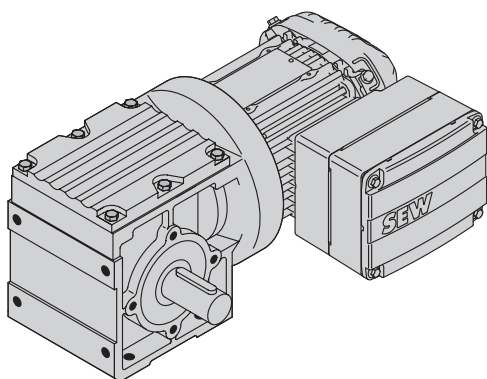
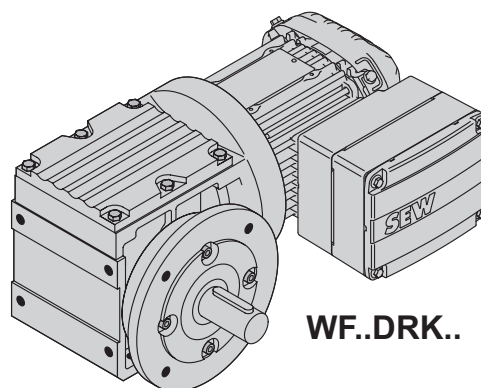


## 12 SPIROPLAN® gearmotors

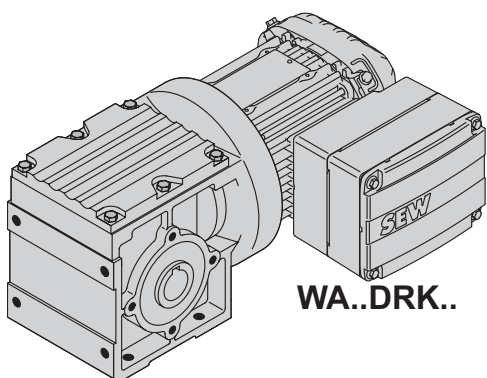
### 12.1 W..DRK.. designs



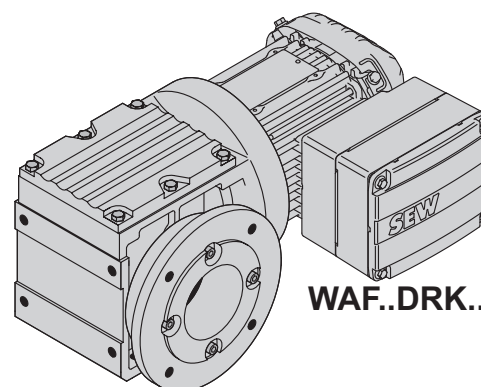
**W..DRK..**



**WF..DRK..**



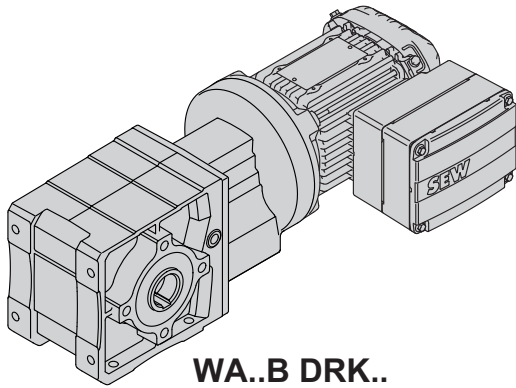
**WA..DRK..**



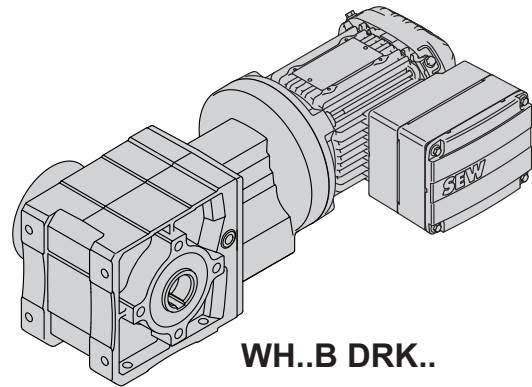
**WAF..DRK..**

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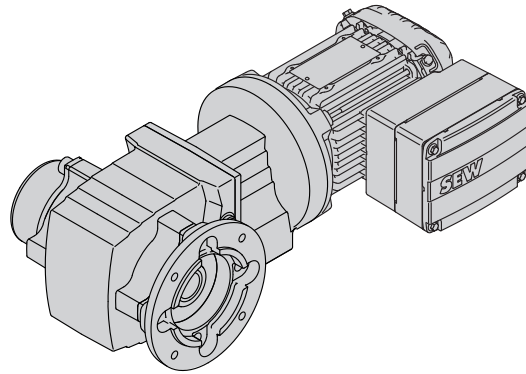


**WA..B DRK..**

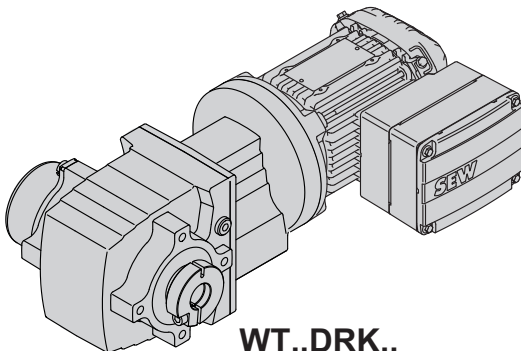


**WH..B DRK..**

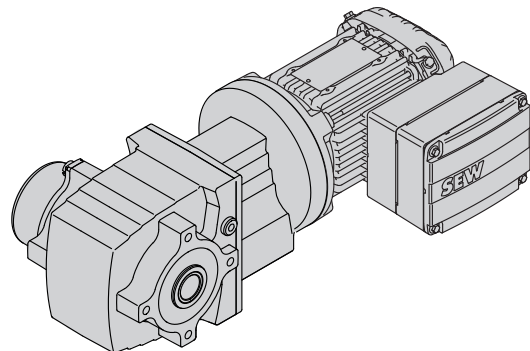
12



**WHF..DRK..**



**WT..DRK..**



**WH..DRK..**

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## 12.2 Possible geometrical combinations of W..DRK..

| W10, $n_e=1400$ 1/min                                                               |                  |               |                   |        | 25 Nm |
|-------------------------------------------------------------------------------------|------------------|---------------|-------------------|--------|-------|
| $n_a$<br>rpm                                                                        | $M_{amax}$<br>Nm | $F_{Ra}$<br>N | $\Phi_{(R)}$<br>° | i      | ET56L |
|  1 |                  |               |                   |        |       |
| 19                                                                                  | 25               | 1960          | -                 | 75.00* |       |
| 23                                                                                  | 25               | 1960          | -                 | 60.00* |       |
| 29                                                                                  | 25               | 1960          | -                 | 48.00* |       |
| 36                                                                                  | 25               | 1960          | -                 | 39.00* |       |
| 43                                                                                  | 25               | 1960          | -                 | 32.50* |       |
| 51                                                                                  | 24               | 1970          | -                 | 27.50* |       |
| 57                                                                                  | 25               | 1960          | -                 | 24.50* |       |
| 72                                                                                  | 25               | 1960          | -                 | 19.50* |       |
| 85                                                                                  | 20               | 1990          | -                 | 16.50* |       |
| 98                                                                                  | 22               | 1980          | -                 | 14.33  |       |
| 137                                                                                 | 13               | 1990          | -                 | 10.25* |       |
| 171                                                                                 | 12               | 1850          | -                 | 8.20*  |       |
| 213                                                                                 | 12               | 1740          | -                 | 6.57   |       |

| W20, $n_e=1400$ 1/min                                                                 |                  |               |                   |        | 40 Nm                              |
|---------------------------------------------------------------------------------------|------------------|---------------|-------------------|--------|------------------------------------|
| $n_a$<br>rpm                                                                          | $M_{amax}$<br>Nm | $F_{Ra}$<br>N | $\Phi_{(R)}$<br>° | i      | ER63S<br>ER63M<br>DRK71S<br>DRK71M |
|  1 |                  |               |                   |        |                                    |
| 19                                                                                    | 40               | 2200          | -                 | 75.00* |                                    |
| 23                                                                                    | 40               | 2200          | -                 | 60.00* |                                    |
| 29                                                                                    | 40               | 2200          | -                 | 48.00* |                                    |
| 36                                                                                    | 40               | 2200          | -                 | 39.00* |                                    |
| 43                                                                                    | 40               | 2200          | -                 | 32.50* |                                    |
| 51                                                                                    | 40               | 2200          | -                 | 27.50* |                                    |
| 57                                                                                    | 40               | 2200          | -                 | 24.50* |                                    |
| 72                                                                                    | 35               | 2200          | -                 | 19.50* |                                    |
| 85                                                                                    | 30               | 2200          | -                 | 16.50* |                                    |
| 98                                                                                    | 30               | 2110          | -                 | 14.33  |                                    |
| 137                                                                                   | 25               | 1920          | -                 | 10.25* |                                    |
| 171                                                                                   | 20               | 1830          | -                 | 8.20*  |                                    |
| 213                                                                                   | 20               | 1740          | -                 | 6.57   |                                    |

| W30, n <sub>e</sub> =1400 1/min                                                       |                         |                      |                        |        |                                    | 70 Nm            |
|---------------------------------------------------------------------------------------|-------------------------|----------------------|------------------------|--------|------------------------------------|------------------|
| n <sub>a</sub><br>rpm                                                                 | M <sub>amax</sub><br>Nm | F <sub>Ra</sub><br>N | φ <sub>(/R)</sub><br>° | i      | ER63S<br>ER63M<br>DRK71S<br>DRK71M | DRK80S<br>DRK80M |
|  1 |                         |                      |                        |        |                                    |                  |
| 19                                                                                    | 70                      | 3000                 | -                      | 75.00* |                                    |                  |
| 23                                                                                    | 70                      | 3000                 | -                      | 60.00* |                                    |                  |
| 29                                                                                    | 70                      | 3000                 | -                      | 48.00* |                                    |                  |
| 36                                                                                    | 70                      | 3000                 | -                      | 39.00* |                                    |                  |
| 43                                                                                    | 70                      | 3000                 | -                      | 32.50* |                                    |                  |
| 51                                                                                    | 70                      | 3000                 | -                      | 27.50* |                                    |                  |
| 57                                                                                    | 70                      | 3000                 | -                      | 24.50* |                                    |                  |
| 72                                                                                    | 70                      | 3000                 | -                      | 19.50* |                                    |                  |

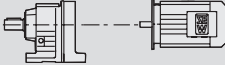
| W30, $n_e=1400$ 1/min |                  |               |                   |        |                                    | 70 Nm            |  |
|-----------------------|------------------|---------------|-------------------|--------|------------------------------------|------------------|--|
| $n_a$<br>rpm          | $M_{amax}$<br>Nm | $F_{Ra}$<br>N | $\Phi_{(R)}$<br>' | $i$    | ER63S<br>ER63M<br>DRK71S<br>DRK71M | DRK80S<br>DRK80M |  |
| 86                    | 60               | 3000          | -                 | 16.33  |                                    |                  |  |
| 98                    | 60               | 3000          | -                 | 14.33  |                                    |                  |  |
| 137                   | 50               | 2970          | -                 | 10.25* |                                    |                  |  |
| 171                   | 40               | 2810          | -                 | 8.20*  |                                    |                  |  |
| 213                   | 40               | 2640          | -                 | 6.57   |                                    |                  |  |

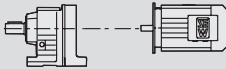
| W37, $n_e=1400$ 1/min                                                               |                  |               |                   |       |                                    | 110 Nm                     |        |
|-------------------------------------------------------------------------------------|------------------|---------------|-------------------|-------|------------------------------------|----------------------------|--------|
| $n_a$<br>rpm                                                                        | $M_{amax}$<br>Nm | $F_{Ra}$<br>N | $\Phi_{(R)}$<br>' | $i$   | ER63S<br>ER63M<br>DRK71S<br>DRK71M | DRK80S<br>DRK80M<br>DRK90M | DRK90L |
|  2 |                  |               |                   |       |                                    |                            |        |
| 20                                                                                  | 110              | 3320          | -                 | 69.05 |                                    |                            |        |
| 22                                                                                  | 110              | 3320          | -                 | 63.33 |                                    |                            |        |
| 26                                                                                  | 110              | 3320          | -                 | 53.92 |                                    |                            |        |
| 30                                                                                  | 110              | 3320          | -                 | 46.49 |                                    |                            |        |
| 37                                                                                  | 110              | 3320          | -                 | 37.88 |                                    |                            |        |
| 41                                                                                  | 90               | 3610          | -                 | 34.52 |                                    |                            |        |
| 44                                                                                  | 90               | 3610          | -                 | 31.67 |                                    |                            |        |
| 45                                                                                  | 110              | 3320          | -                 | 31.33 |                                    |                            |        |
| 50                                                                                  | 110              | 3320          | -                 | 27.78 |                                    |                            |        |
| 52                                                                                  | 90               | 3610          | -                 | 26.96 |                                    |                            |        |
| 60                                                                                  | 90               | 3610          | -                 | 23.25 |                                    |                            |        |
| 66                                                                                  | 110              | 3320          | -                 | 21.33 |                                    |                            |        |
| 74                                                                                  | 90               | 3610          | -                 | 18.94 |                                    |                            |        |
| 89                                                                                  | 90               | 3430          | -                 | 15.67 |                                    |                            |        |
| 101                                                                                 | 90               | 3250          | -                 | 13.89 |                                    |                            |        |
| 110                                                                                 | 70               | 3800          | -                 | 12.70 |                                    |                            |        |
| 120                                                                                 | 70               | 3680          | -                 | 11.65 |                                    |                            |        |
| 131                                                                                 | 90               | 2880          | -                 | 10.67 |                                    |                            |        |
| 141                                                                                 | 70               | 3460          | -                 | 9.92  |                                    |                            |        |
| 164                                                                                 | 70               | 3270          | -                 | 8.55  |                                    |                            |        |
| 201                                                                                 | 70               | 3020          | -                 | 6.97  |                                    |                            |        |
| 243                                                                                 | 70               | 2810          | -                 | 5.77  |                                    |                            |        |
| 274                                                                                 | 70               | 2680          | -                 | 5.11  |                                    |                            |        |
| 356                                                                                 | 70               | 2410          | -                 | 3.93  |                                    |                            |        |
| 438                                                                                 | 70               | 2220          | -                 | 3.20* |                                    |                            |        |

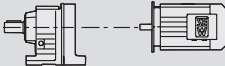
| W47, $n_e=1400$ 1/min                                                                 |                  |               |                   |       |                                    | 180 Nm                     |        |
|---------------------------------------------------------------------------------------|------------------|---------------|-------------------|-------|------------------------------------|----------------------------|--------|
| $n_a$<br>rpm                                                                          | $M_{amax}$<br>Nm | $F_{Ra}$<br>N | $\Phi_{(R)}$<br>' | $i$   | ER63S<br>ER63M<br>DRK71S<br>DRK71M | DRK80S<br>DRK80M<br>DRK90M | DRK90L |
|  2 |                  |               |                   |       |                                    |                            |        |
| 19                                                                                    | 180              | 6400          | -                 | 74.98 |                                    |                            |        |
| 20                                                                                    | 180              | 6400          | -                 | 68.93 |                                    |                            |        |
| 24                                                                                    | 180              | 6400          | -                 | 58.98 |                                    |                            |        |
| 27                                                                                    | 180              | 6230          | -                 | 51.12 |                                    |                            |        |
| 29                                                                                    | 180              | 6040          | -                 | 47.78 |                                    |                            |        |
| 34                                                                                    | 180              | 5650          | -                 | 41.30 |                                    |                            |        |
| 40                                                                                    | 180              | 5230          | -                 | 35.09 |                                    |                            |        |

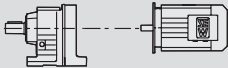
| W47, n <sub>e</sub> =1400 1/min |                         |                      |                        |       | 180 Nm                             |                            |        |
|---------------------------------|-------------------------|----------------------|------------------------|-------|------------------------------------|----------------------------|--------|
| n <sub>a</sub><br>rpm           | M <sub>amax</sub><br>Nm | F <sub>Ra</sub><br>N | Φ <sub>(/R)</sub><br>° | i     | ER63S<br>ER63M<br>DRK71S<br>DRK71M | DRK80S<br>DRK80M<br>DRK90M | DRK90L |
| 44                              | 160                     | 5560                 | -                      | 31.62 |                                    |                            |        |
| 45                              | 180                     | 4950                 | -                      | 31.33 |                                    |                            |        |
| 51                              | 160                     | 5220                 | -                      | 27.41 |                                    |                            |        |
| 52                              | 180                     | 4580                 | -                      | 26.76 |                                    |                            |        |
| 55                              | 160                     | 5070                 | -                      | 25.62 |                                    |                            |        |
| 56                              | 180                     | 4430                 | -                      | 25.07 |                                    |                            |        |
| 63                              | 160                     | 4750                 | -                      | 22.15 |                                    |                            |        |
| 74                              | 160                     | 4410                 | -                      | 18.82 |                                    |                            |        |
| 83                              | 160                     | 4180                 | -                      | 16.80 |                                    |                            |        |
| 98                              | 160                     | 3880                 | -                      | 14.35 |                                    |                            |        |
| 104                             | 160                     | 3760                 | -                      | 13.44 |                                    |                            |        |
| 114                             | 110                     | 4550                 | -                      | 12.30 |                                    |                            |        |
| 124                             | 160                     | 3460                 | -                      | 11.32 |                                    |                            |        |
| 131                             | 110                     | 4300                 | -                      | 10.66 |                                    |                            |        |
| 141                             | 110                     | 4190                 | -                      | 9.96  |                                    |                            |        |
| 163                             | 110                     | 3960                 | -                      | 8.61  |                                    |                            |        |
| 191                             | 110                     | 3710                 | -                      | 7.32  |                                    |                            |        |
| 214                             | 110                     | 3540                 | -                      | 6.53  |                                    |                            |        |
| 251                             | 110                     | 3320                 | -                      | 5.58  |                                    |                            |        |
| 268                             | 110                     | 3240                 | -                      | 5.23  |                                    |                            |        |
| 318                             | 110                     | 3020                 | -                      | 4.40  |                                    |                            |        |
| 360                             | 110                     | 2860                 | -                      | 3.89  |                                    |                            |        |
| 428                             | 110                     | 2660                 | -                      | 3.27  |                                    |                            |        |

