

DA 300

Description

Specifications

Dimensions

Accessories

Compressed Air Unit



Type of unit	System for cleaning and conditioning compressed air
Supported encoders	Max. 10 linear encoders (total 35 m measuring length) angle encoders or rotary encoders
Mechanical design	<p>Fine filter of microfiber for dust, oil and water with particle size as fine as 0.1 µm</p> <p>Activated carbon filter Absorbs oil vapor up to 0.003 mg/m³</p> <p>Pressure regulator For adjusting the output pressure</p>
Items supplied	<p>DA 300 Compressed Air Unit</p> <p>25 m compressed air tubing</p> <p>3 T-joints</p> <p>4 connectors for linear encoders</p>



Description

Sealed **linear encoders** from HEIDENHAIN fulfill the requirements for IP 53 protection according to IEC 60 529 and EN 60 529, provided that they are mounted with the sealing lips facing away from splash water. If the encoder is exposed to particularly heavy concentrations of coolant and mist, **compressed air** can be conducted into the scale housing to provide **IP 64** protection to more effectively prevent the ingress of contamination. All HEIDENHAIN sealed linear encoders are therefore equipped with inlets at both end pieces and on the mounting block of the scanning unit.

The ERA 180, ROD, RON and RCN **angle encoders** can also be provided with a light overpressure. The compressed air introduced directly onto the encoders must be cleaned by a fine filter and must comply with the following quality classes as per ISO 8573-1:

- Solid contaminant: Class 1 (max. particle size 0.1 µm and max. particle density 0.1 mg/m³ at 1 · 10⁵ Pa)
- Total oil content: Class 1 (max. oil concentration 0.01 mg/m³ at 1 · 10⁵ Pa)
- Maximum pressure dew point: Class 4 (+3 °C at 2 · 10⁵ Pa)

HEIDENHAIN offers the **DA 300 Compressed Air Unit** for purifying and conditioning compressed air. It consists of two filter stages (fine filter and activated carbon filter), automatic condensation trap, and a pressure regulator with pressure gauge.

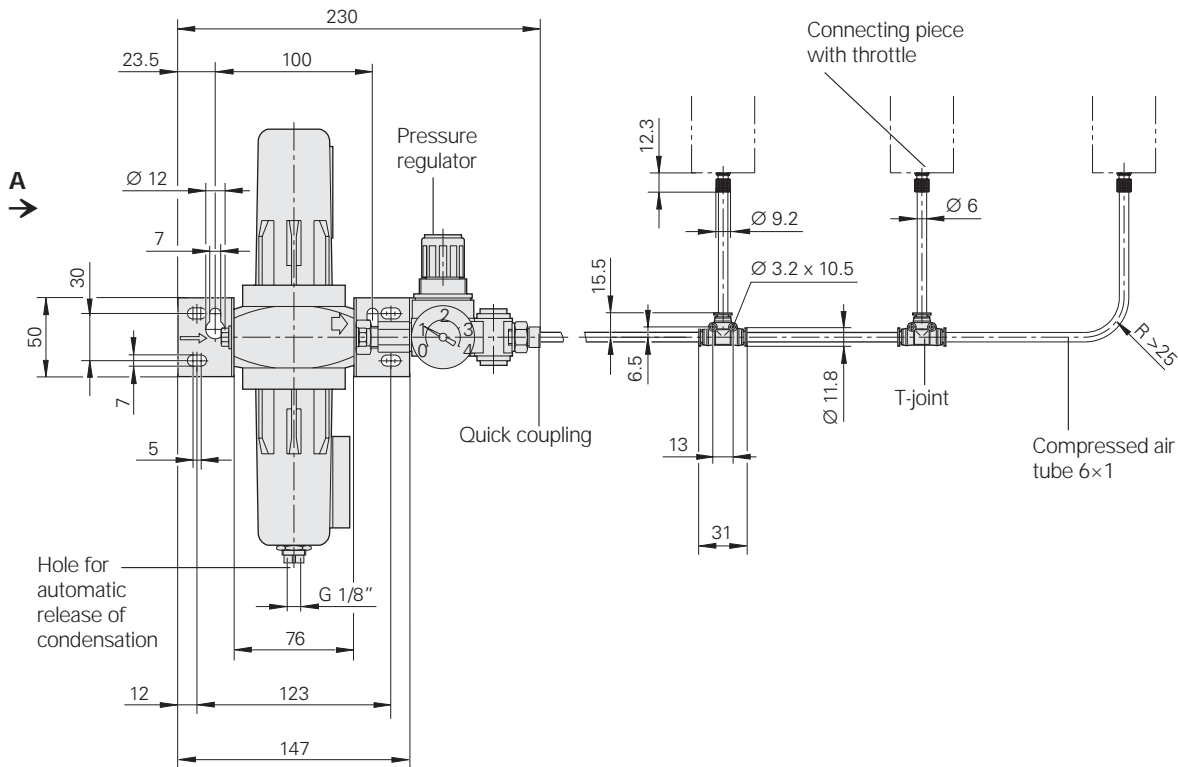
It can serve for up to 10 encoders. At an operating pressure of 7 bars (100 psi), the compressed air conducted to the encoder by far exceeds the required purity. Its pressure gauge and automatic pressure switch (available as accessories) effectively monitor the DA 300.

