

AIR RELEASE VALVE

KARA – Anti-Shock Combination Air Release Valve

REF **EFC-337** ISSUED 15 Jun 2026

SPECIFICATIONS

Size	DN50–DN300
Pressure	PN10–PN25
End connection	flanged (EN 1092-2) / flanged (EN 1092-2) / flanged (EN 1092-2)
Temperature	-10°C to 80°C
Media	Potable water, Clean water

STANDARDS

Design	BS EN 1074-4, AWWA C512, BS EN 1092, BS EN 558
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APPROVALS & CERTIFICATIONS

- WRAS
- ISO 9001

APPLICATIONS

- Potable water distribution
- Water treatment
- Pump stations



MATERIALS

body	Ductile Iron EN GJS 500-7	float	AISI 304 Stainless Steel
guide barrel	AISI 304 Stainless Steel	sealing arc	AISI 304 Stainless Steel
anti shock device	AISI 304 Stainless Steel	seals	EPDM / NBR O-rings; EPDM seat

FEATURES

- The KARA combination air release valve combines large-orifice kinetic air venting during filling with small-orifice continuous air release under operating pressure
- The anti-shock check mechanism prevents water hammer caused by rapid air column collapse
- Suitable for potable water transmission mains and distribution systems where surge protection is required alongside air management

PRESSURE-TEMPERATURE RATING

CLASS	TEMPERATURE	MAX PRESSURE
PN25 max (flange DN50-DN300)	-10°C	25 bar
PN25 max (flange DN50-DN300)	80°C	25 bar

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Features:

- . Advanced design with simple mechanism, strong float to prevent cracking during sudden water hammer & quick closure.
- . Aerokinetic mechanism to resist blow shut under higher air velocity even up to sonic velocity of air.
- . For the potential water hammer location or transmission pipeline, we should use anti shock combination air valve to prevent from damage or impact of severe water hammer.
- . Anti shock device is installed on top of bonnet, It will slow down the exhausting air flow out during filling to prevent hammer impact, whenever vacuum happen, the device will drop down and let Large air into the pipeline.
- . No arms or levers to prevent vibrating, bending, direct closure of the float.
- . Smooth barrel outside of the float, keep float moving in specified guide rail.
- . Guide barrel buffer for collision prevention, and drain easy with proper holes around the barrel during vacuum.
- . Outside screen will be an option for safety and prevent insects or birds in.
- . Fully fusion epoxy coated inside and outside of valve body for long term services.
- . Manufacturing standard meets or exceeds BS EN 1074-4, AWWA C512
- . Flange drilling and dimension meets BS EN 1092 and BS EN 558 and ANSI flange.

KARA- Combination air release valve with anti shock device provides 3 functions: 1.Restricted air release during filling of the pipeline. 2.Small air release under pressurized pipeline. 3.Large air intake during draining of the pipeline.



Service Fields:

For clean water system, transimission and distribution, irrigation system.

Technical Data:

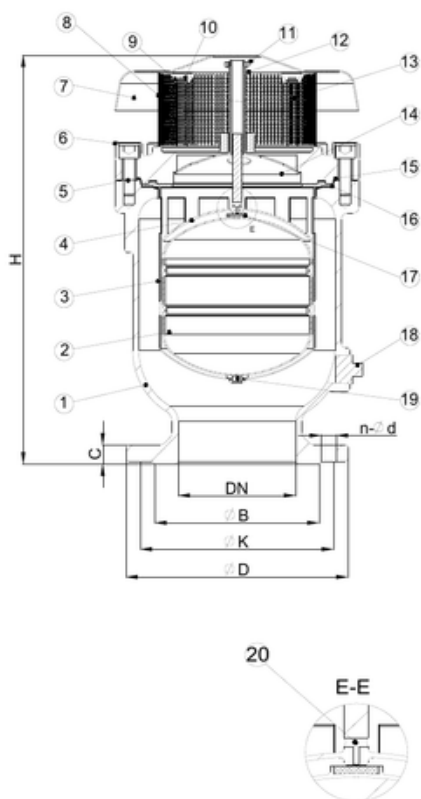
Size range:DN 50-300MM
 Pressure ratings:
 1.0Mpa, 1.6Mpa, 2.5 Mpa (Flange)
 Working temperature: -10°-80°C.
 Flow media: clean water
 Please consult factory for PN40 and anti shock device whenever there is water hammer issue

