

# Offset spur gearbox



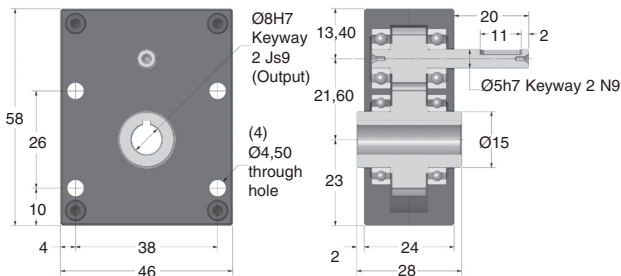
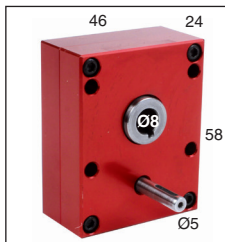
## FF10

## Torque up to 3.7Nm

- **High efficiency**
- Ratios from 2:1 to 7:1
- Output backlash  $\leq 30'$  (0.5°)
- Max. speed: 2,000 rpm
- Materials:
  - casing: anodised aluminium
  - input and output: non-hardened steel
- Weight: 0.23 kg

### Options

- Can be modified to your specifications



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

| Ratios | 2:1  | 3:1  | 4:1  | 5:1  | 6:1  | 7:1  |
|--------|------|------|------|------|------|------|
| 2000   | 1,34 | 1,29 | 1,15 | 1,10 | 0,94 | 0,78 |
| 1000   | 1,55 | 1,49 | 1,33 | 1,27 | 1,08 | 0,90 |
| 500    | 1,85 | 1,78 | 1,58 | 1,51 | 1,30 | 1,07 |
| 200    | 2,08 | 2,00 | 1,78 | 1,71 | 1,46 | 1,21 |
| 100    | 2,44 | 2,35 | 2,09 | 2,00 | 1,71 | 1,42 |
| 50     | 2,74 | 2,63 | 2,36 | 2,25 | 1,92 | 1,60 |
| 10     | 3,70 | 3,57 | 3,16 | 3,03 | 2,60 | 2,16 |

### DISCOUNTS

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

| Part number | Ratio     | Max. input speed (rpm)             | Max. output speed (rpm) | Efficiency at 1000 rpm | Stock* | Price each |
|-------------|-----------|------------------------------------|-------------------------|------------------------|--------|------------|
| FF10-2      | 2:1       | 2000                               | 1000                    | 93%                    | ✓      | 334,97 €   |
| FF10-3      | 3:1       | 2000                               | 666                     | 93%                    | -      | 334,97 €   |
| FF10-4      | 4:1       | 2000                               | 500                     | 93%                    | -      | 334,97 €   |
| FF10-5      | 5:1       | 2000                               | 400                     | 93%                    | ✓      | 334,97 €   |
| FF10-6      | 6:1       | 2000                               | 333                     | 93%                    | -      | 334,97 €   |
| FF10-7      | 7:1       | 2000                               | 285                     | 93%                    | -      | 334,97 €   |
| FF10-XH     | 2:1 - 7:1 | (With hardened gears = torque x 2) |                         |                        | -      | 592,13 €   |

\*Depending on availability - Dimensions in mm



# Offset spur gearbox

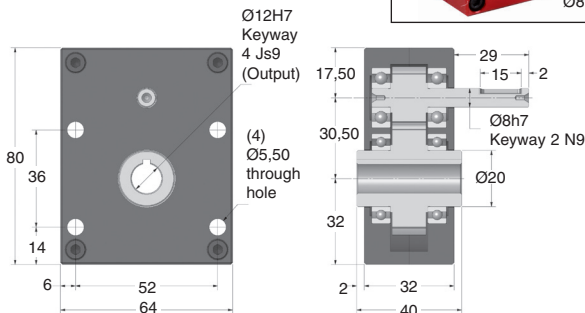
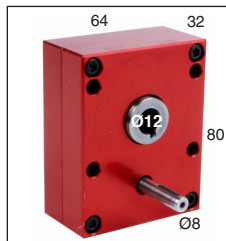
**Torque up to 10Nm**

