

TR 750A



GENERAL INFORMATION

· Maximum recommended equipment diameter D_{tp} : approximately 1500 mm

TECHNICAL DATA

| | | |
|----------------------|--|-----------------------------------|
| U | Voltage (custom voltages available on request): | 230 / 400 V |
| f | Frequency: | 50 Hz |
| | Indexing precision: | 36 arcsec ($\pm 18''$) |
| A_r | Axial run-out of the drive flange: | (at \varnothing 635 mm) 0.05 mm |
| A_r | Axial run-out, including the rotary ring: | (at \varnothing 750 mm) 0.07 mm |
| C_r | Concentricity of the output flange: | 0.03 mm |
| P | Parallelism between the output flange and screw-on surface of the housing: | 0.05 mm |
| m | Total weight, including motor: | 230 kg |

The values stated for axial run-out and concentricity can only be achieved with precise mounting surfaces.

LOAD DATA (for the output flange)

| | | |
|---------------------------|-----------------------------------|---------|
| T_{2 stat} | Static torque: | 2500 Nm |
| M_{2T dyn} | Permitted dynamic tilting moment: | 750 Nm |
| F_{2A dyn} | Permitted dynamic axial force: | 7000 N |
| F_{2R dyn} | Permitted dynamic radial force: | 7000 N |

Combined loads and permitted process forces only after inspection by WEISS.

LOAD TABLE 50 Hz (On request: higher loads / custom indexing and switching times for 60 Hz mains frequency)