The required air flow is 7 to 10 l/min per linear encoder; permissible pressure is in the range of 0.6 to 1 bar (9 to 14 psi). The compressed air flows through connecting pieces with integrated throttle (included with LB, LC, LF, LS 1x6, and LS 4xx linear encoders).

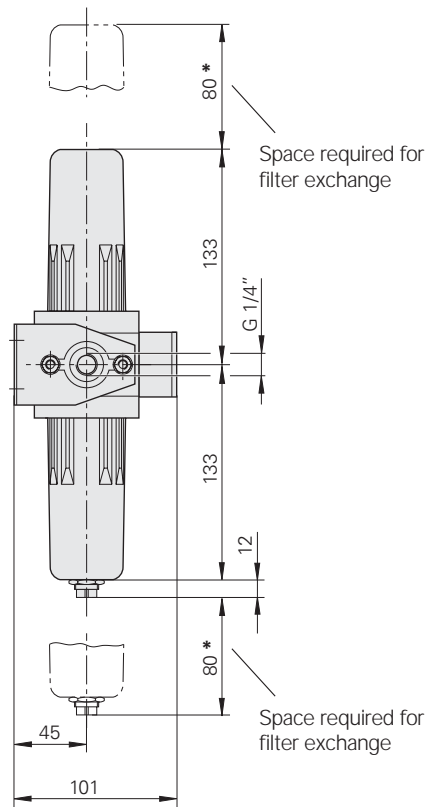
Specifications

Operating pressure	Typical Max. Min.	7 bars (100 psi) 16 bars (230 psi) 3 bars (43 psi) If air pressure falls below 6 bars (87 psi) and the air is saturated with water vapor, an additional air drier must precede the DA 300.
Output pressure		1 bar, adjustable to 3 bars (14 to 43 psi)
Operating temperature		1.5 °C to 30 °C (35 °F to 86 °F)
Flow rate		Max. 367 l/min (± 22 Nm ³ /h)
Connections	Compressed air inlet Condensation trap Compressed air outlet	G 1/4" G 1/8" Quick coupling for air tubing 6 × 1
Maintenance		Filter exchange <i>Up to 3 encoders connected: every 2 years</i> <i>Up to 10 encoders connected: annually</i>

