

## Type 810

The Type 810 planetary gearbox is a high-performance unit engineered for intensive industrial use, where both high torque and operational stability are required. Thanks to its scalable architecture, it supports up to four gear stages (L1 through L4), making it suitable for systems with diverse mechanical needs—from mild deceleration to extremely high torque output. The single-stage configuration (L1) offers gear ratios between 4.30 and 7.90, capable of delivering torque from 3420 to 11020 Nm. In dual-stage setups (L2), the ratio expands to a range of 14.62 to 55.30. For more demanding tasks, the three-stage design (L3) provides gear ratios between 58.48 and 398.16, while the four-stage option (L4) allows for reductions from 341.80 up to 2472.57. Built to handle power inputs of 11, 15, 21, or 35 kW, and operating reliably at speeds up to 1500 rpm, the Type 810 is ideal for machinery exposed to continuous operation, variable loads, and high mechanical stress.

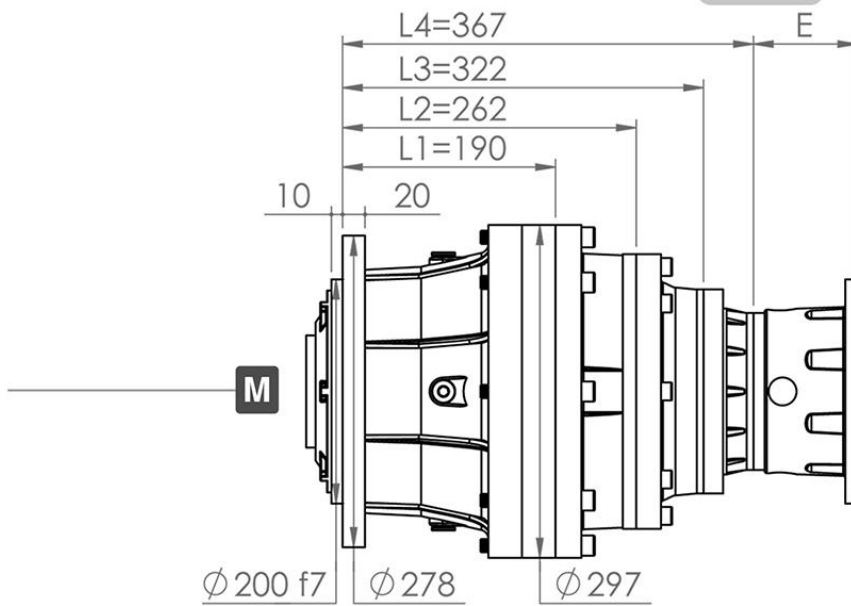
The Type 810 planetary gearbox is particularly suited for heavy-duty industrial sectors that require sustained performance under high torque loads and variable operational speeds. Its broad range of gear reductions—from moderate to extreme—makes it an excellent fit for applications involving complex mechanical demands. In industries such as mining, metal processing, cement, and bulk material handling, where torque levels can reach beyond 11,000 Nm and precise motion control is crucial, this gearbox ensures reliable transmission and energy efficiency. Thanks to its modular four-stage configuration and compatibility with input powers up to 35 kW, it integrates seamlessly into equipment like large conveyor drives, rotary kilns, high-torque winches, industrial mixers, and heavy-duty shredding systems. Whether the system is under constant duty or frequent load shifts, the Type 810 maintains stable operation and long service life.

