

# H4000

## Product Specification

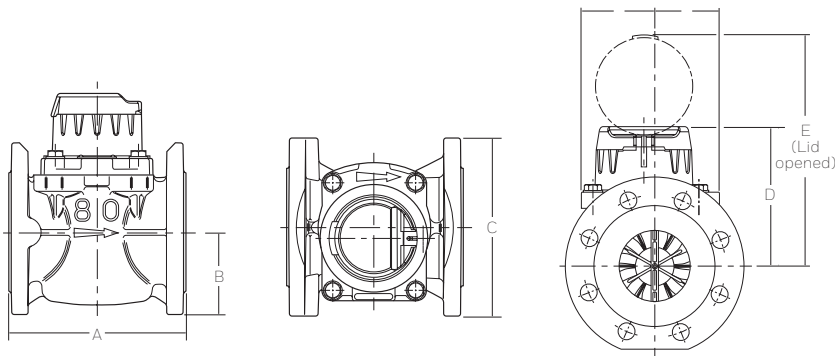


### H4000 PERFORMANCE (FORWARD FLOW)

| METER SIZE (mm)                | FLOW    | UNITS          | 40   | 50   | 65   | 80   | 100  | 125  | 150  | 200  | 250  | 300  |
|--------------------------------|---------|----------------|------|------|------|------|------|------|------|------|------|------|
| OVERLOAD FLOW RATE             | qs±2%   | m³/h           | 90   | 90   | 120  | 200  | 250  | 250  | 600  | 1000 | 1600 | 2000 |
| PERMANENT FLOW RATE            | qp±2%   | m³/h           | 50   | 50   | 65   | 120  | 180  | 180  | 450  | 700  | 1000 | 1500 |
| TRANSITIONAL FLOW RATE         | qt±2%   | m³/h           | 1    | 1    | 1.5  | 2    | 2    | 2    | 4    | 6    | 11   | 15   |
| MINIMUM FLOW RATE (HORIZONTAL) | qmin±5% | m³/h           | 0.35 | 0.35 | 0.4  | 0.5  | 0.6  | 0.6  | 1.8  | 4    | 6    | 12   |
| MINIMUM FLOW RATE (VERTICAL)   | qmin±5% | m³/h           | 0.45 | 0.45 | 0.75 | 1.2  | 1.2  | 1.2  | 4.5  | 7.5  | 12   | 18   |
| STARTING FLOW (APPROXIMATELY)  |         | m³/h           | 0.15 | 0.16 | 0.17 | 0.22 | 0.25 | 0.25 | 0.9  | 1.2  | 1.8  | 1.8  |
| HEADLOSS AT MAXIMUM FLOW       |         | bar            | 0.84 | 0.49 | 0.69 | 0.27 | 0.43 | 0.58 | 0.33 | 0.32 | 0.37 | 0.58 |
| MAXIMUM REGISTRATION           |         | millions of m³ | 1    | 1    | 1    | 1    | 1    | 1    | 10   | 10   | 10   | 10   |
| MAXIMUM WATER TEMPERATURE      |         | °C             | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   | 50   |
| MAXIMUM WORKING PRESSURE       |         | bar            | 16   | 16   | 16   | 16   | 16   | 16   | 16   | 16   | 16   | 16   |