Dimensions



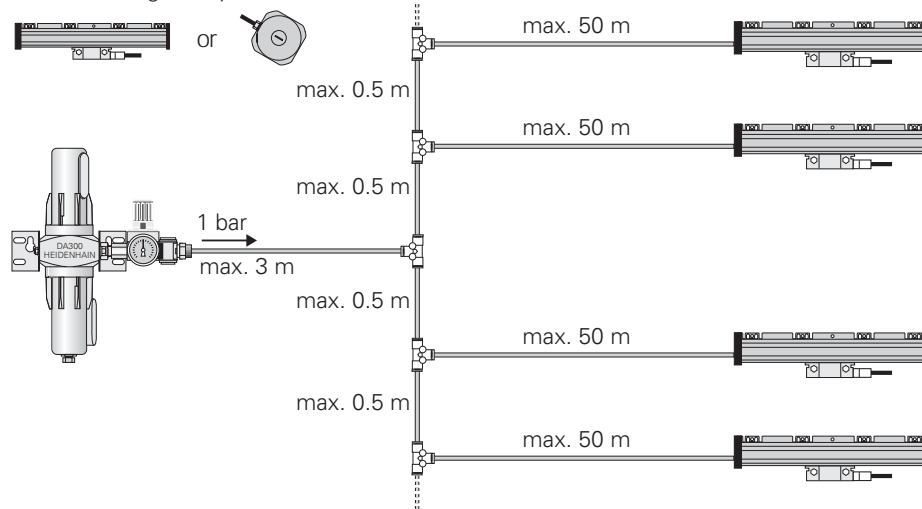
View A



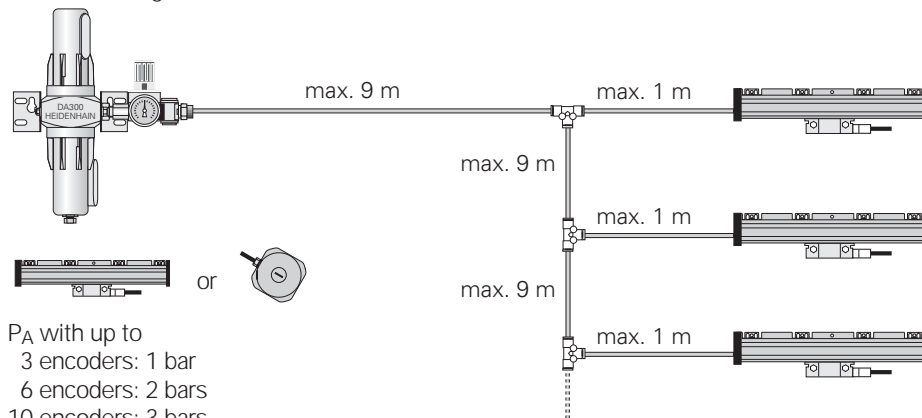
Dimensions in mm

DIN ISO 8015
 ISO 2768 - m H

Max. tube length for parallel connection of encoders


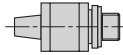
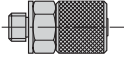


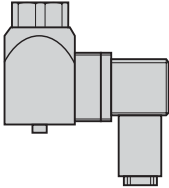


Max. hose length for serial connection of encoders



PA with up to
 3 encoders: 1 bar
 6 encoders: 2 bars
 10 encoders: 3 bars

Accessories

Compressed air tube 6 x 1 , length 25 m 1 piece included	Id. Nr. 207881-09	
T-joint 4 pieces included	Id. Nr. 310094-02	
Connecting piece for linear encoders With throttle and seal 3 pieces included	Id. Nr. 226270-02	
Connecting piece for angle encoders With throttle and seal	Id. Nr. 207835-04	
M5 coupling joint for linear encoders Swiveling, with seal	Id. Nr. 207834-01	
M5 coupling joint for angle encoders Swiveling, with seal	Id. Nr. 207834-02	
Spacer	Id. Nr. 230905-01	
Pressure switch	Id. Nr. 345857-01	
Fine filter element (prefilter)	Id. Nr. 337147-01	
Activated carbon filter element (microfilter)	Id. Nr. 337148-01	

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For more information

- Sealed Linear Encoders brochure
- Angle Encoders brochure