

# TFF

## Supply Valve

### Data Sheet



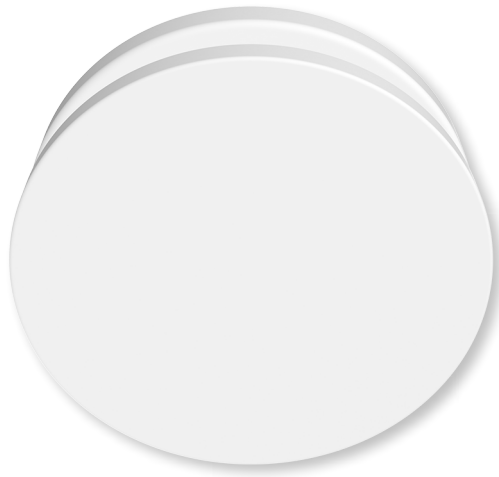
# Table of Contents

Description . . . . .	3
Design . . . . .	4
Dimensions . . . . .	4
Ordering Code . . . . .	5
Accessories . . . . .	6
Quick Selection . . . . .	7
Technical Parameters . . . . .	8
Installation, Maintenance & Operation . . . . .	11
Transport & Storage . . . . .	11
Supplement . . . . .	11



## Good to know

Current information on all products is available at [design.systemair.com](https://design.systemair.com)



## Description

TFF is a circular supply diffuser for ceiling installation. It has adjustable vent capacity and a 360° discharge pattern from which up to 180° can be shielded by a deflector.

### Highlights

- Easy, precise air flow volume adjustment
- Non-disturbant aesthetic form
- Easy installation

### Accessories

Detailed information about accessories for TFF is available on page [6](#).

- RFU and RFP: Mounting Frames

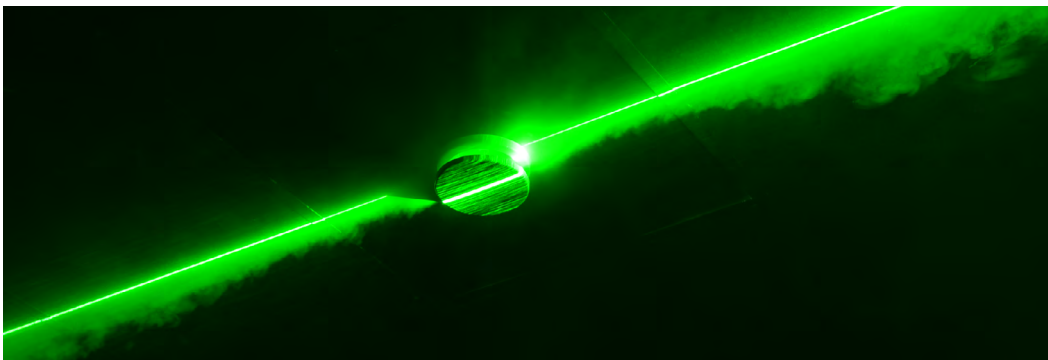
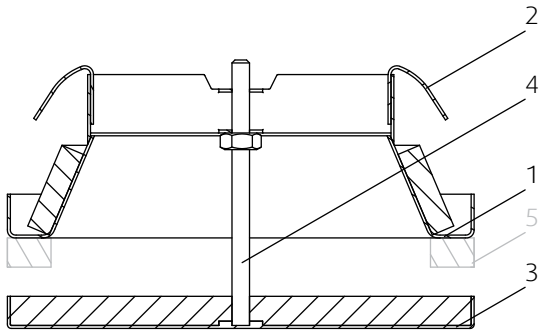


Fig. 1: Air flow visualisation

# Design

TFF is made from galvanized steel sheet with powder colour coating. The product consists of the fixed part with fixing springs, equipped duct connection, the valve seat and the movable valve front plate. The front plate is held by the central thread bolt and can be moved by rotating. So the gap between the plate and the seat can be adjusted to set the required air flow volume.