### MEASURING INSTRUMENTS DIRECTIVE 2014/32/EU

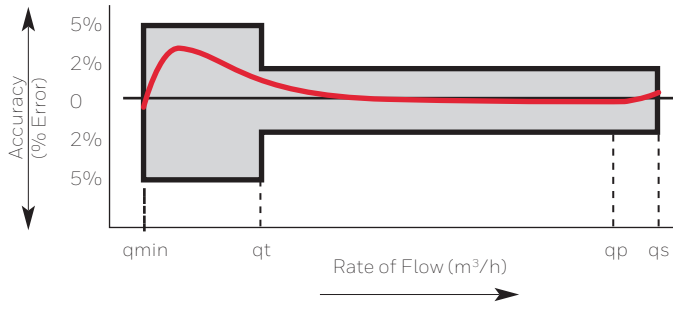
| METER SIZE             |       | mm      | 40   | 50   | 65   | 80   | 100  | 125  | 150  | 200   | 250  | 300   |
|------------------------|-------|---------|------|------|------|------|------|------|------|-------|------|-------|
| OVERLOAD FLOW RATE     | Q4    | m³/h    | 79   | 79   | 79   | 200  | 200  | 200  | 500  | 787.5 | 1250 | 2000  |
| PERMANENT FLOW RATE    | Q3    | m³/h    | 63   | 63   | 63   | 160  | 160  | 160  | 400  | 630   | 1000 | 1600  |
| TRANSITIONAL FLOW RATE | Q2    | m³/h    | 0.81 | 0.81 | 1.6  | 2.05 | 2.05 | 2.05 | 3.2  | 6.3   | 10   | 20.48 |
| MINIMUM FLOW RATE      | Q1    | m³/h    | 0.5  | 0.5  | 1    | 1.28 | 1.28 | 1.28 | 2    | 3.94  | 6.25 | 12.8  |
| TURNDOWN RATIO R       | Q3/Q1 | R value | 125  | 125  | 63   | 125  | 125  | 125  | 200  | 160   | 160  | 125   |
| HEADLOSS AT Q3         | ΔP    | bar     | 0.39 | 0.24 | 0.19 | 0.18 | 0.18 | 0.24 | 0.15 | 0.12  | 0.15 | 0.37  |



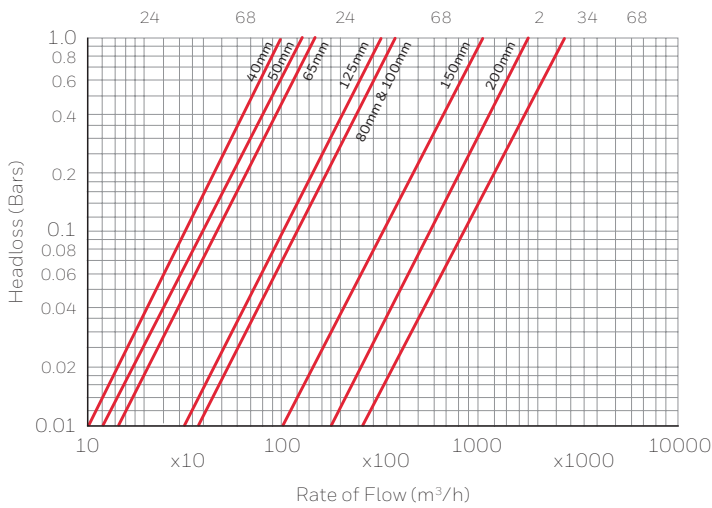
### DIMENSIONS

| METER SIZE (mm)           | UNITS | 40   | 50        | 65      | 80        | 100     | 125  | 150       | 200  | 250 | 300 |
|---------------------------|-------|------|-----------|---------|-----------|---------|------|-----------|------|-----|-----|
| OVERALL LENGTH (ISO) (A)  | mm    | 300  | 200/300   | 200/300 | 200/350   | 250/350 | 250  | 300/500   | 350  | 450 | 500 |
| OVERALL LENGTH (KENT) (A) | mm    | 311  | 311       | -       | 413       | 483     | -    | -         | 520  | -   | -   |
| HEIGHT (B)                | mm    | 78   | 78        | 86      | 94        | 106     | 118  | 135       | 165  | 198 | 225 |
| HEIGHT (D)                | mm    | 148  | 148       | 148     | 159       | 159     | 159  | 206       | 228  | 246 | 246 |
| HEIGHT (E)                | mm    | 236  | 236       | 236     | 247       | 247     | 247  | 294       | 316  | 334 | 334 |
| FLANGE DIAMETER (C)       | mm    | 151  | 166       | 186     | 201       | 228     | 251  | 286       | 341  | 409 | 461 |
| WEIGHT (ISO)              | kg    | 11.8 | 12.2/13.1 | 13/14.4 | 14.1/16.6 | 19.4/21 | 20.5 | 37.5/43.5 | 47.5 | 82  | 104 |
| WEIGHT (KENT)             | kg    | 12   | 13.3      | -       | 17.6      | 23.6    | -    | -         | 54   | -   | -   |

