



CEODEUX SOLENOID VALVES

UNIQUE

MODULAR

SYSTEM



Unique Modular System
Solenoid Valves

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DESCRIPTION

Concept

EFFICIENCY:

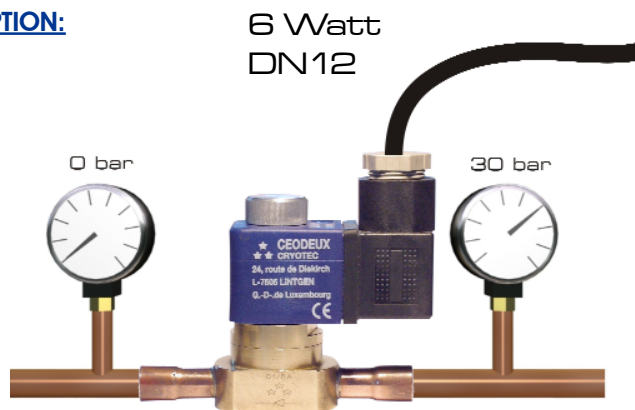
is the most convincing property of Solenoid Valves from CEODEUX due to their special design and their high precision components and assembly.

Efficiency means long cycle life, switching elevated pressures with low power consumption and small space requirements.

COMPACT MODULAR DESIGN:



LOW POWER CONSUMPTION:



Typical applications:



Food transportation

- Low power consumption
- Slim design
- Any orientation
- Long life cycle



Automotive air conditioning

- Lower power consumption
- Slim design
- Any orientation
- Long life cycle



Laboratory

- Low noise with AC
- Fast switching
- Any orientation
- Long life cycle



Ice cube machines

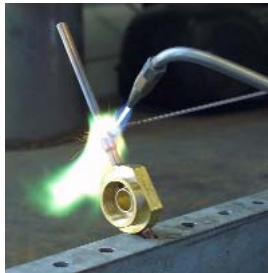
- Low noise with AC
- Any orientation
- Long life cycle

DESCRIPTION

Concept

MODULARITY:

Within one Product Line (M12, M14, M25, M34 or M48), that is assigned to the connecting thread between Valve Cartridge and Valve Body all combinations of Cartridge, Body and Coil are possible.



1. Soldering



2. Cooling down



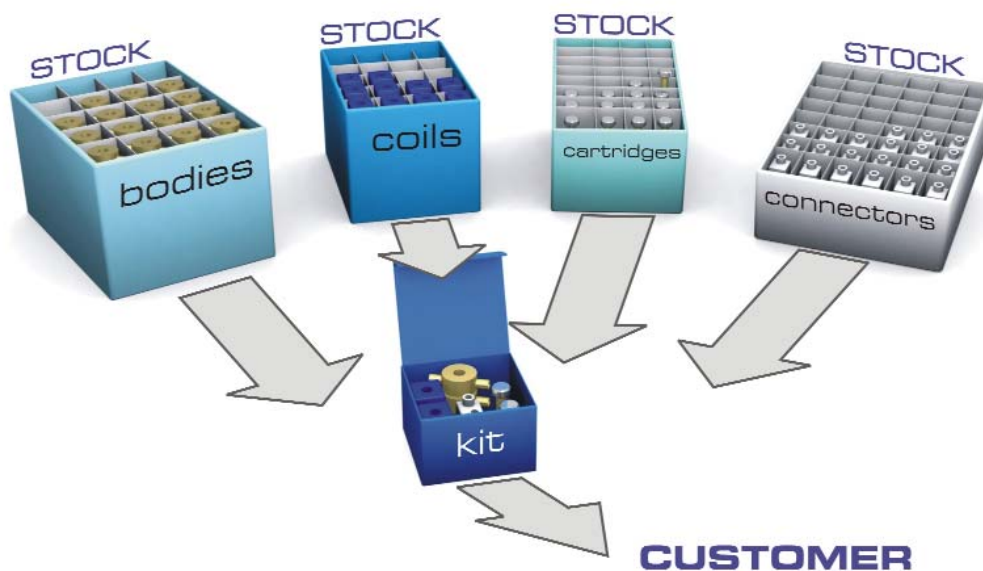
3. Mounting of valve cartridge



4. Mounting of the coil

ADVANTAGE FOR INSTALLERS:

Every component is available separately and the assembly needs only a standard torque wrench. Valve bodies can be soldered separately into the copper lines, without overheating the valve cartridge that is mounted after the soldering process.