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Main Valve-DN50-DN300



Parts List

No.	Part Name	Material	Standard
1	Body	Ductile Iron	EN GJS 500-7
2	Float	Stainless Steel	AISI 304
3	Guide Barrel	Stainless Steel	AISI 304
4	Sealing Arc	Stainless Steel	AISI 304
5	In Hex Bolt	Carbon Steel/ Stainless Steel	G. I/ AISI 304
6	Bonnet	Ductile Iron	EN GJS 500-7
7	Cover	Carbon Steel	Commercial/ Epoxy Coated
8	Screen	Stainless Steel	AISI 304
9	Washer	Carbon Steel/ Stainless Steel	G. I/ AISI 304
10	Hex Bolt	Carbon Steel/ Stainless Steel	G. I/ AISI 304
11	Nut	Carbon Steel/ Stainless Steel	G. I/ AISI 304
12	Spring	Stainless Steel	AISI 304
*13	Pillar	Aluminium	Commercial
14	Anti Shock Device	Stainless Steel	AISI 304
15	O-Ring	Rubber	EPDM/NBR
16	Seat	Rubber	EPDM
17	Nozzle Seat	Rubber	EPDM
*18	Plug (Option)	Stainless Steel	AISI 304
19	Buffer	Rubber	EPDM
20	Small Nozzle	Stainless Steel	AISI 304

* For Size ≤DN150.

* Plug will be added upon request.

Dimension

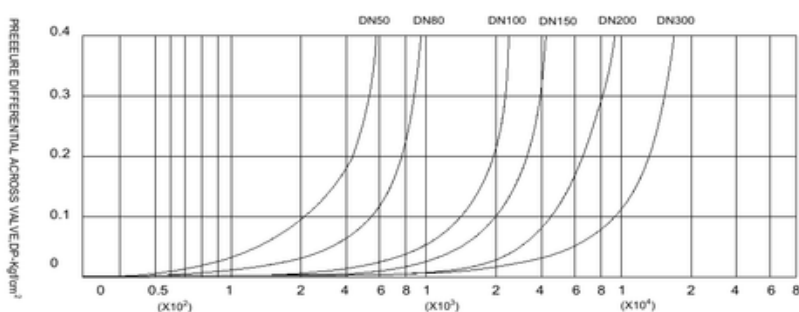
Unit: MM

DN	ØB			ØD			ØK			H	N-Ød			C		
	PN10	PN16	PN25	PN10	PN16	PN25	PN10	PN16	PN25		PN10	PN16	PN25	PN10	PN16	PN25
50		99		165			125			310	4-Ø19				19	
80		132		200			160			382	8-Ø19				19	
100		156		220	235		180	190		420	8-Ø19	8-Ø23			19	
150		211		285	300		240	250		520	8-Ø23	8-Ø28	19		20	
200		266	274	340	360		295	310		630	8-Ø23	12-Ø23	12-Ø28	20	22	
300		370		460			410			800	12-Ø23	12-Ø28			24.5	

