



## TYP VFR

### FOR THE RELIABLE BALANCING OF VOLUME FLOW RATES

Circular flow adjustment dampers for the adjustment of volume flow rates and pressures in supply air and extract air systems

- Each flow adjustment damper carries a diagram with setting values that ensure rapid commissioning on site
- Suitable for duct pressures up to 1000 Pa.
- Volume flow rate can be set using a rotary knob and a scale on the outside of the casing
- Simple retrofit of an actuator
- Casing air leakage to EN 1751, class C

Optional equipment and accessories

- Actuator with potentiometer
- Actuator with mechanical stops

## Application



Application

- Circular flow adjustment dampers Type VFR for the simple balancing of volume flow rates and pressures in air conditioning systems
- Stepless adjustment of the volume flow rate using a rotary knob with position indicator
- Simple retrofit of an actuator
- At the minimum setting (closed position 0) a system pressure dependent leakage flow rate occurs

Special features

- Diagram with setting values on each flow adjustment damper
- Simple retrofit of an actuator is possible

## Description

### Construction

- Galvanised sheet steel
- A2: Stainless steel

### Parts and characteristics

- Ready-to-install flow adjustment damper
- Rotary knob with position indicator
- Stepless adjustment from 0 to 10
- Diagram with setting values
- Lip seal

### Attachments

- Min/Max actuators: Actuators for switching between minimum and maximum volume flow rate setpoint values
- Modulating actuators: Actuators for the stepless adjustment of volume flow rates

### Materials and surfaces

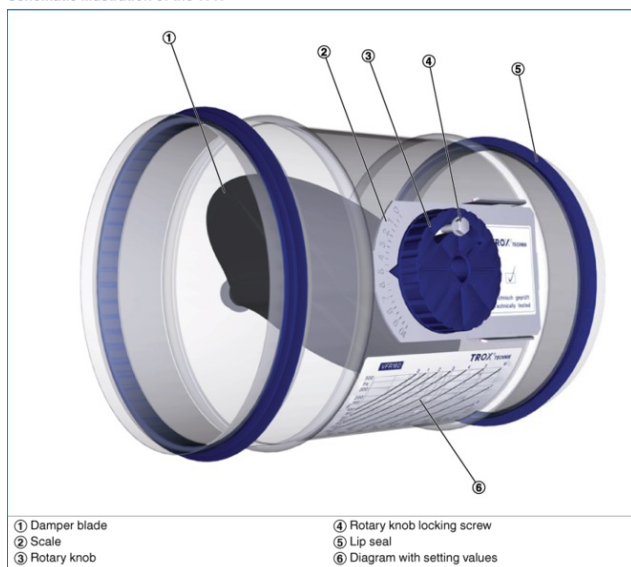
- Casing made of galvanised sheet steel
- Rotary knob, damper blade and bearings made of plastic, flame retardant (V-0) to UL 94

## INFORMACJE TECHNICZNE

### Functional description

For balancing the volume flow rates of duct sections and air terminal devices the differential pressure must be set on the flow adjustment dampers. The value to be set for a certain required volume flow rate at a given differential pressure can be taken from the diagram that each flow adjustment damper carries. This value can then be set using the rotary knob with the position indicator (stepless adjustment between 0 and 10).

### Schematic illustration of the VFR



Nominal sizes	80 – 250 mm
Volume flow rate range	20 – 485 l/s
Volume flow rate range	72 – 1746 m <sup>3</sup> /h
Volume flow rate control range	approx. 10 – 100 % of the nominal volume flow rate
Differential pressure	20 – 1000 Pa
Operating temperature	10 – 50 °C