ADVANTAGE FOR DISTRIBUTORS:

Need only to have the components on stock and not all combinations of seat diameters, tube diameters and supply voltages.

DESCRIPTION

Technologies

PRODUCT LINES:

	<u>M12 / M14</u>	<u>M25</u>	<u>M34</u>	<u>M48</u>
Thread of valve cartridge	5mm	12mm	18mm	25mm
Orifice diameter	5mm	12mm	18mm	25mm
Electrical power consumption	6W	6W	10W	10W
Diameter solder connection(metric)	6 to 10mm	10 to 22mm	16 to 28mm	28 to 42mm
Diameter solder connection (inch)	1/4" - 3/8"	1/4" - 7/8"	5/8" - 1 1/8"	1 1/8" - 1 5/8"
Diameters flare connection	-	1/4" - 5/8"	-	-
Diameters internal thread connection	-	1/4" - 1/2" - 3/8"	3/4"	1"

Coils are available for 12V DC, 24V DC, 24V AC, 115V AC and 230V AC; other voltages on request

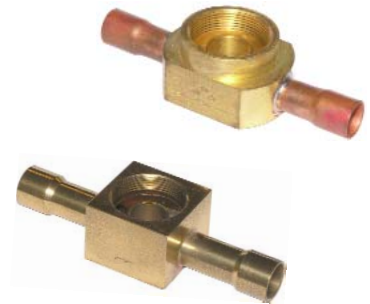
CONNECTION TECHNOLOGIES

COPPER TUBE OR BRASS SOLDER CONNECTION:

Soldering is the preferred method because it results in reliable leak free connections without the need of skilled personnel.

The modular concept of the CEODEUX SOLENOID VALVES allows to solder to the line the valve bodies only, that are not sensitive to soldering heat. The valve cartridge, that contains the heat sensitive parts, is simply screwed in as soon as the soldered body has cooled down and was purged from residuals of the soldering process.

Consequently with CEODEUX SOLENOID VALVES "heat shielding techniques" like envelopes of wet cloth during soldering have become obsolete.



FLARE CONNECTION

With regard to the protection of the environment flare connections are more and more replaced by solder connections. To achieve a leak free metal to metal seal the tube has to be cut squarely, burrs must be removed by reaming and the flaring has to be done carefully with special tools. Thus there are a lot of possibilities to make things wrong. Even the argument that flare connected valves are easier to exchange than solder connected is not valid for CEODEUX SOLENOID VALVES, because in most cases it is sufficient to exchange the screw type valve cartridge only, while the valve body stays connected to the line tubing.



INTERNAL THREAD CONNECTION

Needs double ring fittings trade name SAGANA, available from ROTAREX DISTRIBUTION, to give safe, leakage free connection to the line tube.



DESCRIPTION

Technologies

MATERIALS:

To cover a maximum of media and working conditions, the following materials are used:

Valve housing and Piston:	Brass (Stainless Steel on request)
Magnets and Spring :	Stainless Steel
Seals for internal tightness:	PTFE (Teflon)
Seal for external tightness (O-Ring)	EPDM (others on demand)

WORKING CONDITIONS:

Working temperature:	-40°C to +150°C (Temperature of fluid)
Pressure drop Product Line M12 / M14:	0 to 30 bar
Pressure drop Product Lines M25, M34, M48:	0,1 to 30 bar
Leakage internal	Pressure drop > 10 bar: less than 10 ⁻³ mbarl/s
Leakage external	less than 10 ⁻³ mbarl/s
Fluid media:	Halocarbons, Water, low viscosity oils (others on demand)

Accessories

Product Line M25 valve bodies accept not only M25 solenoid valve cartridges but also the following M25 accessory cartridges:

- **Sight glass** cartridge with moisture indicator



- **Hand wheel** operated **shut off valve** cartridge



- **Key** operated **shut off valve** cartridge



- **Non return valve** cartridge



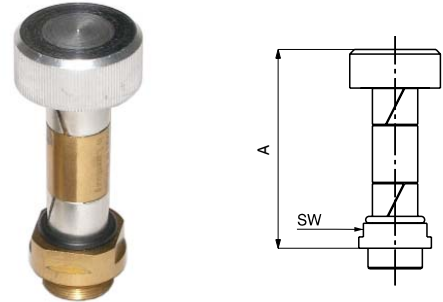
- **Filter** cartridge



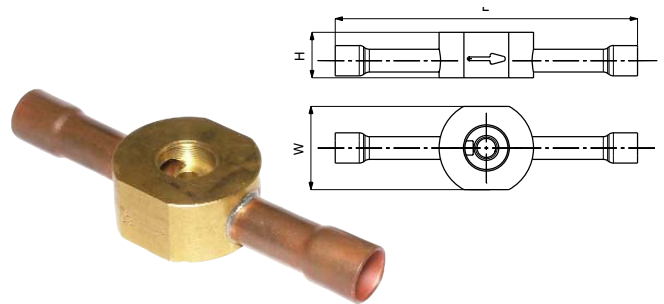
PRODUCT LINE M12
VALVE CARTRIDGE M12
Orifice diameter: 5mm

Version	Order code	Dimensions (mm)	
		A	SW
NC (Normally closed)	VAZ 000	44	14
NO (Normally open)	VAZ 030	44	14

Mounting torque: 10 - 14 Nm

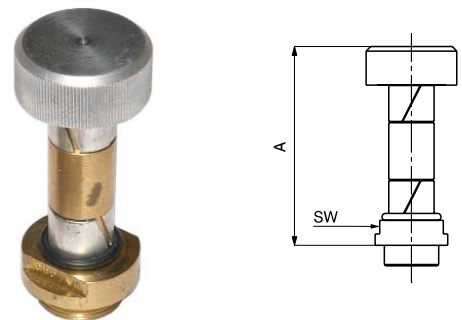

VALVE BODY M12

Version:	Order Code	Dimensions[mm]		
		H	W	L
Solder tube 6mm	GAA 500	12	22	80
Solder tube 10mm	GAB 500	14,5	27	89
Solder tube 1/4"	GAI 500	12	22	80
Solder tube 3/8"	GAJ 500	14,5	27	89

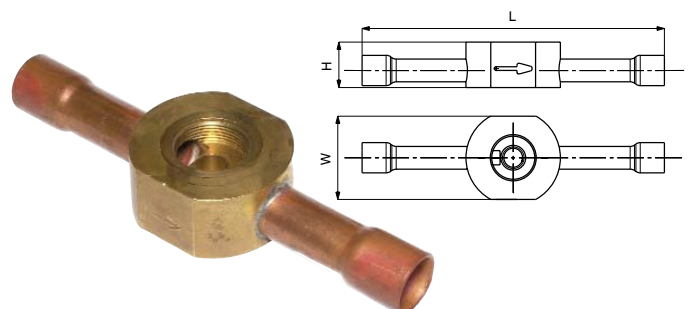

PRODUCT LINE M14
VALVE CARTRIDGE M14
Orifice diameter: 5mm

Version	Order Code	Dimensions (mm)	
		A	SW
NC (Normally closed)	VEZ 000	44	14
NO (Normally open)	VEZ 030	44	14

Mounting torque: 15 - 20 Nm


VALVE BODY M14

Version:	Order Code	Dimensions[mm]		
		H	W	L
Solder tube 6mm	GEA 500	12	22	80
Solder tube 10mm	GEB 500	14,5	27	89
Solder tube 1/4"	GEI 500	12	22	80
Solder tube 3/8"	GEJ 500	14,5	27	89



PARTS

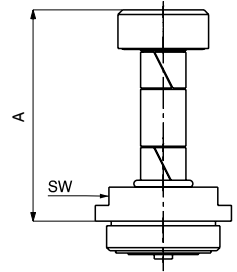
PRODUCT LINE M25

SOLENOID VALVE CARTRIDGE M25

Orifice diameter 12mm

Version	Order Code	Dimensions (mm)	
		A	SW
NC (Normally closed)	VBZ 000	46,5	24
NO (Normally open)	VBZ 030	46,5	24

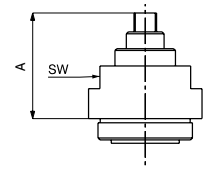
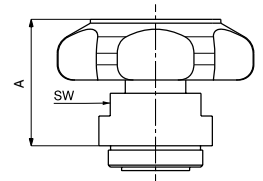
Mounting torque: 25 - 30 Nm



