

#### ■ Vario connection block

TTL is the only manufacturer offering the variable connection system „Vario-Connect“

#### ■ Dekor intake grate

Intake grates with quick fasteners, can be folded for easy inspection access, cleaning and air filter exchange. Optional with micro intake grate.

#### ■ Plastic coated steel sheet housing

The steel sheet housing is equipped with an easy to install equipment mounting bracket and can be delivered in the standard color white (RAL 9016). Individual colorings or a surface design in stainless steel are available.

#### ■ E

Maximum energy savings through a stable and rectified air jet, rotatable coupled and adjustable to the housing situation ( $\pm 35^\circ$ ).

curtain systems guarantee high functionality and a quality that has been tested against standards.

Using innovative technology, outstanding design and a wide programm suitable for all applications, TTL is a first class reference with respect to climate separation and energy savings at doors and gates.

Modern sales psychology relies today on generous architecture, also and especially in the doors area. Shopping today is an adventure, this includes feeling good – not only for the customer but also for the personnel.

- Prevent energy losses in the door area and lower the energy costs
- Remove access barriers and finding customers
- Offer functionality and the architectural integration options
- Secure comfort in the interior space and prevent health related adverse effects due to drafts



Mitglied der



Air curtain systems are designed for the installation in dry rooms with normally utilized air.  
Ambient temperature min. 0 °C / max. 45 °C.  
Humidity max. 75 %.  
Special solutions on request.



## Installation options

### STE – standard installation

with air intake from the room direction and blow-out above the door.

Design of an air curtain roller, whose rotation direction supports the inflowing cold air.

Therefore a relative large zone with increased air movement in the door area.

A solution for smaller rooms, buildings without vacuum and situations where permanent work places are not located in the door area.

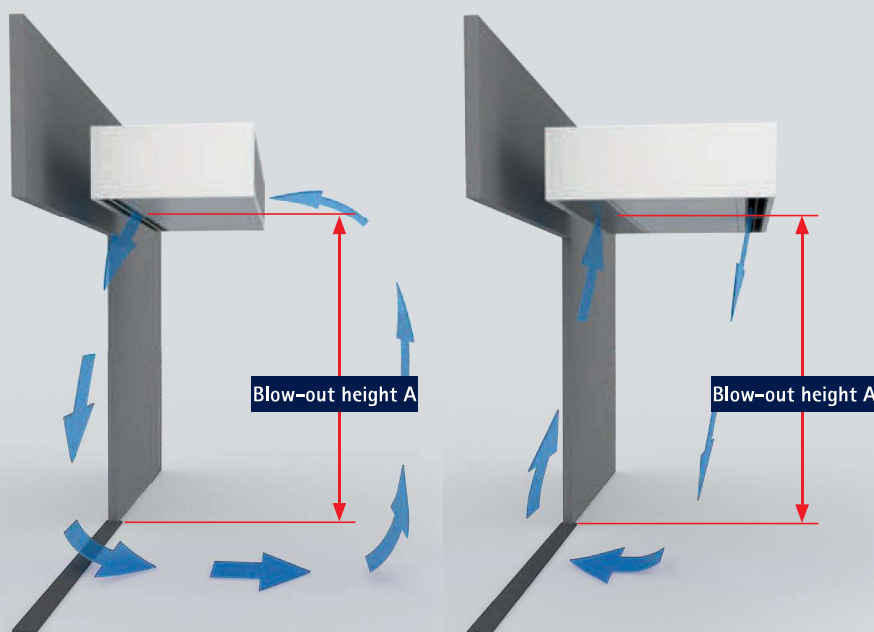
### AWE – shielding roller installation

with air intake above the door and blow-out in the room.

Design of a shielding roller, whose rotation direction works against the inflowing cold air.

This results in a significant increase of the shielding performance, a reduction of the required shielding air volume, the noise level and a reduction of the zone with increased air movement in the entrance area.

## Schematic diagram



## Equipment selection

The physical air exchange in the door area must be considered for the correct dimensioning of an air curtain system. Major influence factors are the size of the door, the room surface and room height, the thermal lift, the back pressure as well as the number of additional doors and openings in the building.