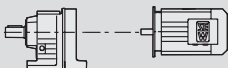
## 12.3 Selection tables W..DRK.. in kW

| P <sub>m</sub> = 0.09 kW |                      |        |                                    |                       |                                                                                    |  |  |  |         |                                                                                     |
|--------------------------|----------------------|--------|------------------------------------|-----------------------|------------------------------------------------------------------------------------|--|--|--|---------|-------------------------------------------------------------------------------------|
| n <sub>a</sub><br>rpm    | M <sub>a</sub><br>Nm | i      | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |  |  |  | m<br>kg |  |
| 18                       | 19                   | 75.00* | 1800                               | 1.30                  |                                                                                    |  |  |  |         |                                                                                     |
| 22                       | 17                   | 60.00* | 1800                               | 1.50                  |                                                                                    |  |  |  |         |                                                                                     |
| 28                       | 15                   | 48.00* | 1800                               | 1.60                  |                                                                                    |  |  |  |         |                                                                                     |
| 35                       | 14                   | 39.00* | 1800                               | 1.75                  |                                                                                    |  |  |  |         |                                                                                     |
| 42                       | 13                   | 32.50* | 1800                               | 1.95                  |                                                                                    |  |  |  |         |                                                                                     |
| 49                       | 11                   | 27.50* | 1800                               | 2.1                   |                                                                                    |  |  |  |         |                                                                                     |
| 55                       | 11                   | 24.50* | 1800                               | 2.4                   |                                                                                    |  |  |  |         |                                                                                     |
| 69                       | 9.1                  | 19.50* | 1800                               | 2.8                   |                                                                                    |  |  |  |         |                                                                                     |
| 82                       | 8.1                  | 16.50* | 1800                               | 2.5                   |                                                                                    |  |  |  |         |                                                                                     |
| 94                       | 7.3                  | 14.33  | 1800                               | 3.0                   |                                                                                    |  |  |  |         |                                                                                     |
| 132                      | 5.6                  | 10.25* | 1800                               | 2.3                   |                                                                                    |  |  |  |         |                                                                                     |
| 165                      | 4.6                  | 8.20*  | 1800                               | 2.6                   |                                                                                    |  |  |  |         |                                                                                     |
| 205                      | 3.8                  | 6.57   | 1800                               | 3.2                   |                                                                                    |  |  |  |         |                                                                                     |

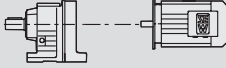
| P <sub>m</sub> = 0.12 kW |                      |        |                                    |                       |                                                                                    |    |    |      |         |                                                                                     |
|--------------------------|----------------------|--------|------------------------------------|-----------------------|------------------------------------------------------------------------------------|----|----|------|---------|-------------------------------------------------------------------------------------|
| n <sub>a</sub><br>rpm    | M <sub>a</sub><br>Nm | i      | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |    |    |      | m<br>kg |  |
| 20                       | 38                   | 69.05  | 4060                               | 2.9                   | W<br>WF<br>WA<br>WAF                                                               | 37 | ER | 63M4 | 10      | 447                                                                                 |
| 22                       | 35                   | 63.33  | 4070                               | 3.1                   |                                                                                    |    |    |      |         |                                                                                     |
| 26                       | 31                   | 53.92  | 4090                               | 3.6                   |                                                                                    |    |    |      |         |                                                                                     |
| 30                       | 27                   | 46.49  | 4100                               | 4.1                   |                                                                                    |    |    |      |         |                                                                                     |
| 37                       | 22                   | 37.88  | 4110                               | 4.9                   |                                                                                    |    |    |      |         |                                                                                     |
| 41                       | 23                   | 34.52  | 4110                               | 3.9                   |                                                                                    |    |    |      |         |                                                                                     |
| 45                       | 21                   | 31.67  | 4120                               | 4.2                   |                                                                                    |    |    |      |         |                                                                                     |
| 19                       | 28                   | 75.00* | 3000                               | 2.6                   | W<br>WF<br>WA<br>WAF                                                               | 30 | ER | 63M4 | 9.0     | 443                                                                                 |
| 24                       | 25                   | 60.00* | 3000                               | 2.8                   |                                                                                    |    |    |      |         |                                                                                     |
| 29                       | 22                   | 48.00* | 3000                               | 3.2                   |                                                                                    |    |    |      |         |                                                                                     |
| 36                       | 20                   | 39.00* | 3000                               | 3.5                   |                                                                                    |    |    |      |         |                                                                                     |
| 43                       | 17                   | 32.50* | 3000                               | 4.2                   |                                                                                    |    |    |      |         |                                                                                     |
| 19                       | 25                   | 75.00* | 2200                               | 1.60                  | W<br>WF<br>WA<br>WAF                                                               | 20 | ER | 63M4 | 6.6     | 440                                                                                 |
| 24                       | 22                   | 60.00* | 2200                               | 1.85                  |                                                                                    |    |    |      |         |                                                                                     |
| 29                       | 20                   | 48.00* | 2200                               | 2.0                   |                                                                                    |    |    |      |         |                                                                                     |
| 36                       | 18                   | 39.00* | 2200                               | 2.2                   |                                                                                    |    |    |      |         |                                                                                     |
| 43                       | 18                   | 32.50* | 2200                               | 2.2                   |                                                                                    |    |    |      |         |                                                                                     |
| 51                       | 15                   | 27.50* | 2200                               | 2.7                   |                                                                                    |    |    |      |         |                                                                                     |
| 58                       | 14                   | 24.50* | 2200                               | 3.0                   |                                                                                    |    |    |      |         |                                                                                     |
| 72                       | 12                   | 19.50* | 2200                               | 3.0                   |                                                                                    |    |    |      |         |                                                                                     |
| 85                       | 10                   | 16.50* | 2200                               | 3.0                   |                                                                                    |    |    |      |         |                                                                                     |
| 98                       | 9.4                  | 14.33  | 2200                               | 3.2                   |                                                                                    |    |    |      |         |                                                                                     |
| 138                      | 7.0                  | 10.25* | 2140                               | 3.6                   |                                                                                    |    |    |      |         |                                                                                     |
| 172                      | 5.8                  | 8.20*  | 2000                               | 3.5                   |                                                                                    |    |    |      |         |                                                                                     |
| 215                      | 4.8                  | 6.57   | 1880                               | 4.1                   |                                                                                    |    |    |      |         |                                                                                     |

| P <sub>m</sub> = 0.18 kW |                      |       |                                    |                       |                                                                                      |    |     |      |         |                                                                                       |
|--------------------------|----------------------|-------|------------------------------------|-----------------------|--------------------------------------------------------------------------------------|----|-----|------|---------|---------------------------------------------------------------------------------------|
| n <sub>a</sub><br>rpm    | M <sub>a</sub><br>Nm | i     | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |    |     |      | m<br>kg |  |
| 19                       | 64                   | 74.98 | 7090                               | 2.8                   |                                                                                      |    |     |      |         |                                                                                       |
| 21                       | 60                   | 68.93 | 7110                               | 3.0                   |                                                                                      |    |     |      |         |                                                                                       |
| 25                       | 52                   | 58.98 | 7150                               | 3.5                   | W                                                                                    | 47 | DRK | 71S4 | 19      | 452                                                                                   |
| 28                       | 46                   | 51.12 | 7180                               | 4.0                   | WF                                                                                   | 47 | DRK | 71S4 | 19      | 453                                                                                   |
| 30                       | 43                   | 47.78 | 7200                               | 4.2                   | WA                                                                                   | 47 | DRK | 71S4 | 17      | 455                                                                                   |
| 35                       | 38                   | 41.30 | 7220                               | 4.8                   | WAF                                                                                  | 47 | DRK | 71S4 | 18      | 453                                                                                   |
| 46                       | 32                   | 31.62 | 6830                               | 5.0                   |                                                                                      |    |     |      |         |                                                                                       |

| P <sub>m</sub> = 0.18 kW |                      |        |                                    |                       |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
|--------------------------|----------------------|--------|------------------------------------|-----------------------|------------------------------------------------------------------------------------|----|-----|------|---------|-------------------------------------------------------------------------------------|----|----|-----|------|-----|-----|
| n <sub>a</sub><br>rpm    | M <sub>a</sub><br>Nm | i      | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |    |     |      | m<br>kg |  |    |    |     |      |     |     |
| 21                       | 55                   | 69.05  | 3950                               | 2.00                  | W                                                                                  | 37 | DRK | 71S4 | 13      | 447                                                                                 |    |    |     |      |     |     |
| 23                       | 51                   | 63.33  | 3980                               | 2.1                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 27                       | 45                   | 53.92  | 4020                               | 2.5                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 31                       | 39                   | 46.49  | 4050                               | 2.8                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 38                       | 33                   | 37.88  | 4080                               | 3.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 42                       | 34                   | 34.52  | 4070                               | 2.7                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 46                       | 31                   | 31.67  | 4080                               | 2.9                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 52                       | 25                   | 27.78  | 4110                               | 4.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 54                       | 27                   | 26.96  | 4100                               | 3.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 62                       | 23                   | 23.25  | 4110                               | 3.8                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 68                       | 20                   | 21.33  | 4120                               | 5.6                   | WF                                                                                 | 37 | DRK | 71S4 | 13      | 448                                                                                 |    |    |     |      |     |     |
| 77                       | 19                   | 18.94  | 4120                               | 4.7                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 19                       | 40                   | 75.00* | 3000                               | 1.75                  |                                                                                    |    |     |      |         |                                                                                     | WA | 37 | DRK | 71S4 | 13  | 450 |
| 24                       | 37                   | 60.00* | 3000                               | 1.90                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 30                       | 32                   | 48.00* | 3000                               | 2.2                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 37                       | 29                   | 39.00* | 3000                               | 2.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 45                       | 25                   | 32.50* | 3000                               | 2.8                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 53                       | 23                   | 27.50* | 3000                               | 3.1                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 59                       | 21                   | 24.50* | 3000                               | 3.3                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 74                       | 18                   | 19.50* | 3000                               | 3.9                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 89                       | 16                   | 16.33  | 3000                               | 3.9                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 101                      | 14                   | 14.33  | 3000                               | 4.3                   | WAF                                                                                | 37 | DRK | 71S4 | 13      | 448                                                                                 |    |    |     |      |     |     |
| 141                      | 11                   | 10.25* | 3000                               | 4.7                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 177                      | 8.7                  | 8.20*  | 3000                               | 4.6                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 221                      | 7.3                  | 6.57   | 2890                               | 5.5                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 19                       | 40                   | 75.00* | 3000                               | 1.75                  |                                                                                    |    |     |      |         |                                                                                     | W  | 30 | DRK | 71S4 | 12  | 443 |
| 24                       | 37                   | 60.00* | 3000                               | 1.90                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 30                       | 32                   | 48.00* | 3000                               | 2.2                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 37                       | 29                   | 39.00* | 3000                               | 2.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 45                       | 25                   | 32.50* | 3000                               | 2.8                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 53                       | 23                   | 27.50* | 3000                               | 3.1                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 59                       | 21                   | 24.50* | 3000                               | 3.3                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 74                       | 18                   | 19.50* | 3000                               | 3.9                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 89                       | 16                   | 16.33  | 3000                               | 3.9                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 101                      | 14                   | 14.33  | 3000                               | 4.3                   | WF                                                                                 | 30 | DRK | 71S4 | 12      | 444                                                                                 |    |    |     |      |     |     |
| 141                      | 11                   | 10.25* | 3000                               | 4.7                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 177                      | 8.7                  | 8.20*  | 3000                               | 4.6                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 221                      | 7.3                  | 6.57   | 2890                               | 5.5                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 19                       | 40                   | 75.00* | 3000                               | 1.75                  |                                                                                    |    |     |      |         |                                                                                     | WA | 30 | DRK | 71S4 | 12  | 446 |
| 24                       | 37                   | 60.00* | 3000                               | 1.90                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 30                       | 32                   | 48.00* | 3000                               | 2.2                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 37                       | 29                   | 39.00* | 3000                               | 2.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 45                       | 25                   | 32.50* | 3000                               | 2.8                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 53                       | 23                   | 27.50* | 3000                               | 3.1                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 59                       | 21                   | 24.50* | 3000                               | 3.3                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 74                       | 18                   | 19.50* | 3000                               | 3.9                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 89                       | 16                   | 16.33  | 3000                               | 3.9                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 101                      | 14                   | 14.33  | 3000                               | 4.3                   | WAF                                                                                | 30 | DRK | 71S4 | 12      | 445                                                                                 |    |    |     |      |     |     |
| 141                      | 11                   | 10.25* | 3000                               | 4.7                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 177                      | 8.7                  | 8.20*  | 3000                               | 4.6                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 221                      | 7.3                  | 6.57   | 2890                               | 5.5                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 19                       | 36                   | 75.00* | 2200                               | 1.10                  |                                                                                    |    |     |      |         |                                                                                     | W  | 20 | DRK | 71S4 | 9.6 | 440 |
| 24                       | 32                   | 60.00* | 2200                               | 1.25                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 30                       | 29                   | 48.00* | 2200                               | 1.35                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 37                       | 27                   | 39.00* | 2200                               | 1.50                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 45                       | 26                   | 32.50* | 2200                               | 1.55                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 53                       | 22                   | 27.50* | 2200                               | 1.85                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 59                       | 20                   | 24.50* | 2200                               | 2.0                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 74                       | 17                   | 19.50* | 2200                               | 2.1                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 88                       | 15                   | 16.50* | 2200                               | 2.0                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 101                      | 14                   | 14.33  | 2200                               | 2.2                   | WF                                                                                 | 20 | DRK | 71S4 | 9.8     | 441                                                                                 |    |    |     |      |     |     |
| 141                      | 10                   | 10.25* | 2080                               | 2.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 177                      | 8.4                  | 8.20*  | 1950                               | 2.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 221                      | 7.1                  | 6.57   | 1840                               | 2.8                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 19                       | 36                   | 75.00* | 2200                               | 1.10                  |                                                                                    |    |     |      |         |                                                                                     | WA | 20 | DRK | 71S4 | 9.3 | 442 |
| 24                       | 32                   | 60.00* | 2200                               | 1.25                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 30                       | 29                   | 48.00* | 2200                               | 1.35                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 37                       | 27                   | 39.00* | 2200                               | 1.50                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 45                       | 26                   | 32.50* | 2200                               | 1.55                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 53                       | 22                   | 27.50* | 2200                               | 1.85                  |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 59                       | 20                   | 24.50* | 2200                               | 2.0                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 74                       | 17                   | 19.50* | 2200                               | 2.1                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 88                       | 15                   | 16.50* | 2200                               | 2.0                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 101                      | 14                   | 14.33  | 2200                               | 2.2                   | WAF                                                                                | 20 | DRK | 71S4 | 9.3     | 441                                                                                 |    |    |     |      |     |     |
| 141                      | 10                   | 10.25* | 2080                               | 2.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 177                      | 8.4                  | 8.20*  | 1950                               | 2.4                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |
| 221                      | 7.1                  | 6.57   | 1840                               | 2.8                   |                                                                                    |    |     |      |         |                                                                                     |    |    |     |      |     |     |

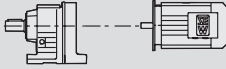
| P <sub>m</sub> = 0.25 kW |                      |       |                                    |                       |                                                                                      |                      |                          |                              |                      |                                                                                       |
|--------------------------|----------------------|-------|------------------------------------|-----------------------|--------------------------------------------------------------------------------------|----------------------|--------------------------|------------------------------|----------------------|---------------------------------------------------------------------------------------|
| n <sub>a</sub><br>rpm    | M <sub>a</sub><br>Nm | i     | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |                      |                          |                              | m<br>kg              |  |
| 19                       | 89                   | 74.98 | 6950                               | 2.0                   | W<br>WF<br>WA<br>WAF                                                                 | 47<br>47<br>47<br>47 | DRK<br>DRK<br>DRK<br>DRK | 71M4<br>71M4<br>71M4<br>71M4 | 20                   | 452                                                                                   |
| 21                       | 82                   | 68.93 | 6990                               | 2.2                   |                                                                                      |                      |                          |                              | 20                   | 453                                                                                   |
| 25                       | 72                   | 58.98 | 7050                               | 2.5                   |                                                                                      |                      |                          |                              | 18                   | 455                                                                                   |
| 28                       | 63                   | 51.12 | 7090                               | 2.8                   |                                                                                      |                      |                          |                              | 19                   | 453                                                                                   |
| 30                       | 59                   | 47.78 | 7110                               | 3.0                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 21                       | 77                   | 69.05 | 3770                               | 1.45                  | W<br>WF<br>WA<br>WAF                                                                 | 37<br>37<br>37<br>37 | DRK<br>DRK<br>DRK<br>DRK | 71M4<br>71M4<br>71M4<br>71M4 | 14<br>14<br>14<br>14 | 447<br>448<br>450<br>448                                                              |
| 23                       | 71                   | 63.33 | 3820                               | 1.55                  |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 27                       | 62                   | 53.92 | 3900                               | 1.80                  |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 31                       | 54                   | 46.49 | 3960                               | 2.0                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 38                       | 45                   | 37.88 | 4020                               | 2.4                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 42                       | 47                   | 34.52 | 4010                               | 1.90                  |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 46                       | 43                   | 31.67 | 4030                               | 2.1                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 52                       | 34                   | 27.78 | 4070                               | 3.2                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 54                       | 37                   | 26.96 | 4060                               | 2.4                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 63                       | 32                   | 23.25 | 4080                               | 2.8                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 68                       | 27                   | 21.33 | 4100                               | 4.1                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 77                       | 27                   | 18.94 | 4100                               | 3.4                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 93                       | 22                   | 15.67 | 4110                               | 4.0                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 105                      | 20                   | 13.89 | 4090                               | 4.5                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 115                      | 19                   | 12.70 | 4090                               | 3.7                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 125                      | 18                   | 11.65 | 3980                               | 4.0                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 136                      | 16                   | 10.67 | 3780                               | 5.8                   |                                                                                      |                      |                          |                              |                      |                                                                                       |
| 147                      | 15                   | 9.92  | 3780                               | 4.7                   |                                                                                      |                      |                          |                              |                      |                                                                                       |