SHUT OFF VALVE CARTRIDGE M25

Version:	Order Code	Dimensions (mm)	
		A	SW
Handwheel operated	HBZ 030	34	19
Key operated	IBZ 030	32	19

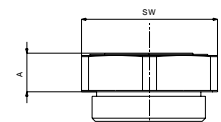
Mounting torque: 25 - 30 Nm



SIGHT GLASS M25

Order Code	Dimensions (mm)	
	A	SW
KBZ 000	12	30

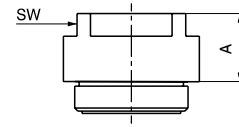
Mounting torque: 25 - 30 Nm



PRODUCT LINE M25
CHECK VALVE CARTRIDGE M25

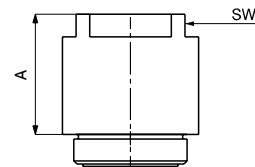
Order Code	Dimensions (mm)	
	A	SW
KBZ 000	15	24

Mounting torque: 25 - 30 Nm

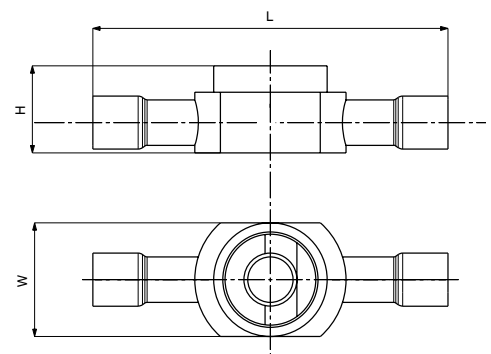

FILTER CARTRIDGE M25

Order Code	Dimensions (mm)	
	A	SW
FBZ 000	21	24

Mounting torque: 25 - 30 Nm


VALVE BODY M25 WITH COPPER SOLDER TUBE

Version:	Order Code*	Dimensions [mm]		
		H	W	L
Solder tube 6mm	GBA 500	17	30	80
Solder tube 10mm	GBB 500	21	30	90
Solder tube 12mm	GBC 500	22	30	94
Solder tube 16mm	GBD 500	26	30	100
Solder tube 22mm	GBE 500	32	30	110
Solder tube 1/4"	GBI 500	17	30	80
Solder tube 3/8"	GBJ 500	21	30	90
Solder tube 1/2"	GBK 500	22	30	94
Solder tube 5/8"	GBL 500	26	30	100
Solder tube 7/8"	GBM 500	32	30	110



*)For brass tubes for brazing order XXX 010 instead of XXX 500

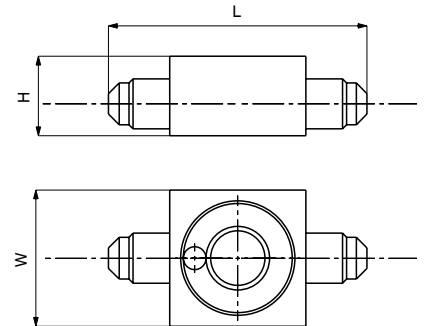


PARTS

PRODUCT LINE M25

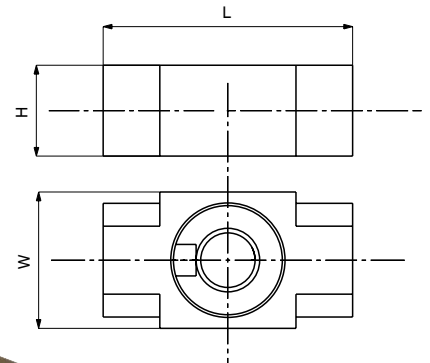
VALVE BODY M25 WITH FLARE CONNECTION

Version:	Order Code	Dimensions [mm]		
		H	W	L
Tube 1/4"	GBA 100	17,5	30	57
Tube 3/8"	GBB 100	21,5	30	62
Tube 1/2"	GBC 100	24	30	66
Tube 5/8"	GBD 100	27	30	70



