

LUCIFER®

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General Catalogue Solenoid Valves

2-way valves

Catalogue 8930/GB

CONTENTS ►



Parker Lucifer SA

Perfect compatibility between a multinational approach and integration into the local industrial community.

Parker Lucifer's Valve Division, manufacturing fluid control solenoid valves and pressure regulators, is located in Carouge-Geneva, Switzerland with manufacturing sites both in Geneva and Gessate near Milan, Italy.

With the multinational structure of the Parker Group we now have support that enables us to face the international market. To date we are represented in over 50 Countries with an established network of distributors in each industrial market open to us. Parker Lucifer is located in Geneva, Switzerland, a European communications and traffic centre.

Mastering technologies in anticipation of your needs.

We aim always to stay a step ahead of our customers' demands. You are looking for someone who has expertise in the latest technology, who has a solid body of know-how and who will participate directly in the development of your products.

Parker Lucifer takes advantage of the developments made in various divisions of Parker Corporation and, in doing so, of all the skills and synergy generated by our Group.

Parker's technology transfer policy provides us with the know-how of a global corporation. You derive direct advantage from this for our expertise in these technologies, which enables us to anticipate your needs.

Total quality and innovation. Our strong points for building the future with you

Quality has now become the essential condition for the survival of a corporation. You know it. We know it.

Your future depends on offering your customers ever more efficient, more reliable products. To do that, you have to be able to rely on first-rate suppliers who share your vision of the future and are capable of understanding your needs.

In order to better meet your demands and to ensure that we can offer you full guarantees of reliability, we have perfected a Total Quality program. At the same time, we pursue a strategy of innovation both in our processes and functions as well as in safety.

Environmental management bears witness to our desire to protect essential values.

Parker Lucifer is committed to respecting and protecting our environment by applying its own solutions. Although not mandatory, the ISO 14001 standards concern the environmental commitment of the company to supply products and service that will help our customers improve environmental quality. It relates to waste reduction, elimination of harmful materials, recycling and development of environment-friendly products. This Certified Management System to ISO 9001 / 14001 will also play a key role as a competitive differentiation in the marketplace.



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Parker Lucifer - the experts in fluid control

Welcome to the Parker Lucifer catalogue. It's your entry point to an entire programme of solenoid valves based on the unique Lucifer modular concept. This gives you the widest choice of specifications and options to match your requirements exactly.

Making business as simple as possible

The catalogue is just one part of a very special kind of supplier-specifier relationship. In short, we want to make doing business as simple as possible. It begins with organising **products by application** for the quickest selection of a product for a specified application. It extends to ease of ordering, fast delivery, and additional customer services. All backed by highly qualified support engineers willing and able to discuss your needs and suggest solutions. Work with us, for example, to create customised products; we have a proud record of customer partnership projects resulting in innovative products - and satisfied customers.

The Parker Lucifer

The Parker Lucifer Series products have been designed to offer customers the ultimate in performance. Every valve is engineered for optimal operation, is constructed with modern machinery that use stringent processes, and provides standard features not necessarily offered in any competitive line.

The Parker Lucifer Series portfolio offers a broad range of solenoid valves. Sizes range from G1/8 to G3, with K_v as high as 1385 L/min. Pressure capabilities range up to 100 bar; the whole range is available with various seal materials, such as NBR, FKM, EPDM, PTFE, PCTFE, PUR and Ruby. Brass, stainless steel and plastic valves are available to control a wide variety of air, neutral gases and liquids, water, oils, process fluids and steam.



Availability

With over 750 product listings, the valve you need is probably available from our standard range. What's more, the same valves are **available from our distributors anywhere in the world**. So wherever you are you can order with complete confidence.

Thanks to the breadth of our product offering, the flexibility of the modular architecture, and the use of automated manufacturing processes, you can count on the ready availability of the valve you require.

Modular construction ensures that even unusual configurations can be assembled from stock components. It provides a high degree of "mix & match" flexibility with a minimum number of parts, giving Parker Lucifer the ability to quickly deliver a great variety of valves.

Quality assured

Certification by SQS (the Swiss Association for Quality Certification), Category ISO 9001/14001, is formal recognition of Parker Lucifer's commitment to total Quality. It is the outward sign of a company dedicated to customer satisfaction at every level of the organisation. It was first achieved back in 1987, long before Quality certification became an everyday business issue, and Parker Lucifer was one of the first to qualify in Switzerland.

All the approvals you need

A wide range of valves and electrical parts are approved by recognised organisations (BASEEFA in UK, PTB in Germany, LCIE in France, CESI in Italy etc.) and meet CENELEC, IEC, and ISO standards. Lucifer valves are also certified by organisations such as TÜV, VDE, SEV/ASE, UL, CSA, etc.



How to select your valve

This catalogue has been designed to make selection as easy as possible. The structure allows you to find your valve step by step, beginning with the most basic features and gradually focusing on more and more precise details.

First, decide what kind of valve you want: 2-way, 3-way, pneumatic or special. Then check the contents page and turn to the beginning of the relevant section.

For ease of use, each valve section is divided by application. At the front of the application sub-section you choose, you will find an overview table of the products featured (see sample below).

Using the table as a guide, decide what kind of actuation you want, then go across the columns, choosing the body material, function, connection, orifice size and maximum pressure: this

process takes you to the specific page number with your product,

Further technical information to help with specification is given in the final section of the catalogue.

General application valves for dry or lubricated air, neutral gases and liquids 2/2

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Direct operated	Brass body	Normally closed	1/8	1.5 to 3	70.0	8
			1/4	1.2 to 5	100.0	8
			3/8	4 to 6	10.0	12
			1/2	8.5 to 11	4.0	12
			SB	1.5 to 3	100.0	14

How to order a valve

Normally a complete valve is composed of 3 elements: the valve itself (body + pilot), the coil and the housing. For integrated coil/housings, the housing reference indicates the fixing nut and nameplate.

Two valve body references are indicated in the tables:

- the Lucifer reference
- the global reference

Either reference can be used when ordering. The Global valve reference permits a common numbering system between Lucifer and Skinner products. A complete cross-reference list of valve reference numbers can be found at the end of this catalogue. In both cases, it is necessary to order the coil and housing reference as well.

Port size	Orifice (mm)	Flow factors (l/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Gases Qmax	Gases Qn	Min	Max DC	AC	Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC			
G																				

Normally closed

1/8	1.5	1.5	6	80	0	20	20	75	75	75	FKM	7121CBG1GV00	121C14	2995	481865	9	8	270	2	2
	1.5	1.5	6	80	0	20	20	75	75	75	FKM			4270	481000	8	8	390	2	
	1.5	1.5	6	80	0	20	20	75	75	75	FKM			2995	482730	7	6	270	2	
	1.5	0.9	2.4	70	0	12	20	75	75	75	FKM	-	121M14	8993	481180	5	4	150	1	1
	1.5	0.9	2.4	70	0	4	20	75	75	75	FKM			8993	488980	2.5	2	150	1	
	1.5	1.5	12.5	80	0	25	60	75	75	75	PCTFE	7121KBG1GF00	E121K14	2995	481865	9	8	300	2	3
	1.5	1.5	12.5	80	0	30	70	75	75	75	PCTFE			4270	481000	8	8	420	2	
	1.5	1.5	12.5	80	0	55	70	75	75	75	PCTFE			4270	486265	14	14	430		
	2	2	8	160	0	7	10	75	75	75	FKM	-	121M13	8993	481180	5	4	150	1	1
	2	2	8	160	0	2.5	10	75	75	75	FKM			8993	488980	2.5	2	150	1	
	2.5	2.8	8.5	220	0	10	10	75	75	75	FKM	7121CBG1LV00	E121C13	2995	481865	9	8	270	2	2

Therefore please specify:

- Valve reference **or** Global valve reference
- Housing
- Coil
- Voltage or voltage code (see tables in the Electrical parts section).