**P<sub>m</sub> = 0.25 kW**

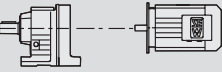
| n <sub>a</sub><br>rpm | M <sub>a</sub><br>Nm | i      | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |  |  |  | m<br>kg |  |
|-----------------------|----------------------|--------|------------------------------------|-----------------------|------------------------------------------------------------------------------------|--|--|--|---------|-------------------------------------------------------------------------------------|
| 19                    | 56                   | 75.00* | 3000                               | 1.25                  |                                                                                    |  |  |  |         |                                                                                     |
| 24                    | 51                   | 60.00* | 3000                               | 1.35                  |                                                                                    |  |  |  |         |                                                                                     |
| 30                    | 45                   | 48.00* | 3000                               | 1.55                  |                                                                                    |  |  |  |         |                                                                                     |
| 37                    | 41                   | 39.00* | 3000                               | 1.70                  |                                                                                    |  |  |  |         |                                                                                     |
| 45                    | 34                   | 32.50* | 3000                               | 2.0                   |                                                                                    |  |  |  |         |                                                                                     |
| 53                    | 32                   | 27.50* | 3000                               | 2.2                   |                                                                                    |  |  |  |         |                                                                                     |
| 59                    | 29                   | 24.50* | 3000                               | 2.4                   |                                                                                    |  |  |  |         |                                                                                     |
| 75                    | 25                   | 19.50* | 3000                               | 2.8                   |                                                                                    |  |  |  |         |                                                                                     |
| 89                    | 21                   | 16.33  | 3000                               | 2.8                   |                                                                                    |  |  |  |         |                                                                                     |
| 102                   | 19                   | 14.33  | 3000                               | 3.1                   |                                                                                    |  |  |  |         |                                                                                     |
| 142                   | 15                   | 10.25* | 3000                               | 3.4                   |                                                                                    |  |  |  |         |                                                                                     |
| 177                   | 12                   | 8.20*  | 3000                               | 3.3                   |                                                                                    |  |  |  |         |                                                                                     |
| 221                   | 10                   | 6.57   | 2860                               | 4.0                   |                                                                                    |  |  |  |         |                                                                                     |
| 24                    | 44                   | 60.00* | 2200                               | 0.90                  |                                                                                    |  |  |  |         |                                                                                     |
| 30                    | 40                   | 48.00* | 2200                               | 1.00                  |                                                                                    |  |  |  |         |                                                                                     |
| 37                    | 37                   | 39.00* | 2200                               | 1.10                  |                                                                                    |  |  |  |         |                                                                                     |
| 45                    | 36                   | 32.50* | 2200                               | 1.10                  |                                                                                    |  |  |  |         |                                                                                     |
| 53                    | 30                   | 27.50* | 2200                               | 1.30                  |                                                                                    |  |  |  |         |                                                                                     |
| 59                    | 27                   | 24.50* | 2200                               | 1.45                  |                                                                                    |  |  |  |         |                                                                                     |
| 75                    | 24                   | 19.50* | 2200                               | 1.50                  |                                                                                    |  |  |  |         |                                                                                     |
| 88                    | 21                   | 16.50* | 2200                               | 1.45                  |                                                                                    |  |  |  |         |                                                                                     |
| 102                   | 19                   | 14.33  | 2200                               | 1.60                  |                                                                                    |  |  |  |         |                                                                                     |
| 142                   | 14                   | 10.25* | 2030                               | 1.75                  |                                                                                    |  |  |  |         |                                                                                     |
| 177                   | 12                   | 8.20*  | 1910                               | 1.70                  |                                                                                    |  |  |  |         |                                                                                     |
| 221                   | 9.8                  | 6.57   | 1810                               | 2.0                   |                                                                                    |  |  |  |         |                                                                                     |

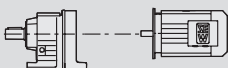
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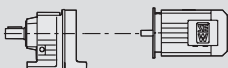
**P<sub>m</sub> = 0.37 kW**

| n <sub>a</sub><br>rpm | M <sub>a</sub><br>Nm | i     | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |  |  |  | m<br>kg |  |
|-----------------------|----------------------|-------|------------------------------------|-----------------------|--------------------------------------------------------------------------------------|--|--|--|---------|---------------------------------------------------------------------------------------|
| 24                    | 108                  | 58.98 | 6840                               | 1.65                  |                                                                                      |  |  |  |         |                                                                                       |
| 28                    | 95                   | 51.12 | 6920                               | 1.90                  |                                                                                      |  |  |  |         |                                                                                       |
| 30                    | 90                   | 47.78 | 6950                               | 2.0                   |                                                                                      |  |  |  |         |                                                                                       |
| 34                    | 79                   | 41.30 | 6890                               | 2.3                   |                                                                                      |  |  |  |         |                                                                                       |
| 40                    | 68                   | 35.09 | 6610                               | 2.6                   |                                                                                      |  |  |  |         |                                                                                       |
| 45                    | 67                   | 31.62 | 6510                               | 2.4                   |                                                                                      |  |  |  |         |                                                                                       |
| 45                    | 61                   | 31.33 | 6420                               | 2.9                   |                                                                                      |  |  |  |         |                                                                                       |
| 52                    | 58                   | 27.41 | 6260                               | 2.7                   |                                                                                      |  |  |  |         |                                                                                       |
| 53                    | 53                   | 26.76 | 6150                               | 3.4                   |                                                                                      |  |  |  |         |                                                                                       |
| 55                    | 55                   | 25.62 | 6150                               | 2.9                   |                                                                                      |  |  |  |         |                                                                                       |
| 57                    | 50                   | 25.07 | 6040                               | 3.6                   |                                                                                      |  |  |  |         |                                                                                       |
| 64                    | 48                   | 22.15 | 5900                               | 3.4                   |                                                                                      |  |  |  |         |                                                                                       |
| 75                    | 41                   | 18.82 | 5640                               | 3.9                   |                                                                                      |  |  |  |         |                                                                                       |
| 85                    | 37                   | 16.80 | 5460                               | 4.4                   |                                                                                      |  |  |  |         |                                                                                       |
| 99                    | 32                   | 14.35 | 5210                               | 5.1                   |                                                                                      |  |  |  |         |                                                                                       |
| 115                   | 29                   | 12.30 | 5070                               | 3.8                   |                                                                                      |  |  |  |         |                                                                                       |
| 133                   | 25                   | 10.66 | 4850                               | 4.4                   |                                                                                      |  |  |  |         |                                                                                       |
| 143                   | 24                   | 9.96  | 4750                               | 4.7                   |                                                                                      |  |  |  |         |                                                                                       |
| 26                    | 94                   | 53.92 | 3570                               | 1.20                  |                                                                                      |  |  |  |         |                                                                                       |
| 31                    | 82                   | 46.49 | 3710                               | 1.35                  |                                                                                      |  |  |  |         |                                                                                       |
| 37                    | 69                   | 37.88 | 3850                               | 1.60                  |                                                                                      |  |  |  |         |                                                                                       |
| 51                    | 52                   | 27.78 | 3980                               | 2.1                   |                                                                                      |  |  |  |         |                                                                                       |
| 53                    | 56                   | 26.96 | 3940                               | 1.60                  |                                                                                      |  |  |  |         |                                                                                       |
| 61                    | 49                   | 23.25 | 3990                               | 1.85                  |                                                                                      |  |  |  |         |                                                                                       |
| 67                    | 41                   | 21.33 | 4040                               | 2.7                   |                                                                                      |  |  |  |         |                                                                                       |
| 75                    | 40                   | 18.94 | 4040                               | 2.2                   |                                                                                      |  |  |  |         |                                                                                       |
| 91                    | 34                   | 15.67 | 4070                               | 2.7                   |                                                                                      |  |  |  |         |                                                                                       |
| 102                   | 30                   | 13.89 | 4000                               | 3.0                   |                                                                                      |  |  |  |         |                                                                                       |
| 133                   | 23                   | 10.67 | 3710                               | 3.8                   |                                                                                      |  |  |  |         |                                                                                       |
| 143                   | 23                   | 9.92  | 3760                               | 3.1                   |                                                                                      |  |  |  |         |                                                                                       |
| 166                   | 20                   | 8.55  | 3600                               | 3.6                   |                                                                                      |  |  |  |         |                                                                                       |

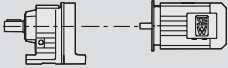


| P <sub>m</sub> = 0.37 kW |                      |        |                                    |                       |                                                                                    |    |     |      |         |                                                                                     |     |
|--------------------------|----------------------|--------|------------------------------------|-----------------------|------------------------------------------------------------------------------------|----|-----|------|---------|-------------------------------------------------------------------------------------|-----|
| n <sub>a</sub><br>rpm    | M <sub>a</sub><br>Nm | i      | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |    |     |      | m<br>kg |  |     |
| 30                       | 68                   | 48.00* | 3000                               | 1.05                  |                                                                                    | W  | 30  | DRK  | 80S4    | 15                                                                                  | 443 |
| 44                       | 52                   | 32.50* | 3000                               | 1.35                  |                                                                                    |    |     |      |         |                                                                                     |     |
| 52                       | 48                   | 27.50* | 3000                               | 1.45                  |                                                                                    |    |     |      |         |                                                                                     |     |
| 58                       | 45                   | 24.50* | 3000                               | 1.55                  |                                                                                    |    |     |      |         |                                                                                     |     |
| 87                       | 33                   | 16.33  | 3000                               | 1.85                  |                                                                                    |    |     |      |         |                                                                                     |     |
| 99                       | 30                   | 14.33  | 3000                               | 2.0                   |                                                                                    |    |     |      |         |                                                                                     |     |
| 139                      | 22                   | 10.25* | 3000                               | 2.3                   |                                                                                    |    |     |      |         |                                                                                     |     |
| 173                      | 18                   | 8.20*  | 3000                               | 2.2                   |                                                                                    |    |     |      |         |                                                                                     |     |
| 216                      | 15                   | 6.57   | 2840                               | 2.6                   | WF                                                                                 | 30 | DRK | 80S4 | 16      | 444                                                                                 |     |
|                          |                      |        |                                    |                       | WA                                                                                 | 30 | DRK | 80S4 | 15      | 446                                                                                 |     |
|                          |                      |        |                                    |                       | WAF                                                                                | 30 | DRK | 80S4 | 15      | 445                                                                                 |     |

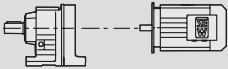
| P <sub>m</sub> = 0.55 kW |                      |        |                                    |                       |                                                                                    |                      |                          |                              |                      |                                                                                     |
|--------------------------|----------------------|--------|------------------------------------|-----------------------|------------------------------------------------------------------------------------|----------------------|--------------------------|------------------------------|----------------------|-------------------------------------------------------------------------------------|
| n <sub>a</sub><br>rpm    | M <sub>a</sub><br>Nm | i      | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |                      |                          |                              | m<br>kg              |  |
| 28                       | 141                  | 51.12  | 6650                               | 1.30                  | W<br>WF<br>WA<br>WAF                                                               | 47<br>47<br>47<br>47 | DRK<br>DRK<br>DRK<br>DRK | 80M4<br>80M4<br>80M4<br>80M4 | 25<br>25<br>23<br>24 | 452<br>453<br>455<br>453                                                            |
| 30                       | 133                  | 47.78  | 6580                               | 1.35                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 35                       | 116                  | 41.30  | 6400                               | 1.55                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 41                       | 100                  | 35.09  | 6180                               | 1.80                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 46                       | 91                   | 31.33  | 6030                               | 2.00                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 52                       | 86                   | 27.41  | 5950                               | 1.85                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 56                       | 81                   | 25.62  | 5860                               | 2.00                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 38                       | 101                  | 37.88  | 3460                               | 1.10                  | W<br>WF<br>WA<br>WAF                                                               | 37<br>37<br>37<br>37 | DRK<br>DRK<br>DRK<br>DRK | 80M4<br>80M4<br>80M4<br>80M4 | 19<br>19<br>19<br>19 | 447<br>448<br>450<br>448                                                            |
| 51                       | 77                   | 27.78  | 3770                               | 1.45                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 62                       | 72                   | 23.25  | 3810                               | 1.25                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 67                       | 60                   | 21.33  | 3910                               | 1.80                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 76                       | 60                   | 18.94  | 3920                               | 1.50                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 91                       | 50                   | 15.67  | 3910                               | 1.80                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 103                      | 45                   | 13.89  | 3800                               | 2.0                   |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 134                      | 35                   | 10.67  | 3560                               | 2.6                   |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 167                      | 29                   | 8.55   | 3520                               | 2.4                   |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 205                      | 24                   | 6.97   | 3310                               | 3.0                   |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 248                      | 20                   | 5.77   | 3130                               | 3.6                   |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 280                      | 17                   | 5.11   | 3020                               | 4.0                   |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 364                      | 13                   | 3.93   | 2780                               | 5.2                   |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 44                       | 76                   | 32.50* | 3000                               | 0.90                  | W<br>WF<br>WA<br>WAF                                                               | 30<br>30<br>30<br>30 | DRK<br>DRK<br>DRK<br>DRK | 80M4<br>80M4<br>80M4<br>80M4 | 18<br>18<br>18<br>18 | 443<br>444<br>446<br>445                                                            |
| 52                       | 71                   | 27.50* | 3000                               | 1.00                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 58                       | 66                   | 24.50* | 3000                               | 1.05                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 88                       | 48                   | 16.33  | 3000                               | 1.25                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 100                      | 44                   | 14.33  | 3000                               | 1.40                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 140                      | 33                   | 10.25* | 3000                               | 1.55                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 174                      | 27                   | 8.20*  | 2950                               | 1.50                  |                                                                                    |                      |                          |                              |                      |                                                                                     |
| 218                      | 23                   | 6.57   | 2770                               | 1.80                  |                                                                                    |                      |                          |                              |                      |                                                                                     |

| P <sub>m</sub> = 0.75 kW |                      |       |                                    |                       |                                                                                      |  |  |  |         |                                                                                       |
|--------------------------|----------------------|-------|------------------------------------|-----------------------|--------------------------------------------------------------------------------------|--|--|--|---------|---------------------------------------------------------------------------------------|
| n <sub>a</sub><br>rpm    | M <sub>a</sub><br>Nm | i     | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |  |  |  | m<br>kg |  |
| 24                       | 215                  | 58.98 | 6100                               | 0.80                  |                                                                                      |  |  |  |         |                                                                                       |
| 28                       | 192                  | 51.12 | 6020                               | 0.95                  |                                                                                      |  |  |  |         |                                                                                       |
| 30                       | 181                  | 47.78 | 5970                               | 1.00                  |                                                                                      |  |  |  |         |                                                                                       |
| 35                       | 159                  | 41.30 | 5860                               | 1.15                  |                                                                                      |  |  |  |         |                                                                                       |
| 41                       | 137                  | 35.09 | 5720                               | 1.30                  |                                                                                      |  |  |  |         |                                                                                       |
| 45                       | 135                  | 31.62 | 5780                               | 1.20                  |                                                                                      |  |  |  |         |                                                                                       |
| 46                       | 124                  | 31.33 | 5610                               | 1.45                  |                                                                                      |  |  |  |         |                                                                                       |
| 52                       | 118                  | 27.41 | 5620                               | 1.35                  |                                                                                      |  |  |  |         |                                                                                       |
| 53                       | 107                  | 26.76 | 5450                               | 1.70                  |                                                                                      |  |  |  |         |                                                                                       |
| 56                       | 110                  | 25.62 | 5540                               | 1.45                  |                                                                                      |  |  |  |         |                                                                                       |
| 57                       | 101                  | 25.07 | 5390                               | 1.80                  |                                                                                      |  |  |  |         |                                                                                       |
| 65                       | 96                   | 22.15 | 5380                               | 1.65                  |                                                                                      |  |  |  |         |                                                                                       |
| 76                       | 82                   | 18.82 | 5180                               | 1.95                  |                                                                                      |  |  |  |         |                                                                                       |
| 116                      | 58                   | 12.30 | 4860                               | 1.90                  |                                                                                      |  |  |  |         |                                                                                       |

