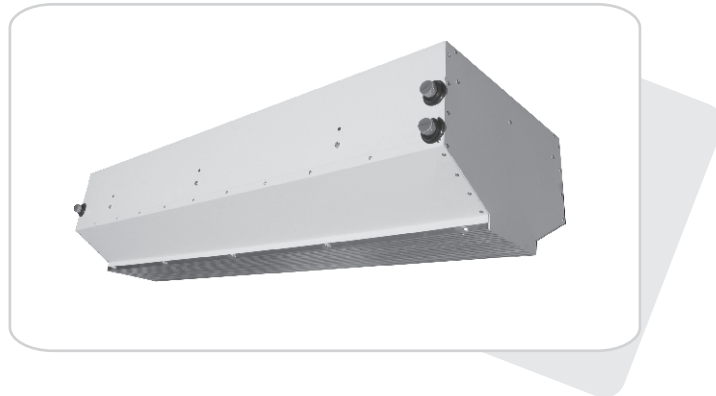


KP/BB ECONOMIC



Series of types of the curtains with two air streams "cold" and "hot".

Curtains advantages:

- **high operational efficiency**
- **lower exploitation costs**
- **lower thermal power of the heaters**
- **lower noise level of curtains operation**

INTENDED USE

Air curtains are used to protect against uncontrolled external air inflow through the gates, building openings, in the doors of industrial plants, warehouse, retail pavilions etc.

Curtains are adapted to draw the air from the inside of the compartment.

They are intended for use in the gates of height 2,5-6m

Curtains can be placed above the gates or on the sides of the gates. It's possible to use several curtains placed next to each other.

UNIT DESCRIPTION

Air stream in the curtains was divided into two streams: "cold" and hot"

"Cold" stream (1/3 of total air quantity) flows next to heater and then flows out with the higher velocity through the part of air blowing slot, when the "hot" stream (around 2/3 of total air quantity) flows through the heater and flows out through the rest part of air blowing slot.

Air streams don't mix inside the curtain casing.

Curtains consists of:

- the casing made of galvanized steel sheets (with the possibility of painting) with the air blowing slot on the entire length and with the partition limiting the air streams,
- water heater made of copper and aluminum,
- 2, 3 or 4 axial fans.

Curtains are manufactured in two versions: A and B, each of them in three sizes.

Each curtain size is made in several lengths.

Version B with the enlarged fans spacing and reduced air quantity is intended for the milder operational conditions of the curtains.

WORKING CONDITIONS

Curtains enable achieving the air velocity at the floor within the limits from 2,5 to 6m/s.

Water heaters are supplied with water at temperature of 110/70°C or lower and the pressure up to 1MPa.

There's a possibility to increase the range of the curtains air efficiency, using additional 5-step revolutions controller.