Ordering example:

121K0756-2995-481865-220/50
or
7121KBG2LVM0-2995-481865-220/50

Important : valve, housing or coil can be ordered separately for use as a replacement or spare part.

2-way valves

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Applications



AIR



WATER



OIL



STEAM



**CORROSION
RESISTANT**



OIL BURNER

General application valves for dry or lubricated air, neutral gases and liquids

2/2

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Direct operated	Brass body	Normally closed	1/8	1.5 to 3	70.0	8
			1/4	1.2 to 5	100.0	8
			3/8	4 to 6	10.0	12
			1/2	8.5 to 11	4.0	12
			SB	1.5 to 3	100.0	14
		Normally open	1/8	2.5	30.0	12
			1/4	1.5 to 2.5	40.0	12
		Magnetic latch control	1/4	3 to 5	20.0	12
Magnalift	Brass body	Normally closed	3/8	15	20.0	16
			1/2	15	20.0	16
			3/4	15	20.0	16
			1	15 to 25	20.0	18
		Normally open	3/8	15	8.5	20
			1/2	15	8.5	20
			3/4	19	8.5	20
	303 Stainless steel body	Normally closed	3/8	15	7.0	20
			1/2	15	7.0	20
			3/4	19	7.0	20
		Normally open	3/8	16	8.5	20
			1/2	16	8.5	20
Pilot operated	Brass body	Normally closed	1/4	8 to 12	40.0	22
			3/8	11 to 12	40.0	22
			1/2	12 to 14.5	40.0	22
			3/4	18 to 20	16.0	24
			1	18 to 25	16.0	24
			1 1/4	28	16.0	26
			1 1/2	40	16.0	26
			2	40	16.0	28
			SB	14	40.0	34
		Normally open	1/4	8 to 12	40.0	30
			3/8	11 to 12	40.0	32
			1/2	12 to 14.5	40.0	32
			3/4	18 to 20	16.0	32
			1	18 to 25	16.0	32
			1 1/4	28	16.0	32
			1 1/2	40	12.0	32
			2	40	12.0	32
			SB	14	40.0	34
		Magnetic latch control	1/4	12	12.0	34
			3/8	12	12.0	34
			1/2	12	12.0	34
			3/4	18	12.0	34
			1	18	12.0	34

Notes:

Direct operated and magnalift valves: pressure range from 0 to max pressure.

Pilot operated valves: pressure range from 0.3 to 0.5 bar to max. pressure (refer to tables).

General application valves for dry or lubricated air, neutral gases and liquids

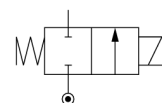
2/2



Direct operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar		Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)	Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Qmax	Gases Qn	Min	Max	Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC		

Normally closed



Brass body/Pipe mounting

1/8	1.5	1.5	6	80	0	20	20	75	75	75	FKM	7121ZBG1GV00	-	2995	481865	9	8	270	2	7893
	1.5	1.5	6	80	0	20	20	75	75	75	FKM			4270	481000	8	8	390	2	
	1.5	1.5	6	80	0	20	20	75	75	75	FKM			2995	482730	7	6	270	2	
	1.5	0.9	2.4	70	0	12	20	75	75	75	FKM	-	121M14	8993	481180	5	4	150	1	1
	1.5	0.9	2.4	70	0	4	20	75	75	75	FKM			8993	488980	2.5	2	150	1	
	1.5	1.5	12.5	80	0	25	60	75	75	75	PCTFE	7121KBG1GF00	E121K14	2995	481865	9	8	300	2	3
	1.5	1.5	12.5	80	0	30	70	75	75	75	PCTFE			4270	481000	8	8	420	2	
	1.5	1.5	12.5	80	0	55	70	75	75	75	PCTFE			4270	486265	14	14	430		
	2	2	8	160	0	7	10	75	75	75	FKM	-	121M13	8993	481180	5	4	150	1	1
	2	2	8	160	0	2.5	10	75	75	75	FKM			8993	488980	2.5	2	150	1	
	2.5	2.8	8.5	220	0	10	10	75	75	75	FKM	7121ZBG1LV00	-	2995	481865	9	8	270	2	7893
	2.5	2.8	8.5	220	0	10	10	75	75	75	FKM			4270	481000	8	8	390	2	
	2.5	2.8	8.5	220	0	5	10	75	75	75	FKM			2995	482730	7	6	270	2	
	2.5	3.5	25	220	0	10	28	100	100	100	Ruby	7121KBG1LR00	E121K23	2995	481865	9	8	300	2	3
	2.5	3.5	25	220	0	12	34	130	130	130	Ruby			4270	481000	8	8	420	2	
	2.5	3.5	25	220	0	22	50	120	120	120	Ruby			4270	486265	14	14	430		
	3	4.5	9	315	0	7	10	100	100	100	FKM	7121KBG1NV00	121K1302	2995	481865	9	8	300	2	3
	3	4.5	9	315	0	8	10	120	120	120	FKM			4270	481000	8	8	420	2	
	3	4.5	9	315	0	10	10	120	120	120	FKM			4270	486265	14	14	430		
	3	4.5	9	315	0	7	10	100	100	100	FKM	7121KBG1NVM0	121K1352 1	2995	481865	9	8	300	2	3
	3	4.5	9	315	0	8	10	120	120	120	FKM			4270	481000	8	8	420	2	
	3	4.5	9	315	0	10	10	120	120	120	FKM			4270	486265	14	14	430		
1/4	1.2	0.85	8.5	50	0	36	80	100	100	100	Ruby	7121KBG2ER00	E121K65	2995	481865	9	8	290		3
	1.2	0.85	8.5	50	0	43	100	130	130	130	Ruby			4270	481000	8	8	410		
	1.2	0.85	8.5	50	0	75	100	120	120	120	Ruby			4270	486265	14	14	420		
	1.5	1.5	6	80	0	20	20	100	100	100	FKM	7121KBG2GV00	E121K0402	2995	481865	9	8	290	2	3
	1.5	1.5	6	80	0	20	20	120	120	120	FKM			4270	481000	8	8	410	2	