**P<sub>m</sub> = 0.75 kW**

| n <sub>a</sub><br>rpm | M <sub>a</sub><br>Nm | i     | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |    |     |      | m<br>kg |  |
|-----------------------|----------------------|-------|------------------------------------|-----------------------|------------------------------------------------------------------------------------|----|-----|------|---------|-------------------------------------------------------------------------------------|
| 46                    | 117                  | 31.33 | 3000                               | 0.95                  |                                                                                    |    |     |      |         |                                                                                     |
| 51                    | 105                  | 27.78 | 3410                               | 1.05                  |                                                                                    |    |     |      |         |                                                                                     |
| 62                    | 99                   | 23.25 | 3500                               | 0.90                  |                                                                                    |    |     |      |         |                                                                                     |
| 67                    | 82                   | 21.33 | 3700                               | 1.35                  |                                                                                    |    |     |      |         |                                                                                     |
| 76                    | 81                   | 18.94 | 3720                               | 1.10                  |                                                                                    |    |     |      |         |                                                                                     |
| 91                    | 68                   | 15.67 | 3680                               | 1.30                  |                                                                                    |    |     |      |         |                                                                                     |
| 103                   | 61                   | 13.89 | 3590                               | 1.50                  | W                                                                                  | 37 | DRK | 90M4 | 24      | 447                                                                                 |
| 134                   | 47                   | 10.67 | 3400                               | 1.90                  | WF                                                                                 | 37 | DRK | 90M4 | 24      | 448                                                                                 |
| 144                   | 46                   | 9.92  | 3600                               | 1.55                  | WA                                                                                 | 37 | DRK | 90M4 | 24      | 450                                                                                 |
| 167                   | 40                   | 8.55  | 3450                               | 1.75                  | WAF                                                                                | 37 | DRK | 90M4 | 24      | 448                                                                                 |
| 205                   | 32                   | 6.97  | 3250                               | 2.2                   |                                                                                    |    |     |      |         |                                                                                     |
| 248                   | 27                   | 5.77  | 3080                               | 2.6                   |                                                                                    |    |     |      |         |                                                                                     |
| 280                   | 24                   | 5.11  | 2970                               | 2.9                   |                                                                                    |    |     |      |         |                                                                                     |
| 364                   | 18                   | 3.93  | 2740                               | 3.8                   |                                                                                    |    |     |      |         |                                                                                     |
| 447                   | 15                   | 3.20* | 2580                               | 4.7                   |                                                                                    |    |     |      |         |                                                                                     |

**P<sub>m</sub> = 1.1 kW**

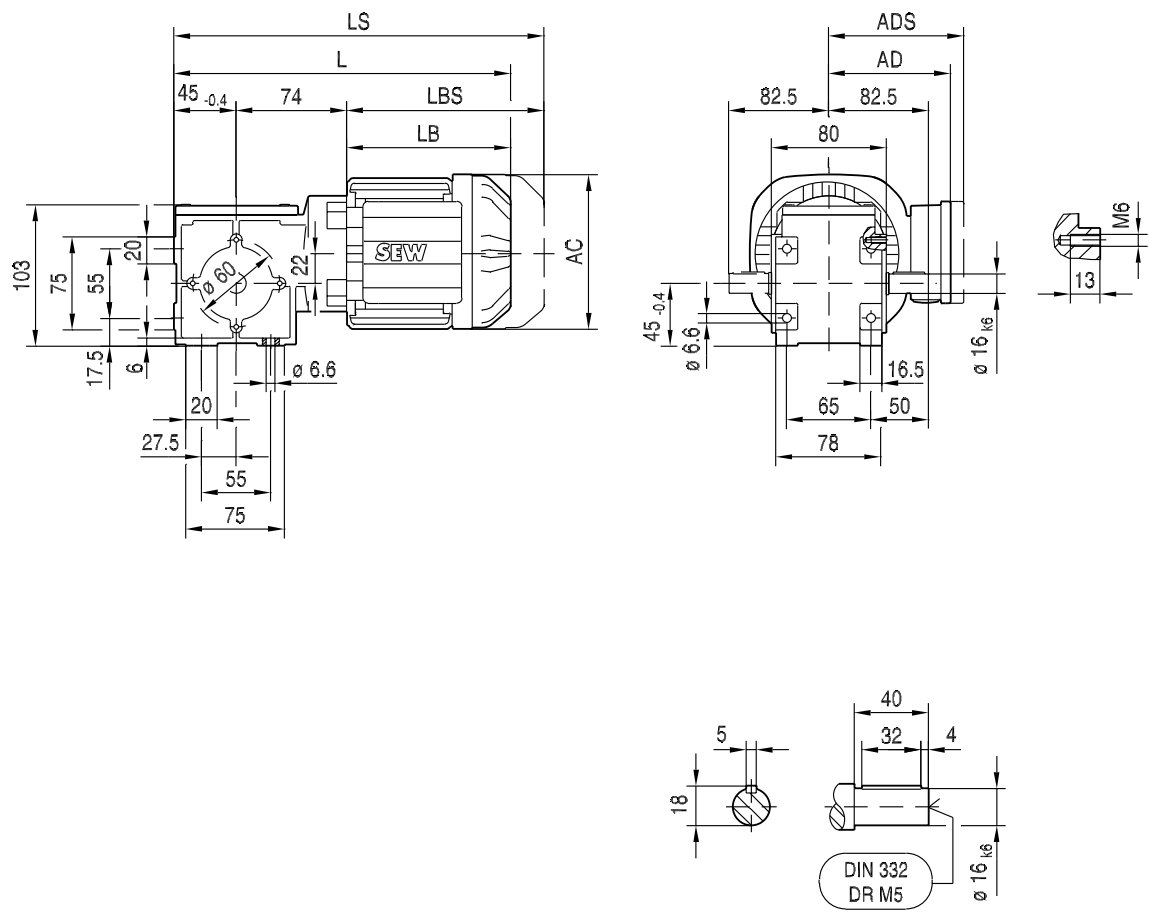
| n <sub>a</sub><br>rpm | M <sub>a</sub><br>Nm | i     | F <sub>Ra</sub> <sup>1)</sup><br>N | SEW<br>f <sub>B</sub> |  |    |     |      | m<br>kg |  |
|-----------------------|----------------------|-------|------------------------------------|-----------------------|------------------------------------------------------------------------------------|----|-----|------|---------|-------------------------------------------------------------------------------------|
| 40                    | 200                  | 35.09 | 4910                               | 0.90                  |                                                                                    |    |     |      |         |                                                                                     |
| 45                    | 183                  | 31.33 | 4890                               | 1.00                  |                                                                                    |    |     |      |         |                                                                                     |
| 53                    | 158                  | 26.76 | 4830                               | 1.15                  |                                                                                    |    |     |      |         |                                                                                     |
| 56                    | 149                  | 25.07 | 4800                               | 1.20                  | W                                                                                  | 47 | DRK | 90L4 | 33      | 452                                                                                 |
| 64                    | 142                  | 22.15 | 4910                               | 1.10                  | WF                                                                                 | 47 | DRK | 90L4 | 33      | 453                                                                                 |
| 75                    | 122                  | 18.82 | 4790                               | 1.30                  | WA                                                                                 | 47 | DRK | 90L4 | 31      | 455                                                                                 |
| 84                    | 109                  | 16.80 | 4690                               | 1.45                  | WAF                                                                                | 47 | DRK | 90L4 | 32      | 453                                                                                 |
| 99                    | 94                   | 14.35 | 4560                               | 1.70                  |                                                                                    |    |     |      |         |                                                                                     |
| 105                   | 89                   | 13.44 | 4500                               | 1.80                  |                                                                                    |    |     |      |         |                                                                                     |
| 164                   | 61                   | 8.61  | 4270                               | 1.80                  |                                                                                    |    |     |      |         |                                                                                     |
| 90                    | 101                  | 15.67 | 3270                               | 0.90                  |                                                                                    |    |     |      |         |                                                                                     |
| 102                   | 90                   | 13.89 | 3230                               | 1.00                  |                                                                                    |    |     |      |         |                                                                                     |
| 133                   | 70                   | 10.67 | 3120                               | 1.30                  | W                                                                                  | 37 | DRK | 90L4 | 26      | 447                                                                                 |
| 203                   | 48                   | 6.97  | 3160                               | 1.45                  | WF                                                                                 | 37 | DRK | 90L4 | 26      | 448                                                                                 |
| 245                   | 40                   | 5.77  | 3000                               | 1.75                  | WA                                                                                 | 37 | DRK | 90L4 | 26      | 450                                                                                 |
| 277                   | 35                   | 5.11  | 2900                               | 2.00                  | WAF                                                                                | 37 | DRK | 90L4 | 26      | 448                                                                                 |
| 360                   | 27                   | 3.93  | 2690                               | 2.6                   |                                                                                    |    |     |      |         |                                                                                     |
| 442                   | 22                   | 3.20* | 2540                               | 3.1                   |                                                                                    |    |     |      |         |                                                                                     |

12

12.4    Dimension sheets W..DRK.. in mm

W10..

20 034 00 15

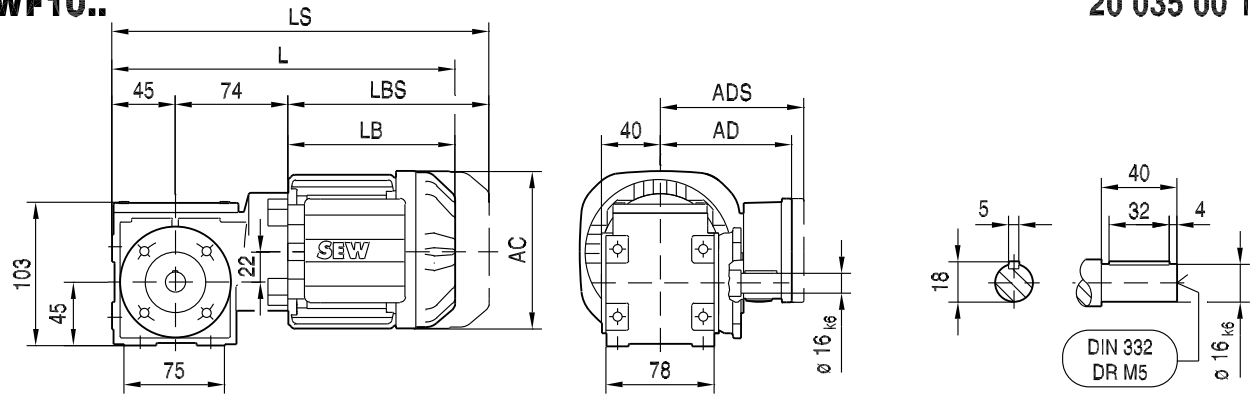


| (→ 144) | ET56.. |  |  |  |  |  |  |  |
|---------|--------|--|--|--|--|--|--|--|
| AC      | 109    |  |  |  |  |  |  |  |
| AD      | 87     |  |  |  |  |  |  |  |
| ADS     | 87     |  |  |  |  |  |  |  |
| L       | 255    |  |  |  |  |  |  |  |
| LS      | 291    |  |  |  |  |  |  |  |
| LB      | 136    |  |  |  |  |  |  |  |
| LBS     | 172    |  |  |  |  |  |  |  |

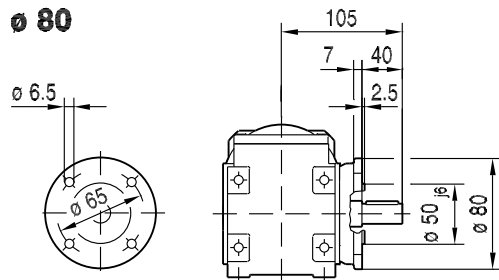
20272545/EN – 11/2015

WF10..

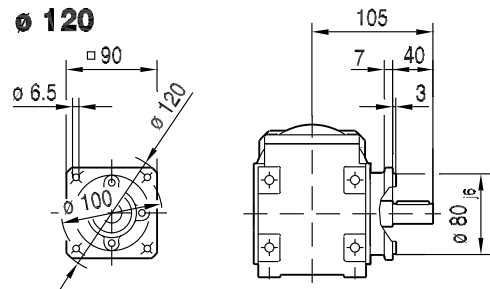
20 035 00 15



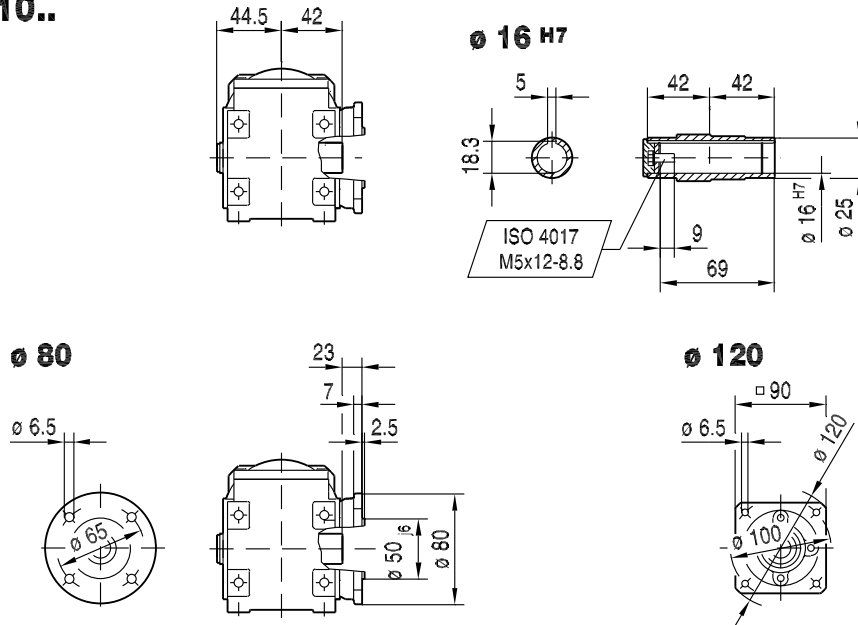
ø 80



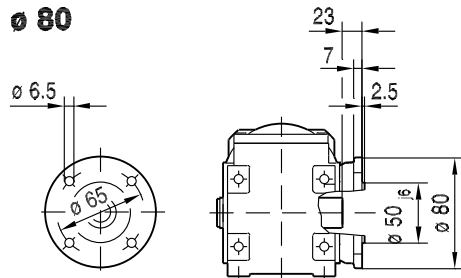
ø 120



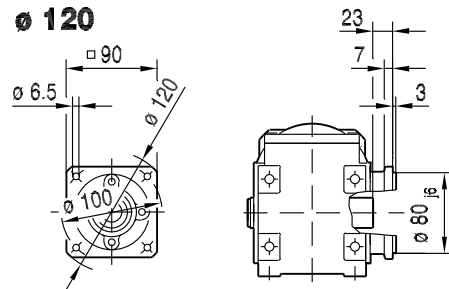
WAF10..



ø 80



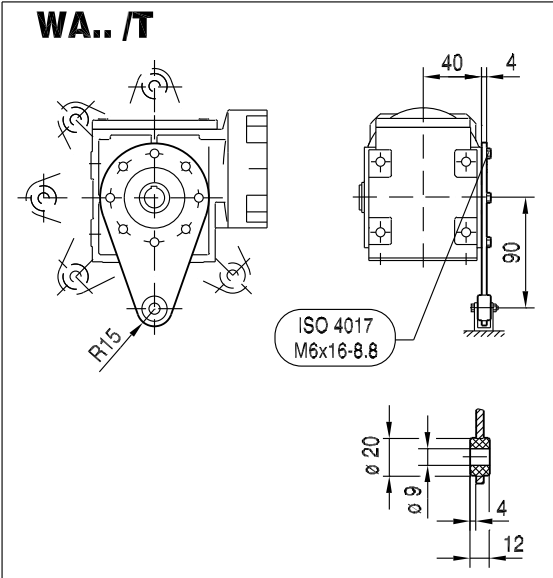
ø 120



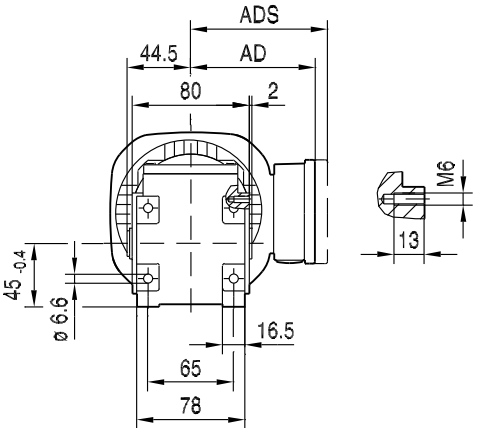
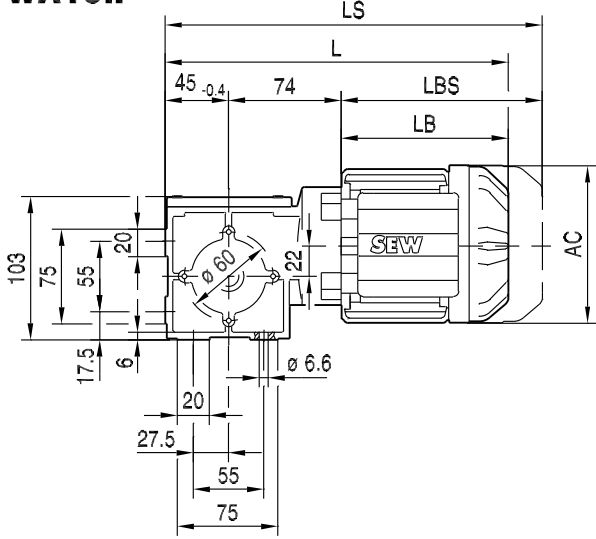
20272545/EN – 11/2015

| (→ 144) | ET56.. |  |  |  |  |  |  |  |
|---------|--------|--|--|--|--|--|--|--|
| AC      | 109    |  |  |  |  |  |  |  |
| AD      | 87     |  |  |  |  |  |  |  |
| ADS     | 87     |  |  |  |  |  |  |  |
| L       | 255    |  |  |  |  |  |  |  |
| LS      | 291    |  |  |  |  |  |  |  |
| LB      | 136    |  |  |  |  |  |  |  |
| LBS     | 172    |  |  |  |  |  |  |  |

