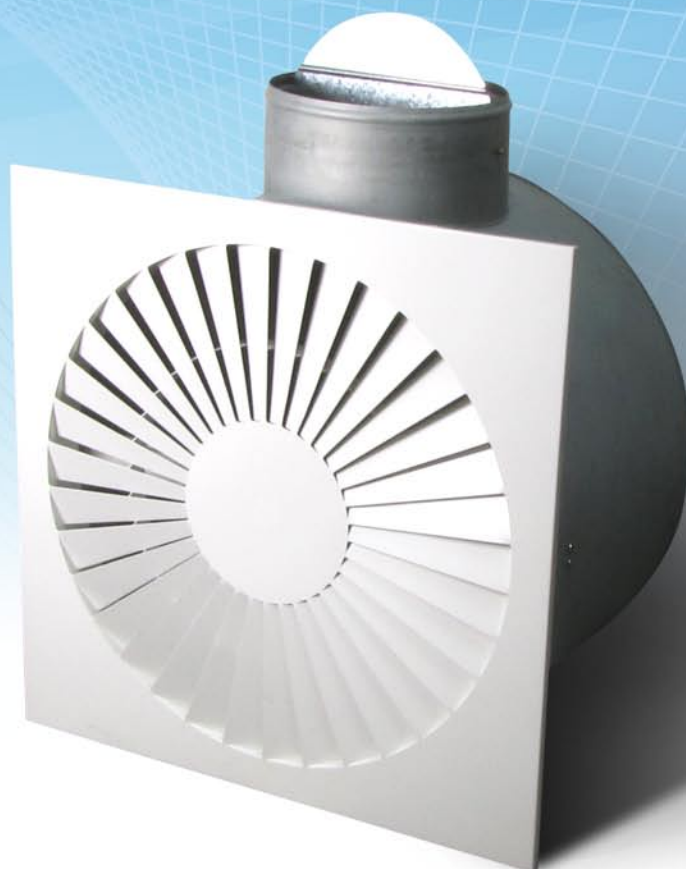


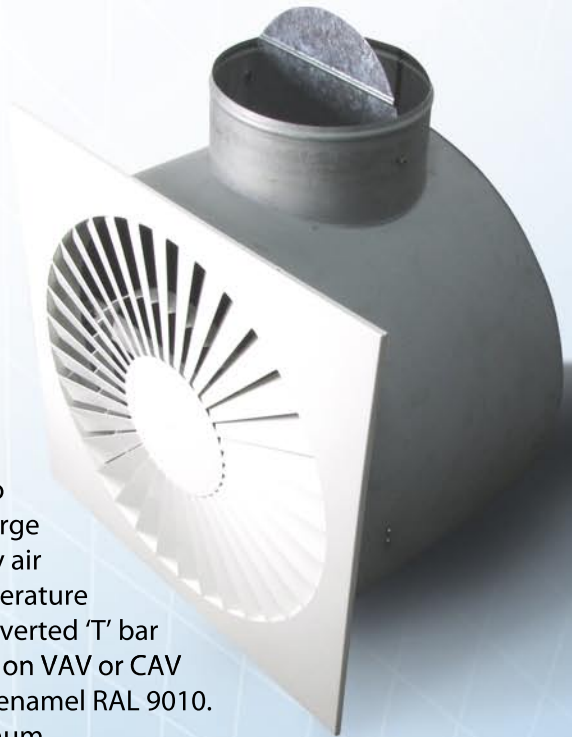
CONNOLS-AIR **SWIRL DIFFUSER**

THE HIGHEST QUALITY IN AIR DISTRIBUTION EQUIPMENT



SWIRL DIFFUSER Model SWL50

Connols-Air's Square Face Model SWL50 diffuser is constructed of steel with blade arranged in a radial pattern to provide a horizontal radial air discharge. The radial air discharge provides high induction and cause rapid mixing of the supply air with the room air leading to rapid equalization of room temperature and air velocity. The diffuser is designed for installation on inverted 'T' bar ceiling or surface mounted on plaster ceiling. It may be used on VAV or CAV system. As a standard the diffuser is painted in baked white enamel RAL 9010. Matching return air diffuser may be used with or without air plenum.



Each diffuser may be supplied with a circular adaptor with top inlet for connection to flexible insulated duct. Each adaptor is constructed of 0.5 mm thick hot-dipped pre-galvanised steel and incorporated with a disc balancing damper and equalizer for minor throttling and uniform air distribution; for more severe throttling, a balancing damper should be located upstream to prevent excessive noise from the damper.

