

Heat exchanger AW

Based on experience with the design and production of special blower units for various industrial applications, KUBÍČEK VHS produce also **AW** (air - water) **pipe heat exchangers**.



Heat exchangers are designed for direct heat exchange between the air / gas and liquid. They are installed on input or output of devices (blower units).

The exchanger consists of housing and two fronts for input and output of air / gas. The housing of exchanger and the inner pipes are made of stainless or carbon steel. Inputs and outputs of liquid / water are placed on the exchanger housing.

- Counterflow connection is used for higher performance.

APPLICATION:

- Cooling of inlet air / gas
- Domestic water heating
- Hot water for heating of the engine room

MAIN ADVANTAGES:

- Simple design
- Unattended equipment
- For standard pipeline sizes **DN 25 to 300**
- G 3/4 „- 2“ connection dimensions for water inlet and outlet
- Long service life

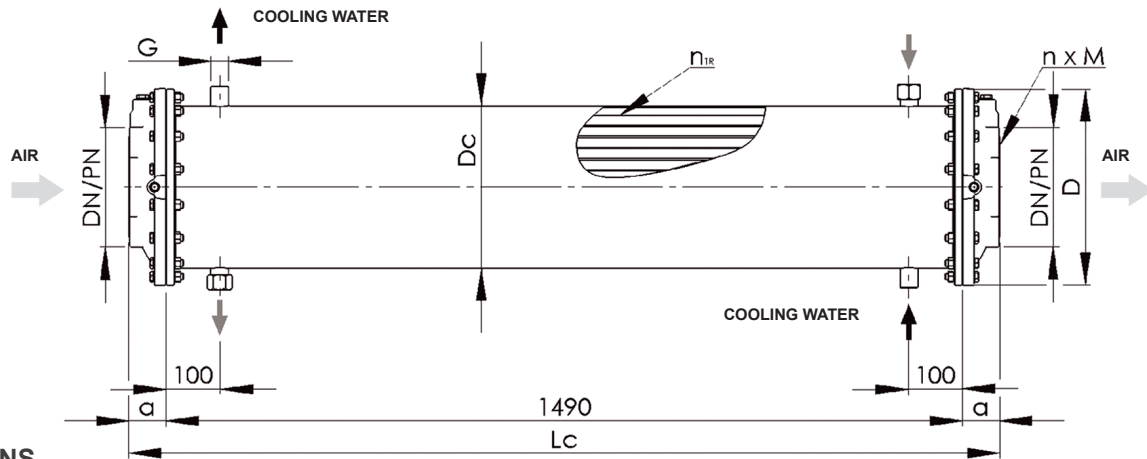
MATERIAL

- Carbon steel with coating for dry air and chemically non-aggressive gases
- Stainless steel for humid air and slightly aggressive gases

OPERATING CONDITIONS

Temperature range	-20°C to 300°C
At the side of gas	max. pressure 0,6 Mpa max. temperature 300°C max flow up to 13 200 m ³ N/h
At the side of liquid	max. pressure 0,6 MPa max. temperature 110°C max. flow up to 12,5 m ³ /h