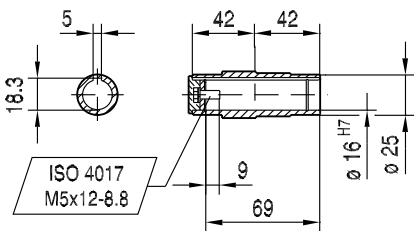
20 036 00 15



**WA10..**



**Ø 16 H7**

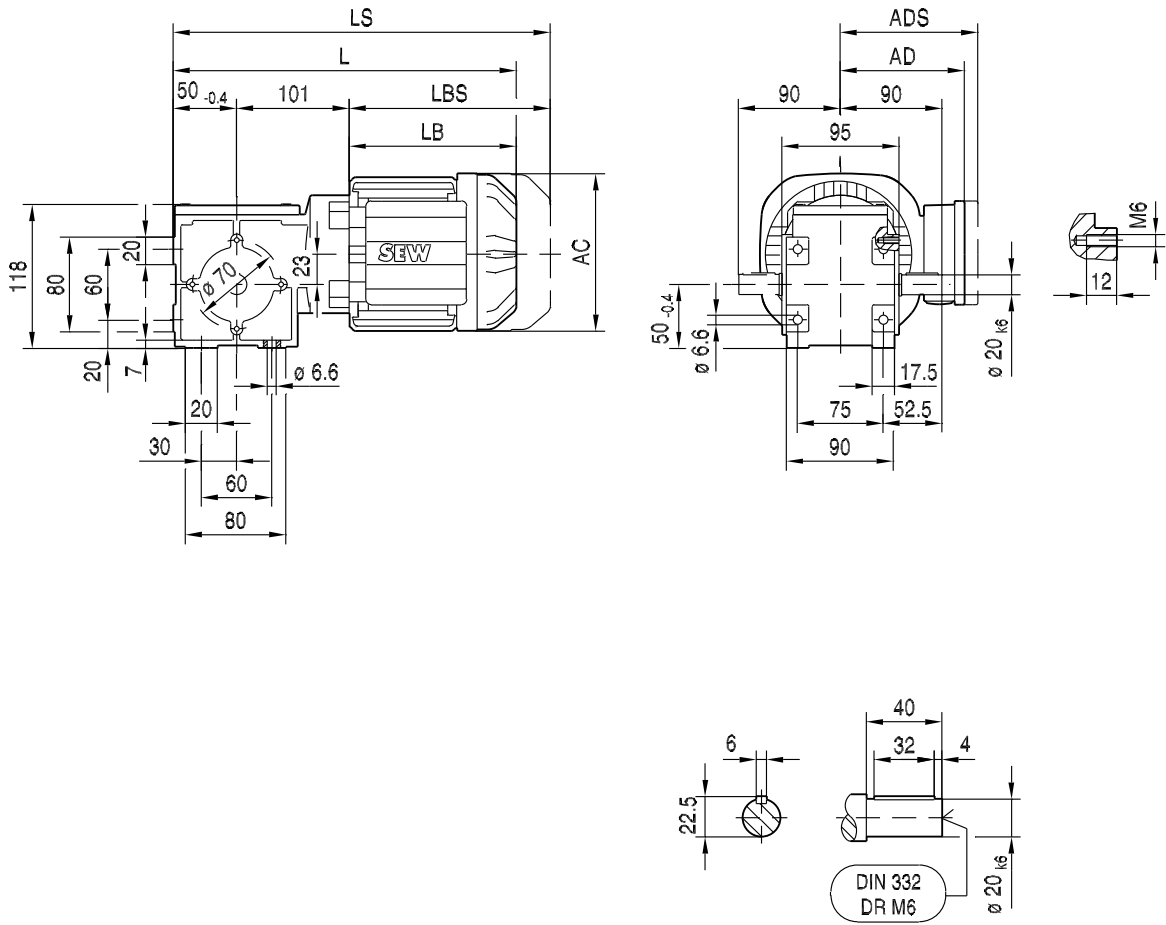


| (→ 144) | ET56.. |  |  |  |  |  |  |  |
|---------|--------|--|--|--|--|--|--|--|
| AC      | 109    |  |  |  |  |  |  |  |
| AD      | 87     |  |  |  |  |  |  |  |
| ADS     | 87     |  |  |  |  |  |  |  |
| L       | 255    |  |  |  |  |  |  |  |
| LS      | 291    |  |  |  |  |  |  |  |
| LB      | 136    |  |  |  |  |  |  |  |
| LBS     | 172    |  |  |  |  |  |  |  |

20272545/EN – 11/2015

W20..

20 037 00 15

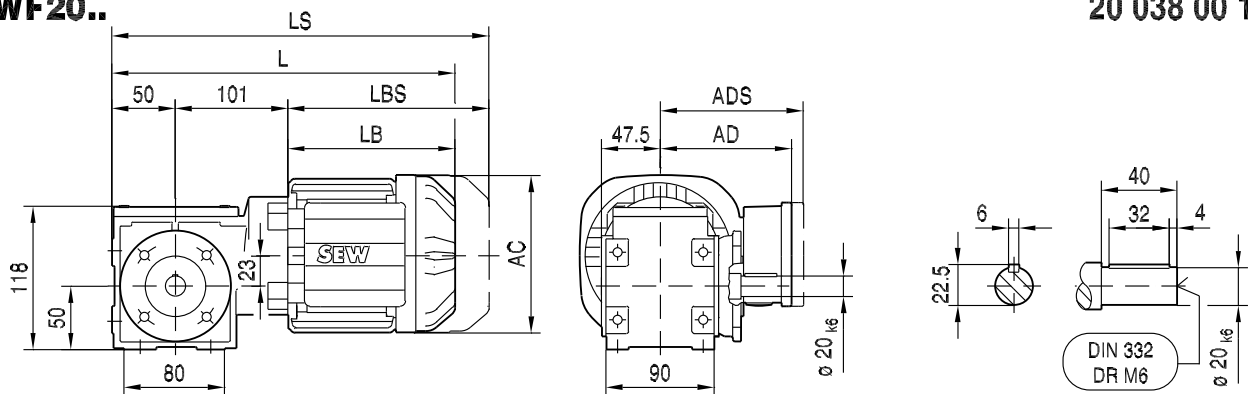


20272545/EN – 11/2015

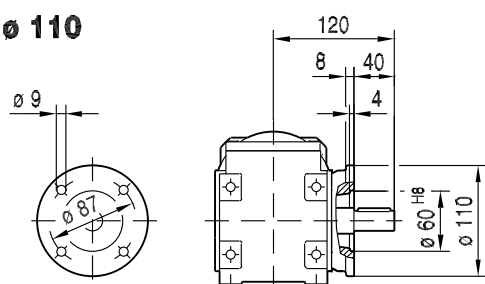
| (→ 144) | ER63.. | DRK71S | DRK71M |  |  |  |  |  |
|---------|--------|--------|--------|--|--|--|--|--|
| AC      | 132    | 139    | 139    |  |  |  |  |  |
| AD      | 105    | 172    | 172    |  |  |  |  |  |
| ADS     | 105    | 172    | 172    |  |  |  |  |  |
| L       | 300    | 311    | 336    |  |  |  |  |  |
| LS      | 355    | 379    | 404    |  |  |  |  |  |
| LB      | 149    | 160    | 185    |  |  |  |  |  |
| LBS     | 204    | 228    | 253    |  |  |  |  |  |

**WF20..**

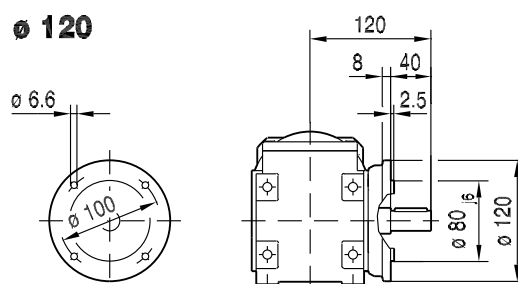
20 038 00 15



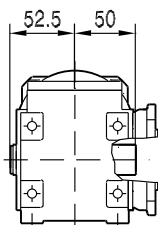
110



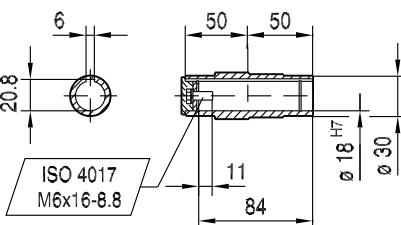
**Ø 120**



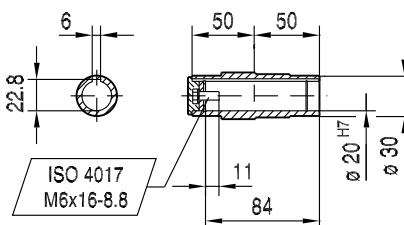
# WAF20..



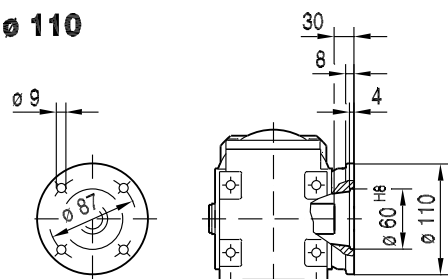
Ø 18 H7



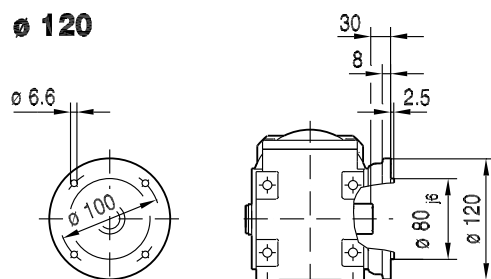
Ø 20 H7



110

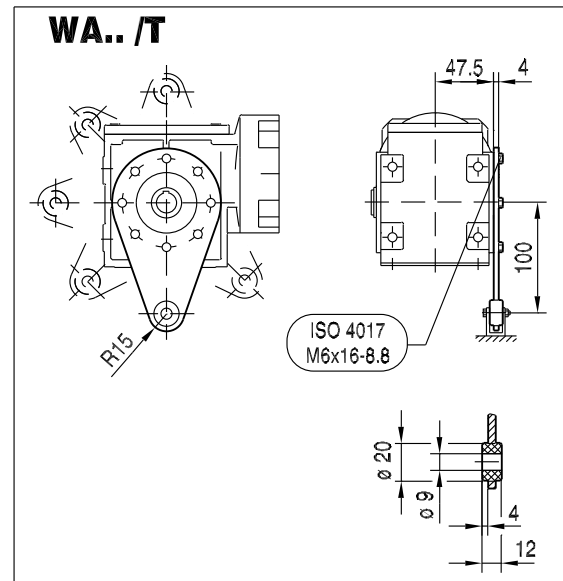


120

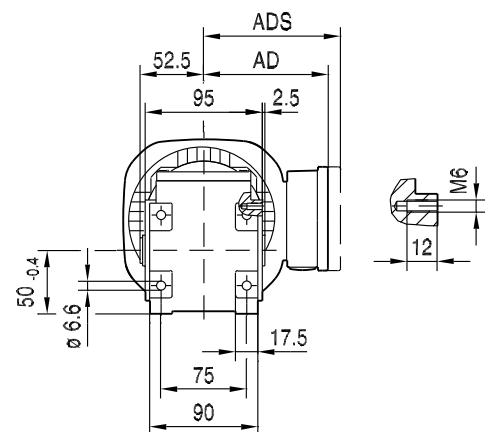
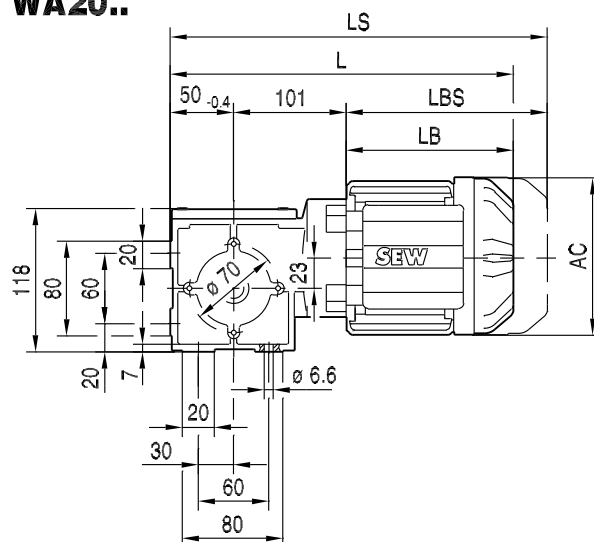


| (→ 144) | ER63.. | DRK71S | DRK71M |  |  |  |  |  |
|---------|--------|--------|--------|--|--|--|--|--|
| AC      | 132    | 139    | 139    |  |  |  |  |  |
| AD      | 105    | 172    | 172    |  |  |  |  |  |
| ADS     | 105    | 172    | 172    |  |  |  |  |  |
| L       | 300    | 311    | 336    |  |  |  |  |  |
| LS      | 355    | 379    | 404    |  |  |  |  |  |
| LB      | 149    | 160    | 185    |  |  |  |  |  |
| LBS     | 204    | 228    | 253    |  |  |  |  |  |

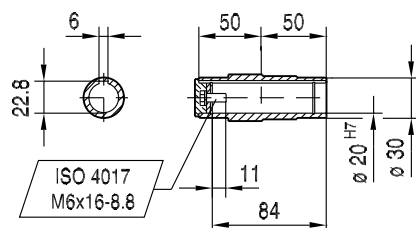
20 039 00 15



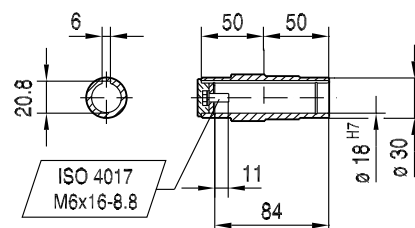
**WA20..**



**Ø 20 H7**



**Ø 18 H7**

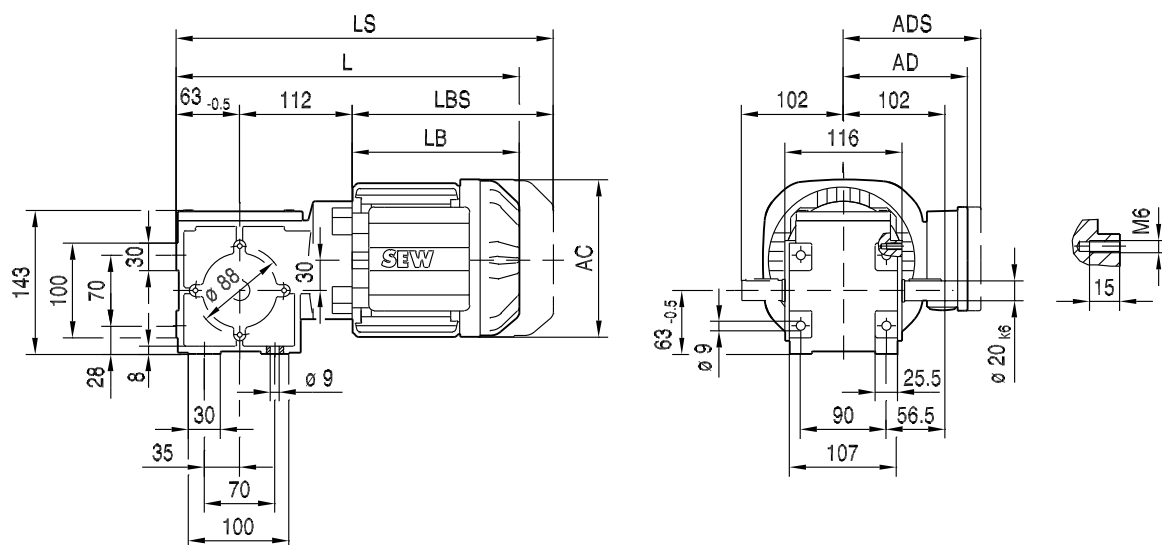
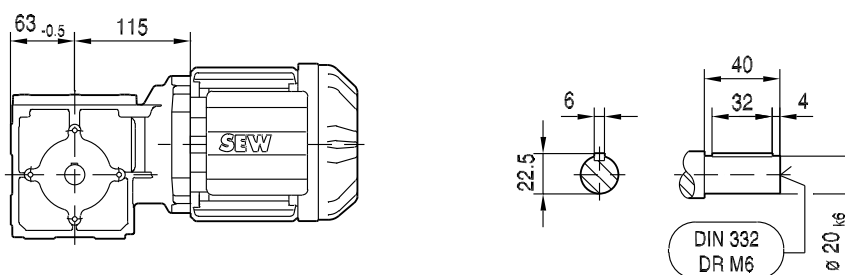