810

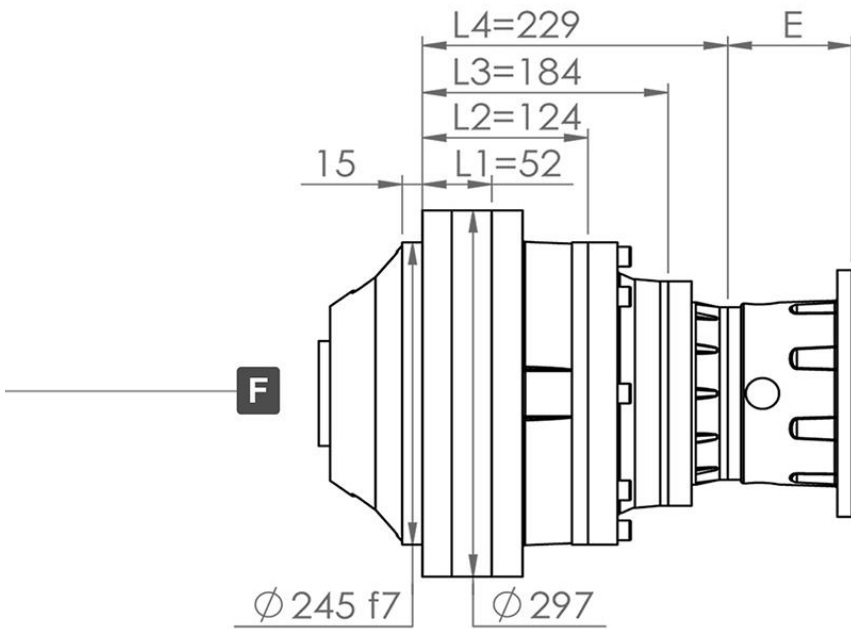
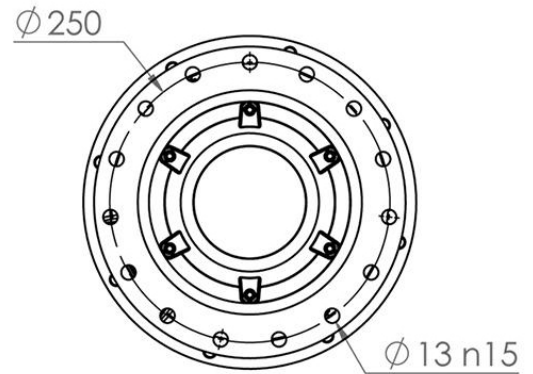
| i  |       | T2 [Nm]        |                    |                  |                 |                   |                  | n1 max | T2 max | pt   |
|----|-------|----------------|--------------------|------------------|-----------------|-------------------|------------------|--------|--------|------|
| L  | 1/... | n2*h           |                    |                  |                 |                   |                  | [min]  | [Nm]   | [Kw] |
|    |       | 10000<br>(10)4 | 25000<br>(2.5*10)4 | 50000<br>(5*10)4 | 100000<br>(10)5 | 500000<br>(5*10)5 | 1000000<br>(10)6 |        |        |      |
| L1 | 4.30  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             | 1500   | 15000  | 35   |
|    | 5.47  | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 6.42  | 8570           | 7130               | 6190             | 5920            | 5370              | 5140             |        |        |      |
|    | 7.90  | 5520           | 4580               | 4100             | 3930            | 3580              | 3430             |        |        |      |
| L2 | 14.62 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             | 1500   | 15000  | 21   |
|    | 17.20 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 18.60 | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 21.50 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 21.83 | 8570           | 7130               | 6190             | 5920            | 5370              | 5140             |        |        |      |
|    | 21.88 | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 24.94 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 25.68 | 8570           | 7130               | 6190             | 5920            | 5370              | 5140             |        |        |      |
|    | 26.86 | 5520           | 4580               | 4100             | 3930            | 3580              | 3430             |        |        |      |
|    | 27.35 | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 30.10 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 31.60 | 5520           | 4580               | 4100             | 3930            | 3580              | 3430             |        |        |      |
|    | 31.73 | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 32.10 | 8570           | 7130               | 6190             | 5920            | 5370              | 5140             |        |        |      |
|    | 37.24 | 8570           | 7130               | 6190             | 5920            | 5370              | 5140             |        |        |      |
|    | 38.29 | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 39.50 | 5520           | 4580               | 4100             | 3930            | 3580              | 3430             |        |        |      |
|    | 44.94 | 8570           | 7130               | 6190             | 5920            | 5370              | 5140             |        |        |      |
|    | 45.82 | 5520           | 4580               | 4100             | 3930            | 3580              | 3430             |        |        |      |
|    | 55.30 | 5520           | 4580               | 4100             | 3930            | 3580              | 3430             |        |        |      |
| L3 | 58.48 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 64.91 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 68.80 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 70.52 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 76.37 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 79.24 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 84.80 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 93.22 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 99.76 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |

| i  |         | T2 [Nm]        |                    |                  |                 |                   |                  | n1 max | T2 max | pt   |
|----|---------|----------------|--------------------|------------------|-----------------|-------------------|------------------|--------|--------|------|
| L  | 1/...   | n2*h           |                    |                  |                 |                   |                  | [min]  | [Nm]   | [Kw] |
|    |         | 10000<br>(10)4 | 25000<br>(2.5*10)4 | 50000<br>(5*10)4 | 100000<br>(10)5 | 500000<br>(5*10)5 | 1000000<br>(10)6 |        |        |      |
| L3 | 102.34  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             | 1500   | 15000  | 15   |
|    | 105.26  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 116.53  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 120.40  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 123.84  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 124.70  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 135.17  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 144.65  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 150.50  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 154.80  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 174.58  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 179.57  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 210.70  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 216.72  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 268.03  | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 275.69  | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 314.58  | 8570           | 7130               | 6190             | 5920            | 5370              | 5140             |        |        |      |
|    | 323.57  | 8570           | 7130               | 6190             | 5920            | 5370              | 5140             |        |        |      |
|    | 398.16  | 5520           | 4580               | 4100             | 3930            | 3580              | 3430             |        |        |      |
|    | 341.80  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             | 1500   | 15000  | 11   |
| L4 | 403.11  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 474.25  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 492.08  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 578.92  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 723.65  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 839.44  | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 920.55  | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 1067.84 | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 1345.83 | 11020          | 10160              | 10020            | 9520            | 7540              | 6130             |        |        |      |
|    | 1712.02 | 9620           | 8050               | 7000             | 6530            | 5900              | 5690             |        |        |      |
|    | 2009.36 | 8570           | 7130               | 6190             | 5920            | 5370              | 5140             |        |        |      |
|    | 2472.57 | 5520           | 4580               | 4100             | 3930            | 3580              | 3430             |        |        |      |

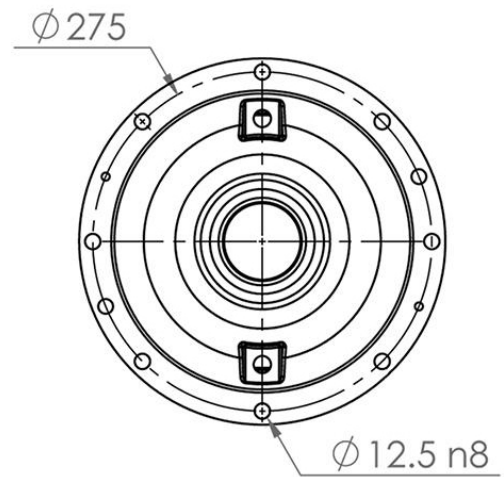
# SH 810



Output Flange Dimensions

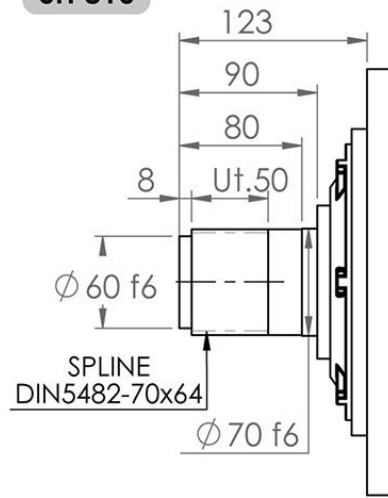
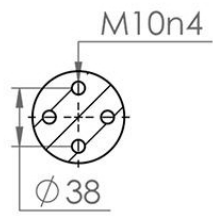