For more information on noise consideration, refer to our Engineering Data Sheet. As a standard, adaptor is not internally insulated and installer has to provide external insulation to the adaptor to avoid condensation. With adaptor the diffuser is not removable. However, the disc balancing damper is easily adjustable through the face of the diffuser without removing it. Adaptor is supplied with mill galvanised finish on the outside and painted matt black internally.

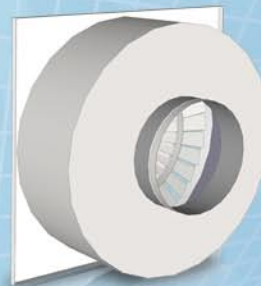
Alternatively, diffuser may be supplied with circular plenum internally insulated with acoustic insulation for absorption of upstream noise from devices such as variable volume terminal units and balancing damper. Each plenum is constructed of 0.5 mm thick hot-dipped pre-galvanised steel with inlet damper for air balancing.



SWL50 WITHOUT PLENUM



SWL50 WITH PLENUM
(SIDE SPIGOT)



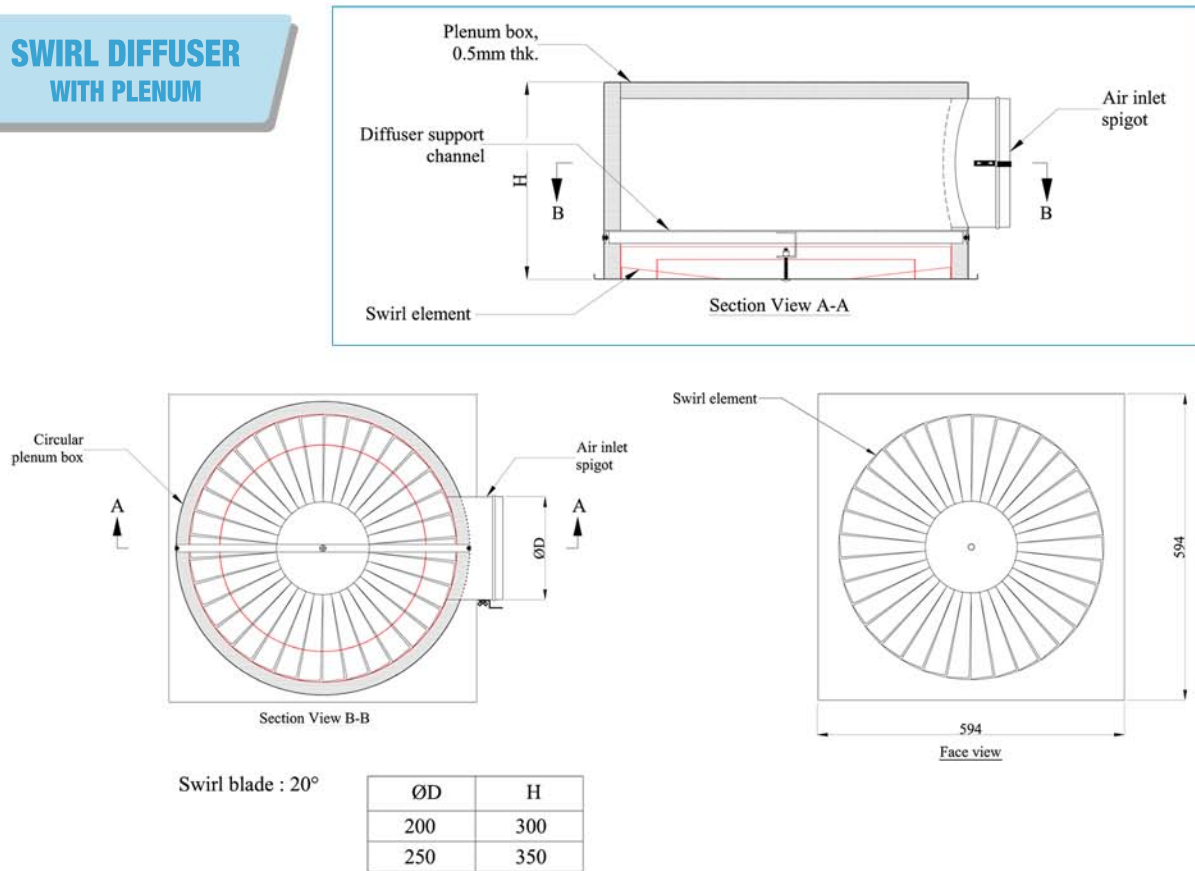
SWL50 WITH ADAPTOR
(TOP SPIGOT)

