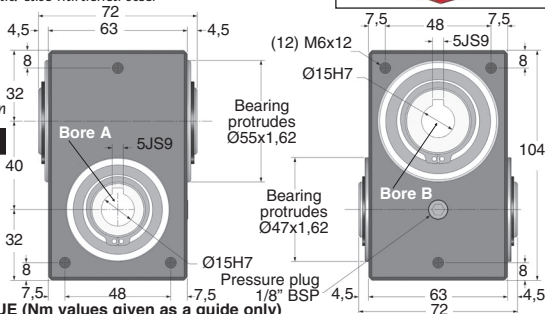
- Weight: 1.67 kg

### Options

- Can be modified your specification

### Accessories

- Input or output shafts E-X and E-DX



### OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
3000	2,3	2,3	2,3	2,3	2,3	-	-	-	-
2000	2,8	2,8	2,8	2,8	2,8	-	-	-	-
1000	3,8	3,8	3,8	3,8	3,8	7,3	8,0	8,8	9,7
500	5,0	5,0	5,0	5,0	5,0	10,7	11,3	12,2	13,1
100	8,0	8,0	8,0	8,0	8,0	14,2	15,0	15,8	16,7
50	9,0	9,0	9,0	9,0	9,0	17,1	17,3	17,7	18,2
10	10,0	10,0	10,0	10,0	10,0	19,5	19,6	19,8	20,0

### DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m <sup>2</sup> )	Self-locking output	Stock	Price each
E40-1	1:1	Helical	B	92%	3000	1,471 x 10 <sup>-4</sup>	NO	✓	599,40 €
E40-2	2:1	Helical	A	90%	3000	6,738 x 10 <sup>-5</sup>	NO	✓	599,40 €
E40-3	3:1	Helical	A	89%	3000	5,193 x 10 <sup>-5</sup>	NO	✓	599,40 €
E40-4	4:1	Helical	A	88%	3000	5,038 x 10 <sup>-5</sup>	NO	✓	599,40 €
E40-5	5:1	Helical	A	80%	3000	5,095 x 10 <sup>-5</sup>	NO	✓	599,40 €
E40-8	8:1	Worm+wheel	A	80%	1000	5,213 x 10 <sup>-5</sup>	NO	-	599,31 €
E40-10	10:1	Worm+wheel	A	73%	1000	5,198 x 10 <sup>-5</sup>	NO	✓	599,31 €
E40-20	20:1	Worm+wheel	A	67%	1000	5,110 x 10 <sup>-5</sup>	YES	✓	599,40 €
E40-40	40:1	Worm+wheel	A	60%	1000	5,090 x 10 <sup>-5</sup>	YES	-	599,31 €
E40-SP	1:1 - 40:1	Ratio from 1:1 to 40:1							On request
E40-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$							On request
E40-SPLH	1:1 - 40:1	Left handed							On request

\*Depending on availability - Dimensions in mm



# Right angle helical gearbox

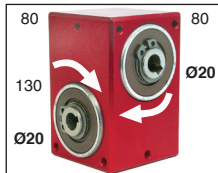
## Torque up to 41Nm

## E50

- Ratios from 1:1 to 40:1
- Single piece construction
- Output backlash  $\leq 45'$  (0,75°)
- Max. input speed up to 3000 rpm
- Materials:

Casing: anodised aluminium  
gears and worms: case-hardened steel

- Ratios 1:1 to 5:1, input and output: case-hardened steel
- Ratios  $\geq 8:1$ , input: case-hardened steel, output: bronze
- Weight: 3.18 kg

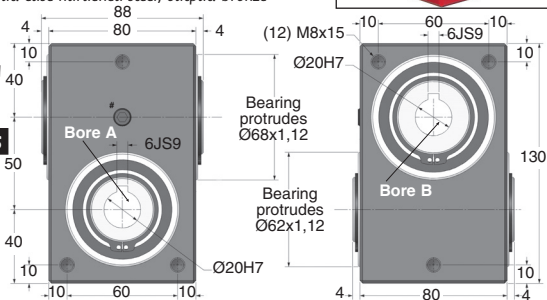


### Options

- Can be modified to your specifications

### Accessories

- Input or output shafts
- E-X** and **E-DX**



### OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
3000	3,0	3,0	3,0	3,0	3,0	-	-	-	-
2000	4,0	4,0	4,0	4,0	4,0	-	-	-	-
1000	6,0	6,0	6,0	6,0	6,0	11,3	13,0	15,0	17,0
500	8,0	8,0	8,0	8,0	8,0	18,0	20,0	21,0	23,0
100	12,0	12,0	12,0	12,0	12,0	25,0	26,0	28,0	30,0
50 (RPM)	14,0	14,0	14,0	14,0	14,0	14,0	31,0	31,0	32,0
10	16,0	16,0	16,0	16,0	16,0	40,0	40,0	41,0	41,0

### DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Type	Input	Effeciency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m <sup>2</sup> )	Self-locking output	Stock*	Price each
E50-1	1:1	Helical	B	93%	3000	4,585 x 10 <sup>-4</sup>	NO	✓	762,32 €
E50-2	2:1	Helical	A	91%	3000	2,240 x 10 <sup>-4</sup>	NO	✓	762,32 €
E50-3	3:1	Helical	A	90%	3000	1,759 x 10 <sup>-4</sup>	NO	✓	762,32 €
E50-4	4:1	Helical	A	89%	3000	1,924 x 10 <sup>-4</sup>	NO	✓	762,32 €
E50-5	5:1	Helical	A	80%	3000	1,920 x 10 <sup>-4</sup>	NO	✓	762,32 €
E50-8	8:1	Worm+wheel	A	80%	1000	1,489 x 10 <sup>-4</sup>	NO	✓	762,32 €
E50-10	10:1	Worm+wheel	A	73%	1000	1,496 x 10 <sup>-4</sup>	NO	-	762,32 €
E50-20	20:1	Worm+wheel	A	67%	1000	1,463 x 10 <sup>-4</sup>	YES	✓	762,32 €
E50-40	40:1	Worm+wheel	A	60%	1000	1,455 x 10 <sup>-4</sup>	YES	✓	762,32 €
E50-SP	1:1 - 40:1	<b>Ratio from 1:1 to 40:1</b>							On request
E50-SPA	1:1 - 40:1	<b>Reduced output backlash <math>\leq 30'</math></b>							On request
E50-SPLH	1:1 - 40:1	<b>Left handed</b>							On request

\*Depending on availability - Dimensions in mm

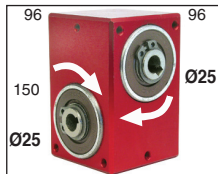
# Right angle helical gearbox



## E60

## Torque up to 62Nm

- Ratios from 1:1 to 40:1
- Single piece construction
- Output backlash  $\leq 45'$  (0,75°)
- Max. input speed up to 3000 rpm
- Materials:  
casing: anodised aluminium  
gears and worms: case-hardened steel
- Ratios 1:1 to 5:1, input and output: case-hardened steel
- Ratios  $\geq 8:1$ , input: case-hardened steel, output: bronze
- Weight: 5.50 kg

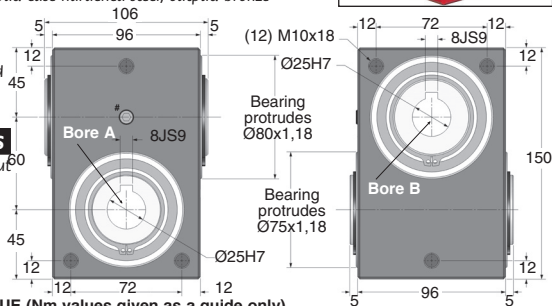


### Options

- Can be modified to your specifications

### Accessories

- Input and output shafts E-X and E-DX



### OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1	4:1	5:1	8:1	10:1	20:1	40:1
3000	4,5	4,5	4,5	4,5	4,5	-	-	-	-
2000	5,5	5,5	5,5	5,5	5,5	-	-	-	-
1000	8,0	8,0	8,0	8,0	8,0	17,8	21,3	22,0	24,0
INPUT SPEED (RPM)	500	10,0	10,0	10,0	10,0	27,0	29,0	31,0	34,0
100	16,0	16,0	16,0	16,0	16,0	37,0	40,2	42,0	44,0
50	20,0	20,0	20,0	20,0	20,0	48,0	49,0	50,0	51,0
10	24,0	24,0	24,0	24,0	24,0	60,0	60,0	61,0	62,0

### DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input (kg.m <sup>2</sup> )	Self-locking output	Stock*	Price each
E60-1	1:1	Helical	B	94%	3000	1,319 x 10 <sup>-3</sup>	NO	✓	919,01 €
E60-2	2:1	Helical	A	92%	3000	6,507 x 10 <sup>-4</sup>	NO	✓	919,01 €
E60-3	3:1	Helical	A	91%	3000	5,111 x 10 <sup>-4</sup>	NO	✓	919,01 €
E60-4	4:1	Helical	A	90%	3000	5,543 x 10 <sup>-4</sup>	NO	✓	919,01 €
E60-5	5:1	Helical	A	80%	3000	5,489 x 10 <sup>-4</sup>	NO	-	919,01 €
E60-8	8:1	Worm+wheel	A	80%	1000	4,951 x 10 <sup>-4</sup>	NO	✓	919,01 €
E60-10	10:1	Worm+wheel	A	73%	1000	4,911 x 10 <sup>-4</sup>	NO	✓	919,01 €
E60-20	20:1	Worm+wheel	A	67%	1000	4,859 x 10 <sup>-4</sup>	YES	✓	919,01 €
E60-40	40:1	Worm+wheel	A	60%	1000	4,846 x 10 <sup>-4</sup>	YES	✓	919,01 €
E60-SP	1:1 - 40:1	Ratio from 1:1 to 40:1							On request
E60-SPA	1:1 - 40:1	Reduced output backlash $\leq 30'$							On request
E60-SPLH	1:1 - 40:1	Left handed							On request

\*Depending on availability - Dimensions in mm

HPC

WEB  
04/2020

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# Right angle helical gearbox

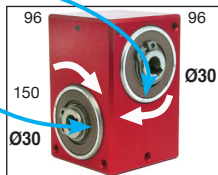


## E60B

## Torque up to 24Nm

- Ratios from 1 :1 to 4:1
- Large bore
- Single block construction
- Output backlash :  $\leq 45'$  ( $0,75^\circ$ )
- Max input speed : up to 3000rpm
- Materials :
  - Casing : anodised aluminium
  - Gears : high carbon steel
  - Ratios 1: to 4:1, Input and output: high carbon steel
- Weight: 5.5 kg

Large bore

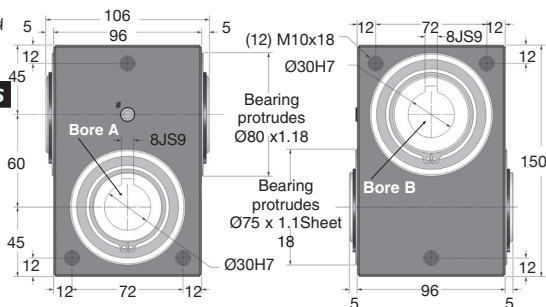


### Option

- Can be modified to your specifications

### Accessoires

- E-X and E-DX input/output shafts



### OUTPUT TORQUE (Nm values given as a guide only)

Ratios	1:1	2:1	3:1
3000	4,5	4,5	4,5
2000	5,5	5,5	5,5
1000	8,0	8,0	8,0
INPUT SPEED (RPM)	500	10,0	10,0
	200	16,0	16,0
	100	20,0	20,0
	50	24,0	24,0

### DISCOUNTS

Qty	1+	2+	4+
Disc.	List	-5%	On request

Part number	Ratio	Type	Input	Efficiency at 1000 rpm	Max. input speed (rpm)	Reflected inertia at input ( $\text{kg.m}^2$ )	Self-locking output	Stock*	Price each
E60B-1	1:1	Helical	B	94%	3000	$1,237 \times 10^{-3}$	NO	-	698,58 €
E60B-2	2:1	Helical	A	92%	3000	$6,023 \times 10^{-4}$	NO	-	698,58 €
E60B-3	3:1	Helical	A	91%	3000	$4,651 \times 10^{-4}$	NO	-	698,58 €
E60B-4	4:1	Helical	A	90%	3000	$5,026 \times 10^{-4}$	NO	-	698,58 €
E60B-SP	1:1 - 40:1	<b>Ratio from 1:1 to 40:1</b>						-	On request
E60B-SPA	1:1 - 40:1	<b>Reduced output backlash <math>\leq 30'</math></b>						-	On request
E60B-SPLH	1:1 - 40:1	<b>Left handed</b>						-	On request