Output Flange Dimensions

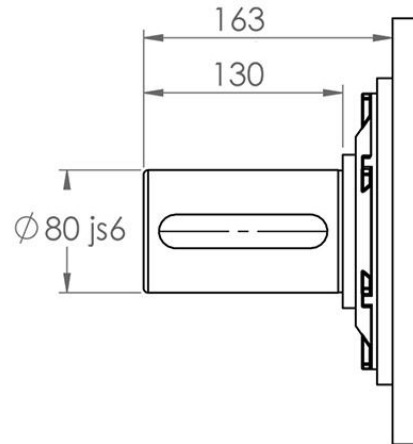
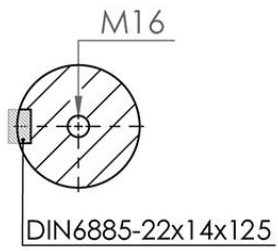


| MOTOR FRAME | 80-4A | 90LA | 90LB | 100LA | 100LB | 112M | 132MA | 132MB | 160LA | 160LB | 180M | 180L | 200L | 225S |
|-------------|-------|------|------|-------|-------|------|-------|-------|-------|-------|------|------|------|------|
| E           | L1    | -    | -    | -     | -     | -    | -     | -     | -     | -     | -    | -    | 177  | 207  |
|             | L2    | -    | -    | -     | -     | -    | -     | -     | 177   | 177   | 177  | 177  | -    | -    |
|             | L3    | -    | 96   | 96    | 117   | 117  | 117   | 132   | -     | -     | -    | -    | -    | -    |
|             | L4    | 93   | 93   | 93    | 103   | 103  | -     | -     | -     | -     | -    | -    | -    | -    |

