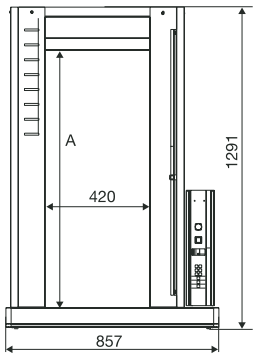
Zwick / Roell

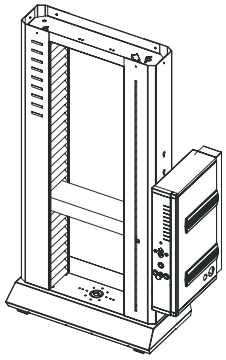
Zwick
Materials Testing

# Product Information

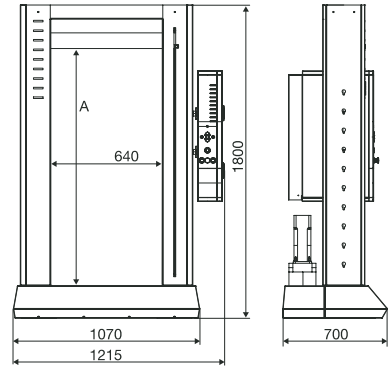
## ProLine table-top machines Z005 up to Z100




Z005, Z010, Z020, Type „TN“



Z050 with *testControl*




Z100

### Range of application

Function testing on components and simple materials testing

### Advantages/Characteristics

- High value, single/twin column load frame
- Robust and durable industrial operation
- Precise crosshead guidance via steel columns/ polished linear axis with carriages seated on ball bearings
- The wide force/measurement range encompasses an expansive range of applications
- Attractive, pricewise, test solutions for routine and standard applications
- Simple operateability
- A high standard of comfort and user ergonomics is created in synergy with the test software *testXpert*®
- *testXpert*® standard test programs for ProLine guarantee intuitively operateable test sequences that are tailor made for the respective applications at lowest possible prices
- CE Conform design
- Setting the machines up on existing industrial furniture enables the test area to be positioned at an optimum height for the operator
- Zwick shows the way with a delivery time of 2 weeks for all ProLine products of the Pure Portfolio

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# Product Information

## ProLine table-top machines Z005 up to Z100

| Order item | | DO-FB005TS | DO-FB005TN | DO-FB010TN | DO-FB020TN | DO-FB030TN | DO-FB050TN | T1-FB050TN | T1-FB100TN | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Load frame** | | | | | | | | | | |
| Test load $F_N$ in tensile/compr. direction | | 5 | 5 | 10[1] | 20[1] | 30[1] | 50[1] | 50 | 100 | kN |
| Test area width | | 420 | 420 | 420 | 420 | 440 | 440 | 440 | 440 | mm |
| Height of the test area (Dimension A) [4] | | 561 | 1061 | 1041 | 1041 | 1374 | 1374 | 1374 | 1364 | mm |
| Max. travel of the moving crosshead [4] | | 496 | 996 | 976 | 976 | 1293 | 1293 | 1293 | 1283 | mm |
| Height | | 791 | 1291 | 1291 | 1291 | 1739 | 1739 | 1739 | 1800 | mm |
| Width | | 857 | 857 | 857 | 857 | 850 | 850 | 850 | 1070 | mm |
| Width with electronics console | | 857 | 857 | 857 | 857 | 964 | 964 | 1007 | 1215 | mm |
| Depth | | 346 | 346 | 346 | 346 | 423 | 423 | 423 | 600 | mm |
| Depth with electronics console | | 346 | 346 | 346 | 346 | 423 | 423 | 509 | 600 | mm |
| Total weight with electron. console | | 90 | 105 | 130 | 133 | ≅ 250 | ≅ 250 | ≅ 250 | ≅ 540 | kg |
| Lower mounting stud (included in scope of supply) dia. | | 20 | 20 | 20 | 36 | 36 | 36 | 36 | 60 | mm |
| **Drive unit** | | | | | | | | | | |
| Crosshead speed $v_{min}$ ... $v_{Nom}$ *(testControl)* rsp. $v_{set}$ (Doli I) | | 0.1[2] ... 500 | 0.1[2] ...500 | 0.1[2] ...1000 | 0.1[2] ... 500 | 0.1[2] ... 300 | 0.1[2] ... 180 | 0.0005 ... 600 | 0.0005 ... 300 | mm/min |
| Accuracy of the set speed | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | % of $v_{Nom}/v_{Set}$ |
| Drive system's travel resolution | | 0.05 | 0.05 | 0.09 | 0.045 | 0.025 | 0.015 | 0.016 | 0.0081 | µm |
| Positioning, repetition accuracy | | ± 2 | ± 2 | ± 2 | ± 3 | ± 2 | ± 2 | ± 2 | ± 2 | µm |
| **Measurement and control electronics** | | | | | | | | | | |
| Electronics | | Doli I | Doli I | Doli I | Doli I | Doli I | Doli I | tc[3] | tc[3] | |
| **Power ratings** | | | | | | | | | | |
| Electrical connections | | 115/230 | 115/230 | 115/230 | 115/230 | 115/230 | 115/230 | 115/230 | 115/230 | V(PH,N,PE) |
| Mains frequency | | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | 50/60 | Hz |
| Power rating | | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 2.3 | 2.3 | kVA |

[1] Valid at Fmax is: 75% of vmax, valid at vmax is: 75% of Fmax
[2] This speed is valid for the operation with Stand Alone, via use of a PC a minimum speed of 0.001 mm/min can be realised
[3] *tc = testControl*: Measurement range up to 165% von $F_N$, with load cell Fmax 2.5 kN up to 130% of $F_N$, real resolution in tensile / compression direction 162,000 ... 912,000 Points, Internal recording rate 500 Hz, Test data group transmission rate to the PC 100 Hz. Doli I: Measurement range up to 150 % of $F_N$ with load cell Fmax 2.5 kN up to 120% of $F_N$, Real resolution in tensile/compression direction 100,000 Points, Internal recording rate 400 Hz, Test data group transmission rate to the PC 50 Hz
[4] Without accessories

**Data for all load frames**

Finish: Z005/Z010/Z020: RAL 7011 iron grey, RAL 7038 agate grey, RAL 3031 orient red
Z030/Z050/Z100: RAL 7037 dusty grey, RAL 7038 agate grey

Ambient temperature + 10 ... + 35 °C, air humidity (non condensing) 20 ... 90 %

Measurement and control electronics

Force measurement: Grade 0.5 / 1 depending upon the load cell, according to ISO 7500-1 (DIN 51220, DIN 51302), ISO R147, ASTM E4, BS 1610 Grade A, NF A 03-501

Zero-point correction automatically at beginning of measurement, measurement signal runtime correction for all channels, output interface RS232, required PC connection (for PC operation): COM1

All data at ambient temperature.