HEAT EXCHANGER AW – AIR / WATER



DIMENSIONS

Dimension			Type											
Name/size	Name	Unit	AW 25/1490	AW 32/1490	AW 40/1490	AW 50/1490	AW 65/1490	AW 80/1490	AW 100/1490	AW 125/1490	AW 150/1490	AW 200/1490	AW 250/1490	AW 300/1490
Air connection	DN/PN	mm/bar	25/16	32/16	40/16	50/16	65/16	80/16	100/16	125/16	150/16	200/10	250/10	300/10
Water connection	G	"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	5/4"	5/4"	6/4"	2"
Tube sheet diameter	D	mm	143	167	182	202	232	258	313	368	426	537	642	743
Total length	L _c	mm	1581	1581	1581	1581	1601	1611	1621	1631	1641	1661	1681	1701
Casing diameter	D _c	mm	107	118	138	138	168	194	256	304	343	462	562	668
Height of bonnet	a	mm	45,6	45,6	45,6	45,6	55,6	60,6	65,6	70,6	75,6	85,6	95,6	105,6
Connection size	n x M	-	4xM12	4xM16	4xM16	4xM16	4xM16	8xM16	8xM16	8xM16	8xM20	8xM20	12xM20	12xM20
Number of cooling pipes	n _{TR}	pc	7	13	19	19	31	37	85	121	151	295	439	649
Flow diameter of pipes	N _p	m ²	0,0011	0,002	0,0029	0,0029	0,0048	0,0057	0,0131	0,0186	0,0232	0,0454	0,0676	0,0999
Heat transfer surface	A _{TR}	m ²	0,51	0,95	1,39	1,39	2,28	2,72	6,24	8,88	11,08	21,65	32,21	47,62
Coolant volume	V _{H2O}	l	9	9,5	13	13	19	27	41	57	74	129	189	261
Volume of air	V _{VZ,CL}	dm ³	1,6	3,0	4,3	4,3	7,2	8,5	19,5	27,7	34,6	67,6	100,7	148,9
Total water weight	H	kg	27	35	45	49	64	95	143	224	290	503	730	1019
Total weight	H _{dk}	kg	36	45	58	62	83	122	184	281	364	632	919	1280

Max. pressure of liquid – water 0,6 MPa; max. pressure of gas – air 0,6 MPa; max. temperature of liquid 110°C; max. temperature of gas at inlet 300°C

OPERATING DATA

Air pressure / Inlet temperature°C		30 kPa/ 60°C			60 kPa/ 90°C			90 kPa/140°C					
Discharge temperature Inlet / discharge temperature		Air approx.35°C Water 12°>30°C		Pressure lost	Air approx.40°C Water 12°>30°C		Pressure lost	Air approx.55°C Water 12°>30°C		Pressure lost	Air approx.40°C Water 12°>30°C		Pressure lost
Type	DN	Qvz (Nm ³ /min)	VH2O (m ³ /h)	Δp (kPa)	Qvz (Nm ³ /min)	VH2O (m ³ /h)	Δp (kPa)	Qvz (Nm ³ /min)	VH2O (m ³ /h)	Δp (kPa)	Qvz (Nm ³ /min)	VH2O (m ³ /h)	Δp (kPa)
AW 25/1490	25	2	0,1	2,3	1,5	0,15	1,2	1,5	0,2	1,1	0,7	0,25	0,3
AW 32/1490	32	3,5	0,15	2,5	2,5	0,2	1,2	3	0,35	1,8	1,3	0,3	0,3
AW 40/1490	40	5	0,2	2,2	3,7	0,3	1,1	4,5	0,5	1,7	1,7	0,4	0,3
AW 50/1490	50	5	0,2	1,5	3,5	0,3	0,7	4,5	0,5	1,1	1,7	0,4	0,2
AW 65/1490	65	7,5	0,25	1,2	6	0,45	0,7	7,5	0,8	1,1	2,7	0,5	0,2
AW 80/1490	80	9	0,35	1,1	7	0,6	0,7	8,5	0,9	0,9	3	0,6	0,15
AW 100/1490	100	20,5	0,65	1,3	17	1,1	0,8	20,5	2,1	1,3	7,2	1,2	0,2
AW 125/1490	125	27,5	0,85	1,1	23,5	1,6	0,7	30,5	2,9	1,2	10,5	1,8	0,2
AW 150/1490	150	32	1	1,5	29	2	0,7	37	3,5	1,1	12,8	2,2	0,15
AW 200/1490	200	61,5	1,7	0,95	53	3	0,7	75	7	1,2	25,7	4,3	0,2
AW 250/1490	250	95	2,7	0,95	72	4	0,5	95	8,5	1,2	37	5,8	0,2
AW 300/1490	300	147	4,2	1	114	6	0,6	133,5	12,5	0,8	55	8,5	0,2

Nm³ – t=20°C, p=101kPa;

Offer with informative character.