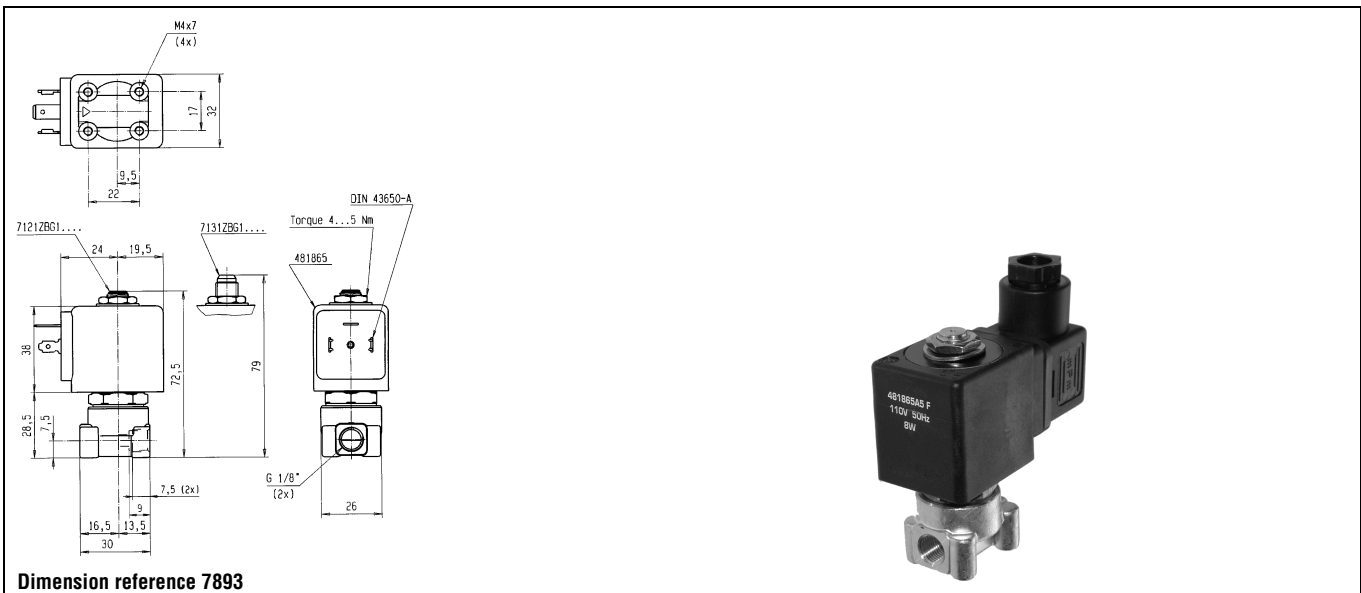
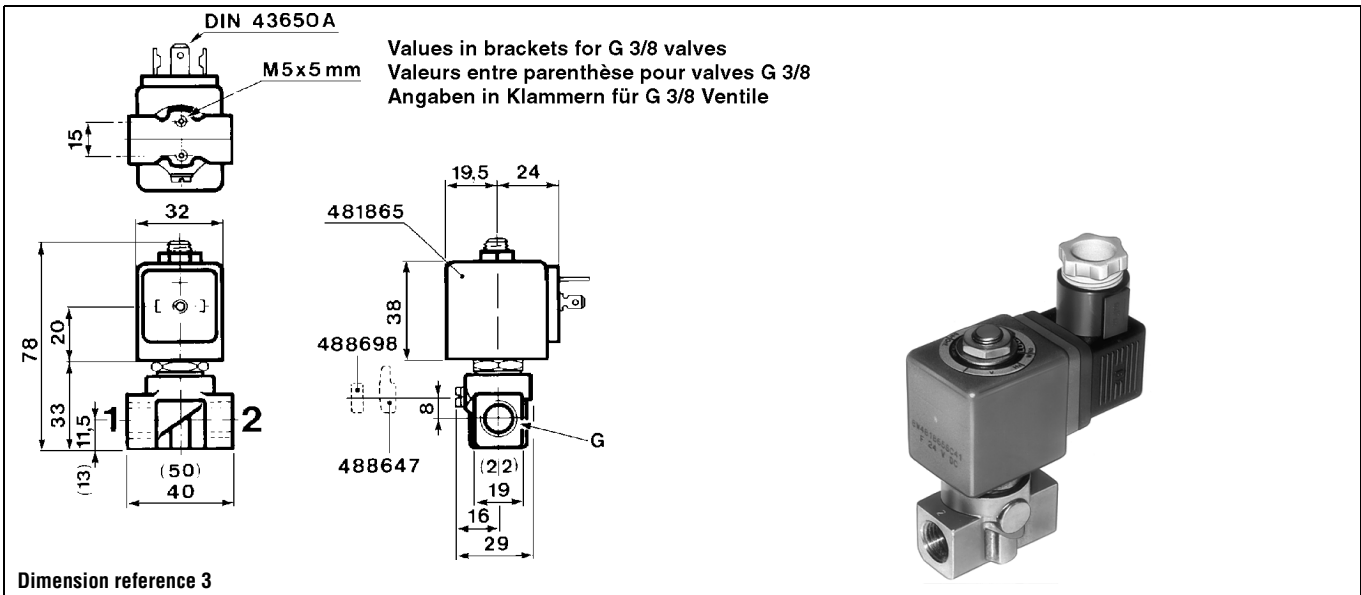
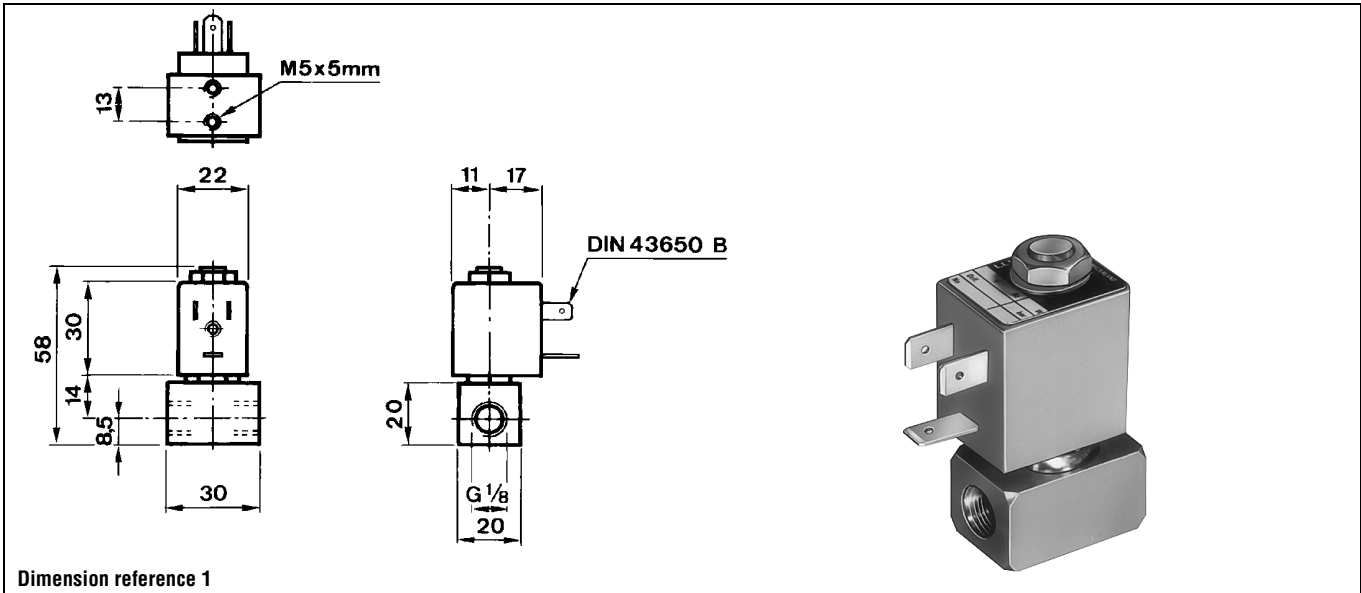
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Notes:

* See Electrical Parts Group table at end of section

1. Manual override standard

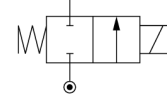
General application valves 2/2 - Direct operated



General application valves 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)	Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Qmax	Gases Qn	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC		

Normally closed



Brass body/Pipe mounting

1/4	1.5	1.5	12.5	80	0	25	60	75	75	75	PCTFE	7121KBG2GF00	E121K04	2995	481865	9	8	290	2	3
	1.5	1.5	12.5	80	0	30	70	75	75	75	PCTFE			4270	481000	8	8	410	2	
	1.5	1.5	12.5	80	0	55	70	75	75	75	PCTFE			4270	486265	14	14	420		
	1.5	1.5	15	80	0	25	60	100	100	100	Ruby	7121KBG2GR00	E121K67	2995	481865	9	8	290		3
	1.5	1.5	15	80	0	30	75	130	130	130	Ruby			4270	481000	8	8	410		
	1.5	1.5	15	80	0	55	100	120	120	120	Ruby			4270	486265	14	14	420		
	2.5	3.5	8.5	220	0	7	14	100	100	100	FKM	7121KBG2LV00	121K0706	2995	481865	9	8	290	2	3
	2.5	3.5	8.5	220	0	9	14	120	120	120	FKM			4270	481000	8	8	410	2	
	2.5	3.5	8.5	220	0	14	14	120	120	120	FKM			4270	486265	14	14	420		
	2.5	3.5	8.5	220	0	7	14	100	100	100	FKM	7121KBG2LVM0	121K0756 1	2995	481865	9	8	290	2	3
	2.5	3.5	8.5	220	0	9	14	120	120	120	FKM			4270	481000	8	8	410	2	
	2.5	3.5	8.5	220	0	14	14	120	120	120	FKM			4270	486265	14	14	420		
	2.5	3.5	25	220	0	10	28	75	75	75	PCTFE	7121KBG2LF00	E121K07	2995	481865	9	8	290	2	3
	2.5	3.5	25	220	0	12	34	75	75	75	PCTFE			4270	481000	8	8	410	2	
	2.5	3.5	25	220	0	22	50	75	75	75	PCTFE			4270	486265	14	14	420		
	2.5	3.5	25	220	0	10	28	100	100	100	Ruby	7121KBG2LR00	E121K63	2995	481865	9	8	290		3
	2.5	3.5	25	220	0	12	34	130	130	130	Ruby			4270	481000	8	8	410		
	2.5	3.5	25	220	0	22	50	120	120	120	Ruby			4270	486265	14	14	420		
	3	4.5	9	315	0	7	10	100	100	100	FKM	7121KBG2NV00	E121K0302	2995	481865	9	8	290	2	3
	3	4.5	9	315	0	8.5	10	120	120	120	FKM			4270	481000	8	8	410	2	
	3	4.5	9	315	0	10	10	120	120	120	FKM			4270	486265	14	14	420		
	3	4.5	9	315	0	7	10	100	100	100	FKM	7121KBG2NVM0	E121K0352 1	2995	481865	9	8	290	2	3
	3	4.5	9	315	0	8.5	10	120	120	120	FKM			4270	481000	8	8	410	2	
	3	4.5	9	315	0	10	10	120	120	120	FKM			4270	486265	14	14	420		
	3	4.5	27	315	0	7	20	75	75	75	PCTFE	7121KBG2NF00	E121K03	2995	481865	9	8	290	2	3
	3	4.5	27	315	0	8.5	25	75	75	75	PCTFE			4270	481000	8	8	410	2	
	3	4.5	27	315	0	15	36	75	75	75	PCTFE			4270	486265	14	14	420		
	3	4.5	27	320	0	7	20	100	100	100	Ruby	7121KBG2NR00	E121K64	2995	481865	9	8	290		3
	3	4.5	27	320	0	8.5	25	130	130	130	Ruby			4270	481000	8	8	410		
	3	4.5	27	320	0	15	36	120	120	120	Ruby			4270	486265	14	14	420		
	4	7.5	10.5	480	0	4	10	100	100	100	FKM	7121KBG2QVM0	121K0250 1	2995	481865	9	8	290	2	3
	4	7.5	10.5	480	0	5	10	120	120	120	FKM			4270	481000	8	8	410	2	
	4	7.5	10.5	480	0	10	10	120	120	120	FKM			4270	486265	14	14	420		
	4	7.5	10.5	480	0	4	10	100	100	100	FKM	7121KBG2QV00	121K02	2995	481865	9	8	290	2	3
	4	7.5	10.5	480	0	5	10	120	120	120	FKM			4270	481000	8	8	410	2	
	4	7.5	10.5	480	0	10	10	120	120	120	FKM			4270	486265	14	14	420		
	5	11	11.5	750	0	2	7	100	100	100	FKM	7121KBG2SVM0	121K0150 1	2995	481865	9	8	290	2	3
	5	11	11.5	750	0	2.8	7	120	120	120	FKM			4270	481000	8	8	410	2	
	5	11	11.5	750	0	5	7	120	120	120	FKM			4270	486265	14	14	420		

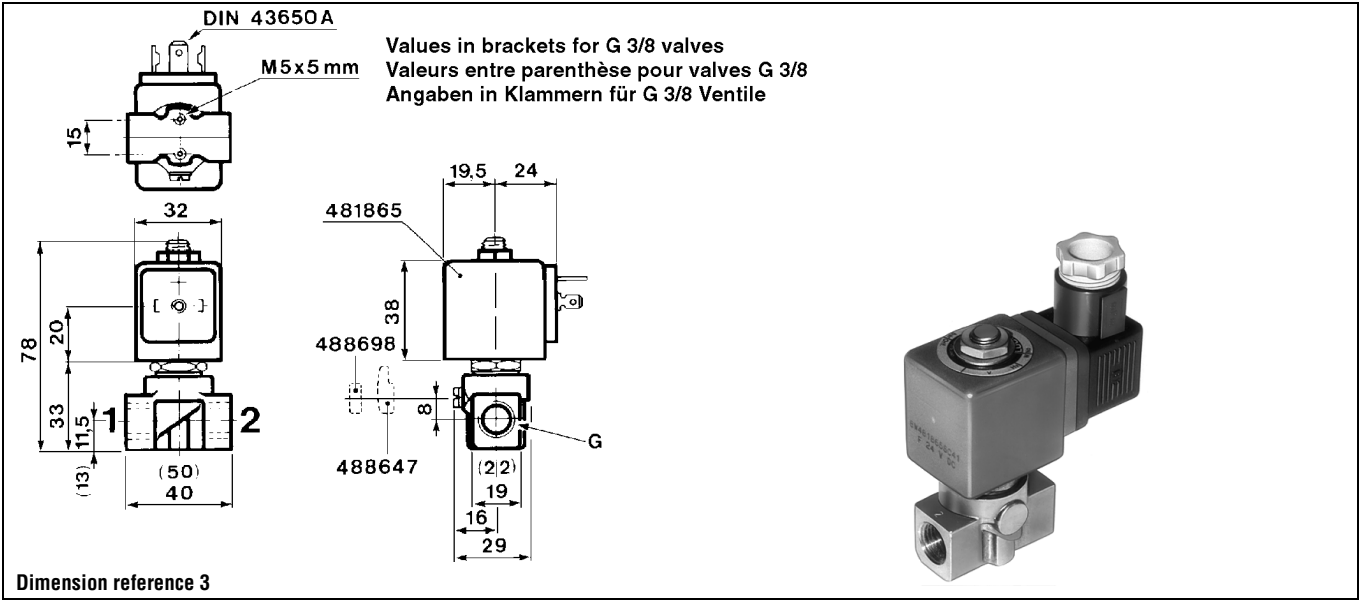
Table continued on page 12

Notes:

* See Electrical Parts Group table at end of section

1. Manual override standard

General application valves 2/2 - Direct operated

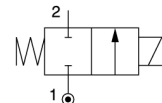


General application valves 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Qmax	Gases Qn	Min	Max DC	AC	Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC			

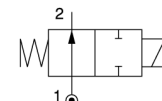
Brass body/Pipe mounting

Normally closed



1/4	5	11	11.5	750	0	2	7	100	100	100	FKM	7121KBG2SV00	121K01	2995	481865	9	8	290	2	3
	5	11	11.5	750	0	2.8	7	120	120	120	FKM			4270	481000	8	8	410	2	
	5	11	11.5	750	0	5	7	120	120	120	FKM			4270	486265	14	14	420		
3/8	4	7.5	10.5	480	0	4	10	100	100	100	FKM	7121KBG3QV00	121K3206	2995	481865	9	8	340	2	3
	4	7.5	10.5	480	0	5	10	120	120	120	FKM			4270	481000	8	8	460	2	
	4	7.5	10.5	480	0	10	10	120	120	120	FKM			4270	486265	14	14	470		
	5	11	11.5	750	0	2	7	100	100	100	FKM	7121KBG3SV00	121K3106	2995	481865	9	8	340	2	3
	5	11	11.5	750	0	2.8	7	120	120	120	FKM			4270	481000	8	8	460	2	
	5	11	11.5	750	0	5	7	120	120	120	FKM			4270	486265	14	14	470		
	6	12	12.5	1100	0	1.1	5	100	100	100	FKM	7121KBG3UV00	121K3306	2995	481865	9	8	340	2	3
	6	12	12.5	1100	0	1.5	5	120	120	120	FKM			4270	481000	8	8	460	2	
	6	12	12.5	1100	0	3	5	120	120	120	FKM			4270	486265	14	14	470	2	
1/2	8.5	25	15	1600	0	0.5	1.1	100	100	100	FKM	7121KBG42V00	E121K46	2995	481865	9	8	430	2	7
	8.5	25	15	1600	0	0.5	2.2	120	120	120	FKM			4270	481000	8	8	550	2	
	8.5	25	15	1600	0	1.2	4	120	120	120	FKM			4270	486265	14	14	560		
	11	36	20	2500	0	0.3	0.7	100	100	100	FKM	7121KBG44V00	E121K45	2995	481865	9	8	430	2	7
	11	36	20	2500	0	0.35	1.2	120	120	120	FKM			4270	481000	8	8	550	2	
	11	36	20	2500	0	0.7	2.5	120	120	120	FKM			4270	486265	14	14	560		

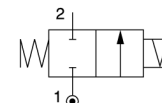
Normally open



Brass body/Pipe mounting

1/8	2.5	3.5	-	-	0	-	30	140	120	140	Ruby	7122KBG1LR00	122K9363	4270	481044	-	14	445		4
	2.5	3.5	-	-	0	30	30	140	120	140	Ruby			4270	486265	14	14	455		
1/4	1.5	1.5	6	80	0	20	20	100	100	100	FKM	7122KBG2GV00	122K8406	2995	481865	9	8	290	2	3
	1.5	1.5	6	80	0	20	20	120	120	120	FKM			4270	481000	8	8	410	2	
	1.5	1.5	8	80	0	30	30	100	100	100	PCTFE	7122KBG2GF00	122K84	2995	481865	9	8	290	2	3
	1.5	1.5	8	80	0	30	30	120	120	120	PCTFE			4270	481000	8	8	410	2	
	1.5	1.5	9.5	96	0	40	40	100	100	100	Ruby	7122KBG2GR00	122K8408	2995	481865	9	8	290	2	3
	1.5	1.5	9.5	96	0	40	40	130	130	130	Ruby			4270	481000	8	8	410	2	
	2.5	3	3.5	180	0	12	12	100	100	100	FKM	7122KBG2LV00	122K8306	2995	481865	9	8	290	2	3
	2.5	3	3.5	180	0	12	12	120	120	120	FKM			4270	481000	8	8	410	2	
	2.5	3	9.5	180	0	12	12	75	75	75	PCTFE	7122KBG2LF00	122K83	2995	481865	9	8	290	2	3
	2.5	3	9.5	180	0	12	12	75	75	75	PCTFE			4270	481000	8	8	410	2	
	2.5	3.5	-	-	0	-	30	140	120	140	Ruby	7122KBG2LR00	122K8363	4270	481044	-	14	425		4
	2.5	3.5	-	-	0	30	30	140	120	140	Ruby			4270	486265	14	14	435		