**FF15**

- **High efficiency**
- Ratios from 2:1 to 7:1
- Output backlash  $\leq 30'$  (0.5°)
- Max. speed: 2,000 rpm
- Materials:
  - casing: anodised aluminium
  - input and output: non-hardened steel
- Weight: 0.55 kg

## Options

- Can be modified to your specifications



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

| Ratios | 2:1   | 3:1  | 4:1  | 5:1  | 6:1  | 7:1  |
|--------|-------|------|------|------|------|------|
| 2000   | 3,70  | 3,50 | 3,20 | 2,90 | 2,60 | 2,20 |
| 1000   | 4,30  | 4,00 | 3,70 | 3,40 | 3,10 | 2,60 |
| 500    | 5,00  | 4,80 | 4,40 | 4,00 | 3,60 | 3,00 |
| 200    | 5,70  | 5,50 | 5,00 | 4,40 | 3,90 | 3,20 |
| 100    | 6,70  | 6,50 | 5,90 | 5,10 | 4,50 | 3,70 |
| 50     | 7,50  | 7,20 | 6,50 | 5,70 | 5,00 | 4,00 |
| 10     | 10,00 | 9,80 | 9,00 | 8,00 | 7,30 | 6,10 |

### DISCOUNTS

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

| Part number | Ratio     | Max. input speed (rpm)             | Max. output speed (rpm) | Efficiency at 1000 rpm | Stock* | Price each |
|-------------|-----------|------------------------------------|-------------------------|------------------------|--------|------------|
| FF15-2      | 2:1       | 2000                               | 1000                    | 93%                    | ✓      | 409,61 €   |
| FF15-3      | 3:1       | 2000                               | 666                     | 93%                    | ✓      | 409,61 €   |
| FF15-4      | 4:1       | 2000                               | 500                     | 93%                    | -      | 409,61 €   |
| FF15-5      | 5:1       | 2000                               | 400                     | 93%                    | ✓      | 409,61 €   |
| FF15-6      | 6:1       | 2000                               | 333                     | 93%                    | ✓      | 409,61 €   |
| FF15-7      | 7:1       | 2000                               | 285                     | 93%                    | ✓      | 409,61 €   |
| FF15-XH     | 2:1 - 7:1 | (With hardened gears = torque x 2) |                         |                        | -      | 737,04 €   |

\*Depending on availability - Dimensions in mm

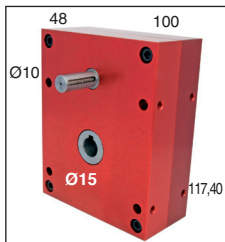
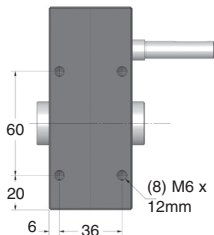
# Offset spur gearbox



## FF20

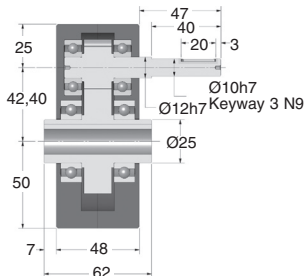
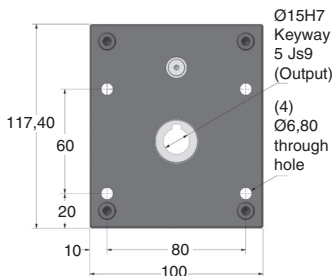
## Torque up to 23Nm

- **High efficiency**
- Ratios from 2:1 to 7:1
- Output backlash  $\leq 30'$  (0.5°)
- Max. speed: 2,000 rpm
- Materials:  
casing: anodised aluminium  
input & output:  
non-hardened steel
- Weight: 1.90 kg



### Options

- Can be modified to your specifications



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

| Ratios | 2:1   | 3:1   | 4:1   | 5:1   | 6:1   | 7:1   |
|--------|-------|-------|-------|-------|-------|-------|
| 2000   | 9,20  | 7,70  | 8,00  | 6,90  | 6,60  | 5,80  |
| 1000   | 10,80 | 10,20 | 9,50  | 8,20  | 7,80  | 6,90  |
| 500    | 12,50 | 11,80 | 11,00 | 9,60  | 9,00  | 8,20  |
| 200    | 15,00 | 14,20 | 13,10 | 11,50 | 10,80 | 9,80  |
| 100    | 16,70 | 15,70 | 14,60 | 12,80 | 12,00 | 10,90 |
| 50     | 19,20 | 18,10 | 16,80 | 14,50 | 13,80 | 12,50 |
| 10     | 23,00 | 21,60 | 20,00 | 17,50 | 16,50 | 15,00 |