Internal insulation may be 25 mm thick tissue-coated fibreglass or, alternatively, 25 mm thick fire-retardant acoustic foam for better indoor air quality. With internal insulation, external thermal insulation on the plenum may be avoided if room air is returned via the ceiling space. Further, if required, the plenum may be supplied with thermal-acoustic internal insulation to reduce heat gain. Plenum is designed to reduce air turbulence at the air discharge, minimise condensation on the diffuser face, ensures uniform air distribution and lower generated noise. Plenum is supplied in mill galvanised finish.

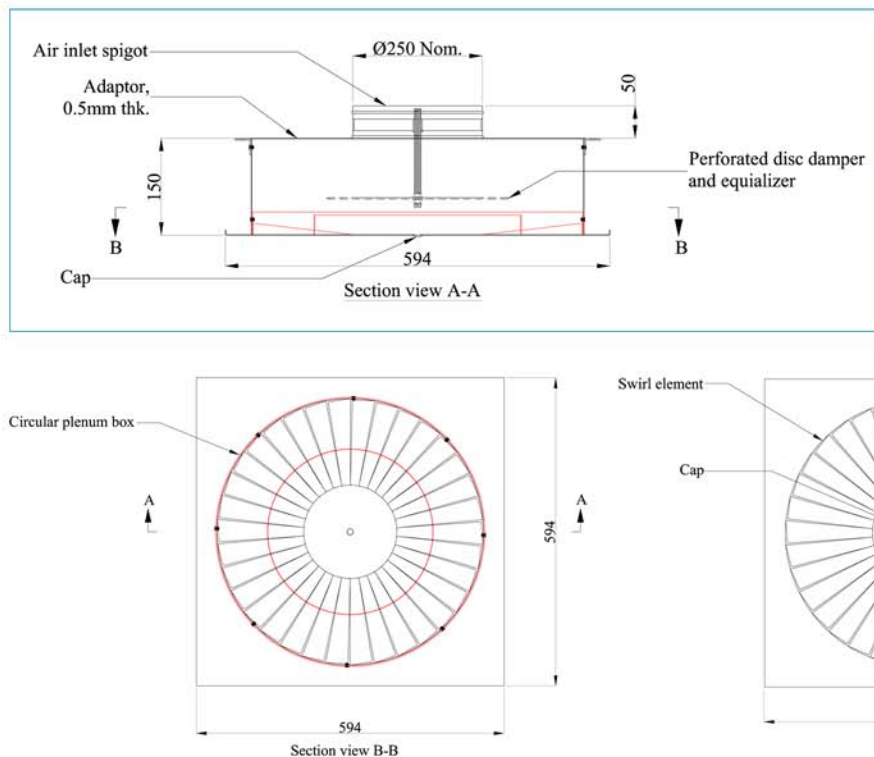
FEATURES

- High induction and horizontal radial air discharge
- Suitable for VAV and CAV
- Rapid temperature and air velocity equalisation
- Low noise

SWIRL DIFFUSER WITH PLENUM



SWIRL DIFFUSER WITH ADAPTOR



Performance Data - Supply							
Airflow		Supply with Plenum			Supply with Adaptor		
		Pressure drop	Throw	NC	Pressure drop	Throw	NC
m ³ /h	l/s	Pa	m		Pa	m	
300	83	8	1.6	-	6	1.7	-
400	111	14	1.9	20	11	2	-
500	138	20	2	23	17	2.1	20
600	166	27	2.2	27	24	2.3	25
700	194	37	2.4	33	32	2.5	30
800	222	48	2.7	37	41	2.7	34

Notes:

1. Throw values are based on terminal velocity of 0.25 m/s with diffuser mounted on the ceiling.
2. Throw values are based on 8 °C temperature differential between supply and room air.
3. NC values are based on 10 dB room absorption and " - " indicates NC below 20.
4. Performance data are based on damper full open.

Performance Data - Return without Plenum			
Airflow		Pressure drop	NC
m ³ /h	l/s	Pa	
300	83	8	-
400	111	14	-
500	138	24	22
600	166	32	26
700	194	40	30
800	222	48	36

Notes:

1. NC values are based on 10 dB room absorption and " - " indicates NC below 20.
2. Performance data are based on diffuser without damper.

MODEL NUMBERING SYSTEM

SWL50 - XXX