Magnetic latch control



Brass body/Pipe mounting

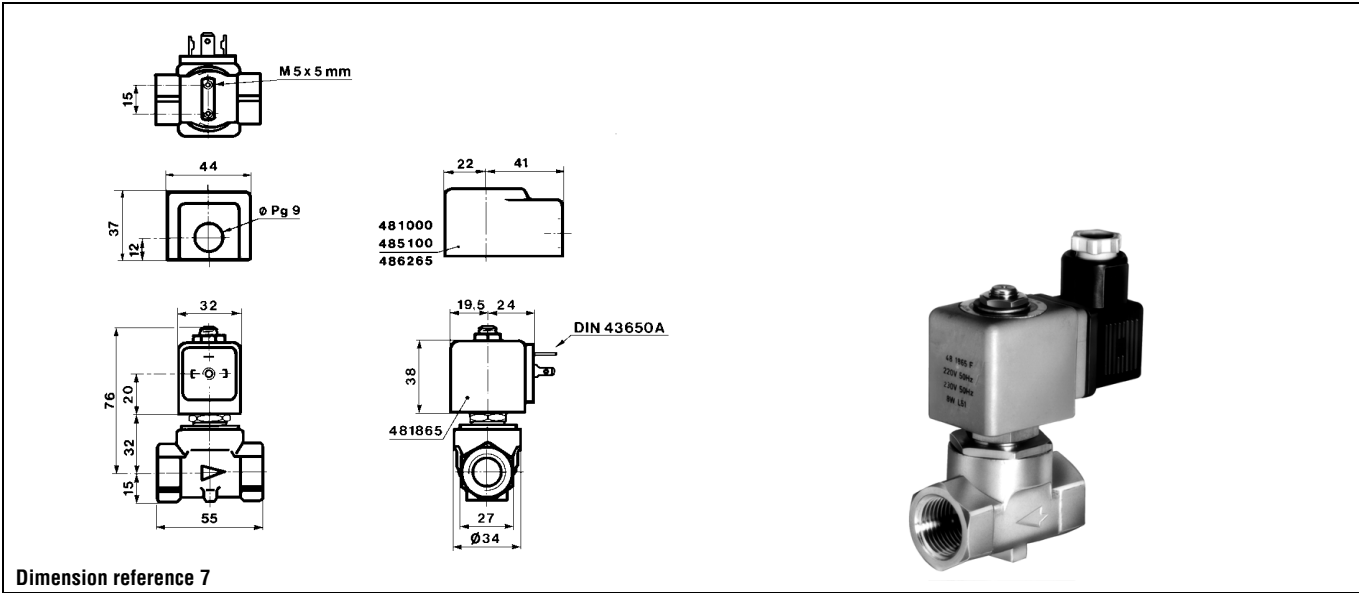
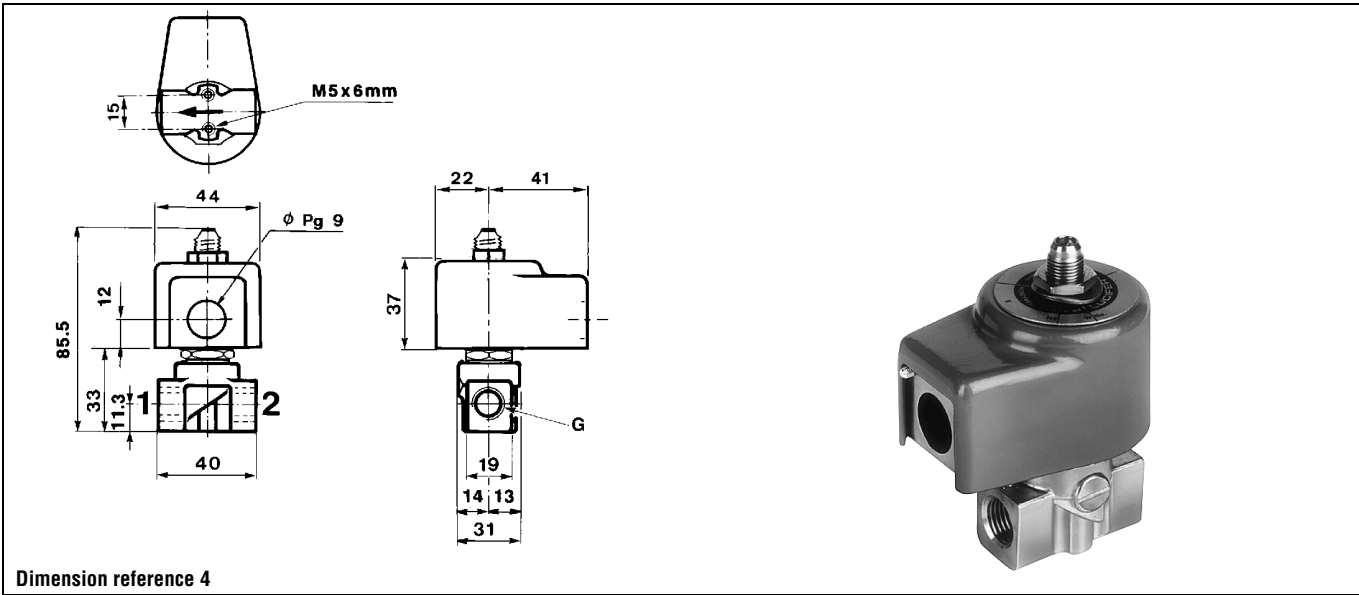
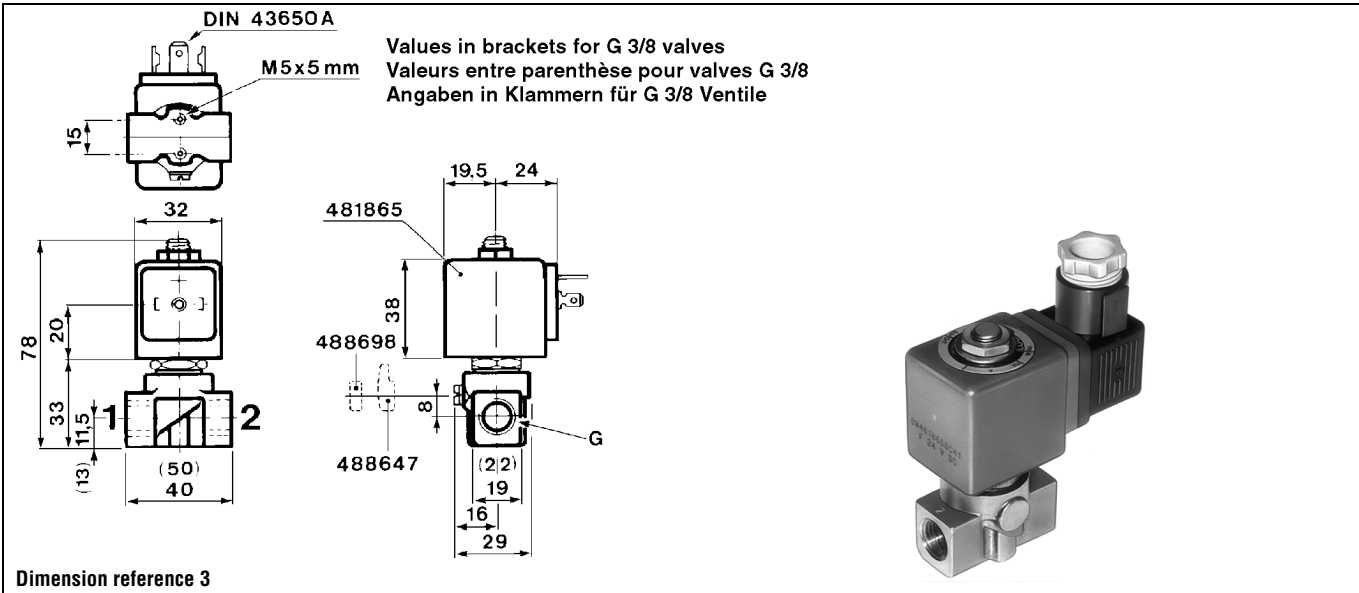
1/4	3	4.5	20	320	0	-	20	75	75	75	PCTFE	7125KBG2NF00	125K03	4269	484990	-	11	430	4	3
	3	4.5	20	320	0	7	-	75	75	75	PCTFE			4269	485400	13	-	430	4	

Table continued on page 14

Notes:

* See Electrical Parts Group table at end of section

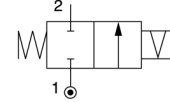
General application valves 2/2 - Direct operated



General application valves 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Qmax	Gases Qn	Min	Max DC	AC	Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC			

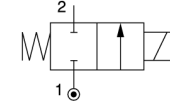
Magnetic latch control



Brass body/Pipe mounting

1/4	5	11	11.5	750	0	-	5	100	100	100	FKM	7125KBG2SV00	125K01	4269	484990	-	11	430	4	3
	5	11	11.5	750	0	1.5	-	100	100	100	FKM			4269	485400	13	-	430	4	