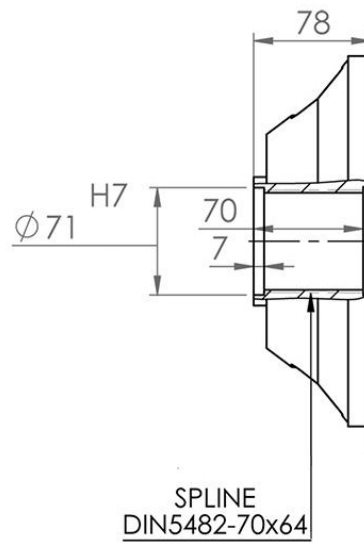
# SH 810



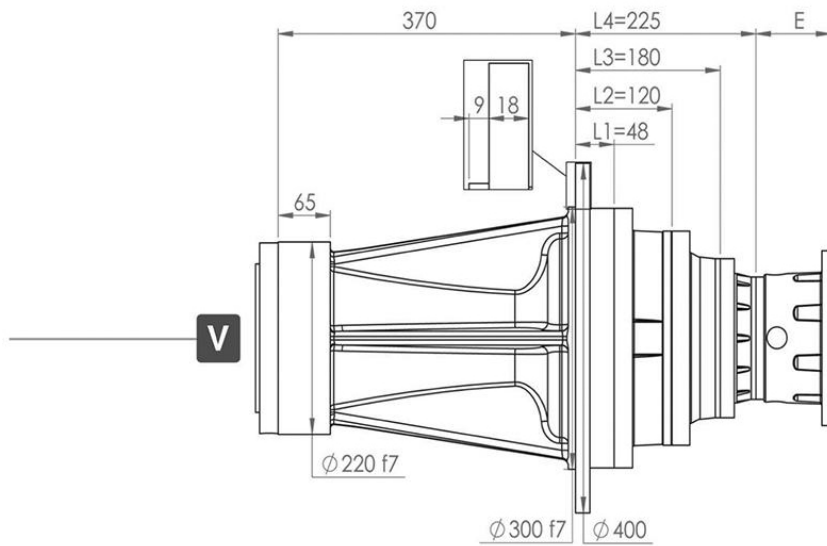
E



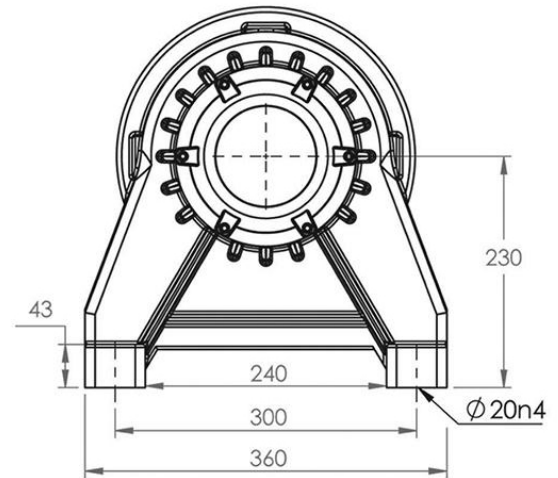
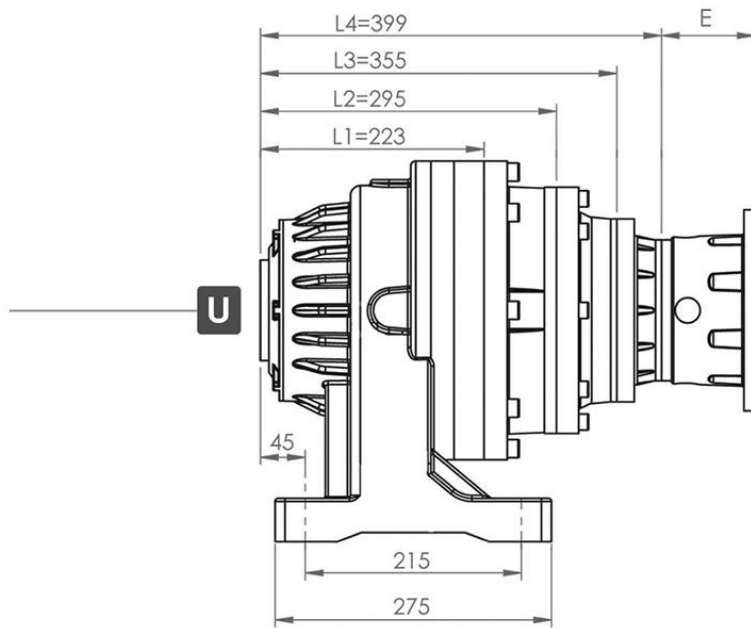
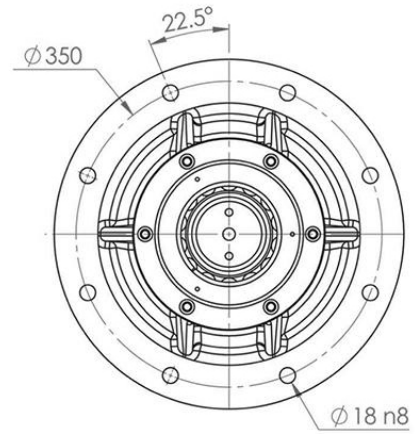
C