**TYPICAL ACCURACY CURVE**



**TYPICAL HEADLOSS CURVE**



**PULSE CONNECTIVITY**

**Calculating pulse weights when fitted with PR7 inductive pulser:**

Pulse weight is calculated by multiplying the register 'pulse factor' (P) by the PR7 'K-factor' (K);  
 Pulse weight (litres per pulse) = P x K.

| SIZE  | PULSE FACTOR | K-FACTOR |          |            |             |
|-------|--------------|----------|----------|------------|-------------|
|       |              | K1       | K10      | K100       | K1000       |
| 40mm  | P:1          | 1 ltr    | 10 ltrs  | 100 ltrs   | 1,000 ltrs  |
| 50mm  | P:1          | 1 ltr    | 10 ltrs  | 100 ltrs   | 1,000 ltrs  |
| 65mm  | P:1          | 1 ltr    | 10 ltrs  | 100 ltrs   | 1,000 ltrs  |
| 80mm  | P:1          | 1 ltr    | 10 ltrs  | 100 ltrs   | 1,000 ltrs  |
| 100mm | P:1          | 1 ltr    | 10 ltrs  | 100 ltrs   | 1,000 ltrs  |
| 125mm | P:1          | 1 ltr    | 10 ltrs  | 100 ltrs   | 1,000 ltrs  |
| 150mm | P:10         | 10 ltrs  | 100 ltrs | 1,000 ltrs | 10,000 ltrs |
| 200mm | P:10         | 10 ltrs  | 100 ltrs | 1,000 ltrs | 10,000 ltrs |
| 250mm | P:10         | 10 ltrs  | 100 ltrs | 1,000 ltrs | 10,000 ltrs |
| 300mm | P:10         | 10 ltrs  | 100 ltrs | 1,000 ltrs | 10,000 ltrs |

PR7 is an open collector pulse transmitter suitable for data logging, AMR and telemetry equipment. Check with your equipment supplier for full details of compatibility.

Pressure equipment directive 97/23/EC. This product is applicable in networks for the supply, distribution and discharge of water and associated equipment and is therefore exempt.

**For more information**

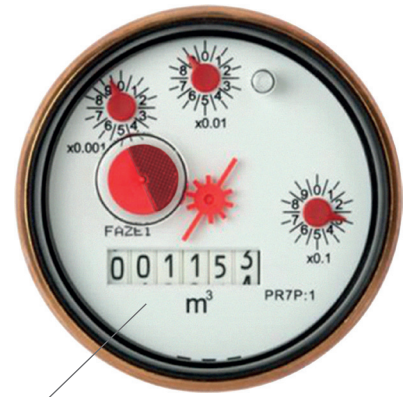
[www.elstermetering.com](http://www.elstermetering.com)

**Elster Water Metering Ltd**

130 Camford Way  
 Sundon Park, Luton  
 Bedfordshire, LU3 3AN  
 United Kingdom  
 T +44 1582 846400  
 F +44 1582 564728  
[water.metering@elster.com](mailto:water.metering@elster.com)

All rights reserved. The company's policy is one of continuous product improvement and the right is reserved to modify the specifications contained herein without notice. These products have been manufactured with current technology and in accordance with the applicable referenced standards.

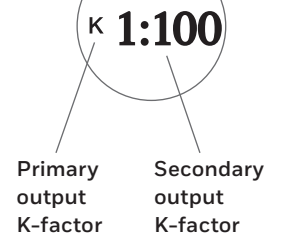
Lit Ref: 8516D43107  
 © 2017 Honeywell International Inc.



On this example 50mm H4000 register, the user can identify from the dial plate both the:  
 - Type of pulser to use, i.e. PR7  
 - Pulse factor, i.e. P:1



On the PR7 unit the user can identify from the label the K-factors for each output channel



Primary output K-factor

Secondary output K-factor