### DISCOUNTS

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

| Part number | Ratio     | Max. input speed (rpm)             | Max. output speed (rpm) | Efficiency at 1000 rpm | Stock* | Price each |
|-------------|-----------|------------------------------------|-------------------------|------------------------|--------|------------|
| FF20-2      | 2:1       | 2000                               | 1000                    | 93%                    | ✓      | 623,05 €   |
| FF20-3      | 3:1       | 2000                               | 666                     | 93%                    | -      | 623,05 €   |
| FF20-4      | 4:1       | 2000                               | 500                     | 93%                    | ✓      | 623,05 €   |
| FF20-5      | 5:1       | 2000                               | 400                     | 93%                    | -      | 623,05 €   |
| FF20-6      | 6:1       | 2000                               | 333                     | 93%                    | -      | 623,05 €   |
| FF20-7      | 7:1       | 2000                               | 285                     | 93%                    | ✓      | 623,05 €   |
| FF20-XH     | 2:1 - 7:1 | (With hardened gears = torque x 2) |                         |                        | -      | 1 040,86 € |

\*Depending on availability - Dimensions in mm



# Offset spur gearbox

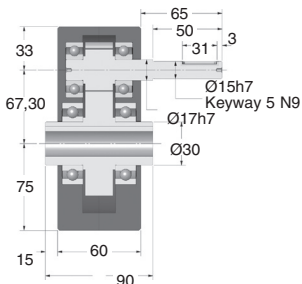
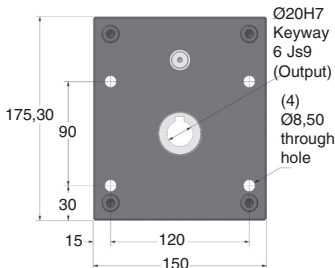
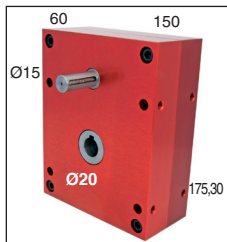
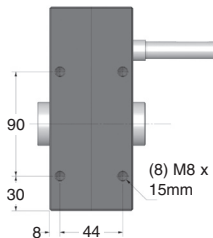
Torque up to 83Nm

FF30

- High efficiency
- Ratios from 2:1 to 7:1
- Output backlash  $\leq 30'$  (0.5°)
- Max. speed: 2,000 rpm
- Materials:
  - casing: anodised aluminium
  - input & output: non-hardened steel
- Weight: 5.50 kg

## Options

- Can be modified to your specifications



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

|                   | Ratios | 2:1   | 3:1   | 4:1   | 5:1   | 6:1   | 7:1   |
|-------------------|--------|-------|-------|-------|-------|-------|-------|
| INPUT SPEED (rpm) | 2000   | 33,20 | 29,10 | 25,20 | 24,30 | 23,90 | 21,50 |
|                   | 1000   | 39,10 | 34,40 | 29,80 | 28,70 | 27,30 | 25,10 |
| SPEED (rpm)       | 500    | 45,20 | 39,70 | 34,40 | 33,10 | 31,60 | 28,80 |
|                   | 200    | 54,30 | 47,60 | 41,30 | 39,70 | 38,20 | 34,00 |
|                   | 100    | 60,40 | 52,90 | 45,90 | 44,20 | 43,40 | 39,10 |
|                   | 50     | 69,00 | 60,08 | 43,00 | 50,80 | 49,30 | 45,20 |
|                   | 10     | 83,00 | 72,70 | 63,00 | 60,70 | 59,20 | 54,40 |