### The following is normally applicable:

The larger the room surface the higher are the physical influence factors in the door area.

### Factors for the equipment selection include:

- Door size
- Room surface
- Room height
- Thermal lift and back pressure
- Number/position of additional doors and openings

Table 1 includes the room surface to be shielded for a normal building, with pressure balance on the door level, for the pre-selection of an air curtain system.

This information is based on an air curtain system with the high-efficiency TTL-Synchrostream® jet nozzle system. If other outlets/systems are used, then the output of the air curtain system must be increased by up to 40% to shield the same room surface.

Table 1: Room surface in m² at a blow-out height A in cm

STE-Installation					AWE-Installation				
230	250	300	320	350	230	250	300	320	350
850	650	350	150		1800	1250	650	300	
1000	700	500	250		2000	1400	800	400	
1200	900	700	400	200	2500	1700	1300	700	400
1500	1100	900	600	300	3000	2200	1800	1000	500

The information about the heater output in the table is calculated for a temperature increase of 12 K for the standard installation (STE) and 22 K for the shielding roller installation (AWE).

The maximum heat outputs of the heat exchangers are in parts significantly higher. These values are available on request.

32 °C are normally the optimum blow-out temperature for air curtain systems. Lower temperatures result in draft occurrences, higher temperatures reduce the shielding output.

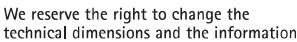
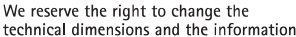
Note:

The heat exchanger must be dimensioned for the lowest intake temperature for a heat circuit (sliding) controlled depending on the outside temperature. An intake air temperature limit through a control valve (mechanically, electrically) is recommended.

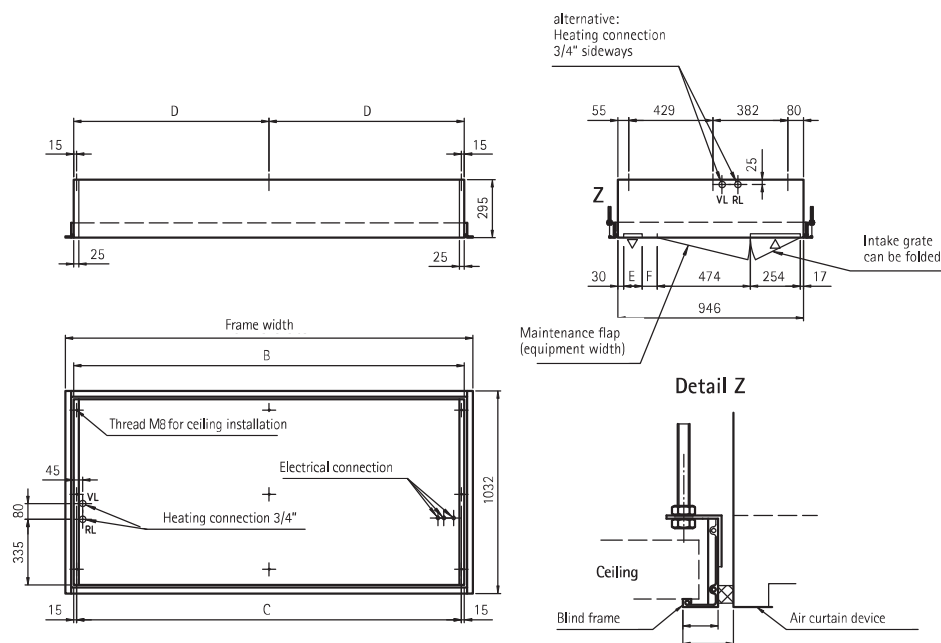
#### -heating

Door width [cm]	Air volume		Heat output			Electrical connection air curtain systems
	min. [m³/h]	max. [m³/h]	stage 1 [kW]	stage 2 [kW]	stage 3 [kW]	
100	950	2100	3,0	6,0	9,0	400 V / 3 Ph / 50 Hz
150	1500	2900	4,5	7,5	13,0	400 V / 3 Ph / 50 Hz
200	2100	4850	6,0	12,0	18,0	400 V / 3 Ph / 50 Hz
250	2800	5800	9,0	15,0	24,0	400 V / 3 Ph / 50 Hz
300	3400	6700	12,0	18,0	30,0	400 V / 3 Ph / 50 Hz

