

YOUR SOLUTION PARTNER IN
INDUSTRIAL
VALVE AUTOMATION...



KNIFE EDGE GATE VALVES

Bi-Directional

K NIFE
G ATE
V ALVES



Mfg. & Mkt by :
aira Euro automation pvt. ltd.

www.airaindia.com

INDIA



Scan For
More Information

Catalogue no. - KGV-CAT-BNR-001-R00

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About Us

*Clients are
why we exist!*

We welcome and thank you for referring out detailed catalogue.

aira is known all over continents as a manufacturer of quality products - Ball Valves, Butterfly Valves, Plug Valves, & Control On / Off Valves with Pneumatic Actuators for Pharma, Oil & Gas, Steel, Paper, Water, Chemical and all type of processing industries.

aira has walked through more than 3 decades, gaining valuable experience, offering equipment's in the products manufactured by OEMs in all spheres of engineering. **aira** products have gained reputations of consultants, and approvals of users, OEMs and other as a quality product.

aira has expanding business into foreign markets specially GCC, UAE, Asian & African countries. This is because increase its customer base and revenue, leading to overall growth and success. Now foreign users come to know and believe in the services provided by the **aira**. Along with the same, it also helps to reach a large number of users thereby leading to the increase their business.

Being an ISO 9001 BVQI certified company has put **aira** in fore front. Our motto is "Value the customer" and "Superior product", one among the best in the world.

Our Quality

- In- House full scale testing facility.
- Lean manufacturing practices
- Certified by : ISO 9001 : 2015 (BVQI LONDON), CE, ATEX, CIMFR, BIS, PESO, SIL 3, IBR

Our Commitment

- To understand customer's need first before proposing our products.
- To keep on providing competitive rate's by adapting to continuous process improvement, without compromising on quality.
- To provide continuous support to our customers and go beyond their expectations in terms of delivery and after sale services.

Our Manufacturing Facility

- In house R & D, manufacturing and testing facility is all located in a spread over three campuses at Ahmedabad, Gujarat, INDIA.

Network - Sales Office

- 60 Plus Branch Offices in different states in India.
- Sales office in the Bangladesh, Dubai, Kenya, Malaysia, Nepal, Qatar, Singapore, South Africa, Sri Lanka, Turkey, USA (Expanding).

QMS (Quality Management System)

ISO 9001 : 2015

EMS (Environment Management System)

ISO 14001 : 2015

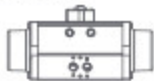
OHSAS (Occupational Health & Safety Management System)

ISO 45001 : 2018

IBR
PISTON VALVE
GLOBE CONTROL VALVE (CKD/CND)
DISC CHECK VALVE (DCV)
PRESSURE REDUCING VALVE (PRV)
POP TYPE SAFETY VALVE
BALL VALVE

Pneumatic Actuator

CE /
ATEX /
EXIDA SIL-3 /
PROOF OF DESIGN



Scotch & Yoke Actuator

CE / ATEX / SIL-3



Stainless Steel Actuator

CE /
IEP ATEX



Positioner Enclosure

CE / CIMFR /
IP67 / BIS
/ PESO



aira's
SOME OF OUR
Certificates

Plug Valve

FUGITIVE EMISSIONS
TEST
AS PER ISO
15848-1 / IBR



Flameproof Solenoid Valve

IEP ATEX / CE / CIMFR
/ IP65 / IP67 / IP68 /
BIS / PESO



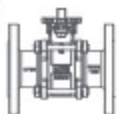
Limit Switch

IEP ATEX / CE / CIMFR
/ IP67 / BIS / PESO /
EQDC IP68



Ball Valve (Floating & Trunnion)

FIRE SAFE TEST DESIGN /
FUGITIVE EMISSIONS TEST
AS PER ISO 15848-1 / CE /
PED /
EXIDA SIL-3



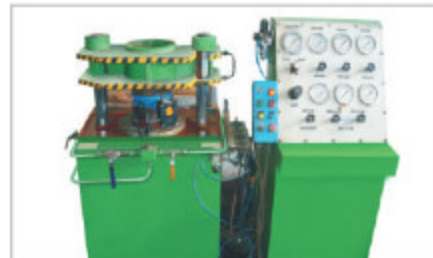
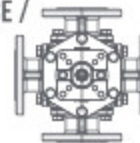
Butterfly Valve (centric / Double & Triple Eccentric)

FIRE SAFE TEST DESIGN /
FUGITIVE EMISSIONS TEST
AS PER ISO 15848-1 / CE /
PED / EXIDA SIL-3
/ IBR / PROOF OF DESIGN /
FOOD GRADE / BIS / ISI



Multiport Ball Valve

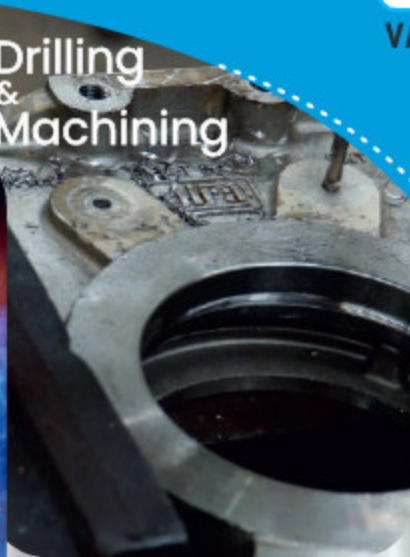
FUGITIVE EMISSIONS TEST
AS PER ISO 15848-1 / CE /
PED / EIL





Welding

Drilling
& Machining



Testing



01
IC CASTING
FOUNDRY

02
MACHINING

03
ASSEMBLING

04
TESTING

05
MATERIAL
HANDLING

06
DISPATCH

some of our
FACILITIES



KNIFE EDGE GATE VALVE EXPLODED VIEW

Bi-directional [BNR SERIES]

SR. NO.	PART NAME	MATERIAL	QTY.
1	Body	ASTM A536 Gr. 65-45-12 (Cast Iron, Cast Steel, Ductile Iron, S.S. 304 / 316)	1
2	Gate	S. S. 304 / S. S. 316 / S. S. 316L / Duplex / as per your request	1
3	Seat	EPDM / NBR / Viton as per your request	1
4	Gland Packing Gasket	PTFE Impregnated Synthetic Fiber / Graphite	2
5	Gland	ASTM A 536 Gr. 65-45-12 / Brass	1
6	Stem	S. S. 304 / S. S. 316 / S. S. 316L / 410 / titanium / EN8	1
7	Sleeve	Brass / Gun Metal / AB2	1
8	Bracket	M. S. / S. S.	1
9	Ring	S. S. 304 / S.S. 316	2
10	Hand Wheel	C. I. / Ductile Iron	1
11	Bush for Pipe	Plastic / Nylon	1
12	Pipe	M. S. / Plastic	1
13	Washer	Brass / Ab2 / Gun Metal	1
14	Sleeve Lock Nut	M. S. / S. S.	1
15	Fasners	M. S. / S. S.	