Normally closed



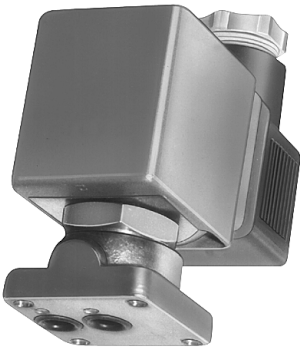
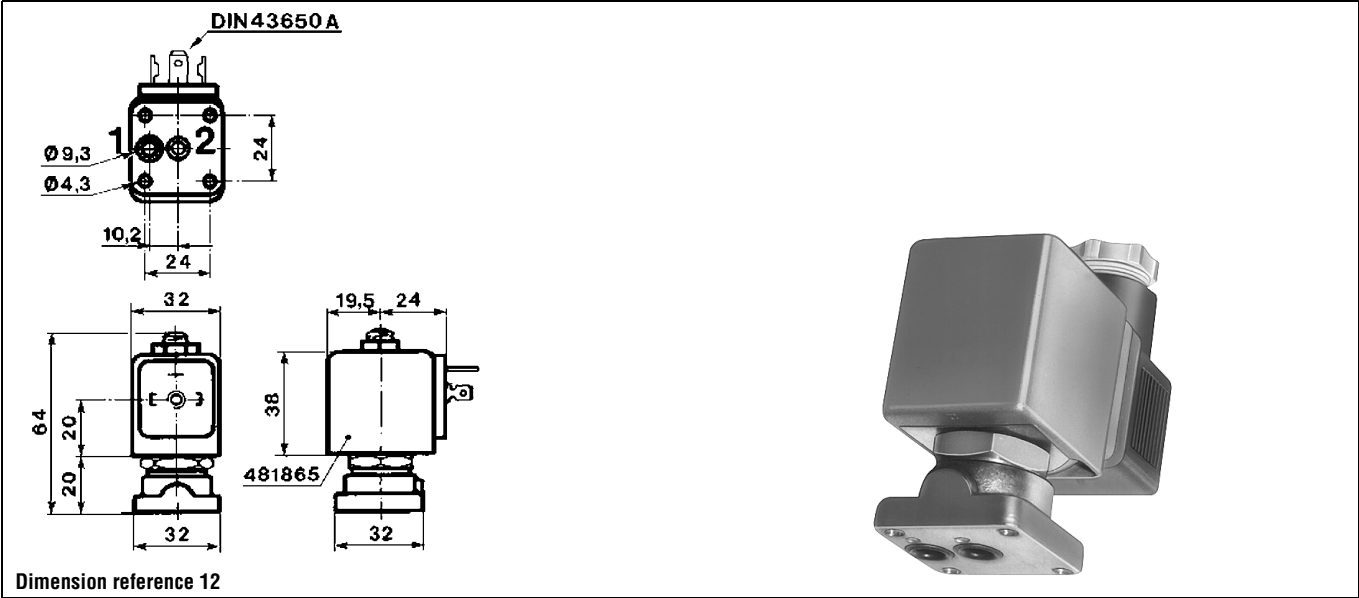
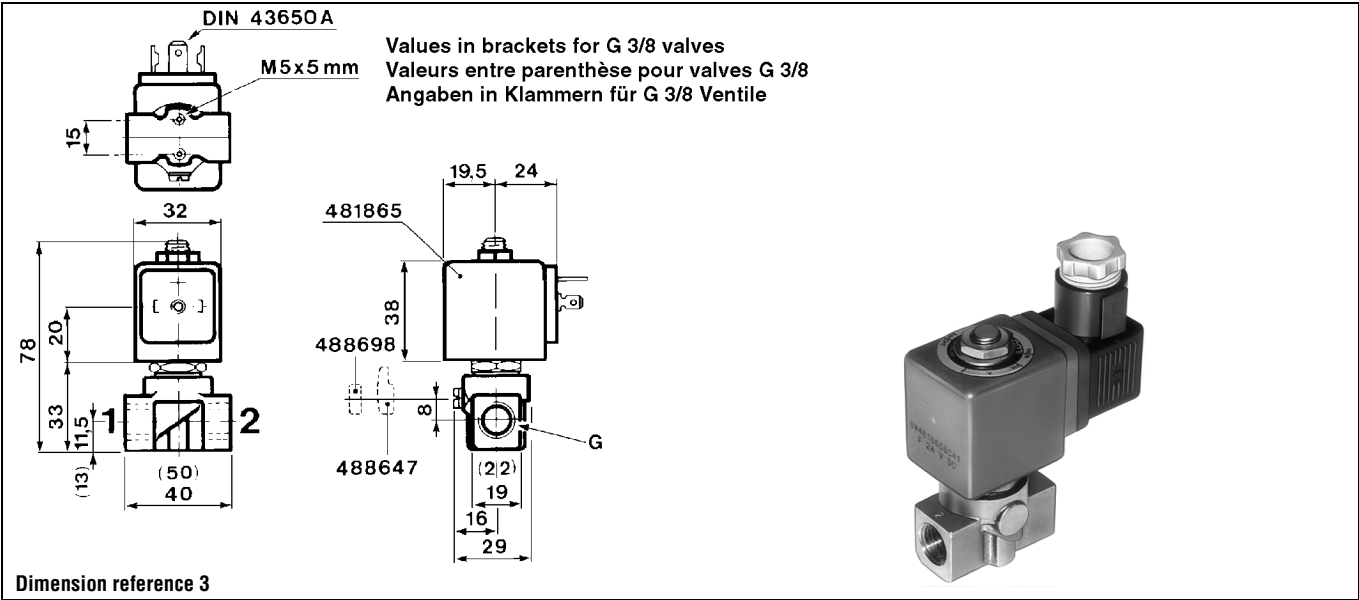
Brass body/Sub-base mounting

SB	1.5	1.6	6	80	0	20	20	100	100	100	FKM	7121FBF4GV00	E121F4406	2995	481865	9	8	250		12
	1.5	1.6	6	80	0	20	20	120	120	120	FKM			4270	481000	8	8	370		
	1.5	1.5	12.5	80	0	25	60	75	75	75	PCTFE	7121FBF4GF00	E121F44	2995	481865	9	8	250	2	12
	1.5	1.5	12.5	80	0	30	70	75	75	75	PCTFE			4270	481000	8	8	370	2	
	1.5	1.5	12.5	80	0	55	70	75	75	75	PCTFE			4270	486265	14	14	380	2	
	1.5	1.5	15	80	0	25	60	100	100	100	Ruby	7121FBF4GR00	121F67	2995	481865	9	8	255	2	12
	1.5	1.5	15	80	0	30	75	130	130	130	Ruby			4270	481000	8	8	375	2	
	1.5	1.5	15	80	0	55	100	120	120	120	Ruby			4270	486265	14	14	385	2	
	2.5	3.5	8.5	220	0	7	14	100	100	100	FKM	7121FBF4LV00	121F4706	2995	481865	9	8	250	2	12
	2.5	3.5	8.5	220	0	9	14	120	120	120	FKM			4270	481000	8	8	370	2	
	2.5	3.5	8.5	220	0	14	14	120	120	120	FKM			4270	486265	14	14	380	2	
	2.5	3.5	25	220	0	10	28	75	75	75	PCTFE	7121FBF4LF00	121F47	2995	481865	9	8	250	2	12
	2.5	3.5	25	220	0	12	34	75	75	75	PCTFE			4270	481000	8	8	370	2	
	2.5	3.5	25	220	0	22	50	75	75	75	PCTFE			4270	486265	14	14	380	2	
	2.5	3.5	25	220	0	10	28	100	100	100	Ruby	7121FBF4LR00	121F63	2995	481865	9	8	255	2	12
	2.5	3.5	25	220	0	12	34	130	130	130	Ruby			4270	481000	8	8	375	2	
	2.5	3.5	25	220	0	22	50	120	120	120	Ruby			4270	486265	14	14	385	2	
	3	4.5	9	315	0	7	10	100	100	100	FKM	7121FBF4NV00	E121F4302	2995	481865	9	8	250	2	12
	3	4.5	9	315	0	8.5	10	120	120	120	FKM			4270	481000	8	8	370	2	
	3	4.5	9	315	0	10	10	120	120	120	FKM			4270	486265	14	14	380	2	
	3	4.5	27	315	0	7	20	75	75	75	PCTFE	7121FBF4NF00	E121F43	2995	481865	9	8	250	2	12
	3	4.5	27	315	0	8.5	25	75	75	75	PCTFE			4270	481000	8	8	370	2	
	3	4.5	27	315	0	15	36	75	75	75	PCTFE			4270	486265	14	14	380	2	
	3	4.5	27	320	0	7	20	100	100	100	Ruby	7121FBF4NR00	121F64	2995	481865	9	8	255	2	12
	3	4.5	27	320	0	8.5	25	130	130	130	Ruby			4270	481000	8	8	375	2	
	3	4.5	27	320	0	15	36	120	120	120	Ruby			4270	486265	14	14	385	2	

