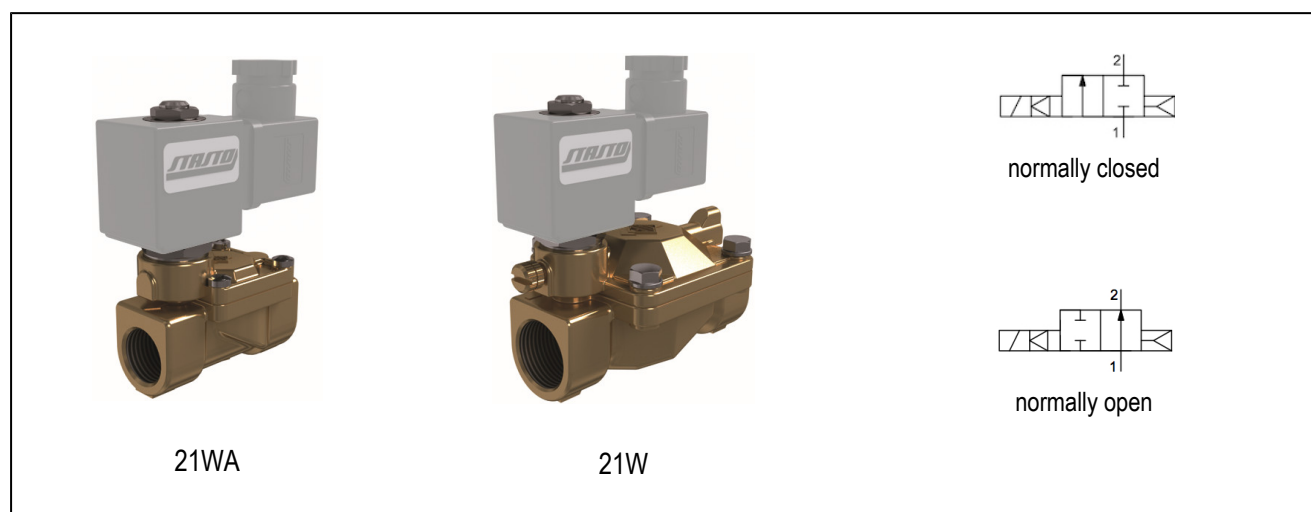


2/2 - way solenoid valve - pilot-operated series 21WA and 21W



design	2/2-way solenoidvalve with diaphragm, pilot-operated, normally closed or normally open
connection	21WA: G3/8"...G1/2" according to ISO228/1 21W: G3/4"...G2" according to ISO228/1
materials	body brass, inner parts brass and stainless steel similar 1.4104, diaphragm material NBR, FKM or EPDM (only 21W)
type of fixing	installed into rigid pipework
mounting position	any
application	gaseous and liquid fluids which do not affect the used materials
viscosity	max. 12mm ² /s (cst)
switching time	depending on operating pressure and media
medium temperature	dependent on sealing material and coil
ambient temperature	see table "coils"
electrical data	
type of coil	type BDA, connector size 32mm (standard coil) type BDV, connector size 32mm (coil for humid area)
electrical connection	connector acc. to EN175301-803-form A (see separate datasheet)
type of current	AC and DC
standard voltage	230V/50-60Hz, 24V/50-60Hz, 24VDC
special voltage	12...380V/50Hz or 60Hz, 12...220VDC
acceptable voltage tolerance	AC +10%/-15% DC +10%/-5%
power consumption	see to the table "power consumption of coils"
duty cycle	100% duty cycle (continuous operation)
protection class	IP65 according to EN 60529 for a correctly mounted connector (protection against the penetration of dust and jet water)
direction for use	please specify voltage and type of current by order. we always recommend connecting a strainer in front of the valve, otherwise malfunction can occur in the event of contaminated medium. these valves can also be used for rough vacuum if the minimum differential pressure of 0,2 bar does exit. ATEX: The valves may only be used for media that are not explosive.

type code 21WA

		21WA 3 K0 B 130 - M - BDA - 230V/50-60Hz									
connection	G3/8"	3									
	G1/2"	4									
function	normally closed	K0									
	normally open	Z0									
seal	NBR	B									
	FKM	V									
nominal diameter	13,0mm	130									
manual emergency override	without manual operation (blank position)										
	manual operation (only for normally closed valves)	M									
coil	BDA standard coil - approval CE									BDA	
	BDV coil for humid area - approval CE-CSA-UL-VDE									BDV	
	Y1 coil for ATEX areas with cable length of 3m (only for normally closed valves)									Y1	
	Y2 coil for ATEX areas with cable length of 3m (only for normally closed valves)									Y2	
voltage	230V/50-60Hz									230V/50-60Hz	
	24V/50-60Hz									24V/50-60Hz	
	24VDC									24VDC	
	12...380V/50Hz or 60Hz										
	12...220VDC										