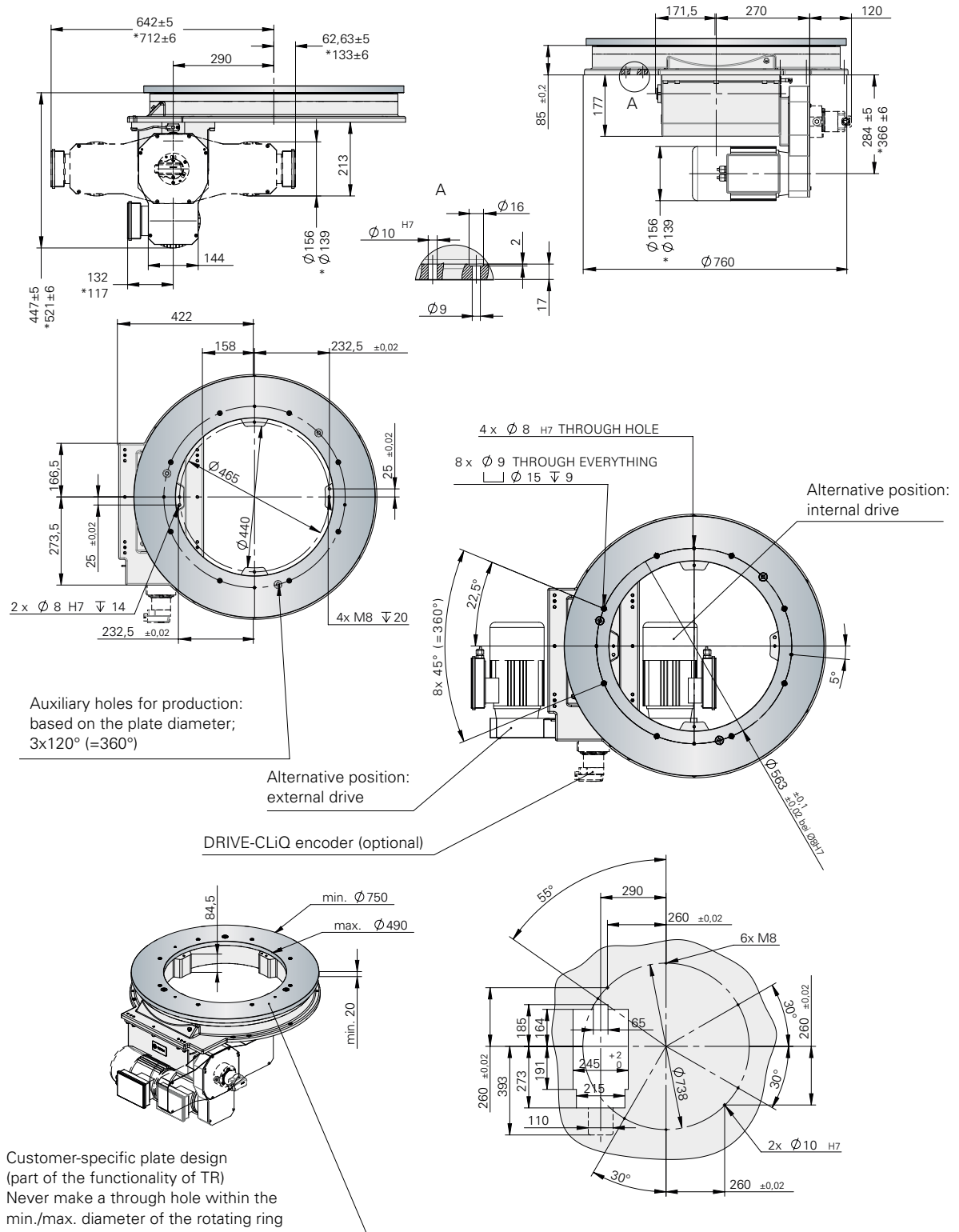
| Indexing | Speed level | 2-stage | | | | | | | | |
|----------|--------------------------|-------------|--------------|------------|------------|------------|------------|-------------|-------------|-------------|
| | | s | a | b | c | d | e | f | g | h |
| 4 | J_{2 Max} | - | 7 | 14 | 22 | 37 | 59 | 87 | 220 | 325 |
| | t _i | - | 0.42 | 0.53 | 0.66 | 0.81 | 1.01 | 1.26 | 1.94 | 2.48 |
| 6 | J_{2 Max} | - | 12 | 22 | 36 | 57 | 90 | 144 | 345 | 560 |
| | t _i | - | 0.42 | 0.53 | 0.66 | 0.81 | 1.01 | 1.26 | 1.94 | 2.48 |
| 8 | J_{2 Max} | - | 19 * | 31 | 49 | 78 | 120 | 195 | 460 | 750 |
| | t _i | - | 0.42* | 0.53 | 0.66 | 0.81 | 1.01 | 1.26 | 1.94 | 2.48 |
| 10 | J_{2 Max} | - | 31 * | 50 | 79 | 125 | 190 | 305 | 720 | 1170 |
| | t _i | - | 0.40* | 0.50 | 0.62 | 0.77 | 0.96 | 1.20 | 1.85 | 2.35 |
| 12 | J_{2 Max} | 18 * | 45 * | 72 | 112 | 175 | 270 | 425 | 1015 | 1650 |
| | t _i | 0.27* | 0.40* | 0.50 | 0.62 | 0.77 | 0.96 | 1.20 | 1.85 | 2.35 |
| 16 | J_{2 Max} | 20 * | 57 * | 90 | 140 | 190 | 335 | 530 | 1260 | 2045 |
| | t _i | 0.26* | 0.39* | 0.48 | 0.60 | 0.74 | 0.92 | 1.16 | 1.78 | 2.27 |
| 20 | J_{2 Max} | 29 * | 72 * | 115 | 175 | 275 | 420 | 665 | 1575 | 2560 |
| | t _i | 0.26* | 0.39* | 0.48 | 0.60 | 0.74 | 0.92 | 1.16 | 1.78 | 2.27 |
| 24 | J_v | 35 * | 85 * | 135 | 210 | 330 | 505 | 800 | 1890 | 3070 |
| | t _i | 0.26* | 0.39* | 0.48 | 0.60 | 0.74 | 0.92 | 1.16 | 1.78 | 2.27 |
| 30 | J_{2 Max} | 35 * | 110 * | 170 | 265 | 410 | 635 | 1000 | 2365 | 3840 |
| | t _i | 0.26* | 0.39* | 0.48 | 0.60 | 0.74 | 0.92 | 1.16 | 1.78 | 2.27 |

J_{2 Max} = max admissible mass inertia loading (kgm²) **t_i** = cycle time (sec.) Depending on motor size, electronics and time optimisation settings, the cycle time measured from the start signal to the electric position indication is approx. 80 - 130 ms longer than the value specified in the table (see also the note on page 17).

*EF2 - Control recommended to minimise brake wear (see page 48).

DIMENSIONS

The position shown for the output flange with rotary ring corresponds to the home position (delivery state). The additional rotating ring is not included in the standard delivery scope and is subject to an extra charge. It is calculated separately as per your details.



* Dimensions for motor BG 71 (2-stage)

TR 1100A



GENERAL INFORMATION

· Maximum recommended equipment diameter D_{tp} : approximately 2200 mm

TECHNICAL DATA

| | | |
|----------------------|--|------------------------------------|
| U | Voltage (custom voltages available on request): | 230 / 400 V |
| f | Frequency: | 50 Hz |
| | Indexing precision: | 36 arcsec ($\pm 18''$) |
| A_r | Axial run-out of the drive flange: | (at \varnothing 945 mm) 0.06 mm |
| A_r | Axial run-out, including the rotary ring: | (at \varnothing 1100 mm) 0.07 mm |
| C_r | Concentricity of the output flange: | 0.04 mm |
| P | Parallelism between the output flange and screw-on surface of the housing: | 0.06 mm |
| m | Total weight, including motor: | 310 kg |

The values stated for axial run-out and concentricity can only be achieved with precise mounting surfaces.