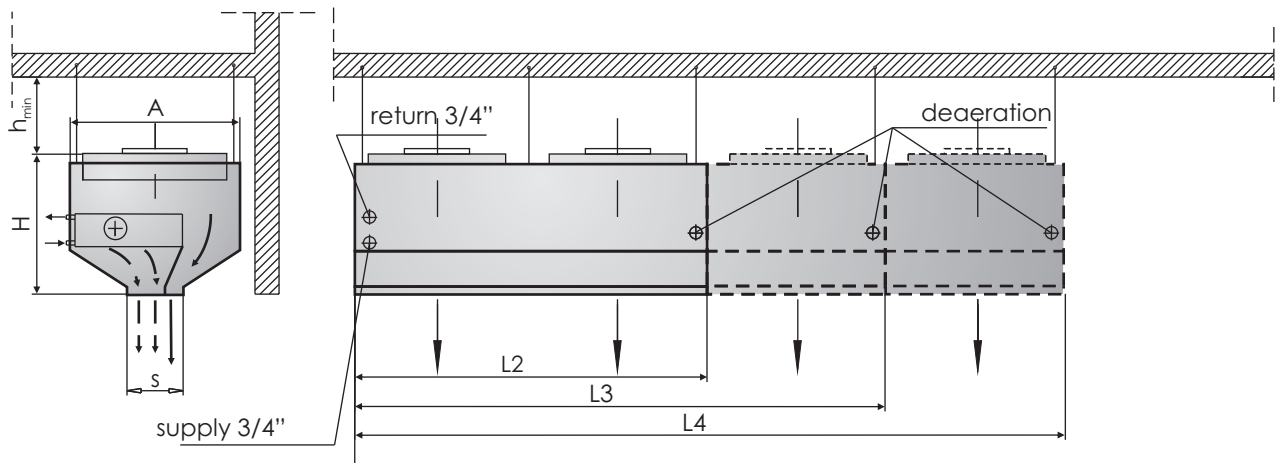
DESIGNATIONS

Air curtain	KP/BB ECONOMIC - A - 2 - 195 - W - T	
Version	A, B	
Size	1; 2; 3	
Length	version A	size 1 (120; 180; 240 cm)
		size 2 (130; 195; 260 cm)
		size 3 (140; 210; 280 cm)
	wersion B	size 1 (200; 300 cm)
		size 2 (200; 300 cm)
		size 3 (200; 300 cm)
Heater	water W	
Fan motor	single phase (J); three phase (T)	

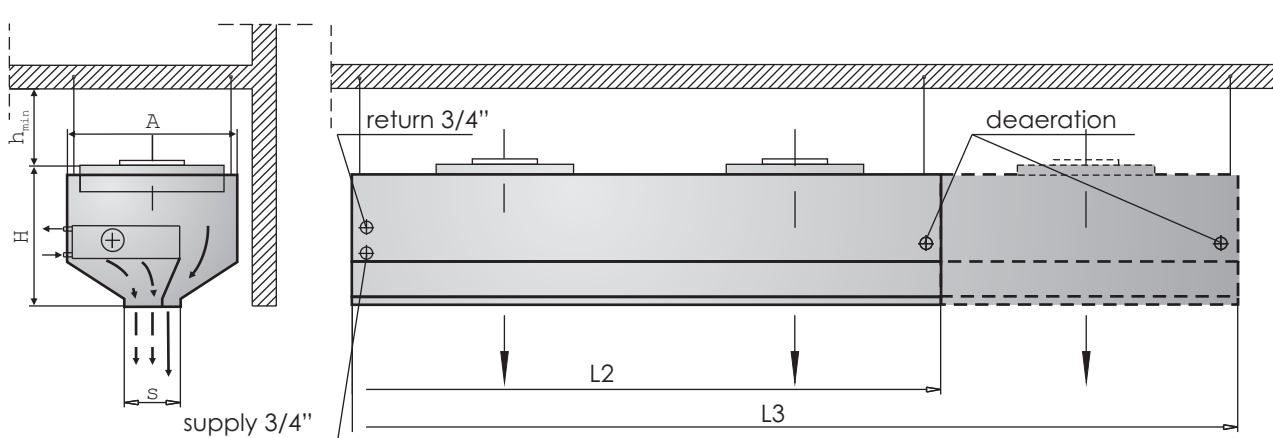
TECHNICAL DATA

Basic dimensions

Version A



Version B



Version	Size	Number of fans	A [cm]	H [cm]	S [cm]	L ₁ [cm]	h _{min} [cm]	Weight [kg]
A	1	2	60	41	15	120	30	70
		3				180		101
		4				240		131
	2	2	65	45	21	130	34	87
		3				195		127
		4				260		166
	3	2	70	47	27	140	38	104
		3				210		150
		4				280		198
B	1	2	60	44	9	200	30	102
		3				300		148
		2				65		45
	3	300	170					
	3	70	47	19,5	200		38	
	3				300	189		

Fan parameters (Versions A i B)