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| (→ 144) | ER63.. | DRK71S | DRK71M |  |  |  |  |  |
|---------|--------|--------|--------|--|--|--|--|--|
| AC      | 132    | 139    | 139    |  |  |  |  |  |
| AD      | 105    | 172    | 172    |  |  |  |  |  |
| ADS     | 105    | 172    | 172    |  |  |  |  |  |
| L       | 300    | 311    | 336    |  |  |  |  |  |
| LS      | 355    | 379    | 404    |  |  |  |  |  |
| LB      | 149    | 160    | 185    |  |  |  |  |  |
| LBS     | 204    | 228    | 253    |  |  |  |  |  |



20 040 00 15

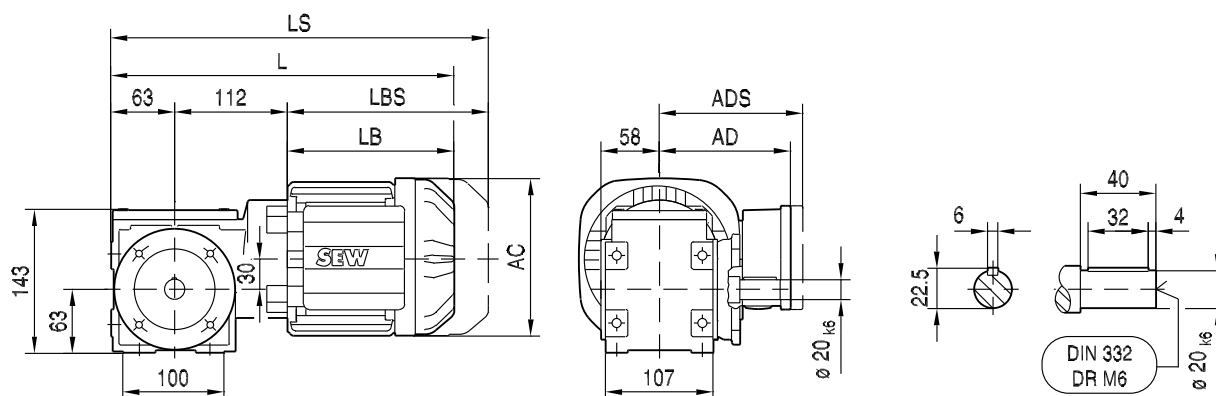
**W30..****DR80..**

| (→ 144) | ER63.. | DRK71S | DRK71M | DRK80S | DRK80M |  |  |  |
|---------|--------|--------|--------|--------|--------|--|--|--|
| AC      | 132    | 139    | 139    | 156    | 156    |  |  |  |
| AD      | 105    | 172    | 172    | 182    | 182    |  |  |  |
| ADS     | 105    | 172    | 172    | 182    | 182    |  |  |  |
| L       | 324    | 335    | 360    | 364    | 395    |  |  |  |
| LS      | 379    | 403    | 428    | 445    | 476    |  |  |  |
| LB      | 149    | 160    | 185    | 189    | 220    |  |  |  |
| LBS     | 204    | 228    | 253    | 270    | 301    |  |  |  |

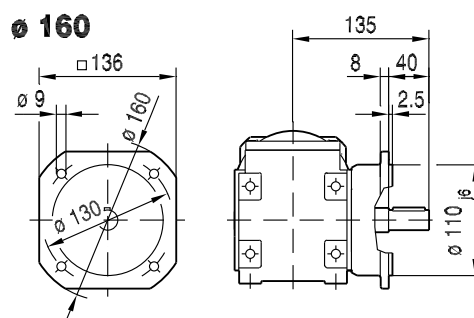
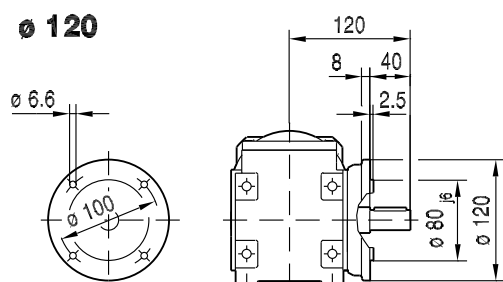
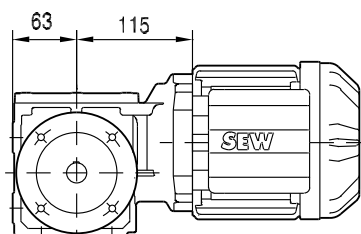
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**WF30..**

20 041 00 15



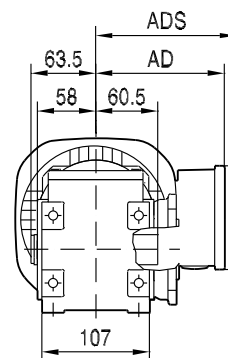
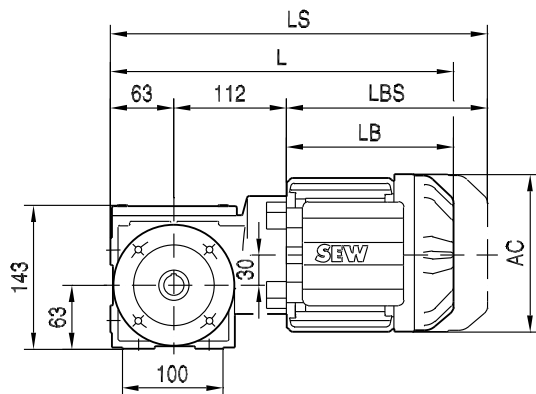
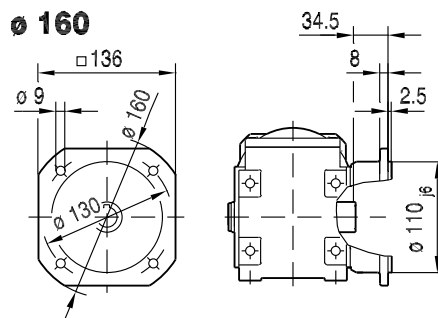
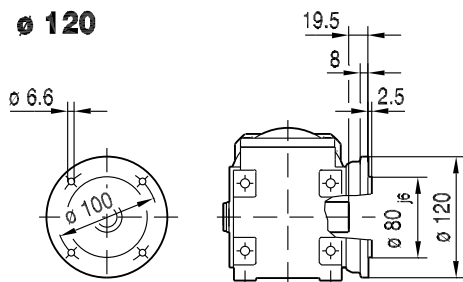
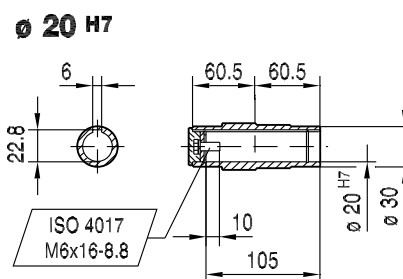
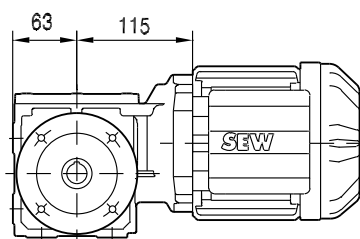
## DR80..



| (→ 📄 144) | ER63.. | DRK71S | DRK71M | DRK80S | DRK80M |  |  |  |
|-----------|--------|--------|--------|--------|--------|--|--|--|
| AC        | 132    | 139    | 139    | 156    | 156    |  |  |  |
| AD        | 105    | 172    | 172    | 182    | 182    |  |  |  |
| ADS       | 105    | 172    | 172    | 182    | 182    |  |  |  |
| L         | 324    | 335    | 360    | 364    | 395    |  |  |  |
| LS        | 379    | 403    | 428    | 445    | 476    |  |  |  |
| LB        | 149    | 160    | 185    | 189    | 220    |  |  |  |
| LBS       | 204    | 228    | 253    | 270    | 301    |  |  |  |

**WAF30..**

20 042 00 15

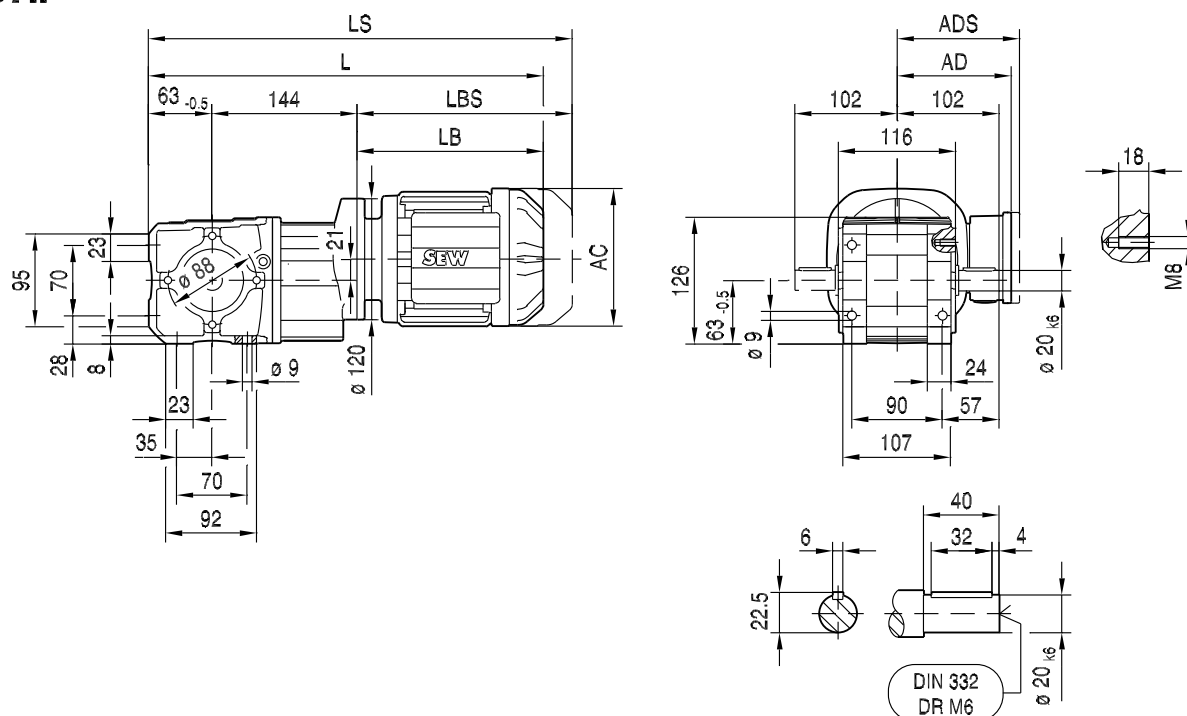
**DR80..**

| (→ 144) | ER63.. | DRK71S | DRK71M | DRK80S | DRK80M |  |  |  |
|---------|--------|--------|--------|--------|--------|--|--|--|
| AC      | 132    | 139    | 139    | 156    | 156    |  |  |  |
| AD      | 105    | 172    | 172    | 182    | 182    |  |  |  |
| ADS     | 105    | 172    | 172    | 182    | 182    |  |  |  |
| L       | 324    | 335    | 360    | 364    | 395    |  |  |  |
| LS      | 379    | 403    | 428    | 445    | 476    |  |  |  |
| LB      | 149    | 160    | 185    | 189    | 220    |  |  |  |
| LBS     | 204    | 228    | 253    | 270    | 301    |  |  |  |

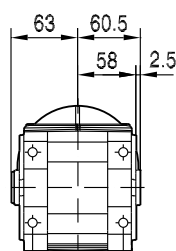


20 044 00 15

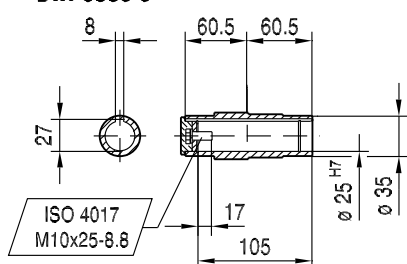
## W37..



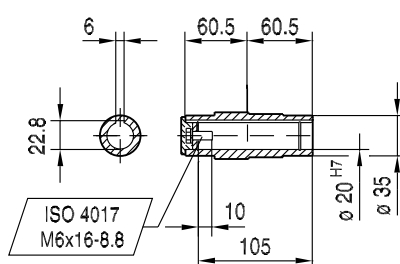
## WA37B..



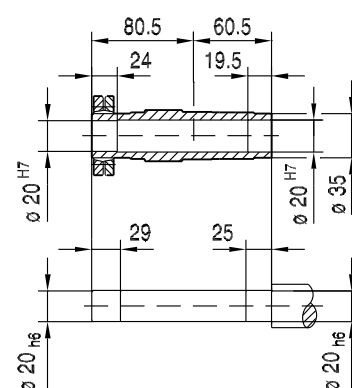
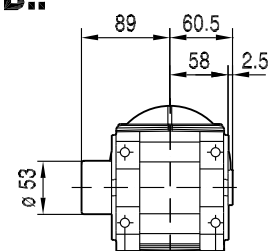
Ø 25 H7  
DIN 6885-3



Ø 20 H7



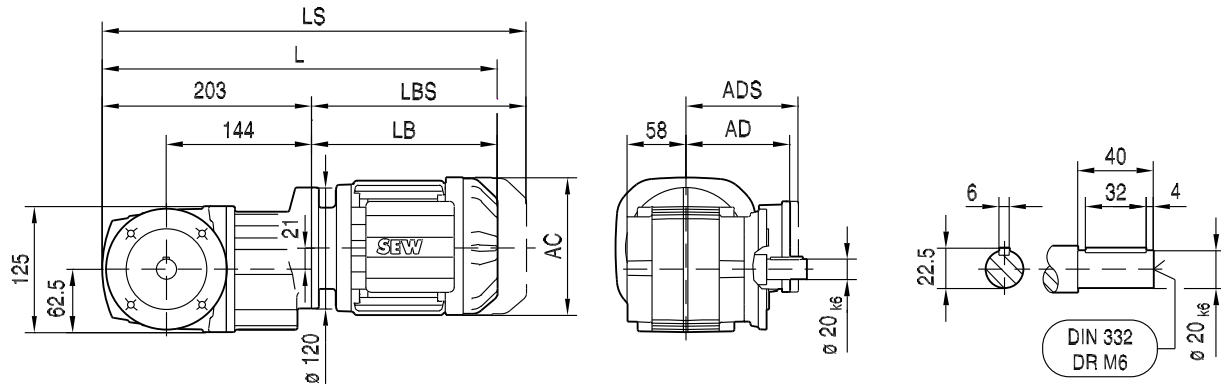
## WH37B..



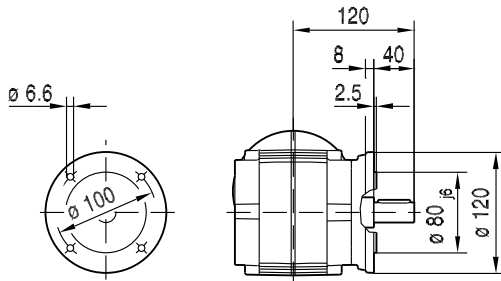
| (→ 144) | ER63.. | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |
|---------|--------|--------|--------|--------|--------|--------|--------|--|
| AC      | 132    | 139    | 139    | 156    | 156    | 179    | 179    |  |
| AD      | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| ADS     | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| L       | 398    | 409    | 434    | 444    | 475    | 479    | 499    |  |
| LS      | 453    | 477    | 502    | 525    | 556    | 572    | 592    |  |
| LB      | 191    | 202    | 227    | 237    | 268    | 272    | 292    |  |
| LBS     | 246    | 270    | 295    | 318    | 349    | 365    | 385    |  |

20 045 00 15

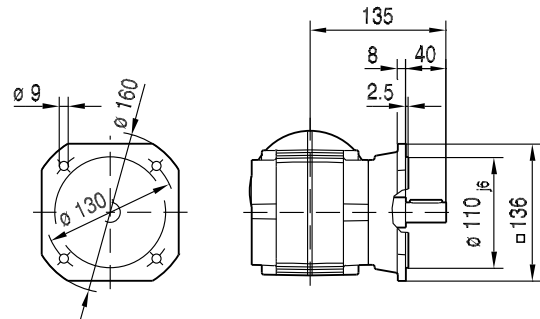
**WF37..**



**$\varnothing 120$**   
max. DR71..

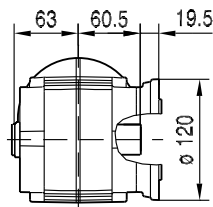


**$\varnothing 160$**

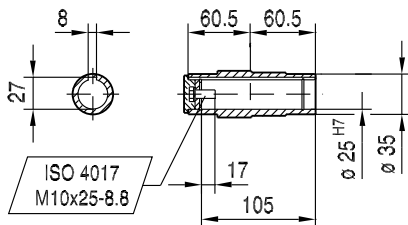


**WAF37..**

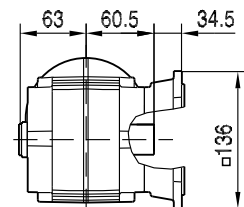
**$\varnothing 120$**   
max. DR71..