LOAD DATA (for the output flange)

| | | |
|---------------------------|-----------------------------------|---------|
| T_{2 stat} | Static torque: | 3500 Nm |
| M_{2T dyn} | Permitted dynamic tilting moment: | 2500 Nm |
| F_{2A dyn} | Permitted dynamic axial force: | 12000 N |
| F_{2R dyn} | Permitted dynamic radial force: | 12000 N |

Combined loads and permitted process forces only after inspection by WEISS.

LOAD TABLE 50 Hz (On request: higher loads / custom indexing and switching times for 60 Hz mains frequency)

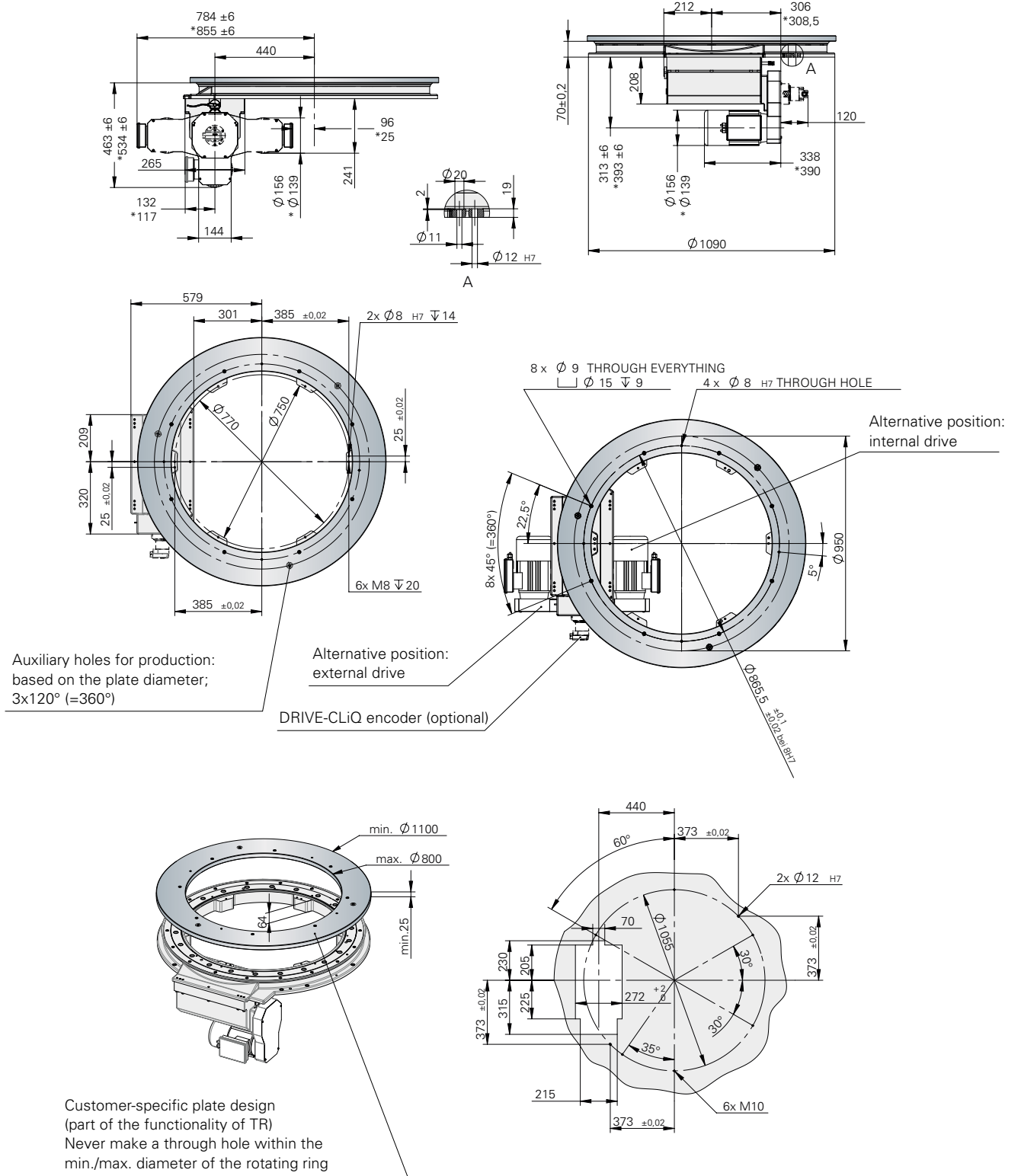
| Indexing | Speed level | Speed level | | | | | | | 2-stage | | |
|----------|--------------------------|-------------|--------|------|------|------|------|------|---------|------|------|
| | | s | a | b | c | d | e | f | g | h | i |
| 4 | J_{2 Max} | - | - | 11 | 19 | 41 | 57 | 60 | 180 | 295 | 445 |
| | t _i | - | - | 0.53 | 0.59 | 0.82 | 0.90 | 1.15 | 1.41 | 2.16 | 2.75 |
| 6 | J_{2 Max} | - | 13 | 34 | 43 | 92 | 114 | 190 | 290 | 675 | 1010 |
| | t _i | - | 0.42 | 0.53 | 0.59 | 0.82 | 0.90 | 1.15 | 1.41 | 2.16 | 2.75 |
| 8 | J_{2 Max} | - | 26 * | 48 | 61 | 126 | 155 | 255 | 385 | 925 | 1510 |
| | t _i | - | 0.42 * | 0.53 | 0.59 | 0.82 | 0.90 | 1.15 | 1.41 | 2.16 | 2.75 |
| 10 | J_{2 Max} | - | 35 * | 62 | 78 | 160 | 195 | 325 | 485 | 1160 | 1890 |
| | t _i | - | 0.39 * | 0.51 | 0.56 | 0.78 | 0.86 | 1.09 | 1.33 | 2.05 | 2.61 |
| 12 | J_{2 Max} | 21 * | 62 * | 116 | 143 | 260 | 350 | 495 | 860 | 2045 | 3325 |
| | t _i | 0.29 | 0.39 * | 0.51 | 0.56 | 0.78 | 0.86 | 1.09 | 1.33 | 2.05 | 2.61 |
| 16 | J_{2 Max} | 38 * | 86 * | 146 | 180 | 355 | 435 | 715 | 1070 | 2540 | 4125 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |
| 20 | J_{2 Max} | 57 * | 109 * | 185 | 225 | 450 | 550 | 895 | 1340 | 3175 | 5160 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |
| 24 | J_v | 65 * | 135 * | 225 | 275 | 540 | 660 | 1075 | 1605 | 3810 | 6190 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |
| 30 | J_{2 Max} | 90 * | 170 * | 280 | 345 | 675 | 825 | 1345 | 2010 | 4765 | 7740 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |
| 36 | J_{2 Max} | 110 * | 205 * | 340 | 415 | 815 | 995 | 1620 | 2415 | 5720 | 9290 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |

J_{2 Max} = max admissible mass inertia loading (kgm²) t_i = cycle time (sec.) Depending on motor size, electronics and time optimisation settings, the cycle time measured from the start signal to the electric position indication is approx. 80 - 130 ms longer than the value specified in the table.

*EF2 - Control recommended to minimise brake wear (see page 48).

DIMENSIONS

The position shown for the output flange with rotary ring corresponds to the home position (delivery state). The additional rotating ring is not included in the standard delivery scope and is subject to an extra charge. It is calculated separately as per your details.



* Dimensions for motor BG 71 (2-stage)

TR 1500A



GENERAL INFORMATION

· Maximum recommended equipment diameter D_{tp} : approximately 3000 mm

TECHNICAL DATA

| | | |
|----------------------|--|------------------------------------|
| U | Voltage (custom voltages available on request): | 230 / 400 V |
| f | Frequency: | 50 Hz |
| | Indexing precision: | 30 arcsec ($\pm 15''$) |
| A_r | Axial run-out of the drive flange: | (at $\varnothing 1275$ mm) 0.08 mm |
| A_r | Axial run-out, including the rotary ring: | (at $\varnothing 1500$ mm) 0.1 mm |
| C_r | Concentricity of the output flange: | 0.04 mm |
| P | Parallelism between the output flange and screw-on surface of the housing: | 0.08 mm |
| m | Total weight, including motor: | 400 kg |

The values stated for axial run-out and concentricity can only be achieved with precise mounting surfaces.

LOAD DATA (for the output flange)

| | | |
|---------------------------|-----------------------------------|---------|
| T_{2 stat} | Static torque: | 5000 Nm |
| M_{2T dyn} | Permitted dynamic tilting moment: | 3200 Nm |
| F_{2A dyn} | Permitted dynamic axial force: | 16000 N |
| F_{2R dyn} | Permitted dynamic radial force: | 16000 N |

Combined loads and permitted process forces only after inspection by WEISS.