## DISCOUNTS

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

| Part number | Ratio     | Max. input speed (rpm)             | Max. output speed (rpm) | Efficiency at 1000 rpm | Stock* | Price each |
|-------------|-----------|------------------------------------|-------------------------|------------------------|--------|------------|
| FF30-2      | 2:1       | 2000                               | 1000                    | 93%                    | -      | 832,96 €   |
| FF30-3      | 3:1       | 2000                               | 666                     | 93%                    | -      | 832,96 €   |
| FF30-4      | 4:1       | 2000                               | 500                     | 93%                    | ✓      | 832,96 €   |
| FF30-5      | 5:1       | 2000                               | 400                     | 93%                    | -      | 832,96 €   |
| FF30-6      | 6:1       | 2000                               | 333                     | 93%                    | -      | 832,96 €   |
| FF30-7      | 7:1       | 2000                               | 285                     | 93%                    | ✓      | 832,96 €   |
| FF30-XH     | 2:1 - 7:1 | (With hardened gears = torque x 2) |                         |                        | -      | 1 297,89 € |

\*Depending on availability - Dimensions in mm

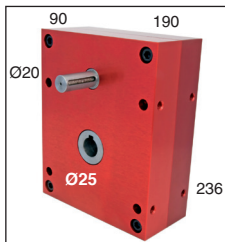
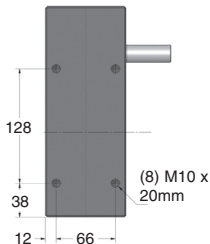
# Offset spur gearbox



## FF40

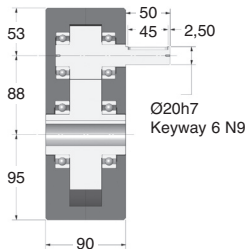
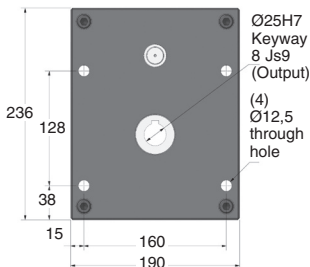
## Torque up to 210Nm

- **High efficiency**
- Ratios from 2:1 to 7:1
- Output backlash  $\leq 30'$  (0.5°)
- Max. speed: 2000 rpm
- Materials:  
casing: anodised aluminium  
input & output:  
non-hardened steel



### Options

- Can be modified to your specifications



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

| Ratios | 2:1 | 3:1 | 4:1 | 5:1 | 6:1 | 7:1 |
|--------|-----|-----|-----|-----|-----|-----|
| 2000   | 83  | 83  | 76  | 70  | 61  | 59  |
| 1000   | 90  | 90  | 82  | 76  | 66  | 64  |
| 500    | 103 | 102 | 95  | 87  | 76  | 73  |
| 200    | 120 | 120 | 110 | 102 | 89  | 86  |
| 100    | 138 | 135 | 126 | 116 | 101 | 98  |
| 50     | 156 | 155 | 146 | 136 | 117 | 113 |
| 10     | 210 | 210 | 196 | 180 | 158 | 152 |

### DISCOUNTS

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

| Part number | Ratio     | Max. input speed (rpm)                    | Max. output speed (rpm) | Efficiency at 1000 t/min |            |
|-------------|-----------|---|-------------------------|--------------------------|------------|
|             |           |   |                         | Efficiency               | Price each |
| FF40-2      | 2:1       | 2000                                      | 1000                    | 93%                      | 1 464,89 € |
| FF40-3      | 3:1       | 2000                                      | 666                     | 93%                      | 1 464,89 € |
| FF40-4      | 4:1       | 2000                                      | 500                     | 93%                      | 1 464,89 € |
| FF40-5      | 5:1       | 2000                                      | 400                     | 93%                      | 1 464,89 € |
| FF40-6      | 6:1       | 2000                                      | 333                     | 93%                      | 1 464,89 € |
| FF40-7      | 7:1       | 2000                                      | 285                     | 93%                      | 1 464,89 € |
| FF40-XH     | 2:1 - 7:1 | <b>(With hardened gears = torque x 2)</b> |                         |                          | 1 915,68 € |

\*Depending on availability - Dimensions in mm



# Offset spur gearbox

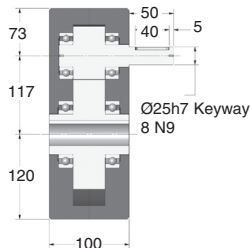
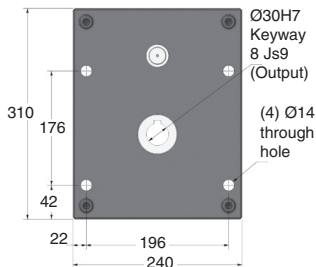
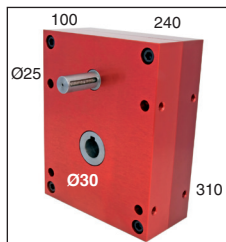
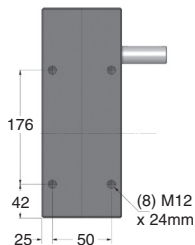
Torque up to 425Nm