STANDARD FLANGE CONNECTION

DIN PN 10 and ANSI B16.5 (class 150)

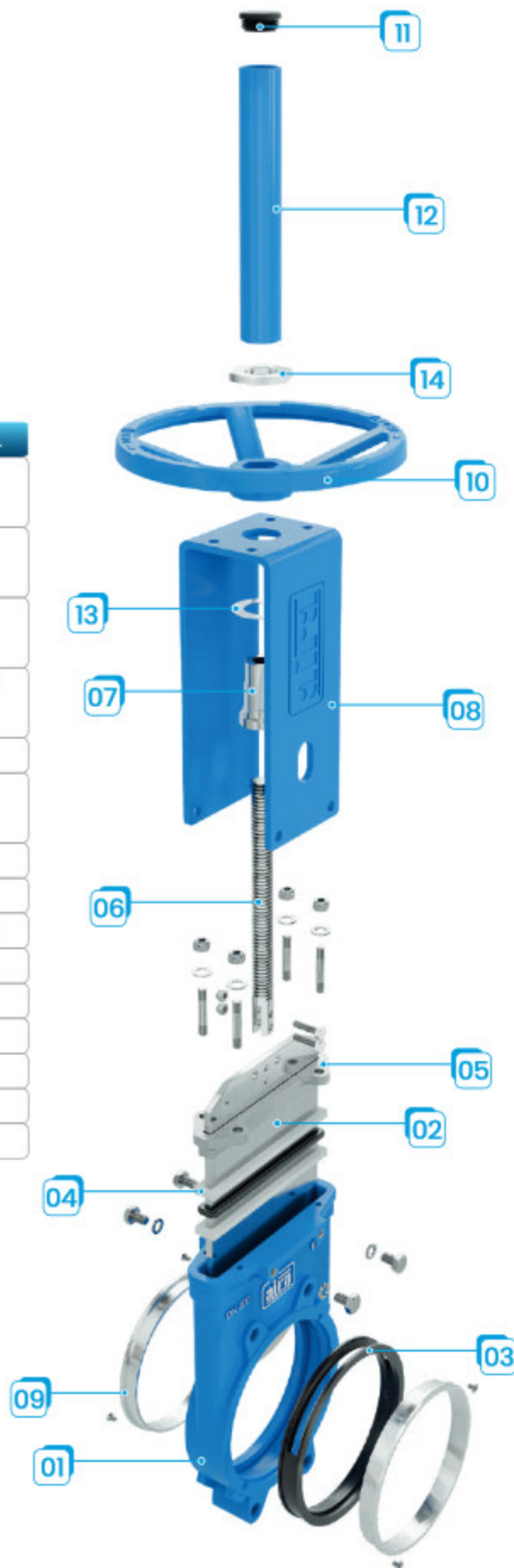
Other Flange Connection Available On Request.

DIRECTIVES:

For EU Directives and other Certificates, please see the document: Directives and Certificates Compliance Knife Gate Valves- Catalogues and Datasheets

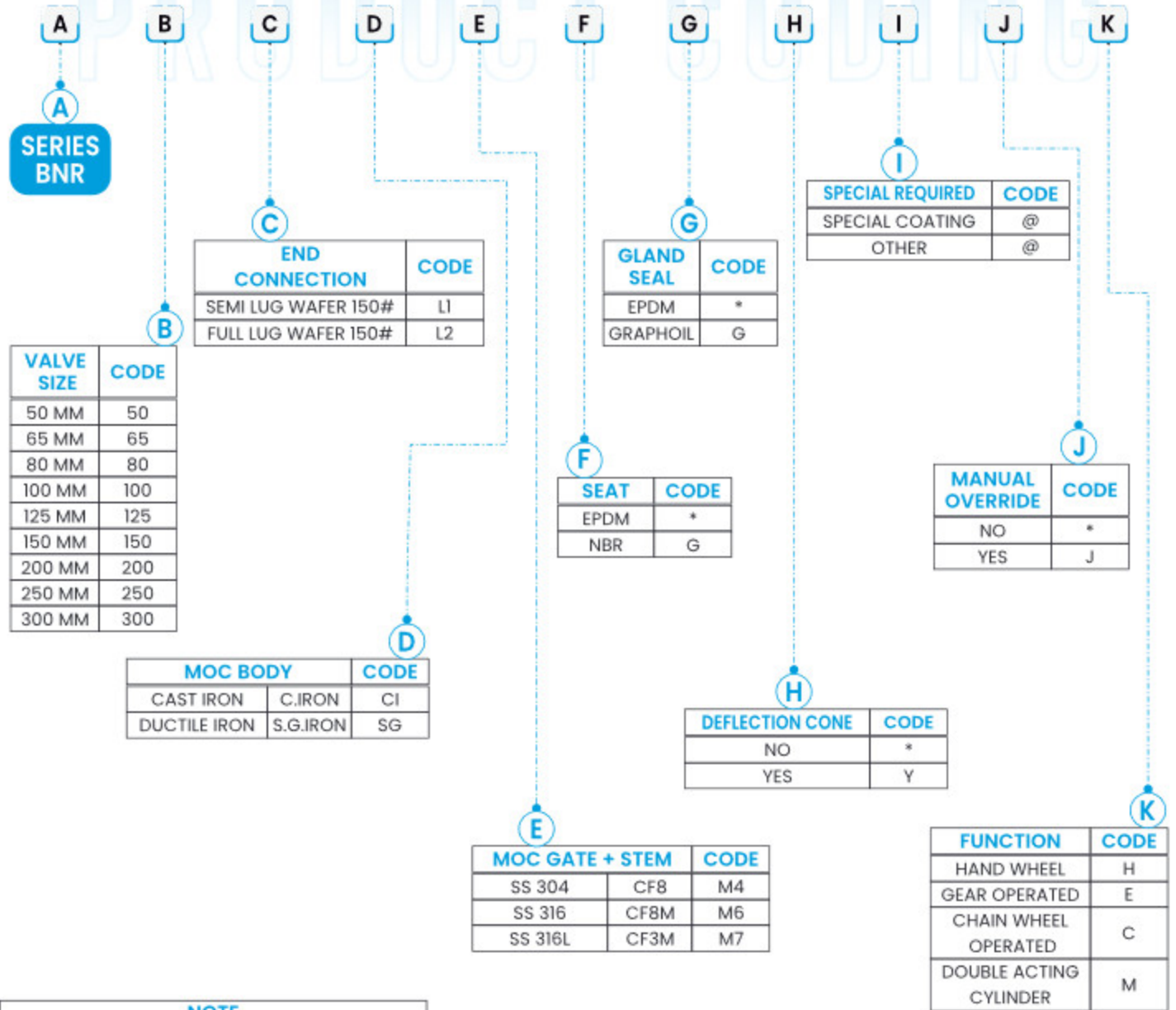
All valves are tested prior to shipping in accordance with the standard developed by the quality control department at "aira"