LOAD TABLE 50 Hz (On request: higher loads / custom indexing and switching times for 60 Hz mains frequency)

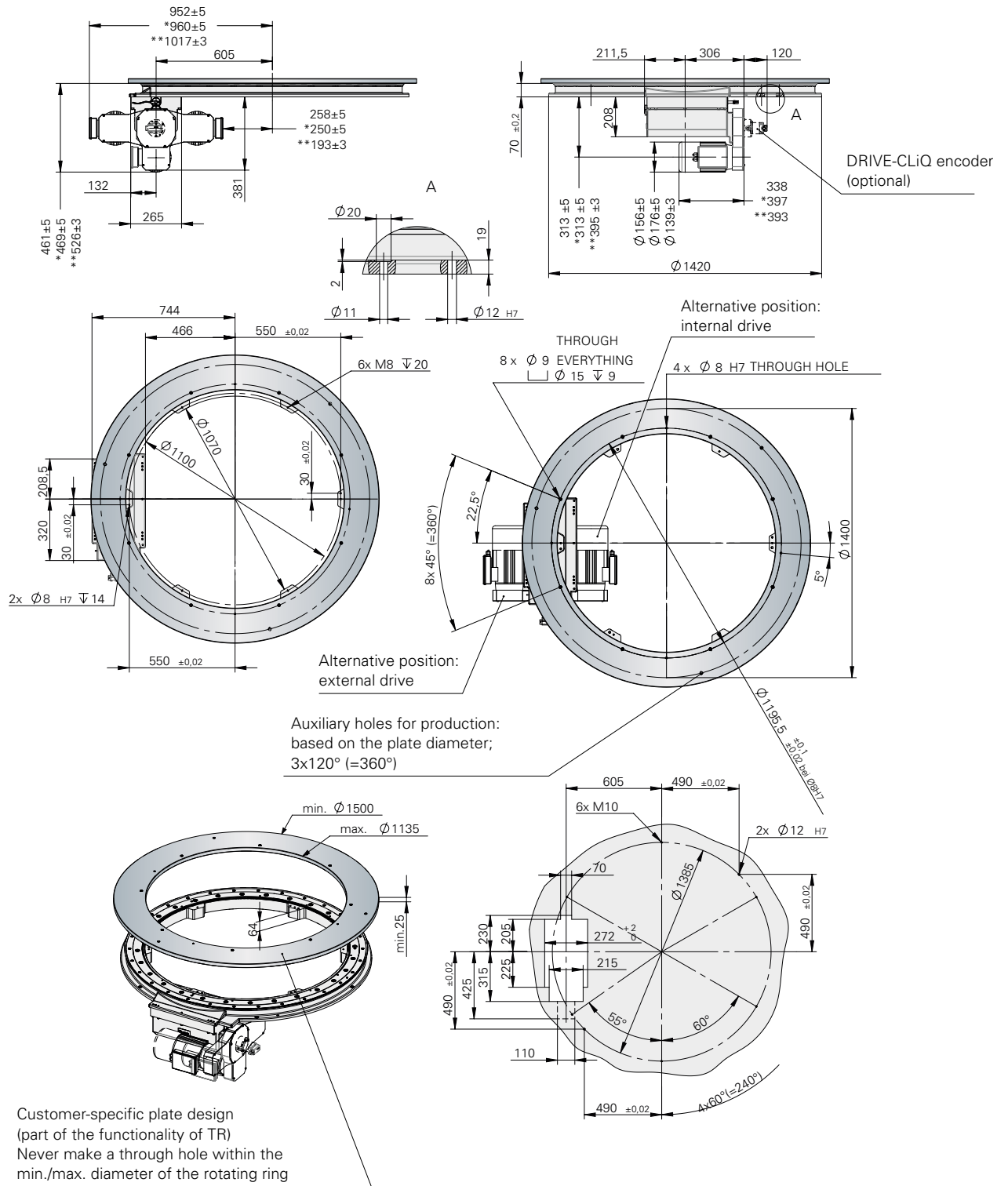
| Indexing | Speed level | 2-stufig | | | | | | | | | |
|-----------|--------------------------|--------------|--------------|------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| | | s | a | b | c | d | e | f | g | h | i |
| 8 | J_{2 Max} | - | - | 57 | 74 | 163 | 203 | 342 | 520 | 1258 | 1792 |
| | t _i | - | - | 0.53 | 0.59 | 0.82 | 0.90 | 1.15 | 1.41 | 2.16 | 2.75 |
| 10 | J_{2 Max} | - | 48 | 100 | 127 | 265 | 330 | 545 | 825 | 1975 | 2395 |
| | t _i | - | 0.39 | 0.51 | 0.56 | 0.78 | 0.86 | 1.09 | 1.33 | 2.05 | 2.61 |
| 12 | J_{2 Max} | - | 75 * | 149 | 185 | 380 | 470 | 775 | 1165 | 2785 | 3330 |
| | t _i | - | 0.39 * | 0.51 | 0.56 | 0.78 | 0.86 | 1.09 | 1.33 | 2.05 | 2.61 |
| 16 | J_{2 Max} | 43 | 108 * | 190 | 235 | 480 | 590 | 965 | 1440 | 3460 | 5325 |
| | t _i | 0.28 | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |
| 20 | J_{2 Max} | 69 * | 140 * | 243 | 301 | 605 | 740 | 1215 | 1820 | 4330 | 7040 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |
| 24 | J_{2 Max} | 87 * | 172 * | 295 | 365 | 730 | 890 | 1460 | 2185 | 5200 | 8455 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |
| 30 | J_{2 Max} | 114 * | 221 * | 375 | 460 | 915 | 1120 | 1830 | 2740 | 6505 | 10570 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |
| 36 | J_v | 141 * | 270 * | 455 | 560 | 1105 | 1350 | 2200 | 3290 | 7810 | 12690 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |
| 48 | J_{2 Max} | 324 * | 600 * | 995 | 1215 | 2375 | 2900 | 4720 | 7045 | 16685 | 27095 |
| | t _i | 0.28 * | 0.38 * | 0.49 | 0.54 | 0.75 | 0.83 | 1.05 | 1.29 | 1.98 | 2.52 |