VALVE BODY M25 WITH FEMALE THREAD CONNECTION

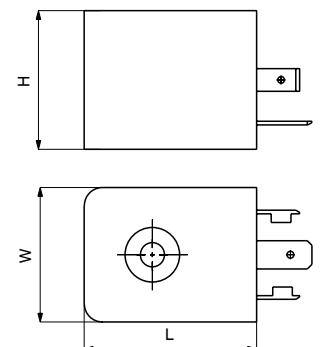
Version:	Order Code	Dimensions [mm]		
		H	W	L
Female Thread G1/4"	GBS 000	20	30	55
Female Thread G3/8"	GBR 000	20	30	55
Female Thread G1/2"	GBT 000	26	30	59



PRODUCT LINES M12 / M14 / M25

COIL 6W

Version:	Order Code	Dimensions [mm]		
		H	W	L
12V DC	MAA 004	30	30	35
24V DC	MAA 003	30	30	35
24V AC	MAA 002	30	30	35
110V AC	MAA 005	30	30	35
200V DC	MAA 006	30	30	35
220V AC	MAA 001	30	30	35



PRODUCT LINE M34

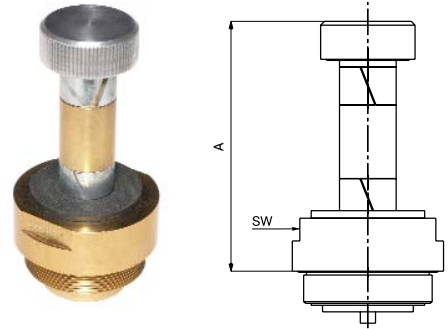
SOLENOID VALVE CARTRIDGE M34

Orifice Diameter 18mm

Version:	Order Code
NC (Normally closed)	GCZ 000
NO (Normally open)	GCZ 030

Mounting torque: 55 - 65 Nm

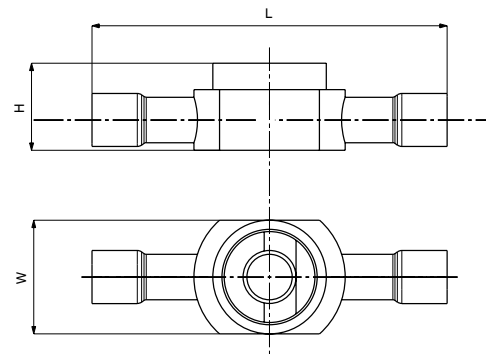
Dimensions (mm)	
A	SW
66	36
66	36



VALVE BODY M34 WITH COPPER SOLDER TUBE

Version:	Order Code*
Solder tube 16mm	GCD 500
Solder tube 22mm	GCE 500
Solder tube 28mm	GCF 500
Solder tube 5/8"	GCL 500
Solder tube 7/8"	GCM 500
Solder tube 1" 1/8	GCN 500

Dimensions [mm]		
H	W	L
34	40	120
38	40	120
41	40	122
34	40	120
38	40	120
41	40	122



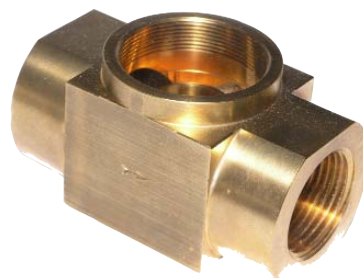
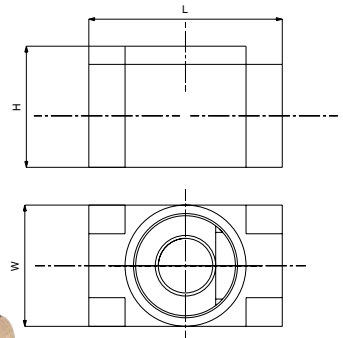
*)For brass tubes for brazing order XXX 010 instead of XXX 500