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Catalogue no. - KGV-CAT-BNR-001-R00

PRODUCT CODING



NOTE	
SYMBOL	INDICATION
@	Contact Factory.
*	By Default, Do Not Mention.

EXAMPLE-1	BNR 50L1CIM4H	KNIFE GATE VALVE SIZE 50MM SEMI LUG WAFER TYPE CAST IRON BODY CF8 GATE EPDM SEAT & GLAND SEAL HAND WHEEL OPERATED
EXAMPLE-2	BNR 200L2CIM6JM	KNIFE GATE VALVE SIZE 200MM FULL LUG WAFER TYPE CAST IRON BODY CF8M GATE EPDM SEAT & GRAPHOIL GLAND SEAL M.O. WITH DOUBLE ACTING CYLINDER OPERATED

KNIFE EDGE GATE VALVE FEATURES Bi Directional

STEM

The standard stainless steel stem offers a long corrosion resistant life. For rising stem handwheel actuators only, a stem protector is provided for additional protection against dust while the valve is in the open position.

GATE

Standard AISI 304 stainless steel gate. The gate is polished on both sides for a greater seal between the gate with both packing and seat. The gate is fully guided in the body allowing for bi-directional service. The material of the gate can be changed on request for higher pressure requirements.

PACKING

Standard PTFE impregnated synthetic fiber (st) with EPDM O-ring for better shut off, with an easy access packing gland ensuring a tight seal. Long-life braided packing is available in a wide range of materials.

SEAT : (RESILIENT)

Completely new design sleeve, slotted in the top half to allow the gate travel. The sleeve is held by means of two seat rings which support it and also guide the gate. The resilient seat is an elastomer sleeve, also available in different materials.

ACTUATORS

All actuators supplied by "aira" are interchangeable, & supplied with a standard mounting kit for installation purposes on site. *Contact Factory for Actuator More Info.

OTHER MATERIALS

On request, the body and the gate can be supplied in other materials.

YOKE OR ACTUATOR SUPPORT

Made of EPOXY coated steel (stainless steel available on request). Compact design makes it extremely robust even under the most severe conditions.

BODY

Wafer-style cast monoblock faces and reinforcing ribs in large diameters for extra body strength. Full part design for greater flow capacity and minimal pressure drop. The internal body design avoids any accumulation of solids that would prevent the valve from closing. Flush ports may be added to allow for the cleaning of solids trapped within the body cavities that can obstruct the flow or prevent the valve from closing (purging can be made with air, steam, liquids, etc). These bi-directional knife gate valves are not suitable for dead-end service without a slight modification or a counter flange. please contact the Technical Department at [aira](http://aira.com)

EPOXY COATING

The epoxy coating on all "aira" cast iron & carbon steel valve bodies and components is applied by means of an electrostatic process, making the valves corrosion-resistant with a high quality finished surface. The "aira" standard color is RAL-5015 blue.

RESILIENT SEAT



SEAT MATERIALS

MATERIAL	MAX. T (°C)	APPLICATIONS
EPDM (E)	120	Acids & Non Mineral Oils
Nitrile (N)	120	Resistance to Petroleum Products
FKM - FPM (v)	200	Chemical Service / High Temp.

More details & other material on request.

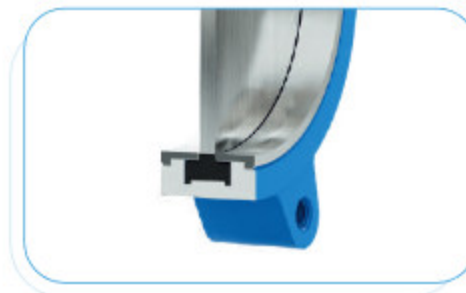
PACKING OPTIONS

MATERIAL	MAX. T (°C)	pH
PTFE Impregn. Synth. Fiber (ST)	250	2 - 3
Braided PTFE (TH)	260	0 - 14
Graphited (GR)	600	0 - 14
Ceramic Fiber (FC)	1200	----

Note : All types include an elastomere 'O' - Ring (Same material as seal),
Excluding TH, GR & FC.