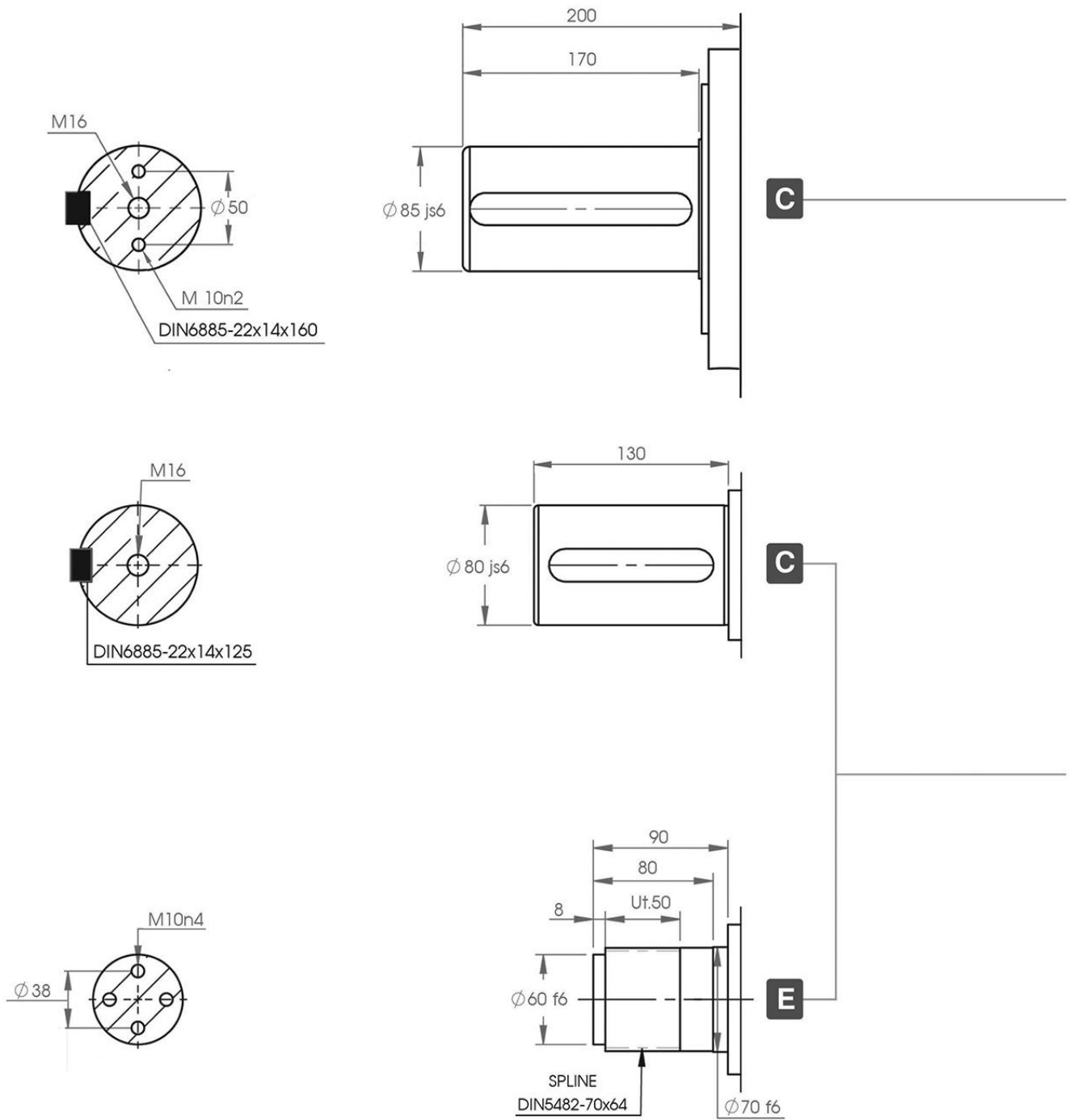
S



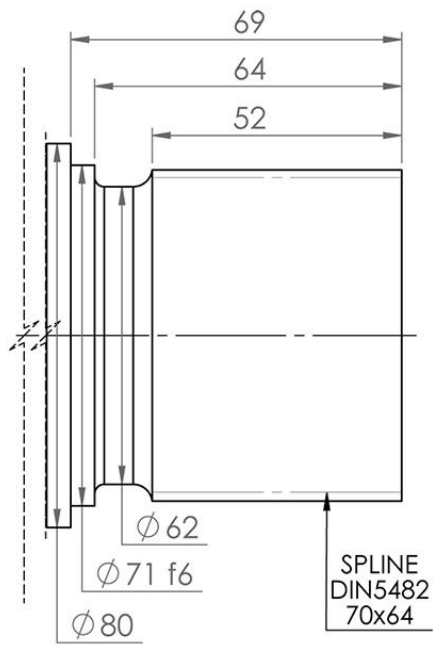
### Output Flange Dimensions



| MOTOR FRAME | 80-4A | 90LA | 90LB | 100LA | 100LB | 112M | 132MA | 132MB | 160LA | 160LB | 180M | 180L | 200L | 225S |
|-------------|-------|------|------|-------|-------|------|-------|-------|-------|-------|------|------|------|------|
| E           | L1    | -    | -    | -     | -     | -    | -     | -     | -     | -     | -    | -    | 177  | 207  |
|             | L2    | -    | -    | -     | -     | -    | -     | -     | 177   | 177   | 177  | 177  | -    | -    |