E = Ribbed pipe heater, Electrical connection 400 V / 3 Ph / 50 Hz, special circuit configurations on request

12

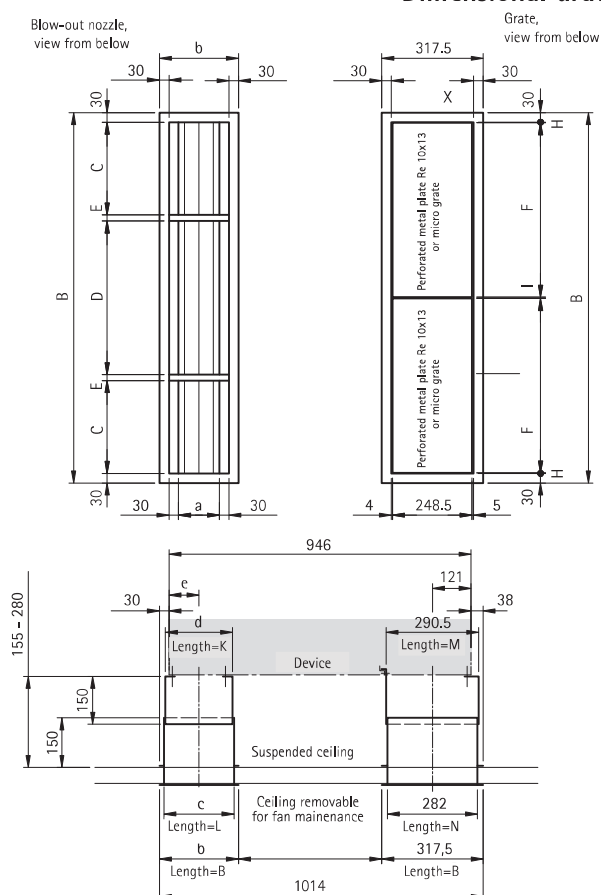
### Dimensional drawing with aluminum blind frame



We reserve the right to change the technical dimensions and the information

Type	Measures			Outside dimensions of frame Width x depth [mm]	Ceiling cutout dimensions Width x depth [mm]	... N/NT -5		... N/NT -8/-LNS		... N/NT -HE		Number of fastening points
	B [mm]	C [mm]	D [mm]			E [mm]	F [mm]	E [mm]	F [mm]	E [mm]	F [mm]	
	990	960	–	1076 x 1032	1046 x 1002	86	85	94	77	128	43	6
	1490	1460	–	1576 x 1032	1546 x 1002	86	85	94	77	128	43	6
	1990	1960	–	2076 x 1032	2046 x 1002	86	85	94	77	128	43	6
	2490	2460	1245	2576 x 1032	2546 x 1002	86	85	94	77	128	43	9
	2990	2960	1495	3076 x 1032	3046 x 1002	86	85	94	77	128	43	9

- Dimensional drawing with sliding type fittings



a [mm]	b* [mm]	c [mm]	d [mm]	e [mm]	f [mm]
86	206	177	169	73	491
94	214	185	177	77	483
128	248	219	211	94	449
B* [mm]	C [mm]	D [mm]	E [mm]	F [mm]	
999	939	–	–		936
1499	712	–	15		1436
1999	962	–	15		1936
2499	712	985	15		1216
2999	962	985	15		976
H [mm]	I [mm]	K [mm]	L [mm]	M [mm]	N [mm]
1,5	–	963	969	969	963
1,5	–	1463	1469	1469	1463
1,5	–	1963	1969	1969	1963
1,5	4	2463	2469	2469	2463
1,5	4	2963	2969	2969	2963

= outside dimension intake blind/blow-out blind

We reserve the right to change the technical dimensions and the information