## Product Parts



## Legend

1	Valve seat (fixed part)
2	Fixing spring for duct or mounting frame
3	Front plate (movable)
4	Thread bolt
5	Area to adhere the foam deflector stripe (part product package)

Fig. 3: Components of TFF

## Dimensions

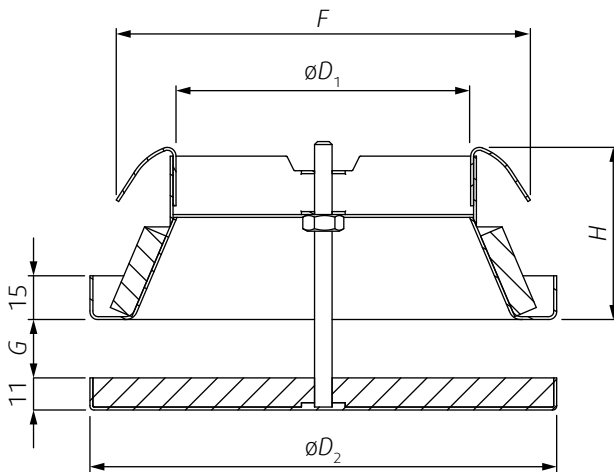


Fig. 2: Dimensions of TFF

Tab. 1: Dimensions of TFF

	$\varnothing D_1$	$\varnothing D_2$	F	G	H	m
$\varnothing DN$	(mm)					(kg)
80	55	108	96	0 ... 20	60	0,22
100	73	135	114	0 ... 30	60	0,3
125	101	160	142	0 ... 20	60	0,37
150	128	191	169	0 ... 15	60	0,4
160	136	195	176	0 ... 15	60	0,47
200	175	230	216	0 ... 30	60	0,72

# Ordering Code

		TFF-		-	
		80			
		100			
		125			
		150			
		160			
Size	$\varnothing DN$ (mm)	200			
	Signal white	RAL9003			
	White	RAL9010			
	White	RAL9016			
Colour	Other RAL colour	RALXXXX			

NOTE: The standard RAL colours have gloss 30%.

## Example of the Ordering Code

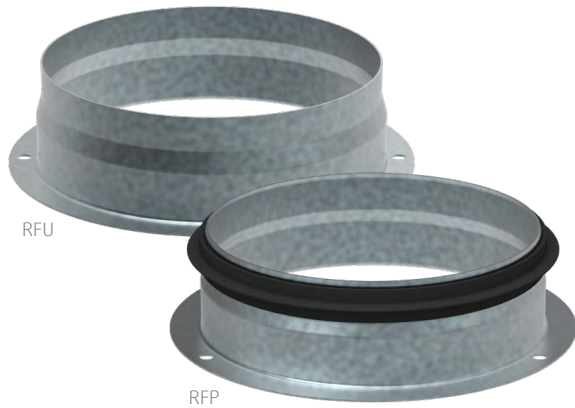
TFF-125-RAL9003

Supply valve with nominal size 125 mm, with signal white coating RAL 9003.

# Accessories

## RFU & RFP

### Mounting Frames



Tab. 2: Dimensions of RFU and RFP

$\varnothing DN$	$\varnothing A$	$\varnothing D$	Installation opening diameter
(mm)			
80	100	71	78
100	120	97	103
125	146	122	128
150	170	147	153
160	180	157	163
200	220	197	203

### Description

RFU, RFP are mounting frames for the valve TFF. They enable connection of the duct types that cannot be connected directly to the valve, like e.g. flexible ducts. Also the frames help fixing the valves to the rigid construction parts like e.g. suspended ceiling.

### Design

The RFU, RFP are made from galvanized steel. The RFP is fitted with a rubber gasket.

### Dimensions

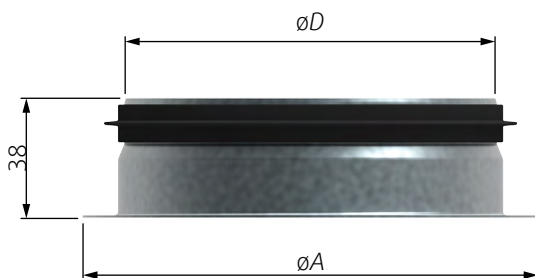


Fig. 4: Dimensions of RFU and RFP

### Ordering Codes

		RFU(RFP)-	
		80	
		100	
		125	
		150	
		160	
Size	$\varnothing DN$ (mm)	200	

### Example of the Ordering Code

RFP-125

Mounting frame with rubber gasket, size 125 mm.