J_{2 Max} = max admissible mass inertia loading (kgm²) **t_i** = cycle time (sec.) Depending on motor size, electronics and time optimisation settings, the cycle time measured from the start signal to the electric position indication is approx. 80 - 130 ms longer than the value specified in the table.

*EF2 - Control recommended to minimise brake wear (see page 48).

DIMENSIONS

The position shown for the output flange with rotary ring corresponds to the home position (delivery state). The additional rotating ring is not included in the standard delivery scope and is subject to an extra charge. It is calculated separately as per your details.



* Dimensions for motor BG 90
** Dimensions for motor BG 71 (2-stage)

TR 2200A



GENERAL INFORMATION

· Maximum recommended equipment diameter D_{tp} : approximately 4400 mm

TECHNICAL DATA

| | | |
|----------------------|--|------------------------------------|
| U | Voltage (custom voltages available on request): | 230 / 400 V |
| f | Frequency: | 50 Hz |
| | Indexing precision*: | 24 arcsec ($\pm 12''$) |
| A_r | Axial run-out of the drive flange: | (at \varnothing 1990 mm) 0.08 mm |
| A_r | Axial run-out, including the rotary ring: | (at \varnothing 2200 mm) 0.15 mm |
| C_r | Concentricity of the output flange: | 0.05 mm |
| P | Parallelism between the output flange and screw-on surface of the housing: | 0.08 mm |
| m | Total weight, including motor: | 950 kg |

The values stated for axial run-out and concentricity can only be achieved with precise mounting surfaces.

LOAD DATA (for the output flange)

| | | |
|---------------------------|-----------------------------------|----------|
| T_{2 stat} | Static torque: | 15000 Nm |
| M_{2T dyn} | Permitted dynamic tilting moment: | 4500 Nm |
| F_{2A dyn} | Permitted dynamic axial force: | 30000 N |
| F_{2R dyn} | Permitted dynamic radial force: | 30000 N |

Combined loads and permitted process forces only after inspection by WEISS.

LOAD TABLE 50 Hz (On request: higher loads / custom indexing and switching times for 60 Hz mains frequency)