VALVE BODY M34 WITH FEMALE THREAD

Version:	Order Code
Female Thread G3/4"	GCU 000

Dimensions [mm]		
H	W	L
40	40	74



PARTS

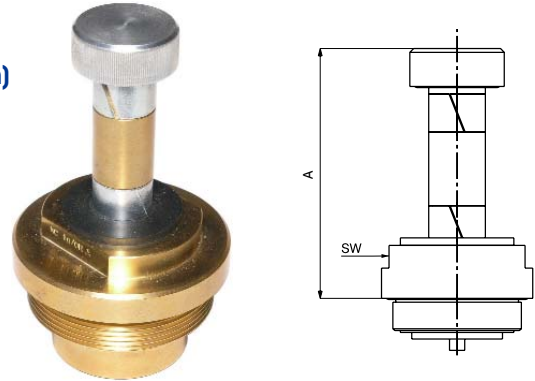
PRODUCT LINE M48

SOLENOID VALVE CARTRIDGE M48

Orifice Diameter 25mm

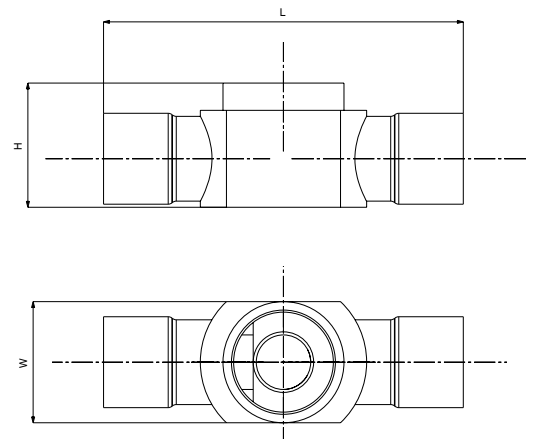
Version:	Order Code	Dimensions (mm)	
		A	SW
NC (Normally closed)	VDZ 000	66	32
NO (Normally open)	VDZ 010	66	32

Mounting torque: 55 - 65 Nm



VALVE BODY M48 WITH COPPER SOLDER TUBE

Version:	Order Code*	Dimensions [mm]		
		H	W	L
Solder tube 28mm	GDF 500	52	53	140
Solder tube 35mm	GDG 500	55	53	140
Solder tube 42mm	GDH 500	55	53	140
Solder tube 1" 1/8	GDN 500	52	53	140
Solder tube 1" 3/8	GDO 500	55	53	140
Solder tube 1" 5/8	GDP 500	55	53	140



*For brass tubes for brazing order XXX 010 instead of XXX 500

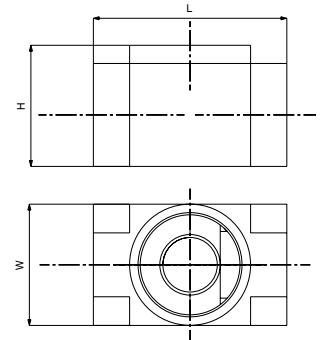


PARTS

PRODUCT LINE M48

VALVE BODY M48 WITH FEMALE THREAD

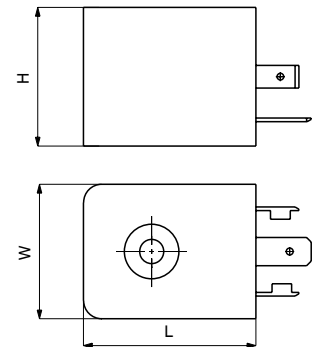
Version:	Order Code	Dimensions [mm]		
		H	W	L
Female Thread G1"	GDV 000	55	55	91



PRODUCT LINES M34 / M48

COIL 10W

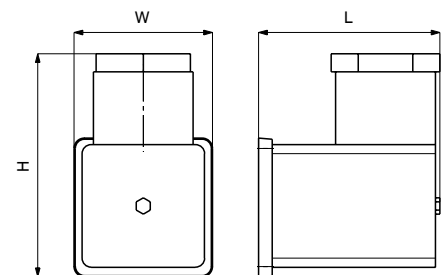
Version:	Order Code	Dimensions [mm]		
		Height	Width	Length
12V DC	MCA 004	40	40	48
24V DC	MCA 003	40	40	48
24V AC	MCA 002	40	40	48
110V AC	MCA 005	40	40	48
200V DC	MCA 006	40	40	48
220V AC	MCA 001	40	40	48



PRODUCT LINES M12 / M14 / M25 / M34 / M48

CONNECTOR IP 65 ACC. DIN 46530 A

Version:	Order Code	Dimensions [mm]		
		H	W	L
Standard	SAA 000	52	27	27
With Diodes for NO Valves	SAA 003	52	27	27