# Quick Selection

Type	Air flow volume at different sound power levels $L_{WA}$					
	25 dB		30 dB		35 dB	
	m <sup>3</sup> /h	l/s	m <sup>3</sup> /h	l/s	m <sup>3</sup> /h	l/s
<b>TFF-80</b>	38	11	45	13	52	14
<b>TFF-100</b>	55	15	69	19	81	23
<b>TFF-125</b>	121	34	142	39	160	44
<b>TFF-150</b>	126	35	151	42	172	48
<b>TFF-160</b>	145	40	172	48	196	54
<b>TFF-200</b>	205	57	251	70	289	80

NOTE: The working points were measured with 20 mm vent gap adjustment.

## Technical Parameters

### Legend

$p_s$	Pa	Pressure drop
$q_v$	m <sup>3</sup> /h l/s	Air flow volume
$L_{WA}$	dB(A)	A-weighted total radiated sound power level
$\Delta T$	K	Temperature difference Supply air - Room air
$L_{0,2}$	m	Air throw length with terminal velocity 0,2 m/s
$L_x$	m	Air throw length calculated for specific terminal velocity
$x$	m/s	Terminal velocity in range of 0,1 m/s ... 1 m/s

### Calculation of Air Throw for Different Terminal Velocities

$$L_x = L_{0,2} \cdot 0,2/x$$

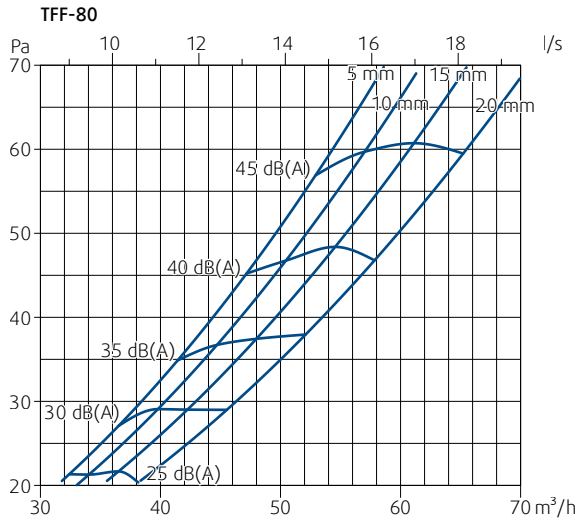


Diagram 1: Pressure drop & A-weighted total radiated sound power level depending on air flow volume

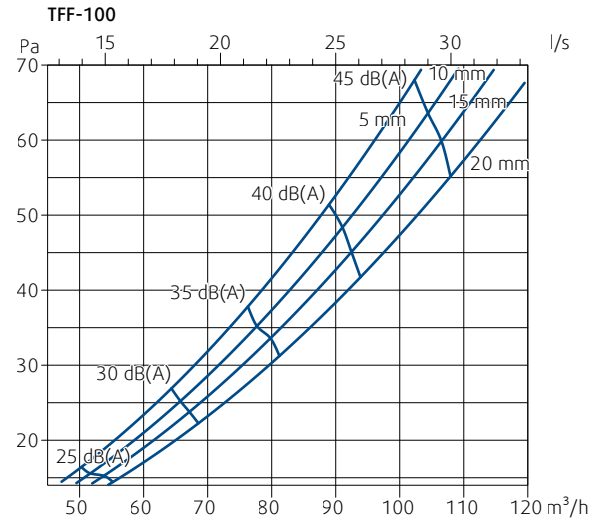


Diagram 3: Pressure drop & A-weighted total radiated sound power level depending on air flow volume

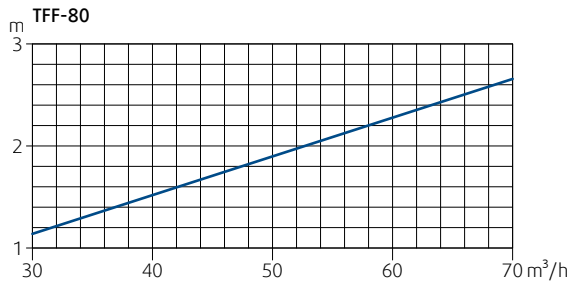


Diagram 2: Isothermal air throw length with terminal velocity 0,2 m/s depending on air flow volume