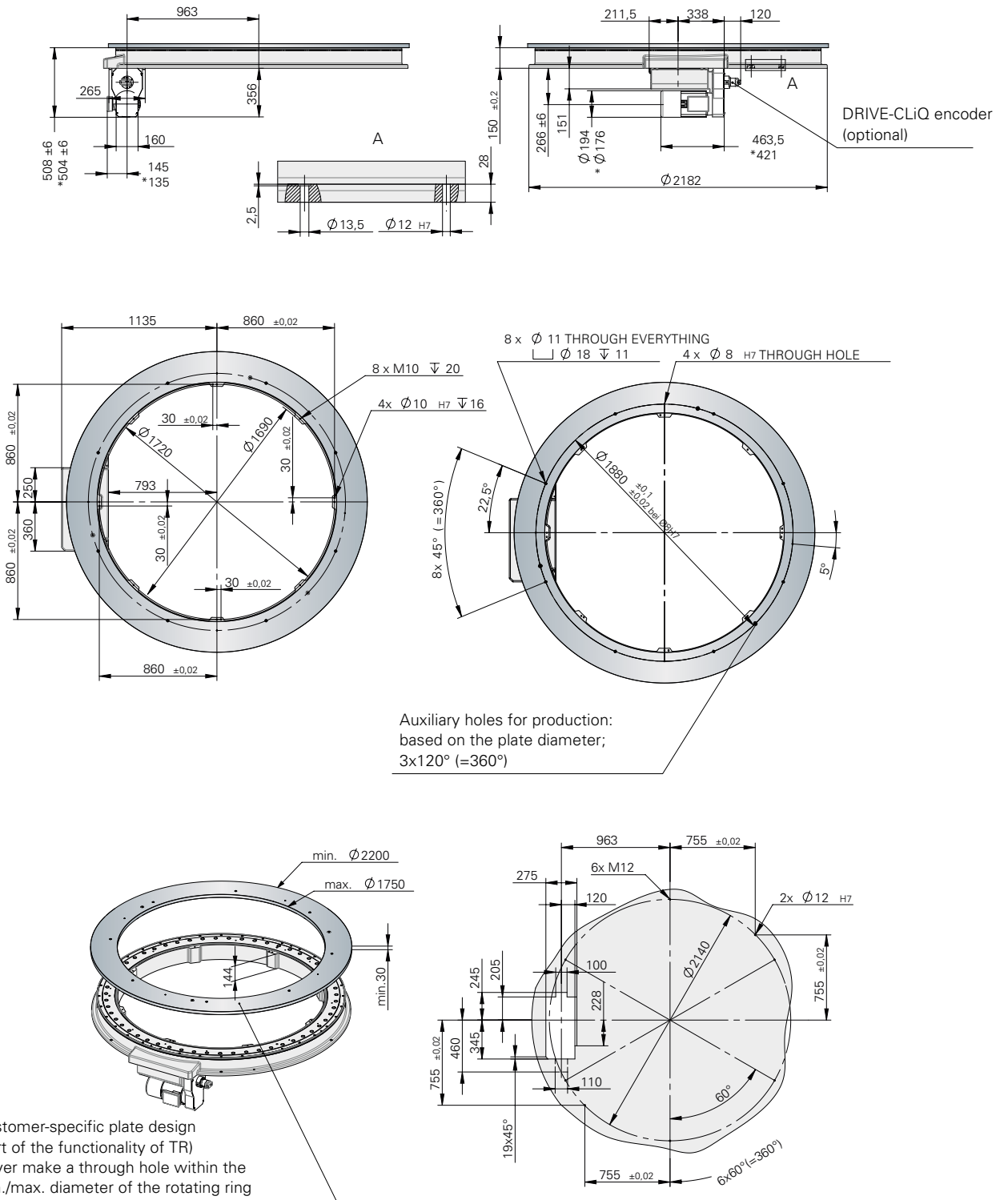
| Indexing | | Speed level | | | | | | |
|-----------|--------------------------|-------------|------------|-------------|-------------|-------------|-------------|--------------|
| | | a | b | c | d | e | f | g |
| 14 | J_{2 Max} | - | - | - | 525 | 720 | 1010 | 2400 |
| | t _i | - | - | - | 0.77 | 0.86 | 0.97 | 1.48 |
| 16 | J_{2 Max} | - | - | 420 | 995 | 1030 | 1640 | 3075 |
| | t _i | - | - | 0.62 | 0.77 | 0.86 | 0.97 | 1.48 |
| 18 | J_{2 Max} | - | - | 600 | 1325 | 1370 | 2140 | 3955 |
| | t _i | - | - | 0.62 | 0.77 | 0.86 | 0.97 | 1.48 |
| 20 | J_{2 Max} | - | 511 | 797 | 1550 | 1750 | 2670 | 4945 |
| | t _i | - | 0.50 | 0.62 | 0.77 | 0.86 | 0.97 | 1.48 |
| 24 | J_{2 Max} | - | 665 | 1180 | 1805 | 2455 | 3255 | 7230 |
| | t _i | - | 0.50 | 0.62 | 0.77 | 0.86 | 0.97 | 1.48 |
| 30 | J_{2 Max} | - | 707 | 1245 | 2010 | 2580 | 3420 | 8240 |
| | t _i | - | 0.46 | 0.57 | 0.70 | 0.78 | 0.89 | 1.36 |
| 36 | J_{2 Max} | 465 | * | 900 | 1545 | 2465 | 3135 | 4155 |
| | t _i | 0.37 | * | 0.46 | 0.57 | 0.70 | 0.78 | 0.89 |
| 48 | J_v | 762 | * | 1281 | 2140 | 3370 | 4165 | 13335 |
| | t _i | 0.37 | * | 0.46 | 0.57 | 0.70 | 0.78 | 0.89 |

J_{2 Max} = max admissible mass inertia loading (kgm²) **t_i** = cycle time (sec.) Depending on motor size, electronics and time optimisation settings, the cycle time measured from the start signal to the electric position indication is approx. 80 - 130 ms longer than the value specified in the table.