Resilient seat

The new seat is a **slotted sleeve on** its top half and includes a **metal core in the bottom half** which provides a **great resistance** to demanding working conditions and pressures. The seat is held by means of **Two Stainless Steel Rings**. This design provides **water tightness in both directions** while avoiding any buildup of solids that could prevent the valve from closing. The seat can be supplied in different resilient material qualities



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TYPES OF *Operating System*

AUTOMATION

- > Pneumatic (single & double acting)
- > Electric (rising & non-rising stem)

MANUAL

- > Handwheel (rising stem)
- > Bevel Gear
- > Chainwheel

Fail Safe Systems

SINGLE ACTING/SPRING RETURN

Available From

Dn 50mm/2" To Dn 300mm/12"

Supply Pressure

Min.5 Bar-max.10 Bar

Options

- Pneumatic Or Electric Fail Open
- Pneumatic Or Electric Fail Close
- Other Options On Request

DOUBLE ACTING WITH AIR TANK

Available for all valve sizes

Supply pressure

min.3.5bar - max. 10 bar

Options

- Pneumatic or electric fail open
- Pneumatic or electric fail close
- Other options on request

Accessories

1 Mechanical stops

2 Locking device

3 Manual override

4 Solenoid valves

5 Positioners

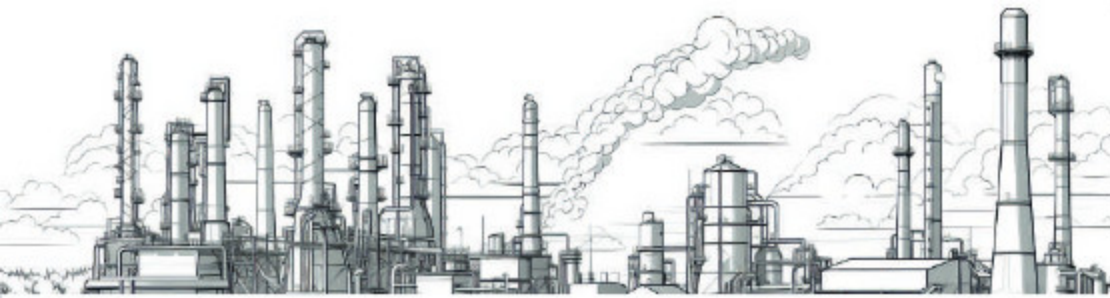
6 Limit switches

7 Proximity switches

8 Floor stands

9 Stem extensions

Wide Range of
valve Extensions
Available

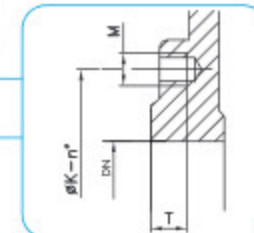
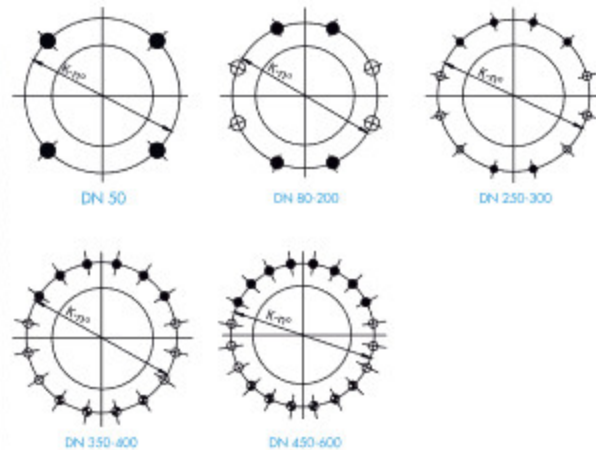


VALVE MOUNTING Details

EN 1092-2 PN10

SIZE (DN)	N°	K	M	T	● ⊕ ⊕
50	4	125	M-16	11	4-0-0
80	8	160	M-16	11	4-4-0
100	8	180	M-16	11	4-4-0
125	8	210	M-16	11	4-4-0
150	8	240	M-20	14	4-4-0
200	8	295	M-20	14	4-4-0
250	12	350	M-20	14	6-6-0
300	12	400	M-20	18	6-6-0
350	16	460	M-20	22	6-6-4
400	16	515	M-24	25	6-6-4
450	20	565	M-24	25	8-6-6
500	20	620	M-24	25	8-6-6
600	20	725	M-27	25	8-6-6

All dimensions are in mm

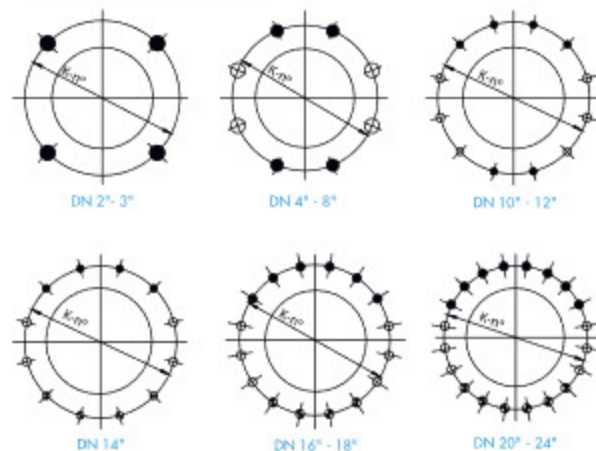


- BUND TAPPED HOLES
- ⊕ TAPPED THROUGH
- ⊕ THROUGH HOLES

ANSI B16.5, CLASS 150

SIZE (DN)	N°	K	M	T	● ⊕ ⊕
2"	4	4 1/4"	5/8"-11 UNC	3/8"	4-0-0
3"	4	6"	5/8"-11 UNC	3/8"	4-0-0
4"	8	7 1/2"	5/8"-11 UNC	3/8"	4-4-0
5"	8	8 1/2"	3/4"-10 UNC	3/8"	4-4-0
6"	8	9 1/2"	3/4"-10 UNC	1/2"	4-4-0
8"	8	11 1/2"	3/4"-10 UNC	1/2"	4-4-0
10"	12	14 1/4"	7/8"-9 UNC	1/2"	6-6-0
12"	12	17"	7/8"-9 UNC	3/4"	6-6-0
14"	12	18 3/4"	1"-8 UNC	7/8"	4-4-4
16"	16	21 1/4"	1"-8 UNC	1"	6-6-4
18"	16	22 3/4"	1 1/8"-7 UNC	1"	6-6-4
20"	20	25"	1 1/8"-7 UNC	1"	8-6-6
24"	20	29 1/2"	1 1/8"-7 UNC	1"	8-6-6

All dimensions are in inch



PNEUMATIC CYLINDER OPERATED KNIFE EDGE GATE VALVE

Bi directional

aira Our bi-directional knife edge gate valve, operated by a pneumatic cylinder, ensures precise flow control and reliability in demanding applications. Engineered for durability and efficiency, it excels in handling clean media such as water, oil, solvents and air. Trust **aira** for advanced valve solutions that meet industrial needs.