type code 21W

		21W 3 K B 190 - MR - BDA - 230V/50-60Hz									
connection	G3/4"	3									
	G1"	4									
	G1 1/4"	5									
	G1 1/2"	6									
	G2"	7									
function	normally closed	K									
	normally open	Z									
seal	NBR	B									
	FKM	V									
	EPDM	E									
nominal diameter	19mm	190									
	25mm	250									
	35mm	350									
	40mm	400									
	50mm	500									
manual emergency override	without manual operation (blank position)										
	manual operation/adjustable closing delay (only for normally closed valves)	MR									
coil	BDA standard coil - approval CE									BDA	
	BDV coil for humid area - approval CE-CSA-UL-VDE									BDV	
	Y1 coil for ATEX areas with cable length of 3m (only for normally closed valves)									Y1	
	Y2 coil for ATEX areas with cable length of 3m (only for normally closed valves)									Y2	
voltage	230V/50-60Hz									230V/50-60Hz	
	24V/50-60Hz									24V/50-60Hz	
	24VDC									24VDC	
	12...380V/50Hz or 60Hz										
	12...220VDC										

application of the individual seal materials

material	medium temperature	examples of use
NBR	-10...90°C	air, water, neutral gases and liquids
EPDM	-10...140°C	hot water, steam, oxygen
FKM	-10...140°C	oils, petrol, diesel

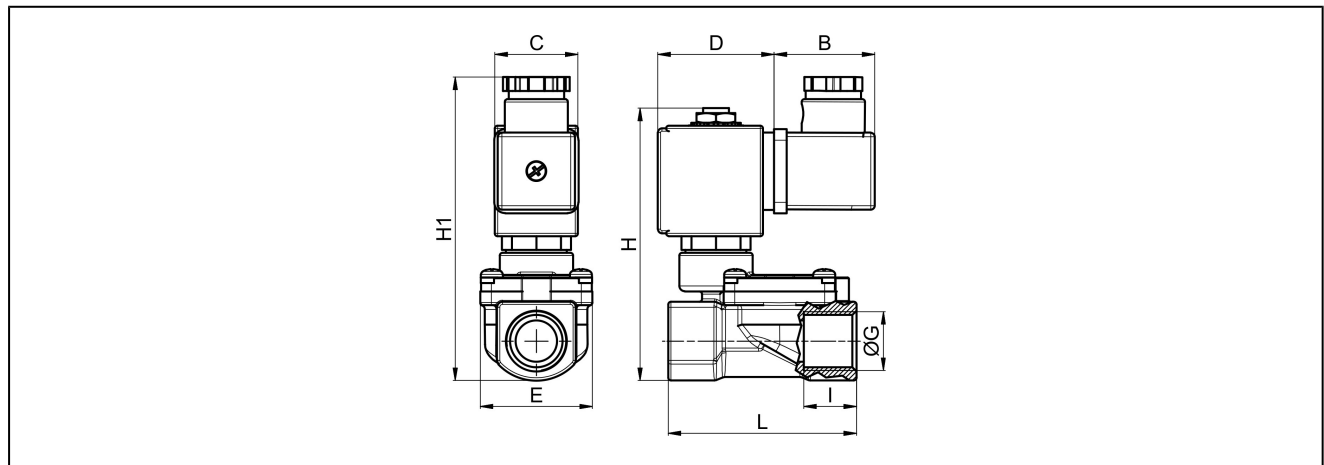
coils

type	protection class	use	ambient temperature	approvals
BDA	IP65	medium temperature up to max. 120°C	-10...+40°C	CE
BDV	IP65	medium temperature up to max. 160°C, high humidity	-20...+60°C	CE-CSA-UL-VDE
Y1/Y2	Ex II 2G Ex mb IIC T4 Ex II 2D Ex mb tb IIIC T130°C	in areas where there is a risk of explosion, zone 1/2/21/22, ignition class T4, maximum medium temperature 80°C	-20...+50°C	ATEX