*EF2 - Control recommended to minimise brake wear (see page 48).

DIMENSIONS

The shown position of the rotating ring corresponds to the home position (state of delivery) with motor size BG100. Additional indexing plates are not included in the standard delivery scope and are subject to an extra charge. They are calculated separately as per your details.



* Dimensions for motor BG 90

EF2

FIXED-STATION ROTARY INDEXING TABLES | EF2 ROTARY TABLE CONTROL SYSTEM

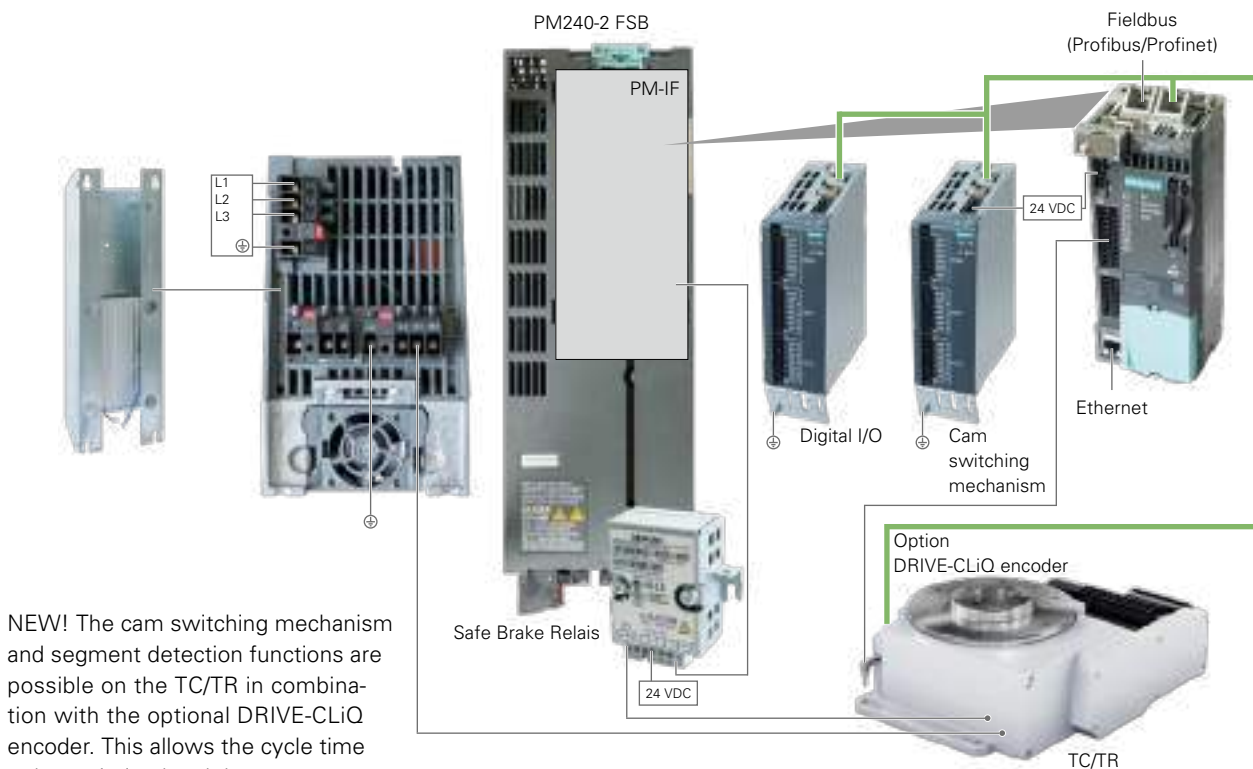
ADVANTAGES

The EF2 rotary table control system enables fast and convenient control of rotary indexing tables of all sizes belonging to the TC and TR series.

- Intuitive, web-based user interface for faster commissioning
- No brake wear, soft start-up from intermediate positions is gentle on gearing
- Increased performance through fully automatic optimisation cycle
- Remote support and remote diagnostics options
- Worldwide use thanks to various mains standards
- Compact hardware (all-in-one)
- Fieldbus connection: Profibus and Profinet
- Interface: Digital I/O
- Integrated SIL2 safety function
- Additional SIL3 measures possible
- Watchdog mechanism



BLOCK DIAGRAM



NEW! The cam switching mechanism and segment detection functions are possible on the TC/TR in combination with the optional DRIVE-CLiQ encoder. This allows the cycle time to be optimised and the current process status in all nests to be reliably detected.