CYLINDER Operated



• THE STANDARD PNEUMATIC ACTUATOR (DOUBLE ACTING ON-OFF CYLINDER) CONSISTS OF:

- Aluminum end covers / CI / SGI
- Stainless Steel (AISI 304) piston rod
- Nitrile coated steel piston
- Supply Pressure : Min. 3.5 Bar Max. 10 Bar. Actuator designed with 6 Bar air supply.
- For valves installed in a horizontal position, We recommend U-type support plates and / or actuator support.

SIZE RANGE DN 50 TO DN 2000

**Air receiver tank also can be provided based on the customer request

OPTIONS

- Hard anodized barrel and covers
- Stainless Steel barrel and covers
- Over / Undersized cylinder
- Manual Override
- Fail safe system
- Travel stops

INSTRUMENTATION (ON REQUEST) :

- Positioners
- Solenoid Valves
- Flow Regulators
- Air Preparation Units

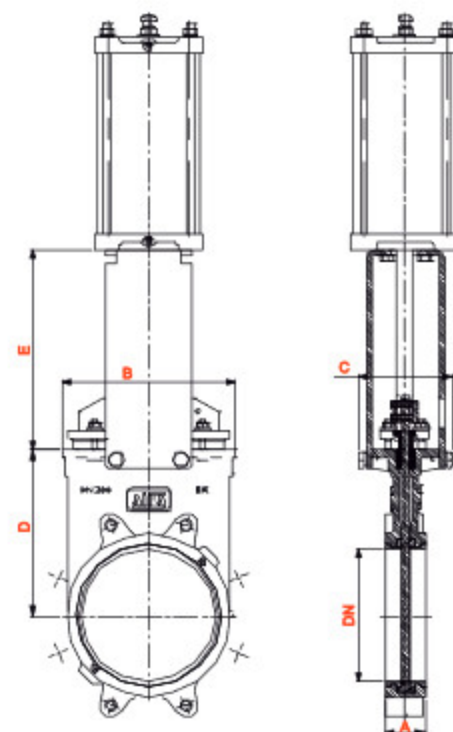
SIZE in mm	WORKING PRE.
50 to 250	10 bar
300 to 400	6 bar
450	5 bar
500 to 600	4 bar

DIMENSIONS

SIZE (DN) in mm	A	B	C	D	E	STANDARD CYL.	AIR CONNECTION
50	45	124	125	105	129	C100-62	1/4"G
65	45	139	125	115	145	C100-85	1/4"G
80	50	149	125	124	162	C100-95	1/4"G
100	50	169	125	142	187	C100-115	1/4"G
125	50	190	125	165	211	C125-143	1/4"G
150	60	217	125	190	237	C125-168	1/4"G
200	60	268	142	250	309	C160-220	1/4"G
250	70	356	142	308	364	C200-270	3/8"G
300	70	396	142	360	414	C200-320	3/8"G
350	96	429	197	348	500	C250-375	3/8"G
400	100	472	197	398	550	C250-425	3/8"G
450	106	527	270	442	600	C300-475	1/2"G
500	110	592	270	495	660	C300-525	1/2"G
600	110	695	270	590	760	C300-625	1/2"G

600 & Above On Request.

All dimensions are in mm



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Catalogue no. - KGV-CAT-BNR-001-R00

GEAR OPERATED KNIFE EDGE GATE VALVE

Bi directional



aira Our bi-directional gear operated knife edge gate valve offers superior control and durability. Designed for clean water, oil, and air applications, it ensures reliable sealing and smooth operation. **aira** provides advanced valve solutions that meet the highest industrial standards.

SIZE RANGE DN 200 TO DN 2000

SIZE in mm	WORKING PRE.
50 to 250	10 bar
300 to 400	6 bar
450	5 bar
500 to 600	4 bar

CONSISTS OF :

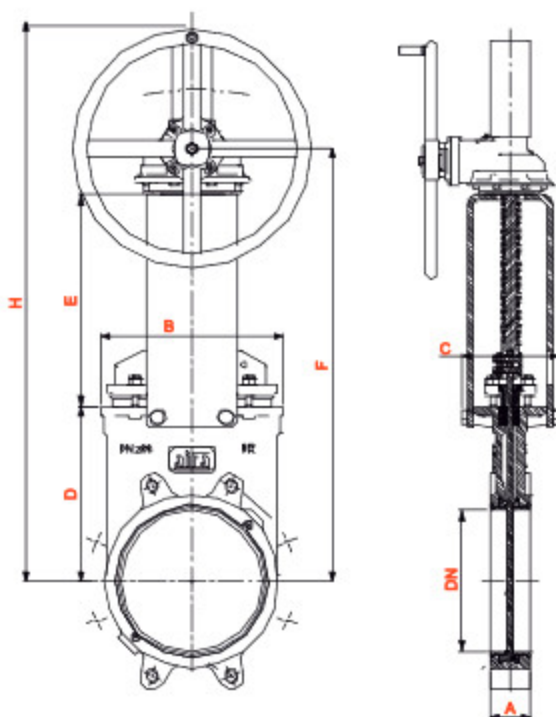
- Stem
- Stem Protector
- Bevel Gear Actuator with Handwheel
- Yoke

OPTIONS :

- Locking Device
- Extension
- Chainwheel
- Rising Stem & Non Rising Stem



GEAR
Operated



DIMENSIONS

SIZE (DN) in mm	A	B	C	D	E	F	H
200	60	268	142	250	305	625	775
250	70	356	142	308	360	738	888
300	70	396	142	360	410	840	990
350	96	429	197	348	490	913	1138
400	100	472	197	398	540	1013	1238
450	106	527	270	442	592	1109	1334
500	110	592	270	495	652	1222	1447
600	110	965	270	590	755	1420	1645

600 & Above On Request. All dimensions are in mm

Catalogue no. - KGV-CAT-BNR-001-R00

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HAND WHEEL (RISING STEM) OPERATED KNIFE EDGE GATE VALVE Bi directional

aira The hand wheel operated knife edge gate valve, bi-directional by design, offers exceptional control and longevity. Perfect for demanding environments, it guarantees full flow and bubble tight lock. **aira** delivers high-quality valve solutions for industrial excellence.