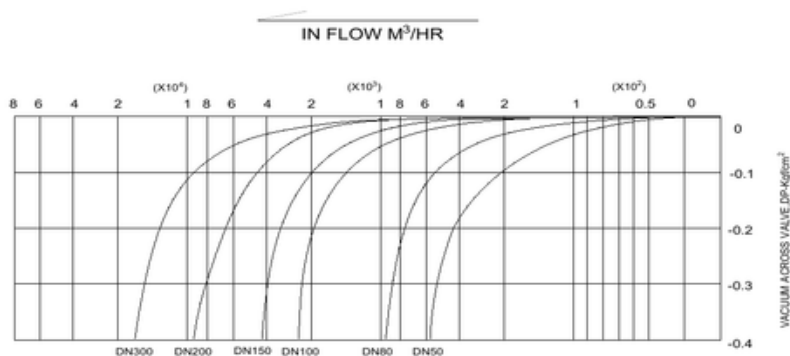
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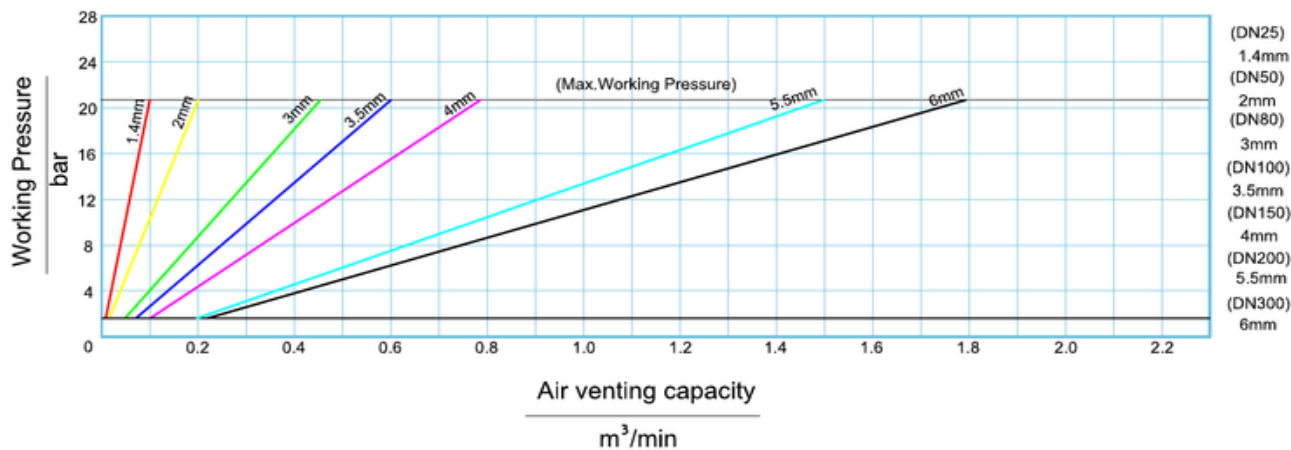
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* Air flow capacity will be restricted by anti device, the curve shown above is for standard air valve .



Air Venting



AIR RELEASE VALVE

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KARA-Quick Selection Table

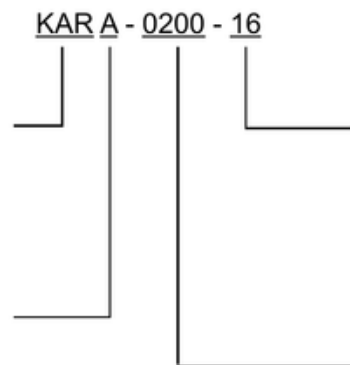
Water flow rate range Max.CMH (M ³ /Hour)	1,360	4,160	8,500	19,100	33,400	76,300
Main pipe size MM	200-400	400-700	750-1000	1050-1500	1500-2000	2100-3000
Inlet size of KARA MM	50	80	100	150	200	300
bore of outlet MM	75	95	130	170	230	330
small orifice size MM	2	3	3.5	4	5.5	6

*Those flange type from DN 50-300 can be up to Max. WP PN 25.

Ordering Code

Model:
KAR- kinetic air valve, with 3 functions
KAV-Kinetic air/vacuum valve, with 2 functions,
for restricted air exhaust and large air intake

Type:
A: Anti shock device



End Connection / ratings:
10: PN10
16: PN16
25: PN25

Valve Size:
0080: 80MM
0200: 200MM

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SECTION Dimensions per size REF EFC-337

SIZE	B	D	K	H	C	D_PN16	D_PN25	K_PN16	K_PN25	C_PN16	C_PN25	B_PN10	B_PN16	D_PN10	K_PN10	C_PN10
DN50	99	165	125	310	19	—	—	—	—	—	—	—	—	—	—	—
DN80	132	200	160	382	19	—	—	—	—	—	—	—	—	—	—	—
DN100	156	—	—	420	19	220	235	180	190	—	—	—	—	—	—	—
DN150	211	—	—	520	—	285	300	240	250	19	20	—	—	—	—	—
DN200	—	—	—	630	—	360	—	310	—	22	—	266	274	340	295	20
DN300	370	460	410	800	24.5	—	—	—	—	—	—	—	—	—	—	—

All dimensions in millimetres unless stated otherwise. Values are nominal; tolerances confirmed at quote.