FF50

- High efficiency
- Ratios from 2:1 to 7:1
- Output backlash  $\leq 30'$  (0.5°)
- Max. speed: 2000 rpm
- Materials:
  - casing: anodised aluminium
  - input & output: non-hardened steel
- Weight: 26.59 kg

## Options

- Can be modified to your specifications



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

| Ratios | 2:1 | 3:1 | 4:1 | 5:1 | 6:1 | 7:1 |
|--------|-----|-----|-----|-----|-----|-----|
| 2000   | 166 | 156 | 147 | 138 | 120 | 111 |
| 1000   | 180 | 168 | 160 | 149 | 130 | 120 |
| 500    | 207 | 194 | 183 | 172 | 150 | 139 |
| 200    | 242 | 226 | 214 | 200 | 175 | 162 |
| 100    | 276 | 260 | 245 | 220 | 200 | 185 |
| 50     | 318 | 300 | 282 | 264 | 230 | 212 |
| 10     | 425 | 400 | 380 | 356 | 310 | 286 |

## DISCOUNTS

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

| Part number | Ratio     | Max. input speed (rpm)             | Max. output speed (rpm) | Efficiency at 1000 rpm | Price each |
|-------------|-----------|------------------------------------|-------------------------|------------------------|------------|
| FF50-2      | 2:1       | 2000                               | 1000                    | 93%                    | 2 244,81 € |
| FF50-3      | 3:1       | 2000                               | 666                     | 93%                    | 2 244,81 € |
| FF50-4      | 4:1       | 2000                               | 500                     | 93%                    | 2 244,81 € |
| FF50-5      | 5:1       | 2000                               | 400                     | 93%                    | 2 244,81 € |
| FF50-6      | 6:1       | 2000                               | 333                     | 93%                    | 2 244,81 € |
| FF50-7      | 7:1       | 2000                               | 285                     | 93%                    | 2 244,81 € |
| FF50-XH     | 2:1 - 7:1 | (With hardened gears = torque x 2) |                         |                        | 2 695,59 € |

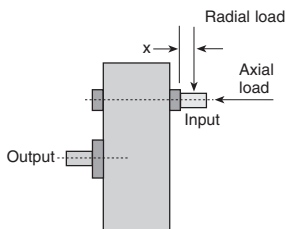
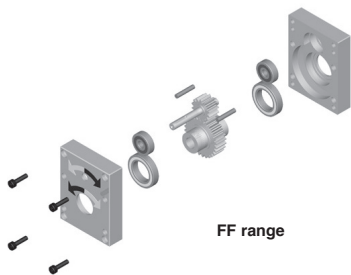
\*Depending on availability - Dimensions in mm

# Offset spur gearboxes

## FF

## Technical information

- **Speed ratio: from 2:1 to 7:1**
- **Materials :**  
housing anodised aluminium  
steel
- **Gears in steel**
- **Max. speed: 2,000 rpm on input**
- **Backlash:  $\leq 30'$  (0.5°) on output**
- **Lubrication: greased for life**  
(Shell Gadus S5V42P 2.5 grease)
- **Guarantee: 13 months**
- **Tolerances : ground shafts h7, Ra 0.8**



### ADMISSIBLE LOADS

| Part number | Distance 'X' (mm) | Input Radial load (N) | Output Radial load (N) | Axial load (N) |
|-------------|-------------------|-----------------------|------------------------|----------------|
| FF10        | 8                 | 20                    | 100                    | 100            |
| FF15        | 10                | 60                    | 200                    | 200            |
| FF20        | 15                | 160                   | 400                    | 300            |
| FF30        | 20                | 200                   | 600                    | 400            |
| FF40        | 30                | 300                   | 800                    | 500            |
| FF50        | 40                | 400                   | 1000                   | 600            |

Data given based on input speed of 1000 rpm.  
Values given as an indication only.