Size	Fan type	Number of fans	Single fan parameters								
			Three phase motors 400V						Single phase motors 230V		
			Δ Connection			Y Connection					
			Revolutions [rpm]	Motor power [kW]	Current [A]	Revolutions [rpm]	Motor power [kW]	Current [A]	Revolutions [rpm]	Motor power [kW]	Current [A]
1	FE 040	2; 3 ;4	1250	0,28	0,47	890	0,17	0,27	1320	0,31	1,35
2	FN 045	2; 3 ;4	1350	0,54	1,1	1020	0,37	0,68	1320	0,55	2,5
3	FN 050	2; 3 ;4	1340	0,83	1,45	940	0,55	0,97	1230	0,75	3,3

Extents of curtain air stream for curtains

Version	Size	Outlet width [cm]	Air stream speed [m/s]	Air stream speed [m/s] at distance							
				1m	2m	3m	4m	5m	6m	7m	8m
A	1	15	10,0	-	7,1	5,8	5,0	4,5	4,1	3,8	3,5
	2	21	11,2	-	9,4	7,7	6,6	5,9	5,4	5,0	4,7
	3	27	11,5	-	10,9	8,9	7,7	6,9	6,3	5,8	5,5
B	1	9	10,0	7,7	5,5	4,5	3,9	3,5	3,2	-	-
	2	13,5	11,3	-	7,6	6,2	5,4	4,8	4,4	4,1	3,8
	3	19,5	11,1	-	8,9	7,3	6,3	5,7	5,2	4,8	4,5

Noise level

Size	Noise level* [dB(A)] at distance of 5m
KP/BB ECONOMIC-1	60
KP/BB ECONOMIC-2	66
KP/BB ECONOMIC-3	67

*Noise level – the level of acoustic pressure at the distance of 5 meters from the curtain with taking into consideration the availability of noise absorption by the compartment A=100m².

Thermal power of curtains with water heater

Size		KP/BB ECONOMIC-1														
Version		A									B					
Length [cm]		120			180			240			200			300		
Air capacity [m ³ /h]		6500			9750			13000			6500			9750		
Water temp. [°C]	Inflow air temp. [°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]														
		kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa
90/70	5	24,1	20	1,8	42,0	23	4,0	62,6	25	11,0	35,2	28	3,0	60,2	31	13,5
	10	21,9	24	1,4	38,6	27	3,2	57,1	29	9,0	32,1	31	2,5	55,0	34	11,0
	15	19,8	28	1,1	35,2	30	2,6	51,6	32	7,8	29,1	34	2,1	49,8	37	9,2
80/60	5	19,9	18	1,0	35,2	20	2,6	52,0	22	8,0	29,3	24	2,1	50,2	26	9,4
	10	17,9	21	0,8	31,6	24	2,1	46,8	25	6,4	26,4	27	1,7	45,2	30	7,6
	15	15,9	25	0,7	28,1	27	1,7	41,6	29	5,0	23,5	31	1,4	40,2	33	6,0
70/50	5	16,0	15	0,8	28,3	17	2,0	41,9	18	5,1	23,6	20	1,4	40,5	22	6,1
	10	14,0	19	0,7	24,9	21	1,3	36,8	22	3,9	20,8	23	1,1	35,7	25	4,7
	15	12,2	23	0,6	21,6	24	1,0	31,9	25	3,0	18,0	27	1,0	31,0	29	3,6
60/40	5	12,5	13	0,6	21,7	14	1,0	32,1	15	3,0	18,2	16	0,9	31,3	18	3,6
	10	10,5	17	0,5	18,5	18	0,9	27,4	19	2,2	15,5	20	0,8	26,7	21	2,6
	15	8,7	20	0,5	15,4	22	0,8	22,8	22	1,5	12,9	23	0,7	22,3	25	1,8