power consumptions of the coils

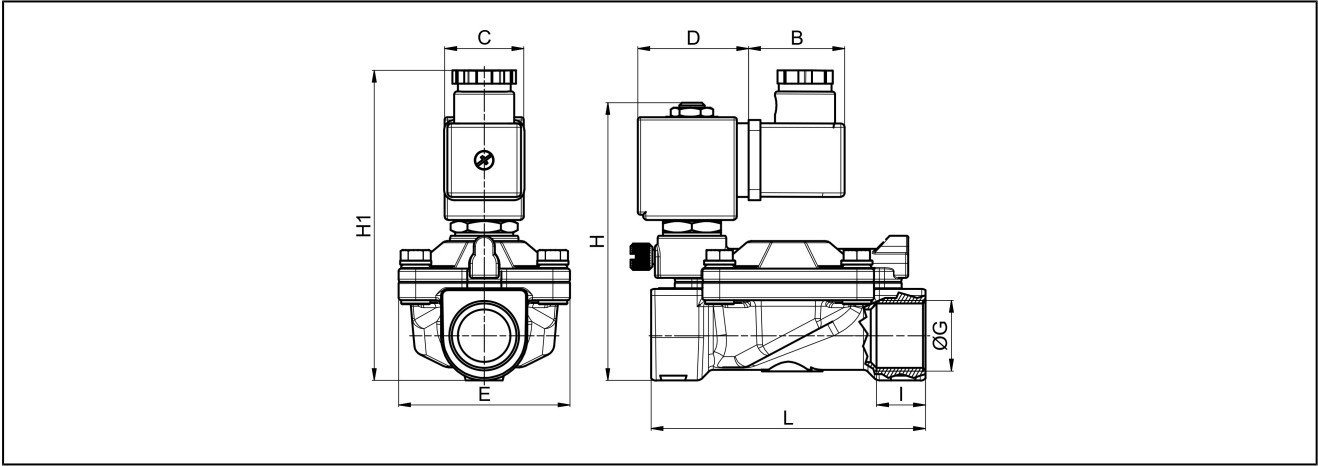
voltage	inrush power (AC) VA	holding power (AC) VA	holding power (direct current) at operating temperature W	type
220-230V/50-60Hz	25	14,5	-	BDA08223DS
24V/50-60Hz	25	14,5	-	BDA08024DS
24VDC	-	-	8	BDA08024CS
380V/50-60Hz	25	14,5	-	BDA08380DS
110V/50-60Hz	25	14,5	-	BDA08110DS
48V/50Hz	25	14,5	-	BDA08048AS
42V/50Hz	25	14,5	-	BDA08042AS
110VDC	-	-	8	BDA08110CS
12VDC	-	-	8	BDA08012CS
230V/50Hz 240V/60Hz	25	16	-	BDV08230AY
24V/50-60Hz	25	17	-	BDV08024DY
24VDC	-	-	11	BDV08024CY
110V/50Hz 120V/60Hz	25	15	-	BDV08110AY
220-240V/50-60Hz	-	max. 9,2	-	Y1220-240V/50-60Hz
24VDC	-	-	10,1	Y124VDC
220-240V/50-60Hz	-	max. 9,2	-	Y2220-240V/50-60Hz
24VDC	-	-	10,1	Y224VDC

dimensions 21WA



connection G	nominal diameter DN[mm]	pressure range [bar]	B	C	D	E	H	H1	L	I	kv value [m ³ /h water]	weight [approx. kg]	coil	type
G3/8"	13	0,2-16	36	30	42	40	97	111	60	15	3,6	0,6	BD.	21WA3.0.130
G3/8"	13	0,2-16	36	36	43	40	97	133	60	15	3,6	0,72	Y1/Y2	21WA3.0.130
G1/2"	13	0,2-16	36	30	42	40	97	111	66	15	4,2	0,6	BD.	21WA4.0.130
G1/2"	13	0,2-16	36	36	43	40	97	133	66	15	4,2	0,72	Y1/Y2	21WA4.0.130

dimensions 21W



connection G	nominal diameter DN[mm]	pressure range [bar]	B	C	D	E	H	H1	I	L	kv value [m ³ /h water]	weight [approx. kg]	coil	type
G3/4"	19	0,2-16	36	30	42	65	105	119	17	104	8,4	1,2	BD.	21W3..190
G3/4"	19	0,2-16	36	36	43	65	105	141	17	104	8,4	1,3	Y1/Y2	21W3..190
G1"	25	0,2-16	36	30	42	65	112	126	17	104	11,4	1,2	BD.	21W4..250
G1"	25	0,2-16	36	36	43	65	112	148	17	104	11,4	1,3	Y1/Y2	21W4..250
G1 1/4"	35	0,2-10	36	30	42	98	125	139	21	144	24,0	2,7	BD.	21W5..350
G1 1/4"	35	0,2-10	36	36	43	98	125	161	21	144	24,0	2,8	Y1/Y2	21W5..350
G1 1/2"	40	0,2-10	36	30	42	98	125	139	21	144	31,2	2,7	BD.	21W6..400
G1 1/2"	40	0,2-10	36	36	43	98	125	161	21	144	31,2	2,8	Y1/Y2	21W6..400
G2"	50	0,2-10	36	30	42	118	141	155	25	172	45,0	4,9	BD.	21W7..500
G2"	50	0,2-10	36	36	43	118	141	177	25	172	45,0	5,0	Y1/Y2	21W7..500

illustrations are non-binding
all designs, configurations, measurements and materials are subject to change without prior notice