|             | L3    | -    | 96   | 96    | 117   | 117  | 117   | 132   | -     | -     | -    | -    | -    | -    |
|             | L4    | 93   | 93   | 93    | 103   | 103  | -     | -     | -     | -     | -    | -    | -    | -    |

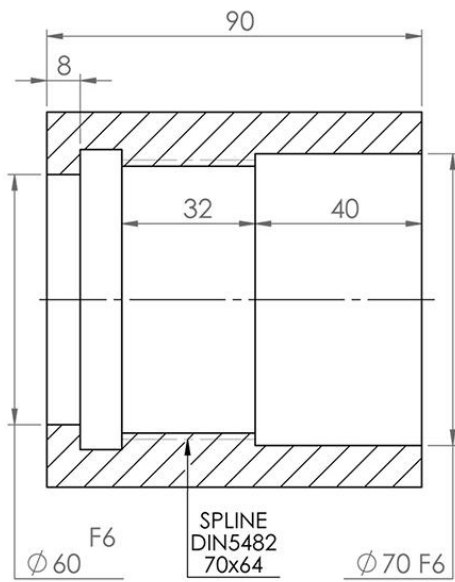
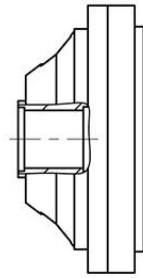


# SH 810



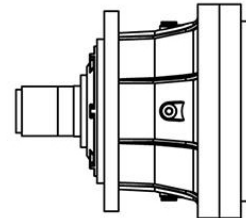
**Saft** S(E)810

SH 810 FS

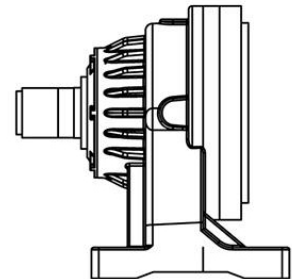


**Bush** S(I)810

SH 810 ME

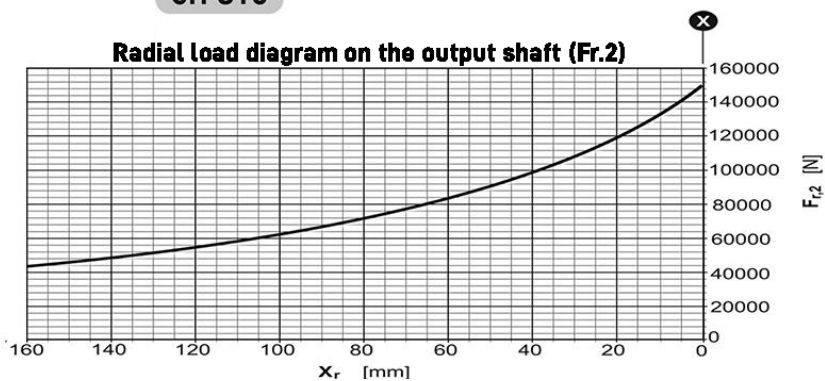
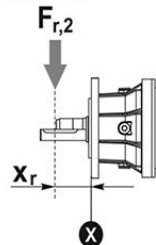