Thermal power of curtains with water heater

Size		KP/BB ECONOMIC-2														
Wariant		A									B					
Length [cm]		130			195			260			200			300		
Air capacity [m ³ /h]		11000			16500			22000			11000			16500		
Water temp. [°C]	Inflow air temp. [°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]														
		kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa
90/70	5	37,9	19	1,6	66,6	22	7,6	91,3	22	18,0	52,3	25	4,8	89,9	28	22,0
	10	34,5	23	1,4	60,7	25	6,3	84,8	26	15,5	47,7	28	4,0	82,0	31	18,4
	15	31,2	27	1,1	54,9	29	5,2	76,7	30	12,7	43,2	32	3,3	74,2	35	15,1
80/60	5	31,4	17	1,3	55,2	19	5,2	77,2	19	12,8	45,5	21	3,4	74,8	24	15,3
	10	28,2	21	1,1	49,6	23	4,2	69,4	23	10,3	39,1	25	2,7	67,3	27	12,4
	15	25,0	25	1,0	44,1	26	3,4	61,7	27	8,2	34,8	28	2,2	59,9	31	9,8
70/50	5	25,1	14	1,1	44,3	16	3,4	62,0	16	8,3	35,0	18	2,2	60,3	20	9,9
	10	22,1	18	1,0	39,0	20	2,6	54,6	20	6,4	30,8	22	1,7	53,1	23	7,7
	15	19,1	22	0,9	33,8	24	2,0	47,3	24	4,8	26,7	25	1,3	46,1	27	5,8
60/40	5	19,2	12	1,0	33,9	13	2,0	47,6	14	4,8	26,8	15	1,5	46,4	17	6,0
	10	16,4	16	0,9	28,9	17	1,5	40,5	18	3,5	22,9	19	1,0	39,6	20	4,3
	15	13,6	20	0,7	24,1	21	1,1	33,7	21	2,4	19,0	22	0,9	33,0	23	2,9

Thermal power of curtains with water heater

Size		KP/BB ECONOMIC-3														
Version		A									B					
Length [cm]		140			210			280			200			300		
Air capacity [m ³ /h]		15600			23200			31200			15600			23200		
Water temp. [°C]	Inflow air temp. [°C]	Thermal power [kW], outflow air temperature [°C] and resistance of water flow [kPa]														
		kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa	kW	°C	kPa
90/70	5	48,1	19	2,2	91,4	21	11,9	127,7	22	31,7	68,8	23	6,4	109,5	25	25,0
	10	44,1	22	1,8	83,3	25	9,9	116,4	26	26,4	62,8	27	5,3	99,8	28	20,9
	15	39,9	26	1,5	75,4	29	8,1	105,4	29	21,6	56,8	31	4,4	90,4	32	17,1
80/60	5	40,1	16	1,5	75,8	18	8,2	105,9	19	21,8	57,2	20	4,4	91,0	21	17,3
	10	36,0	19	1,3	68,1	22	6,6	95,1	23	17,6	51,3	24	3,6	81,7	25	14,0
	15	31,9	24	1,0	60,6	26	5,2	84,6	26	13,9	45,7	28	2,9	72,7	28	11,0
70/50	5	32,1	13	1,1	60,9	16	5,3	85,0	16	14,1	45,9	17	2,9	73,1	18	11,2
	10	28,2	17	1,0	53,5	19	4,1	74,8	20	10,9	40,4	21	2,2	64,4	22	8,7
	15	24,4	21	0,8	46,4	23	3,1	64,8	24	8,2	35,0	25	1,7	55,8	25	6,5
60/40	5	24,5	11	1,0	46,6	13	3,1	65,2	14	8,3	35,2	14	1,7	56,1	15	6,6
	10	20,8	15	0,9	39,7	17	2,3	55,6	17	6,0	30,0	18	1,2	47,9	19	4,8
	15	17,3	19	0,7	33,0	21	1,6	46,2	21	4,2	25,0	22	1,0	39,9	22	3,3

AUTOMATICS

Description of air curtains automatics components selection are presented in the section: AIR CURTAINS CONTROL AND AUTOMATICS in this catalogue