ORDER TABLE

2 / 2 WAY SOLENOID VALVES OVERVIEW Table

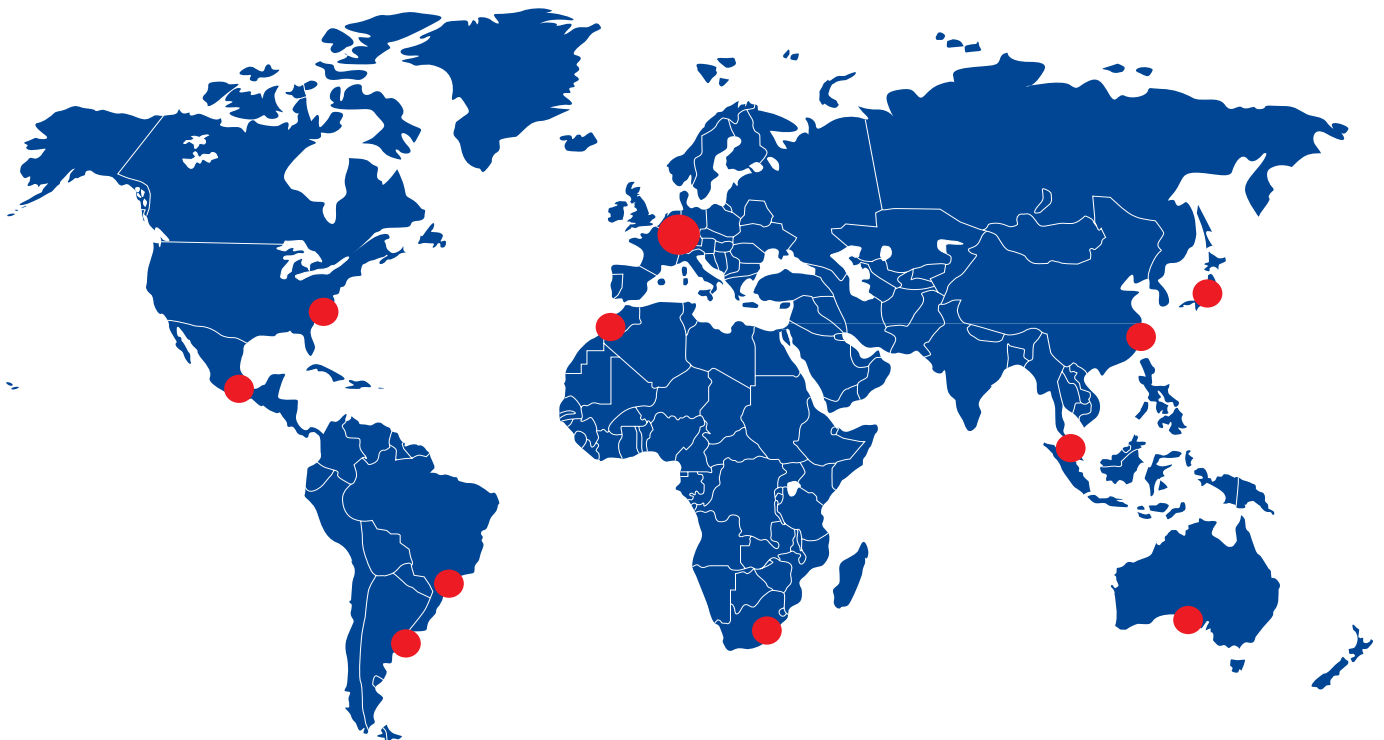
Brass Body / Copper Tube Solder Connections									
BODY	TUBE OD	ORIFICE	Kv VALUE	PRESSURE DROP		CARTRIDGE	ORDER CODE	ORDER CODE	Coil
ORDER CODE	Cu soldertube	DIA (mm)	m3/h	mini	Maxi	PRODUCT LINE	NC	NO	W
GAI 500	1/4"	5	0.26	0	30	M12	VAZ 000	VAZ 030	6
GAJ 500	3/8"	5	0.3	0	30	M12	VAZ 000	VAZ 030	6
GEI 500	1/4"	5	0.26	0	30	M14	VEZ 000	VEZ 030	6
GEJ 500	3/8"	5	0.3	0	30	M14	VEZ 000	VEZ 030	6
GBI 500	1/4"	12	0.3	0.1	30	M25	VBZ 000	VBZ 030	6
GBJ 500	3/8"	12	0.8	0.1	30	M25	VBZ 000	VBZ 030	6
GBK 500	1/2"	12	1.9	0.1	30	M25	VBZ 000	VBZ 030	6
GBL 500	5/8"	12	2.4	0.1	30	M25	VBZ 000	VBZ 030	6
GBM 500	7/8"	12	2.6	0.1	30	M25	VBZ 000	VBZ 030	6
GCL 500	5/8"	18	4.5	0.1	30	M34	VCZ 000	VCZ 030	10
GCM 500	7/8"	18	6	0.1	30	M34	VCZ 000	VCZ 030	10
GCN 500	1"1/8	18	6	0.1	30	M34	VCZ 000	VCZ 030	10
GDN 500	1"1/8	25	12.5	0.1	30	M48	VDZ 000	VDZ 030	10
GDO 500	1"3/8	25	12.5	0.1	30	M48	VDZ 000	VDZ 030	10
GDP 500	1"5/8	25	14	0.1	30	M48	VDZ 000	VDZ 030	10
GAA 500	6 mm	5	0.26	0	30	M12	VAZ 000	VAZ 030	6
GAB 500	10 mm	5	0.3	0	30	M12	VAZ 000	VAZ 030	6
GEA 500	6 mm	5	0.26	0	30	M14	VEZ 000	VEZ 030	6
GEB 500	10 mm	5	0.3	0	30	M14	VEZ 000	VEZ 030	6
GBA 500	6 mm	12	0.3	0.1	30	M25	VBZ 000	VBZ 030	6
GBB 500	10 mm	12	0.8	0.1	30	M25	VBZ 000	VBZ 030	6