HAND WHEEL Operated



STANDARD MANUAL ACTUATOR CONSISTS OF :

- Handwheel
- Stem
- Stem Nut
- Stem Protector

OPTIONS

- Locking Device
- Extension
- Square nut drive
- Chainwheel

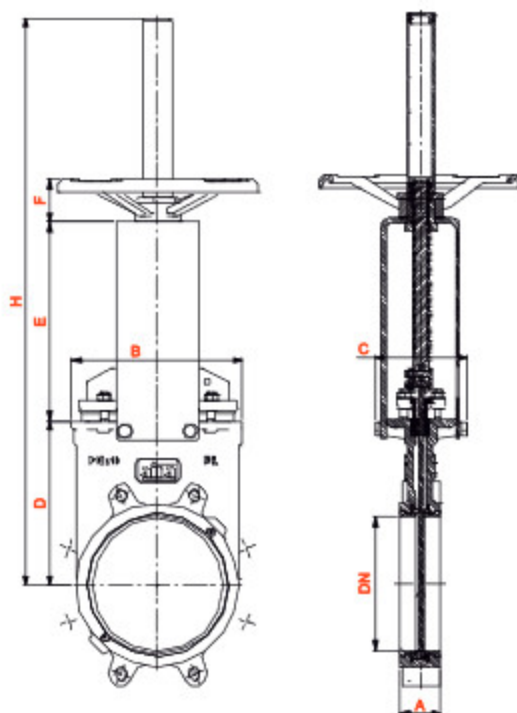
SIZE RANGE DN 50 TO DN 2000

SIZE in mm	WORKING PRE.
50 to 250	10 bar
300 to 400	6 bar
450	5 bar
500 to 600	4 bar

DIMENSIONS

SIZE (DN) in mm	A	B	C	D	E	F	H
50	45	124	125	105	144	63	430
65	45	139	125	115	145	63	454
80	50	149	125	124	177	63	480
100	50	169	125	142	202	63	570
125	50	190	125	165	226	63	615
150	60	217	125	190	252	63	670
200	60	268	142	250	317	73	870
250	70	356	142	308	372	73	1093
300	70	396	142	360	422	73	1187
350	96	429	197	348	509	98	-
400	100	472	197	398	559	98	-
450	106	527	270	442	611	98	-
500	110	592	270	495	671	98	-
600	110	695	270	590	771	98	-

600 & Above On Request. All dimensions are in mm



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Catalogue no. - KGV-CAT-BNR-001-R00

CHAINWHEEL OPERATED KNIFE EDGE GATE VALVE

Bi directional



aira Experience top-tier performance with our bi-directional chain wheel operated knife edge gate valve. Engineered for rugged environments, it provides reliable sealing and easy operation. Choose **aira** for innovative and durable valve technology.

SIZE RANGE DN 50 TO DN 2000

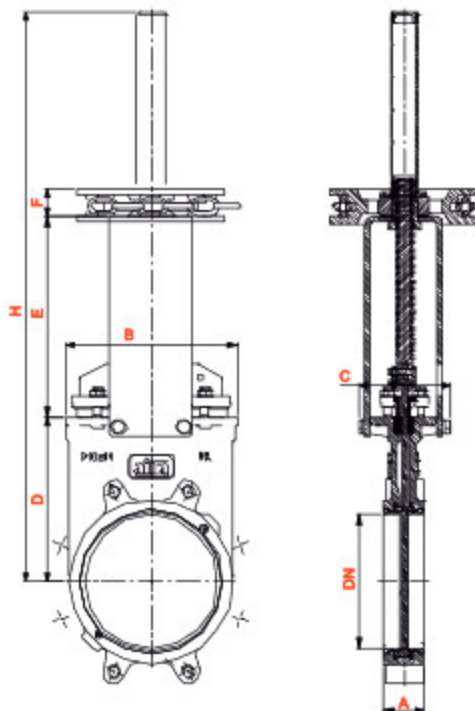
SIZE in mm	WORKING PRE.
50 to 250	10 bar
300 to 400	6 bar
450	5 bar
500 to 600	4 bar

STANDARD MANUAL ACTUATOR CONSISTS OF :

- Handwheel
- Stem
- Stem Nut
- Stem Protector

OPTIONS

- Extension
- Square nut drive
- Chainwheel



DIMENSIONS

SIZE (DN) in mm	A	B	C	D	E	F	H
50	45	124	125	105	144	63	420
65	45	139	125	115	145	63	454
80	50	149	125	124	177	63	480
100	50	169	125	142	202	63	570
125	50	190	125	165	226	63	615
150	60	217	125	190	252	63	670
200	60	268	142	250	317	73	870
250	70	356	142	308	372	73	1093
300	70	396	142	360	422	73	1187
350	96	429	197	348	509	98	-
400	100	472	197	398	559	98	-
450	106	527	270	442	611	98	-
500	110	592	270	495	671	98	-
600	110	695	270	590	771	98	-

600 & Above On Request. All dimensions are in mm

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AIR FR + L SETS 2PC WITH PRESSURE GAUGE



Model	: JHFRCLM
size	: 1/4", 3/8", 1/2", 3/4", 1"
body	: Aluminium Pressure Die Cast
seals	: NBR
pressure	: 10kg/cm ²
temperature	: 50 °C
media	: Compressed air

Pneumatic - Pneumatic & Electro Pneumatic LINEAR Valve Positioner



Input Signal
Supply Air Pressure
Standard Stroke
Air Pipe Connection
Ambient Temperature
Degree of Protection
Out-put Characteristics
Conduit Connection
Body Material

: 3 ~ 15 (0.2 ~ 1.0 Kg/cm²)
: 100 psi Max. (7.0 Kg/cm²)
: 10 ~ 80 mm
: 1/4" NPT
: -20 °C to 70 °C
: IP 65
: Linear
: 1/2" NPT
: Aluminium Die Cast

SMART Positioner LINEAR



Model	: IP 6000 Series
Body	: Aluminium
Set Point Signal	: 4 ~ 20mA DC
Ambient Temperature	: Normal Version : -20 °C ~ 70 °C Optional Version : -40 °C ~ 70 °C
Supply Pressure	: 0.14 ~ 0.7 MPa
Flow	: 55L/min (Sup=0.14MPa)