SH 810 UE

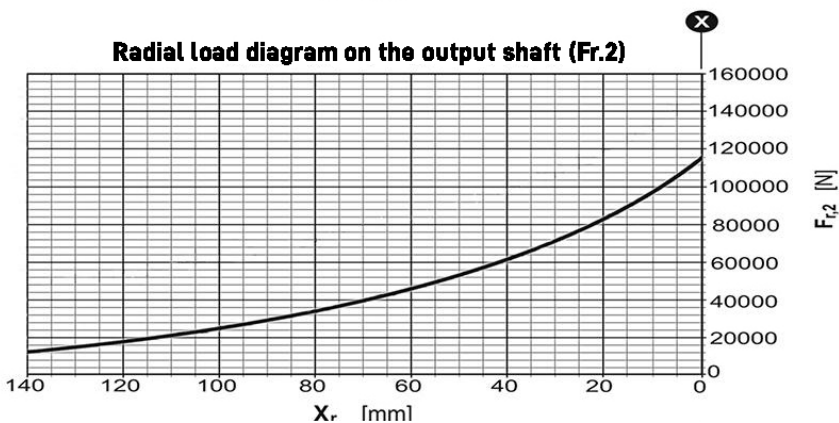
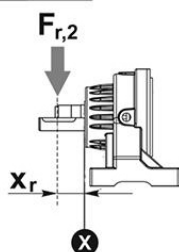




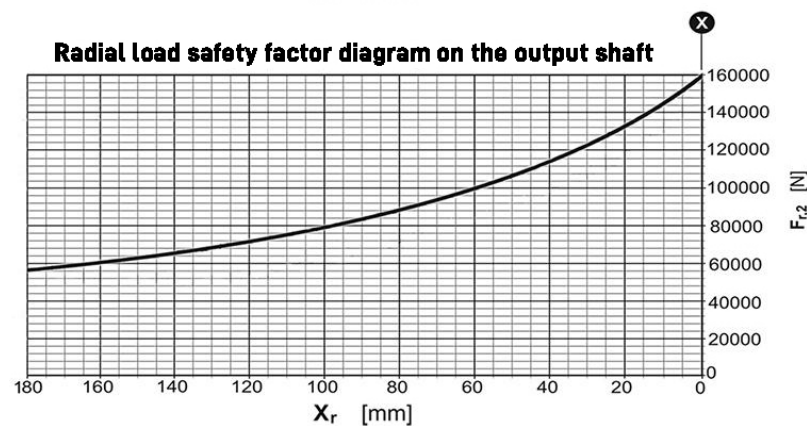
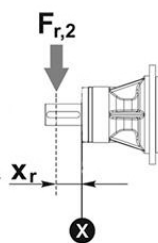
|    |     |    |          |
|----|-----|----|----------|
| SH | 810 | .. | MC<br>ME |
|----|-----|----|----------|



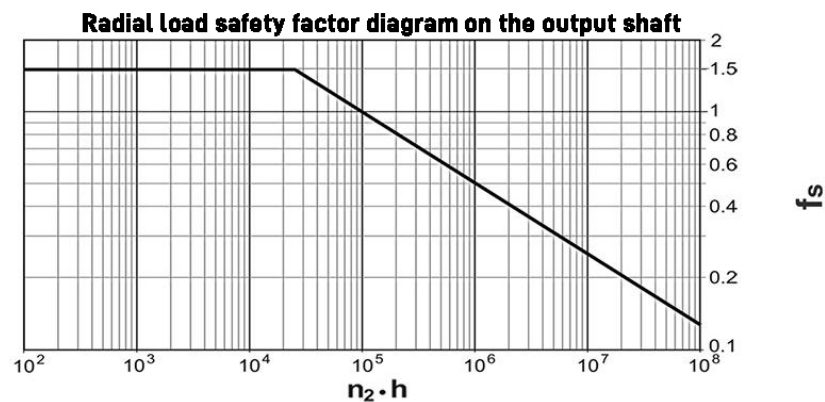
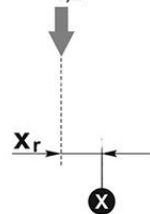
|    |     |    |          |
|----|-----|----|----------|
| SH | 810 | .. | UE<br>UC |
|----|-----|----|----------|



|    |     |    |    |
|----|-----|----|----|
| SH | 810 | .. | VC |
|----|-----|----|----|



Modified radial load  $F_{r,2}(f_s)$



Modified radial load  $F_{r,2}(f_s) = F_{r,2} \times f_s$