\*Depending on availability - Dimensions in mm

# Stainless steel shafts

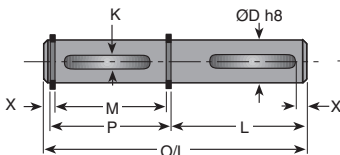
For E gearboxes

Ex  
EDX

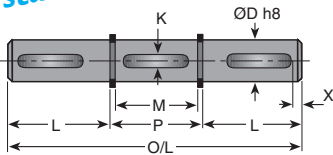
- Optional accessory for adding outputs shafts to E series gearboxes

## Composition

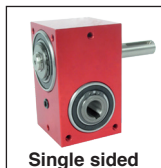
- Single sided shaft kit E-X: shaft in stainless steel 303, 2 steel keys and 2 steel circlips
- Double shaft kit E-DX: stainless steel 303 shaft, 3 steel keys and 2 steel circlips



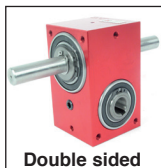
Single sided shaft E-X



Double sided shaft E-DX



Single sided



Double sided

Assembly examples

## DISCOUNTS

Qty	1+	6+	20+	40+
Disc.	List	-15%	-20%	On request

Part number	For gearbox	ØD	O/L	M	P	X	L	K	Price each 1 to 5
<b>Single sided</b>									
E20-X	E20	6	68,80	40	41,60	3,00	25	K2 x 22	34,21 €
E30-X	E30	10	98,60	54	56,20	3,50	40	K3 x 20	40,48 €
E40-X	E40	15	127,10	72	74,20	4,00	50	K5 x 30	49,24 €
E50-X	E50	20	153,80	88	90,60	4,50	60	K6 x 32	57,24 €
E60-X	E60	25	182,30	106	108,60	5,00	70	K8 x 40	59,29 €
<b>Double sided</b>									
E20-DX	E20	6	91,60	40	41,60	3,00	25	K2 x 22	44,14 €
E30-DX	E30	10	136,20	54	56,20	3,50	40	K3 x 20	50,81 €
E40-DX	E40	15	174,20	72	74,20	4,00	50	K5 x 30	59,11 €
E50-DX	E50	20	210,60	88	90,60	4,50	60	K6 x 32	68,69 €
E60-DX	E60	25	248,60	106	108,60	5,00	70	K8 x 40	80,09 €

Dimensions in mm

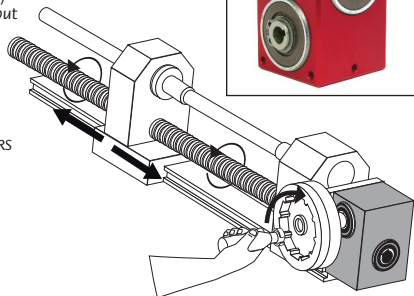


# Crossed axis gearboxes

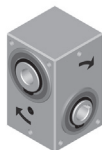
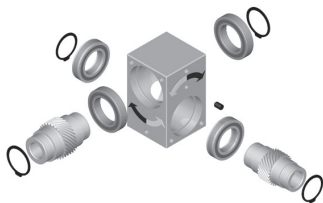
## Technical information

E

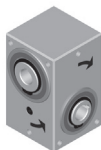
- **Speed ratio: from 1:1 to 40:1**
- **Materials :**  
casing anodised aluminium  
gears in case hardened  
(ratio >8 : output aluminium bronze)
- **Max. speed: 3000 to 4000 rpm at input**  
depending on model
- **Backlash(output):  $\leq 45'$  ( $0,75^\circ$ )**  
( $\leq 0^\circ30'$  optional)
- **Lubrication: greased for life**  
(Shell Gadus S2 V220AD 2)
- **Guarantee: 13 months**
- **Steel bearing with single ball race 2RS**



Typical application



Left handed teeth (LH)



Right handed teeth (RH)

### ADMISSIBLE LOADS

Part number	Distance 'X' (mm)	Radial load (N)	Axial load (N)
E15	6	150	100
E20	6	150	100
E30	10	200	150
E40	12	400	300
E50	20	600	400
E60	25	800	500
E60B	25	800	500

Data given based on input speed of 1,000 rpm.  
Values given as an indication only.