Weatherproof Limit Switch Box



Model	: MMLS-BX-WP-01-A MMLS-BX-WP-01-B MMLS-BX-WP-01-C
Switch	: Honeywell ZM / NJ2-V3-N / NBB-V3-Z4
Type	: 1 NO + 1 NC / 2 Switch
Enclosure	: IP 67
Protection	
Ambient	: -20 °C to 80 °C
Temperature	
Conduit Entry	: 1/2" - NPT
Terminal	: 8 Point
Mounting	: Namur VDI / VDE3845 / ISO 5211
Bracket	
Material	: Aluminium, S.S - CF8M



Flameproof Limit Switch Box



Model	: MLS-BX-FLP-01-A MLS-BX-FLP-01-B MLS-BX-FLP-01-C MLS-BX-FLP-01-D
Switch	: Honeywell V15 / Honeywell V 15 PCB Type / NCB2-V3-NO / NJ2-V3-N NBB-V3-Z4 / NBB3-V3-Z4
Type	: 1 NO + 1 NC / 2 NO + 2 NC 2 Switch
Enclosure	: IP 67
Protection	
Ambient Temp.	: -20 °C to 80 °C
Conduit Entry	: 1/2" - NPT
Terminal	: 8 Point
Mounting	: Namur VDI / VDE3845 / ISO 5211
Bracket	
Material	: Aluminium, S.S - CF8M



Weatherproof Limit Switch Box (Big Box)



Model	: MLS-BX-01-A MLS-BX-01-B MLS-BX-01-C MLS-BX-01-D
Switch	: Honeywell V 15 / NJ2-V3-N / NBB-V3-Z4 / NCB2-V3-NO
Type	: 1 NO + 1 NC / 2 NO + 2 NC 2 Switch
Enclosure	: IP 67
Protection	
Ambient	: -20 °C to 80 °C
Temperature	
Conduit Entry	: 1/2" - NPT
Terminal	: 8 Point
Mounting	: Namur VDI / VDE3845 / ISO 5211
Bracket	
Material	: Aluminium, S.S - CF8M



PNEUMATIC ROTARY ACTUATOR ACCESSORIES

3/2 Way Internal Pilot Operated STAINLESS STEEL 316 Single Namur Solenoid Valve



Stainless
Steel 316*

Model	: MPT-S6-32
Coil Voltage	: All Std. Voltage Available
Frequency	: 50 - 60 Hz
Connection Type	: 1/4" (NPT)
Conduit	: PF 1/2"
Coil Insulation Grade	: Class "F" & "H"
Ambient Temp.	: -20 °C ~ 70 °C
MOC	: ASTM A351 Gr. CF8M
Seals	: NBR (Viton On Request)
Working Pressure	: Upto 2.5 to 10 Kg/cm ²

5/2 Way Poppet Type STAINLESS STEEL 316 Single Namur Solenoid Valve



Stainless
Steel 316*

Model	: OTX-S6-52
Coil Voltage	: All Std. Voltage Available
Frequency	: 50 - 60 Hz
Connection Type	: 1/4" (NPT)
Conduit	: PF 1/2"
Coil Insulation Grade	: Class "F" & "H"
Ambient Temp.	: -20 °C ~ 70 °C
MOC	: ASTM A351 Gr. CF8M
Seals	: NBR (Viton On Request)
Working Pressure	: Upto 2.5 to 10 Kg/cm ²

5/2 way single solenoid valve



Model	2ADD5
size	: 1/4", 1/2"
body	: Aluminium, S.S - CF8M
seals	: NBR / Nitrile
pressure	: 1 to 10kg/cm ²
temperature	: 5 to 50 C
media	: Compressed air (filtered & Lubricated)

3/2 way single solenoid valve



Model	2ADD5
size	: 1/4", 1/2"
body	: Aluminium, S.S - CF8M
seals	: NBR / Nitrile
pressure	: 1 to 10kg/cm ²
temperature	: 5 to 50 C
media	: Compressed air (filtered & Lubricated)

2/2 & 3/2 Way Direct Acting Solenoid Valve



Model	AMV, AJ
size	: 1/4"
body	: Aluminium Hard anodized
pressure	: 0 to 8kg/cm ²
media	: Compressed air (filtered & Lubricated)

Manual Direction Control Valve 5/2 Way Hand Lever Valve Spring Return



Model	2ARMHLV
size	: 1/4", 1/2"
body	: Aluminium, S.S - CF8M
pressure	: Upto 10kg/cm ²
media	: Compressed air (filtered & Lubricated)

Filter + Regulator Air Combination



(4FQ / 8FQ) (FRJ)

Model	: 4FQ / 8 FQ / FRJ
Air Connection	: 1/4"
Max. Supply Pressure	: 4FQ : 0.5 to 4 Kg / cm ² 8FQ : 0.5 to 8 Kg / cm ² FRJ : 1 to 9 Kg / cm ²
Gauge Connection	: 1/8"
Ambient Temp.	: -20 °C ~ 70 °C
Mini Filtering Size	: 5 Micron
Material	: Aluminium, Stainless steel - CF8M

Air Volume Booster



Model	: VLB
Size	: 1/4" to 1"
MOC	: Aluminium, S.S - CF8M
Seals	: NBR
Supply Pressure	: 10 Bar
Output Pressure	: 7 Bar
Temperature	: -20 °C ~ 70 °C

Single & Double Air Lock Valve



Model Single	: SALV
Model Double	: DALV
Size	: 1/4" to 3/4"
MOC	: Aluminium, S.S - CF8M
Seals	: NBR
Supply Pressure	: 10 Bar
Output Pressure	: 7 Bar
Temperature	: -20 °C ~ 70 °C

Manual Override Clutch Type (MO)



Model	: AMO
Torque	: 200 Nm to 10000 Nm
Body	: Aluminium, S. G. Iron, MS
Lever Wheel	: Stainless Steel
Hand Wheel	: S.S. / M.S. (Fabricated)

Mining
& Mineral
Processing

Pulp
&
Paper

Cement

water
&
Wastewater

Sugar

Carbon
Black

Material
Handling

Fossil Fuel
Power

MAIN MARKETS

Usage & Applications

Knife gate and slurry valves are rarely used where conventional valve designs such as gate, globe, ball, plug or butterfly valves would work well. In particular, these designs are seldom used in services involving clean liquids or gases as their limitations far outweigh the advantages. However, where solids (Free flowing powders), mixtures of liquids and solids, or solids and gases are involved, these valves provide superior functional features, and service life compared to conventional valve designs.