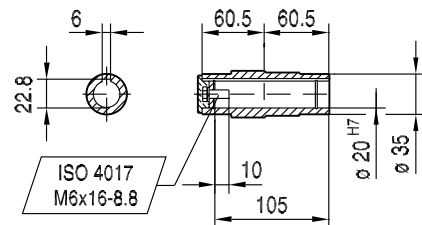
**$\varnothing 25$  H7**  
DIN 6885-3



**$\varnothing 160$**



**$\varnothing 20$  H7**

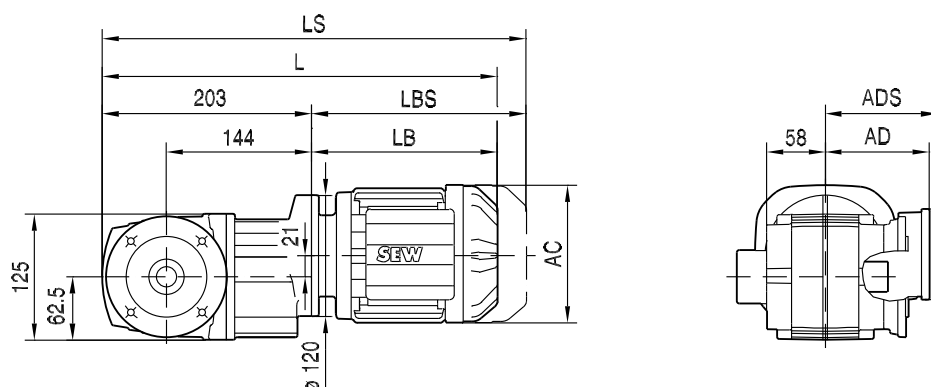
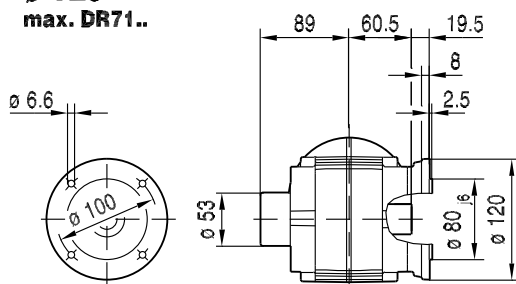
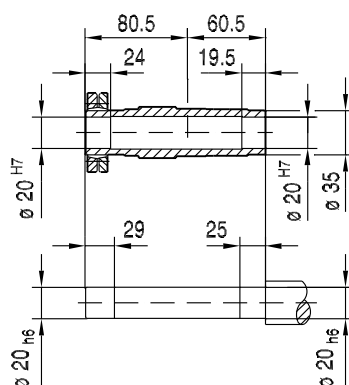
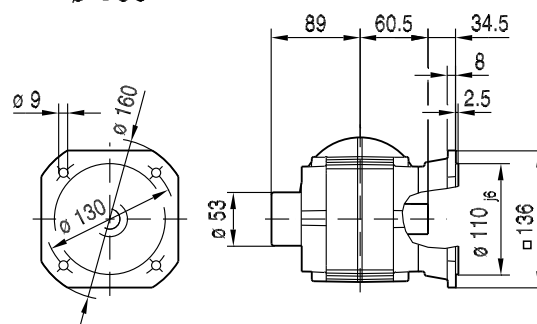


| (→ $\square 144$ ) | ER63.. | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |
|--------------------|--------|--------|--------|--------|--------|--------|--------|--|
| AC                 | 132    | 139    | 139    | 156    | 156    | 179    | 179    |  |
| AD                 | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| ADS                | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| L                  | 394    | 405    | 430    | 440    | 471    | 475    | 495    |  |
| LS                 | 449    | 473    | 498    | 521    | 552    | 568    | 588    |  |
| LB                 | 191    | 202    | 227    | 237    | 268    | 272    | 292    |  |
| LBS                | 246    | 270    | 295    | 318    | 349    | 365    | 385    |  |

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20 046 00 15

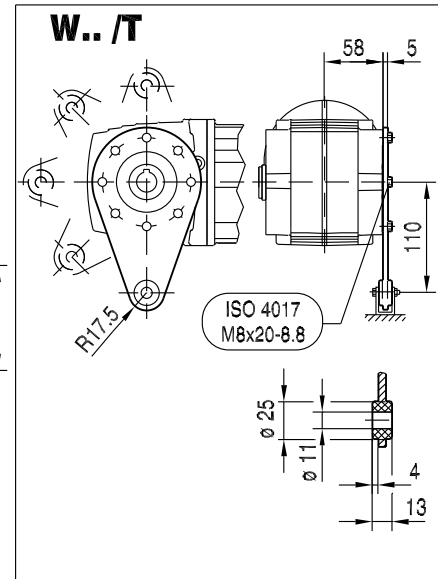
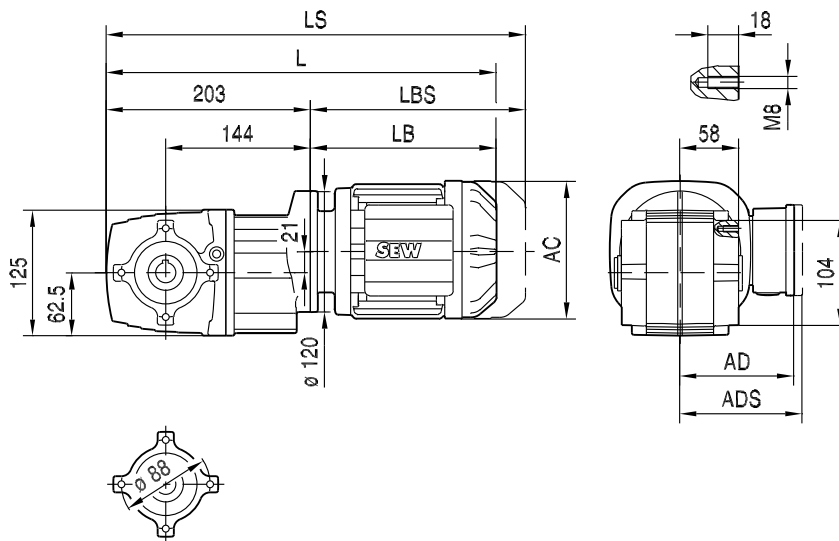
## WHF37..


 **$\varnothing 120$**   
 max. DR71..

 **$\varnothing 160$** 


| (→ 144) | ER63.. | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |
|---------|--------|--------|--------|--------|--------|--------|--------|--|
| AC      | 132    | 139    | 139    | 156    | 156    | 179    | 179    |  |
| AD      | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| ADS     | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| L       | 394    | 405    | 430    | 440    | 471    | 475    | 495    |  |
| LS      | 449    | 473    | 498    | 521    | 552    | 568    | 588    |  |
| LB      | 191    | 202    | 227    | 237    | 268    | 272    | 292    |  |
| LBS     | 246    | 270    | 295    | 318    | 349    | 365    | 385    |  |

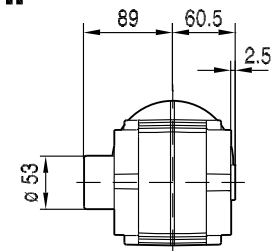
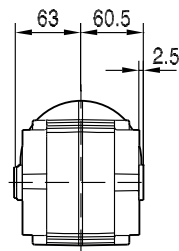
**WA37..**

**20 047 00 15**



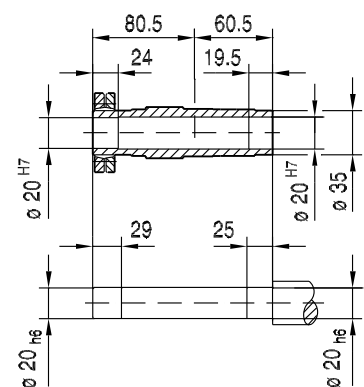
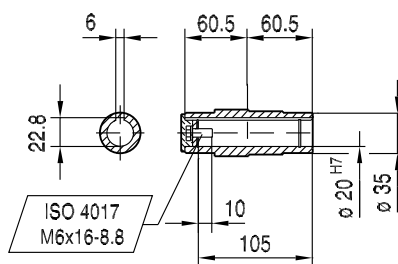
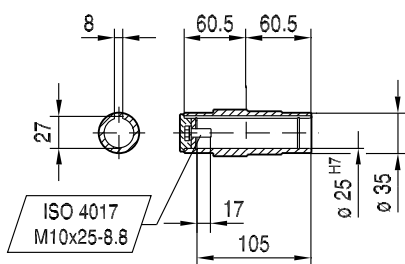
**WA37..**

**WH37..**



**Ø 25 H7  
DIN 6885-3**

**Ø 20 H7**



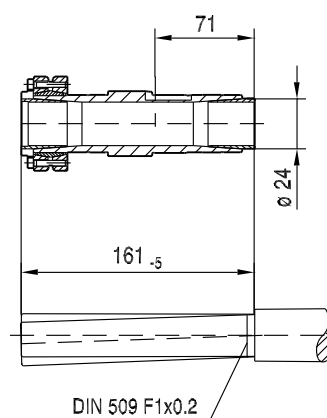
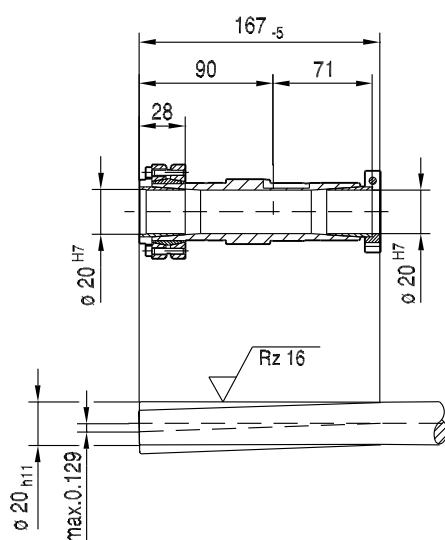
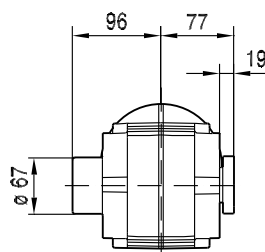
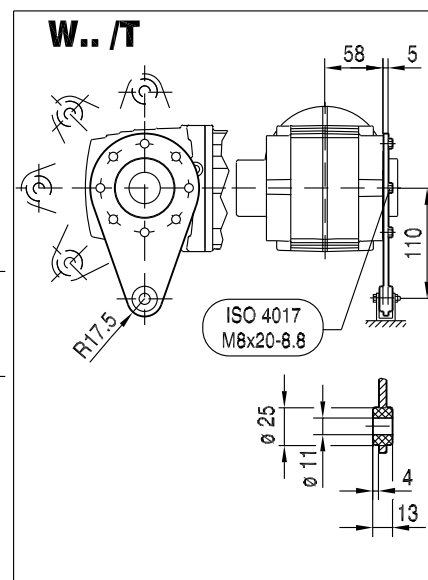
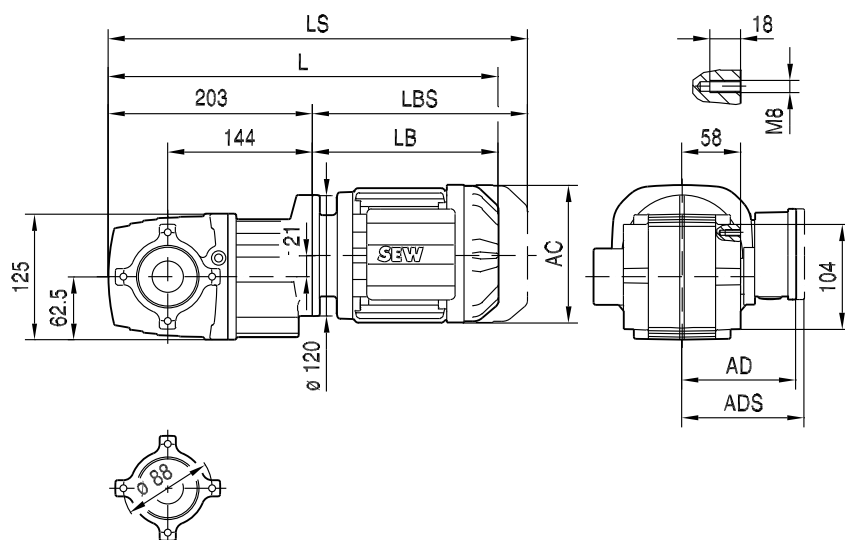
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| (→ 144) | ER63.. | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |
|---------|--------|--------|--------|--------|--------|--------|--------|--|
| AC      | 132    | 139    | 139    | 156    | 156    | 179    | 179    |  |
| AD      | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| ADS     | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| L       | 394    | 405    | 430    | 440    | 471    | 475    | 495    |  |
| LS      | 449    | 473    | 498    | 521    | 552    | 568    | 588    |  |
| LB      | 191    | 202    | 227    | 237    | 268    | 272    | 292    |  |
| LBS     | 246    | 270    | 295    | 318    | 349    | 365    | 385    |  |



## WT37..

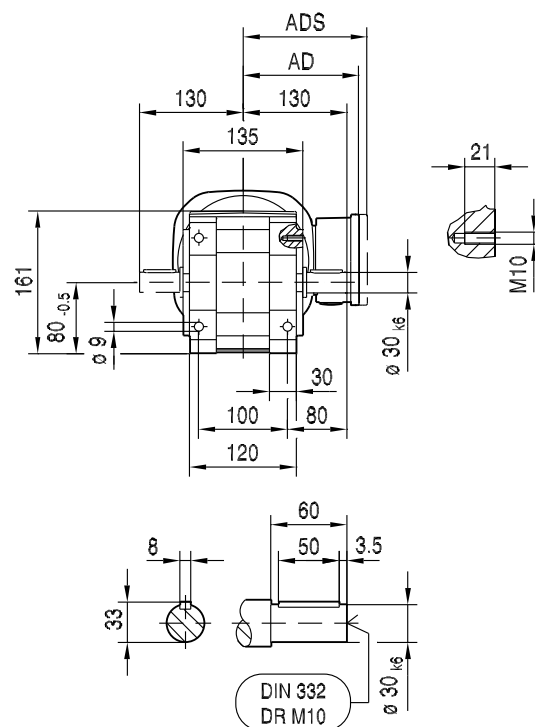
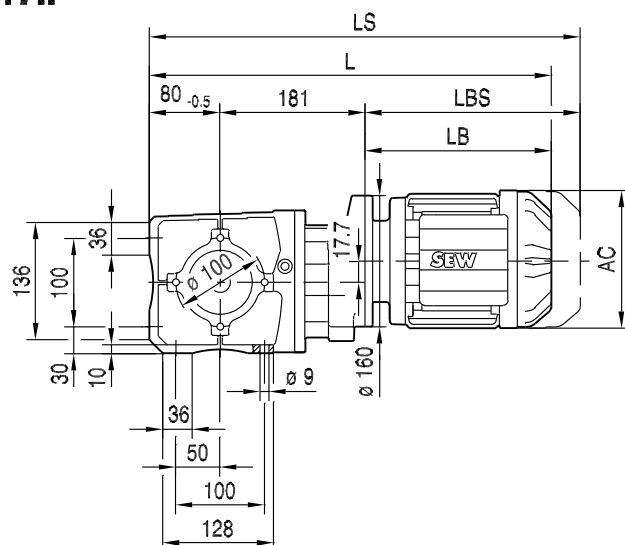
20 048 00 15



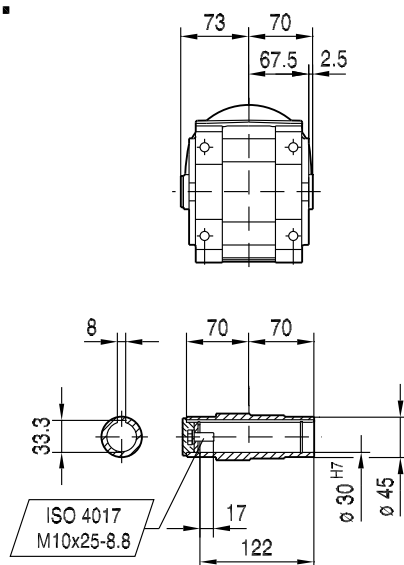
| (→ 144) | ER63.. | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |
|---------|--------|--------|--------|--------|--------|--------|--------|--|
| AC      | 132    | 139    | 139    | 156    | 156    | 179    | 179    |  |
| AD      | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| ADS     | 105    | 172    | 172    | 182    | 182    | 193    | 193    |  |
| L       | 394    | 405    | 430    | 440    | 471    | 475    | 495    |  |
| LS      | 449    | 473    | 498    | 521    | 552    | 568    | 588    |  |
| LB      | 191    | 202    | 227    | 237    | 268    | 272    | 292    |  |
| LBS     | 246    | 270    | 295    | 318    | 349    | 365    | 385    |  |