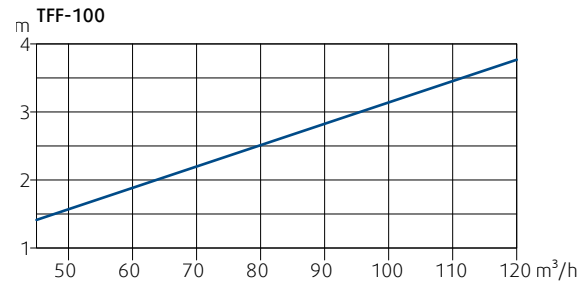


Diagram 4: Isothermal air throw length with terminal velocity 0,2 m/s depending on air flow volume



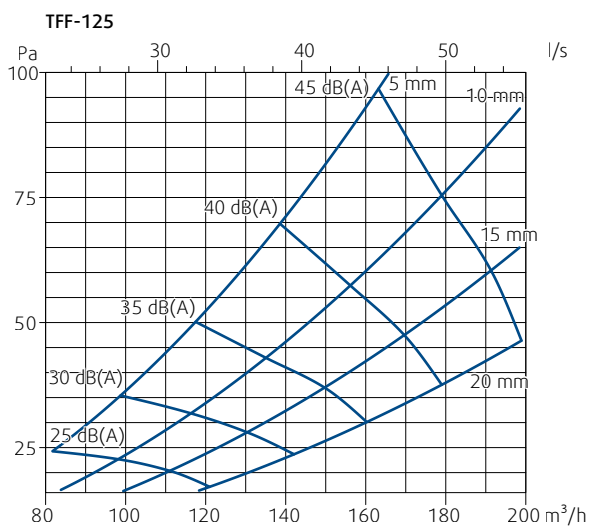


Diagram 5: Pressure drop & A-weighted total radiated sound power level depending on air flow volume

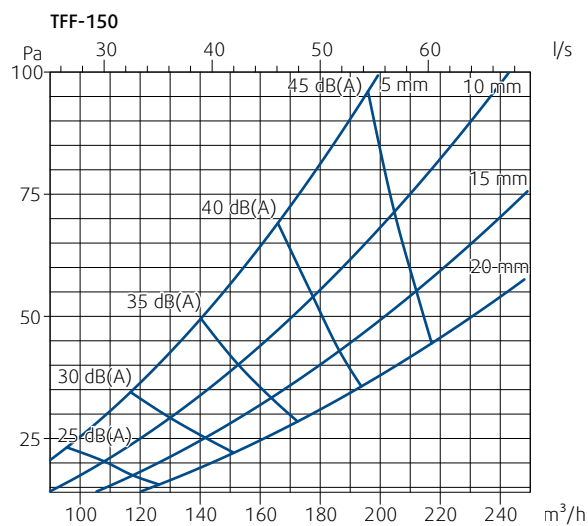


Diagram 7: Pressure drop & A-weighted total radiated sound power level depending on air flow volume

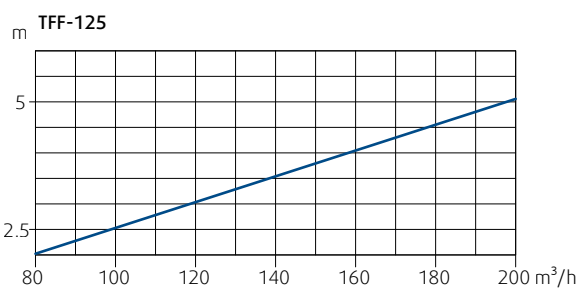


Diagram 6: Isothermal air throw length with terminal velocity 0,2 m/s depending on air flow volume

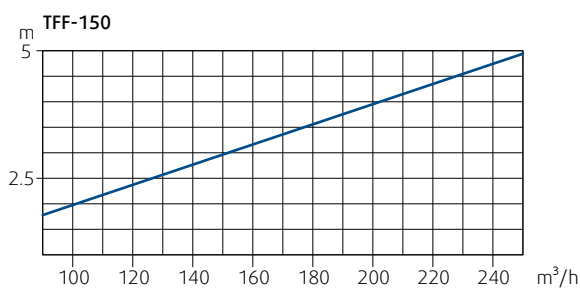


Diagram 8: Isothermal air throw length with terminal velocity 0,2 m/s depending on air flow volume