GBC 500	12 mm	12	1.9	0.1	30	M25	VBZ 000	VBZ 030	6
GBD 500	16 mm	12	2.4	0.1	30	M25	VBZ 000	VBZ 030	6
GBE 500	22 mm	12	2.6	0.1	30	M25	VBZ 000	VBZ 030	6
GCD 500	16 mm	18	4.5	0.1	30	M34	VCZ 000	VCZ 030	10
GCE 500	22 mm	18	6	0.1	30	M34	VCZ 000	VCZ 030	10
GCF 500	28 mm	18	6	0.1	30	M34	VCZ 000	VCZ 030	10
GDF 500	28 mm	25	12.5	0.1	30	M48	VDZ 000	VDZ 030	10
GDG 500	35 mm	25	12.5	0.1	30	M48	VDZ 000	VDZ 030	10
GDH 500	42 mm	25	14	0.1	30	M48	VDZ 000	VDZ 030	10
Brass Body / Flare Connections									
BODY	TUBE OD	ORIFICE	Kv VALUE	PRESSURE DROP		CARTRIDGE	ORDER CODE	ORDER CODE	Coil
ORDER CODE	Flare Conn.	DIA (mm)	m3/h	mini	Maxi	PRODUCT LINE	NC	NO	W
GBI 100	1/4"	12	0.3	0.1	30	M25	VBZ 000	VBZ 030	6
GBJ 100	3/8"	12	0.8	0.1	30	M25	VBZ 000	VBZ 030	6
GBK 100	1/2"	12	1.9	0.1	30	M25	VBZ 000	VBZ 030	6
GBL 100	5/8"	12	2.4	0.1	30	M25	VBZ 000	VBZ 030	6
Brass Body / Female Thread									
BODY	THREAD DIA	ORIFICE	Kv VALUE	PRESSURE DROP		CARTRIDGE	ORDER CODE	ORDER CODE	Coil
ORDER CODE	Femalethread	DIA (mm)	m3/h	mini	Maxi	PRODUCT LINE	NC	NO	W
GBS 000	1/4"	12	0.3	0.1	30	M25	VBZ 000	VBZ 030	6
GBR 000	3/8"	12	0.8	0.1	30	M25	VBZ 000	VBZ 030	6
GBT 000	1/2"	12	1.9	0.1	30	M25	VBZ 000	VBZ 030	6
GCU 000	3/4"	18	4.5	0.1	30	M34	VCZ 000	VCZ 030	10
GDV 000	1"	25	12.5	0.1	30	M48	VDZ 000	VDZ 030	10

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information