**W47..**

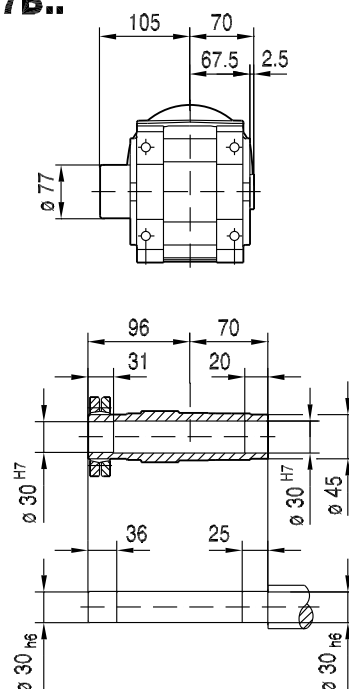
20 049 00 15



**WA47B..**

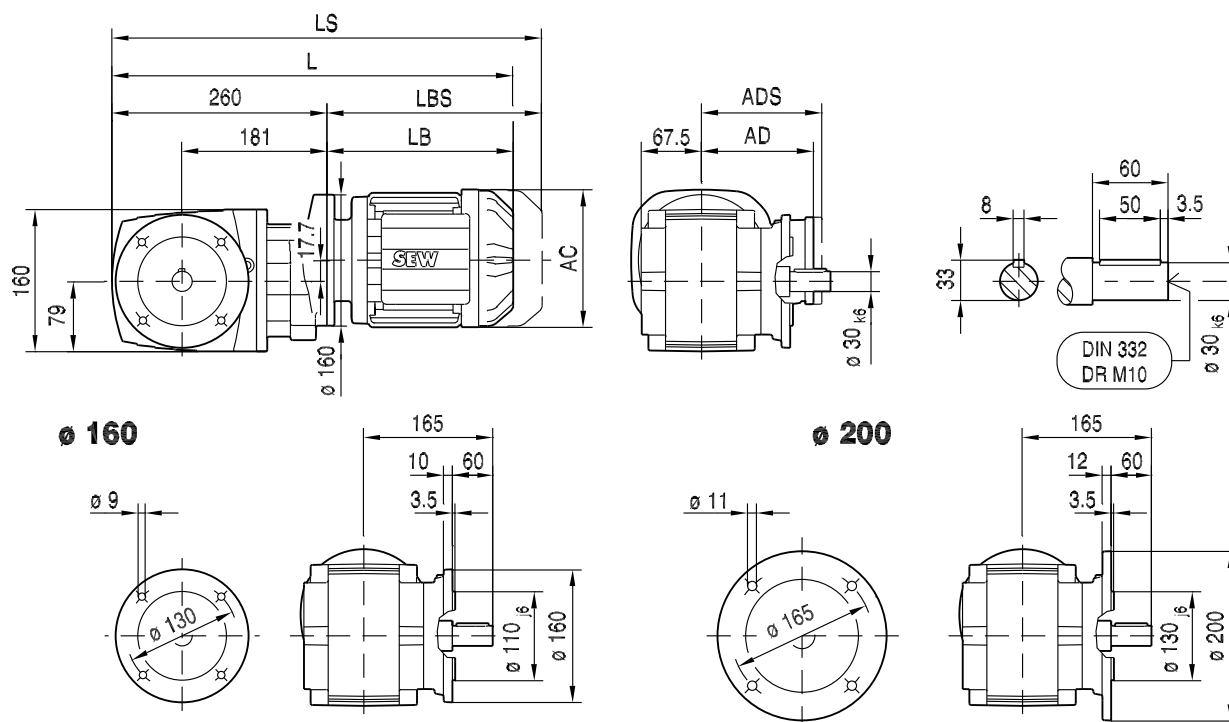


**WH47B..**



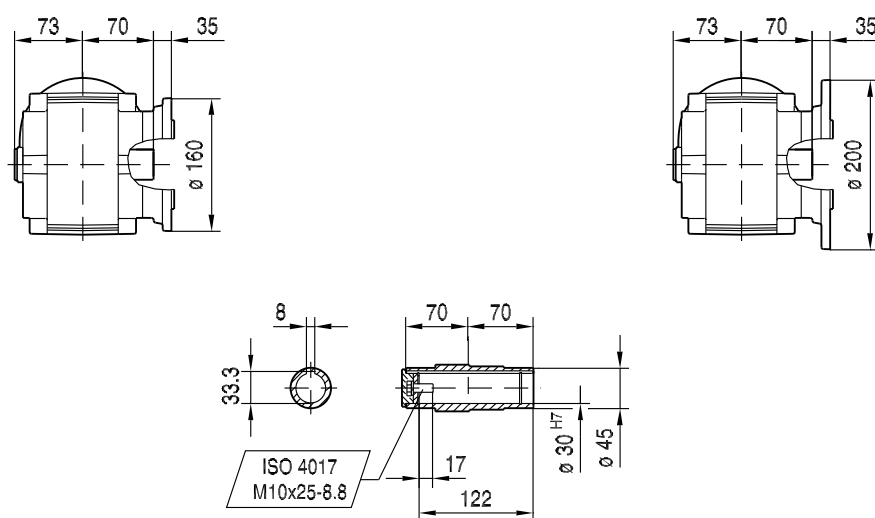
| (→ 144) | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |  |
|---------|--------|--------|--------|--------|--------|--------|--|--|
| AC      | 139    | 139    | 156    | 156    | 179    | 179    |  |  |
| AD      | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| ADS     | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| L       | 457    | 482    | 491    | 522    | 524    | 544    |  |  |
| LS      | 525    | 550    | 572    | 603    | 617    | 637    |  |  |
| LB      | 196    | 221    | 230    | 261    | 263    | 283    |  |  |
| LBS     | 264    | 289    | 311    | 342    | 356    | 376    |  |  |

20 050 00 15

**WF47..****WAF47..**

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200

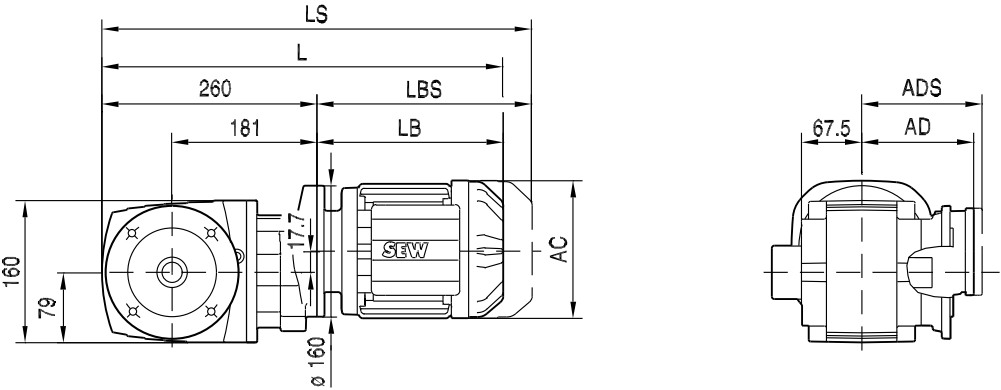


| (→ 144) | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |  |
|---------|--------|--------|--------|--------|--------|--------|--|--|
| AC      | 139    | 139    | 156    | 156    | 179    | 179    |  |  |
| AD      | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| ADS     | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| L       | 456    | 481    | 490    | 521    | 523    | 543    |  |  |
| LS      | 524    | 549    | 571    | 602    | 616    | 636    |  |  |
| LB      | 196    | 221    | 230    | 261    | 263    | 283    |  |  |
| LBS     | 264    | 289    | 311    | 342    | 356    | 376    |  |  |

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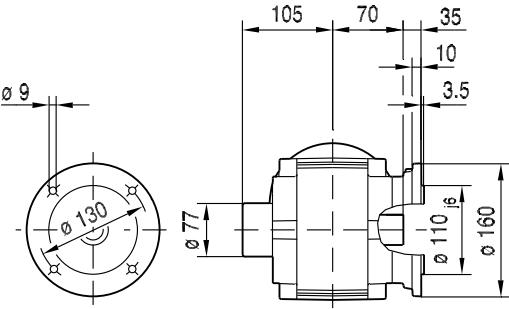
20 055 00 15

WHF47..

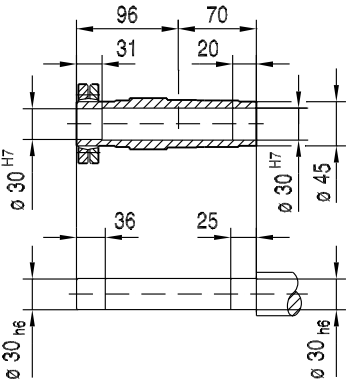
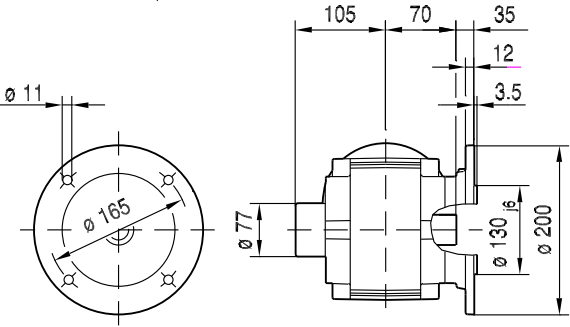


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Ø 160



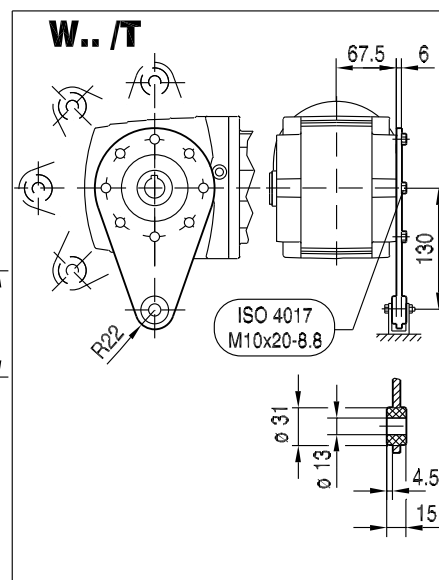
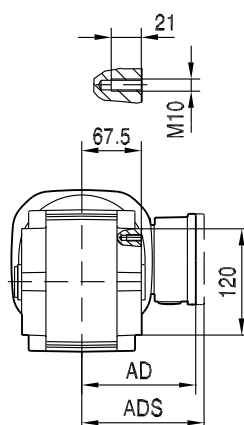
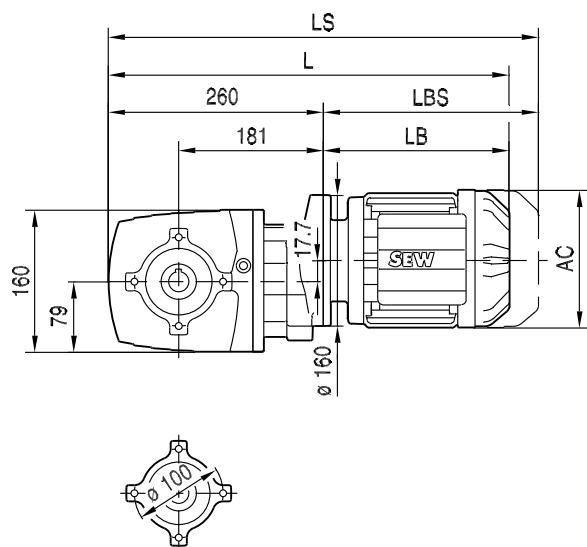
Ø 200



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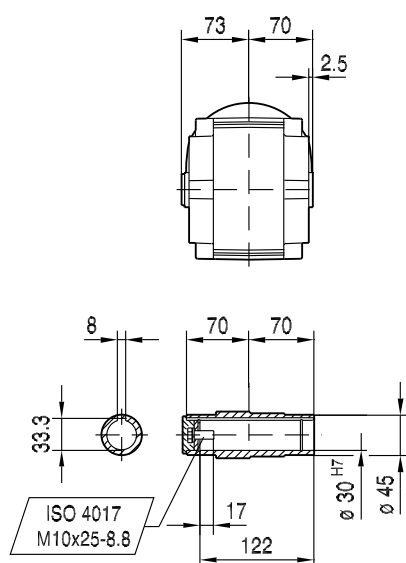
| (→ 144) | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |  |
|---------|--------|--------|--------|--------|--------|--------|--|--|
| AC      | 139    | 139    | 156    | 156    | 179    | 179    |  |  |
| AD      | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| ADS     | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| L       | 456    | 481    | 490    | 521    | 523    | 543    |  |  |
| LS      | 524    | 549    | 571    | 602    | 616    | 636    |  |  |
| LB      | 196    | 221    | 230    | 261    | 263    | 283    |  |  |
| LBS     | 264    | 289    | 311    | 342    | 356    | 376    |  |  |

## WA47..

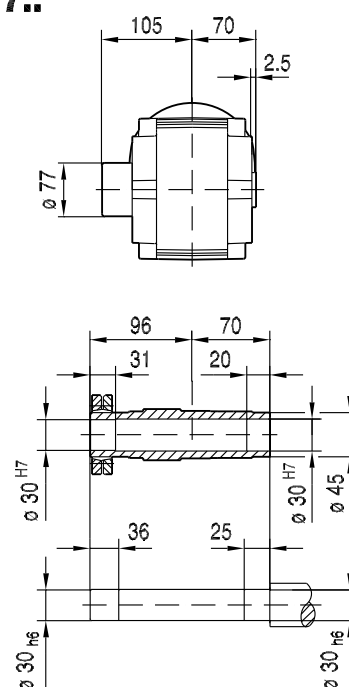


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## WA47..



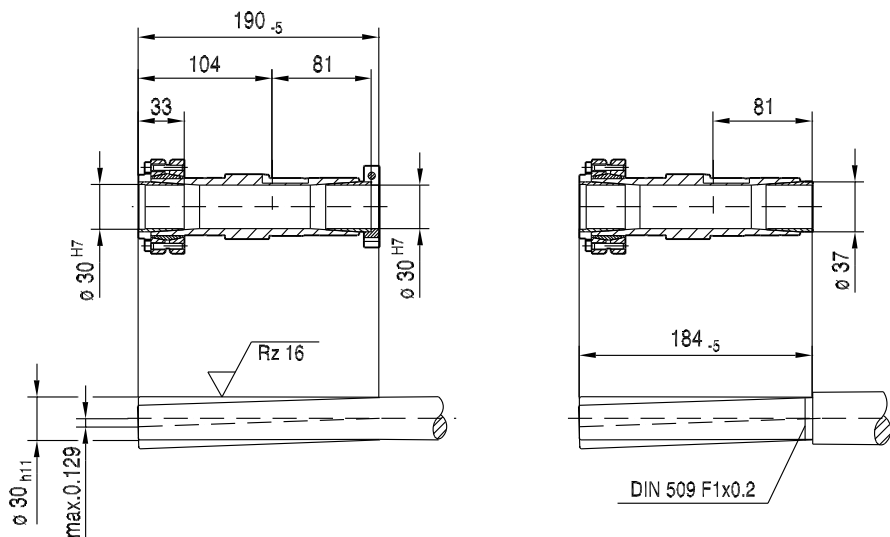
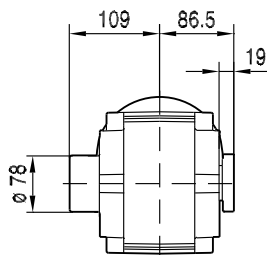
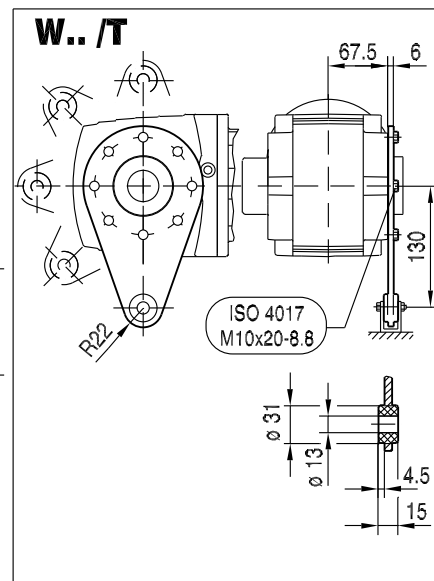
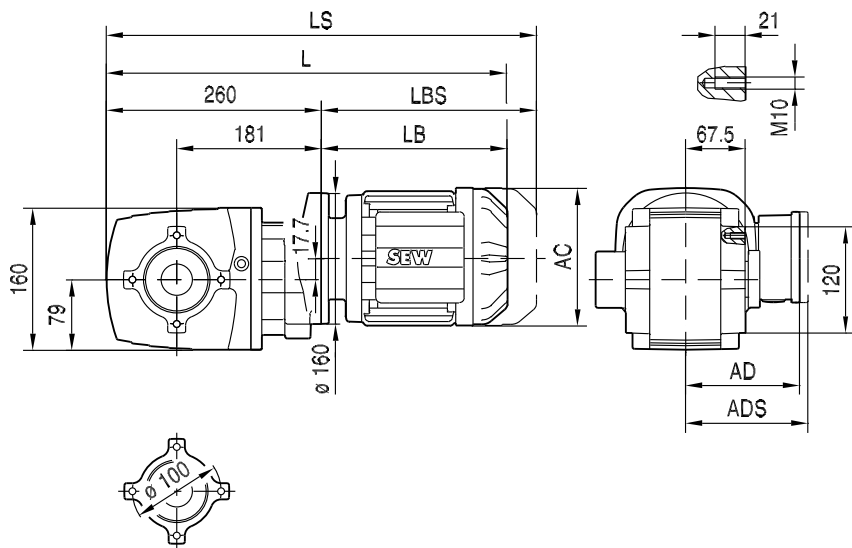
## WH47..



| (→ 144) | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |  |
|---------|--------|--------|--------|--------|--------|--------|--|--|
| AC      | 139    | 139    | 156    | 156    | 179    | 179    |  |  |
| AD      | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| ADS     | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| L       | 456    | 481    | 490    | 521    | 523    | 543    |  |  |
| LS      | 524    | 549    | 571    | 602    | 616    | 636    |  |  |
| LB      | 196    | 221    | 230    | 261    | 263    | 283    |  |  |
| LBS     | 264    | 289    | 311    | 342    | 356    | 376    |  |  |

**WT47..**

20 052 00 15



| (→ 📄 144) | DRK71S | DRK71M | DRK80S | DRK80M | DRK90M | DRK90L |  |  |
|-----------|--------|--------|--------|--------|--------|--------|--|--|
| AC        | 139    | 139    | 156    | 156    | 179    | 179    |  |  |
| AD        | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| ADS       | 172    | 172    | 182    | 182    | 193    | 193    |  |  |
| L         | 456    | 481    | 490    | 521    | 523    | 543    |  |  |
| LS        | 524    | 549    | 571    | 602    | 616    | 636    |  |  |
| LB        | 196    | 221    | 230    | 261    | 263    | 283    |  |  |
| LBS       | 264    | 289    | 311    | 342    | 356    | 376    |  |  |