Knife gate and slurry valves are predominantly used for shut-off/isolation services as 'On/Off' valves. They are seldom used to throttle flow or as control valves as the media they handle are not suitable for throttling. However, few exceptions and some special designs do exist for these limited throttling applications. Major industrial sectors where these valves are applied are shown in Fig-5.

Liquid + solid

These mixtures occur in a variety of industries and form the primary area of use for knife gate and slurry valves. The mixtures vary widely in composition and are usually referred to as sludge or slurry. Typically, sludge contains relatively soft solid components whereas slurry has harder and more abrasive solid components. The composition of the solid component may vary from very small percentages to as high as 70 percent. The solid component, may be present in the form of very fine powder or as a mixture of fine powder and coarse lumps. Most of these media remain homogeneous only when kept agitated and mixed well, when kept still (as in stagnant pipes or vessels) they tend to settle and form separate solid and liquid layers. Many of them dewater and harden on cement. The liquid component drains off in the service. All these factors create challenges to the effective functioning of these valves.

Solid (Powders)

Primary use with powders are to extract materials from storage vessels like silos. This application is used across a wide variety of industries.

Media handled

Typical types of media where these valves are used:

Solid (Powders) + Gas

In many of these applications involve pneumatic conveying systems where powders are transported, these also occur across many industries.

Gas

Some of the knife gate valve designs can handle high temperatures as well as thermal cycling better than other valve designs. Exhaust gas heat regeneration and carbon black processing are typical sectors with such services. Examples of typical media that knife gate and slurry valves handle are:

Paper mill



Wastewater



Chemical



Pulp & Paper

- » Paper Stock
- » Liquor Services
- » Recycle Project

Wastewater

- » Slurry / Sludge Lines

General Industry

- » Pneumatic Conveyance
- » Raw & Treated Water
- » Water Conveyed Solids
- » Dry Media / Cement
- » Hot Gases

Chemical

- » Pellets
- » Processing Fluids & Chemicals
- » Petroleum Products

Power

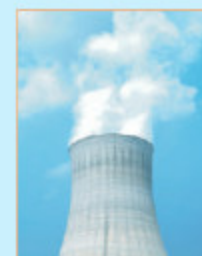
- » Fly Ash
- » Bottom Ash
- » Branch Lines

Food & Beverage

- » Winery
- » Drain Processing
- » Brewery
- » Grain
- » Storage Silo
- » Spent Grain

Steel

- » Slog
- » Iron or Slurry

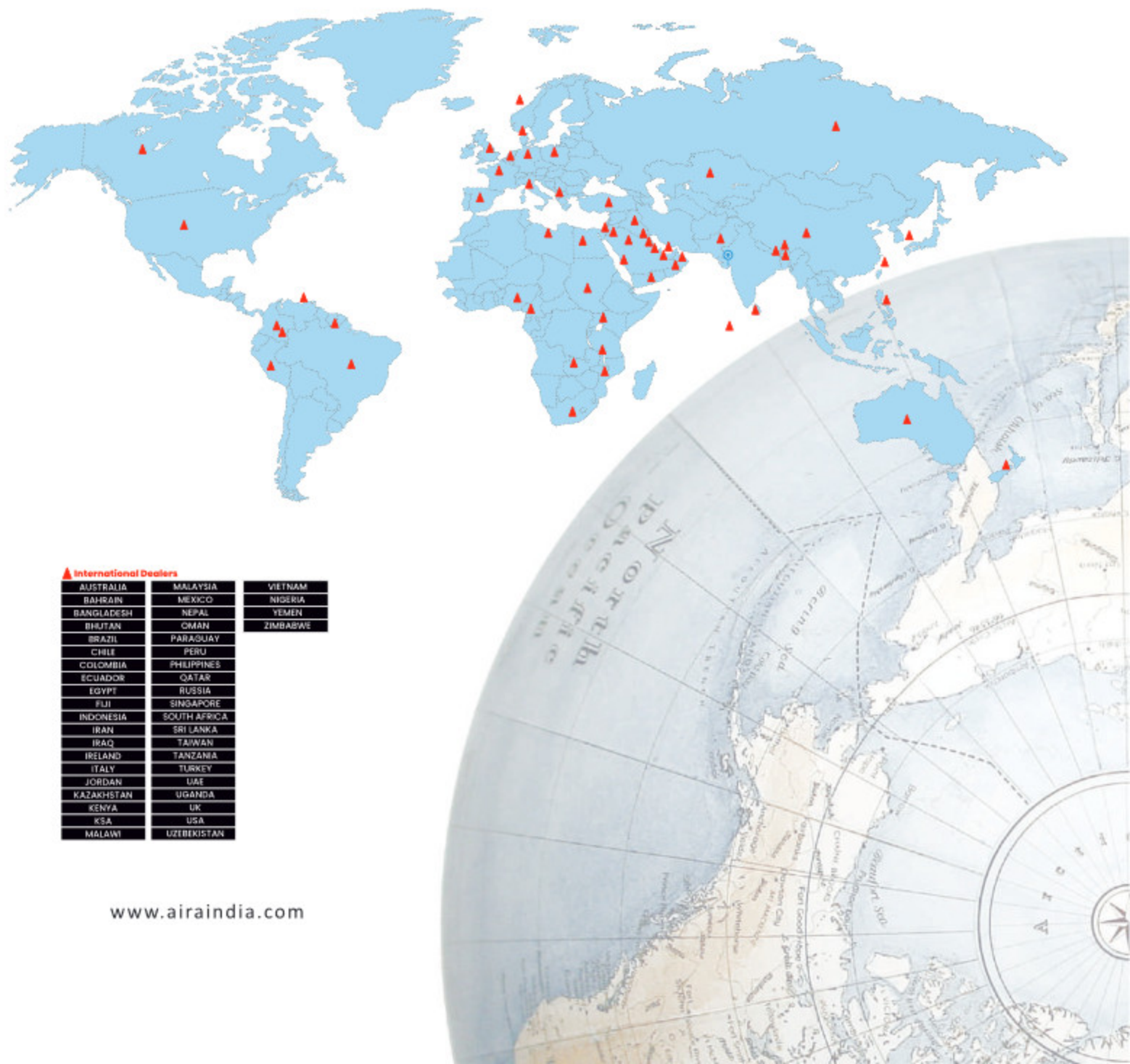




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