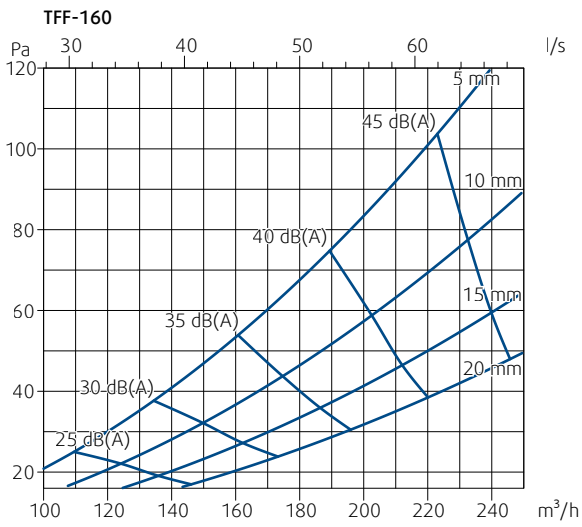


Diagram 9: Pressure drop & A-weighted total radiated sound power level depending on air flow volume

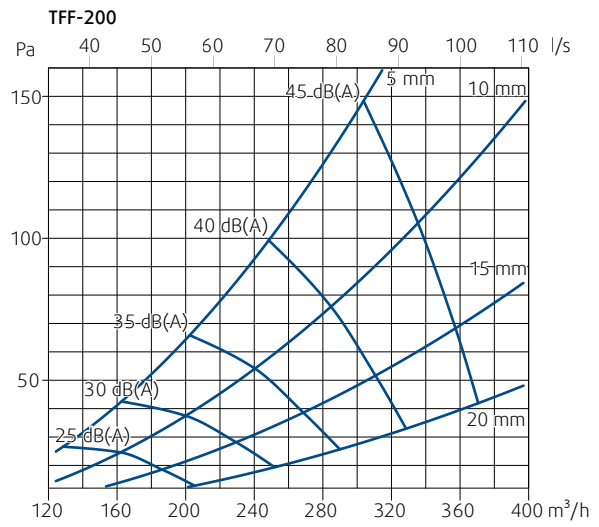


Diagram 11: Pressure drop & A-weighted total radiated sound power level depending on air flow volume

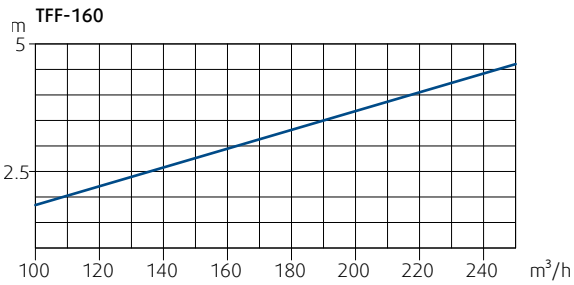


Diagram 10: Isothermal air throw length with terminal velocity 0,2 m/s depending on air flow volume

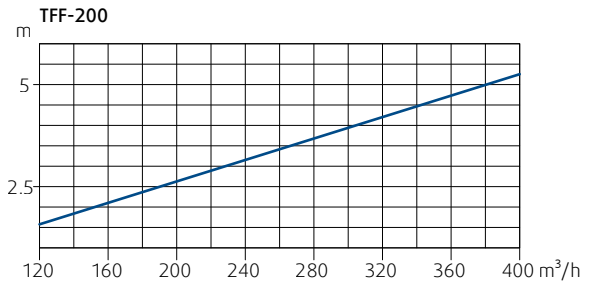


Diagram 12: Isothermal air throw length with terminal velocity 0,2 m/s depending on air flow volume

# Installation, Maintenance & Operation

Information about installation, maintenance and operation is available in the ["UserManual\\_TFF"](#) document or follow the instructions on [Systemair DESIGN](#).

Dry indoor conditions with an operation temperature range of -20°C to +70°C.

## Transport & Storage

Dry indoor conditions with a temperature range of -40°C to +50°C.

## Supplement

Any deviations from the technical specifications contained herein and the terms should be discussed with the manufacturer. We reserve the right to make any changes to the product without prior notice, provided that these changes do not affect the quality of the product and the required parameters.

Current information on all products is available on [Systemair DESIGN](#).