Quick sizing: Sound pressure level

Nominal size	Volume flow rate		$\Delta p_{PA}$ [Pa]							
			10	20	30	50	80	100	200	
	l/s	m <sup>3</sup> /h	$L_{PA}$ dB(A)							
80	20	72	25	28	30	32	35	36	41	
	30	108	30	33	35	37	40	41	45	
	40	144	33	36	38	41	43	45	49	
	50	180	36	40	42	44	47	48	53	
100	30	109	27	29	31	34	36	38	44	
	45	163	32	35	37	39	42	43	48	
	60	217	36	39	41	44	46	48	52	
	75	272	40	43	45	48	50	52	56	
125	50	180	28	31	33	36	39	41	47	
	70	252	33	36	38	41	44	46	51	
	95	342	37	41	43	46	49	50	55	
	120	432	41	45	47	50	53	54	59	
140	60	215	25	29	31	34	38	40	47	
	90	323	31	34	37	40	44	45	51	
	120	431	35	39	42	45	48	50	56	
	150	538	39	43	45	49	52	54	59	
150	70	252	26	30	32	36	39	41	48	
	105	378	31	35	37	41	44	46	52	
	140	504	35	39	42	45	48	50	56	
	170	619	37	42	44	48	51	53	58	
160	80	612	27	30	33	36	39	41	48	
	120	432	33	37	39	42	45	47	53	
	155	558	38	41	44	47	50	51	57	
	195	702	41	45	47	50	53	54	59	
180	100	358	25	29	32	35	39	41	48	
	150	540	31	35	38	41	45	47	53	
	200	720	35	39	42	45	48	50	56	
	250	900	38	42	45	48	51	53	59	
200	125	450	26	30	33	37	41	43	51	
	185	665	32	36	39	42	46	48	55	
	245	882	36	40	43	47	50	52	59	
	310	1116	39	44	46	50	54	56	62	
224	155	557	24	28	31	35	39	41	47	
	230	828	28	32	35	39	42	44	50	
	310	1115	32	36	38	42	45	47	53	
	385	1386	34	38	41	44	48	49	55	
250	195	702	24	28	32	36	41	43	52	
	290	1043	28	33	36	40	45	47	56	
	385	1386	31	36	40	44	49	51	59	
	485	1746	34	39	43	47	52	54	62	

Circular flow adjustment dampers for the simple balancing of volume flow rates in air conditioning systems, for supply air and extract air, available in 10 nominal sizes.

Suitable for duct pressures up to 1000 Pa.

Ready-to-install unit consists of the casing with damper blade and rotary knob for the stepless adjustment of volume flow rates.

Spigot with lip seal, for circular connecting ducts to EN 1506 or EN 13180.

Casing air leakage to EN 1751, class C.

Special features

- Diagram with setting values on each flow adjustment damper
- Simple retrofit of an actuator is possible

Materials and surfaces

- Casing made of galvanised sheet steel
- Rotary knob, damper blade and bearings made of plastic, flame retardant (V-0) to UL 94

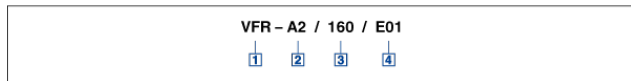
Construction

- Galvanised sheet steel
- A2: Stainless steel

Technical data

- Nominal sizes: 80 – 250 mm
- Volume flow rate range: 9 to 615 l/s or 32 to 2215 m<sup>3</sup>/h
- Differential pressure: 20 – 1000 Pa

**VFR**



**1 Type**

**VFR** Flow adjustment damper

**2 Material**

**A2** No entry: galvanised sheet steel  
Stainless steel

**3 Nominal size [mm]**

- 80
- 100
- 125
- 140
- 150
- 160
- 180
- 200
- 224
- 250

**4 Actuator**

- E01** No entry: Manual operation  
 $V_{min}/V_{max}$  switching, 24 V AC/DC supply voltage, potentiometer
- E02**  $V_{min}/V_{max}$  switching, 230 V AC supply voltage, potentiometer
- E03** variable volume flow, 24 V AC/DC supply voltage, potentiometer, control signal 0 to 10 V DC
- M01**  $V_{min}/V_{max}$  switching, 24 V AC/DC supply voltage, mechanical stops
- M02**  $V_{min}/V_{max}$  switching, 230 V AC supply voltage, mechanical stops