Notes:

* See Electrical Parts Group table at end of section

General application valves 2/2 - Direct operated



General application valves for dry or lubricated air, neutral gases and liquids

2/2

Applications

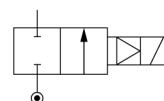
Magnalift valves are recommended in applications where the minimum pressure cannot be held at a sufficient level, i.e. where the effective supply pressure may be zero. This concerns applications like filling/emptying tanks by gravity and any other applications with a minimum pressure of zero.



Magnalift

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
		Liquids kv	Gases Qmax	Gases Qn	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil		DC	AC		

Normally closed



Brass body/Pipe mounting

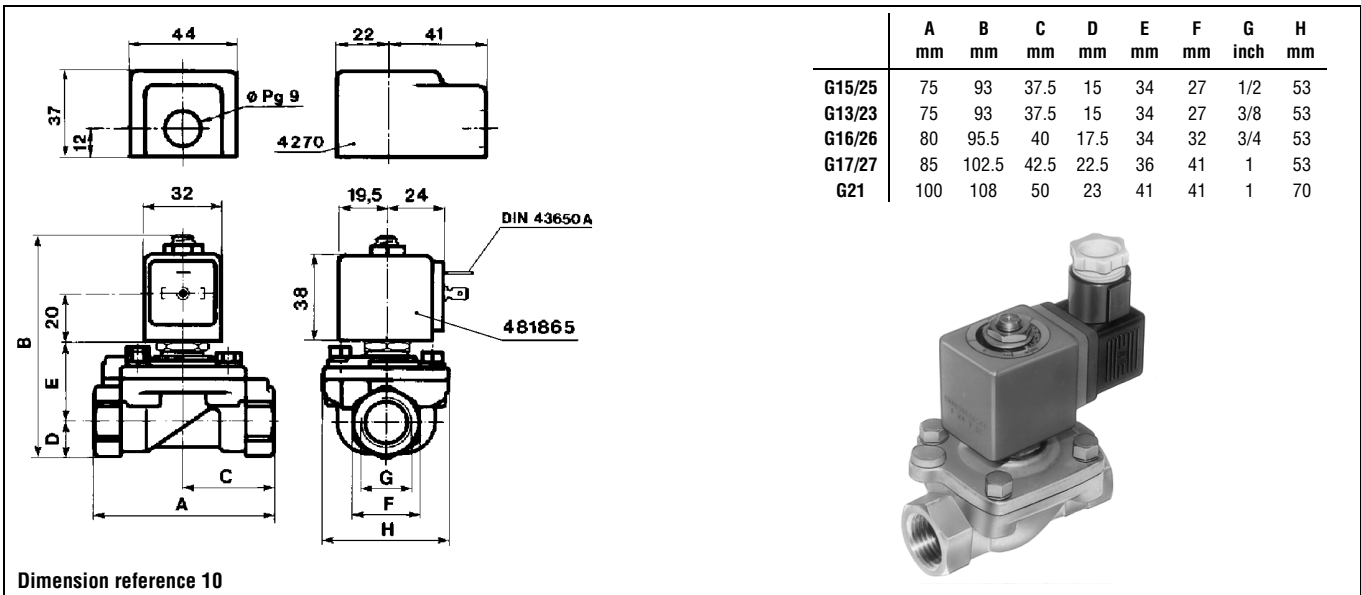
3/8	15	65	65	4500	0	10	-	100	-	100	FKM	7221GBG3VVH0	221G2330	2995	481865	¹	9	-	630	10
	15	65	65	4500	0	10	10	65	-	65	FKM			4270.06	492070	¹	8	8	1000	
	15	65	65	4500	0	10	10	75	-	75	FKM			4270.06	492190	¹	9	11	1000	
	15	65	65	4500	0	-	16	100	-	100	FKM	7221GBG3VV00	221G23	2995	481865	¹	9	8	630	10
	15	65	65	4500	0	-	16	120	-	120	FKM			4270	481000		8	8	750	
	15	65	65	4500	0	7	20	120	-	140	FKM			4270	486265		14	14	760	
	15	65	65	4500	0	10	-	100	75	100	NBR	7221GBG3VNH0	221G1330	2995	481865	¹	9	-	630	10
	15	65	65	4500	0	10	10	65	65	65	NBR			-	492070	¹	8	8	1000	
	15	65	65	4500	0	10	10	75	75	75	NBR			-	492190	¹	9	11	1000	
	15	65	65	4500	0	-	16	100	75	100	NBR	7221GBG3VN00	221G13	2995	481865		-	8	630	10
	15	65	65	4500	0	-	16	100	75	100	NBR			4270	481000		-	8	750	
	15	65	65	4500	0	7	-	100	75	100	NBR			4270	486265		14	-	760	
1/2	15	65	65	4500	0	-	16	75	-	75	FKM	7221GBG4VV1D	221G25001D	-	483250		-	8	1605	3846
	15	65	65	4500	0	10	-	100	-	100	FKM	7221GBG4VVH0	221G2530	2995	481865	¹	9	-	640	10
	15	65	65	4500	0	10	10	65	-	65	FKM			-	492070	¹	8	8	1010	
	15	65	65	4500	0	10	10	75	-	75	FKM			-	492190	¹	9	11	1010	
	15	65	65	4500	0	-	16	100	-	100	FKM	7221GBG4VV00	221G25	2995	481865		-	8	630	10
	15	65	65	4500	0	-	16	120	-	120	FKM			4270	481000		-	8	760	
	15	65	65	4500	0	7	20	120	-	140	FKM			4270	486265		14	14	760	
	15	65	65	4500	0	10	-	100	75	100	NBR	7221GBG4VNH0	221G1530	2995	481865	¹	9	-	640	10
	15	65	65	4500	0	10	10	65	65	65	NBR			-	492070	¹	8	9	1010	
	15	65	65	4500	0	10	10	75	75	75	NBR			-	492190	¹	9	11	1010	
	15	65	65	4500	0	-	16	100	75	100	NBR	7221GBG4VN00	221G15	2995	481865		-	8	640	10
	15	65	65	4500	0	-	16	100	75	100	NBR			4270	481000		-	8	760	
	15	65	65	4500	0	7	-	100	75	100	NBR			4270	486265		14	-	770	
3/4	15	80	80	6000	0	-	16	75	-	75	FKM	7221GBG51V1D	221G26001D	-	483250		-	8	1635	3847

Table continued on page 18

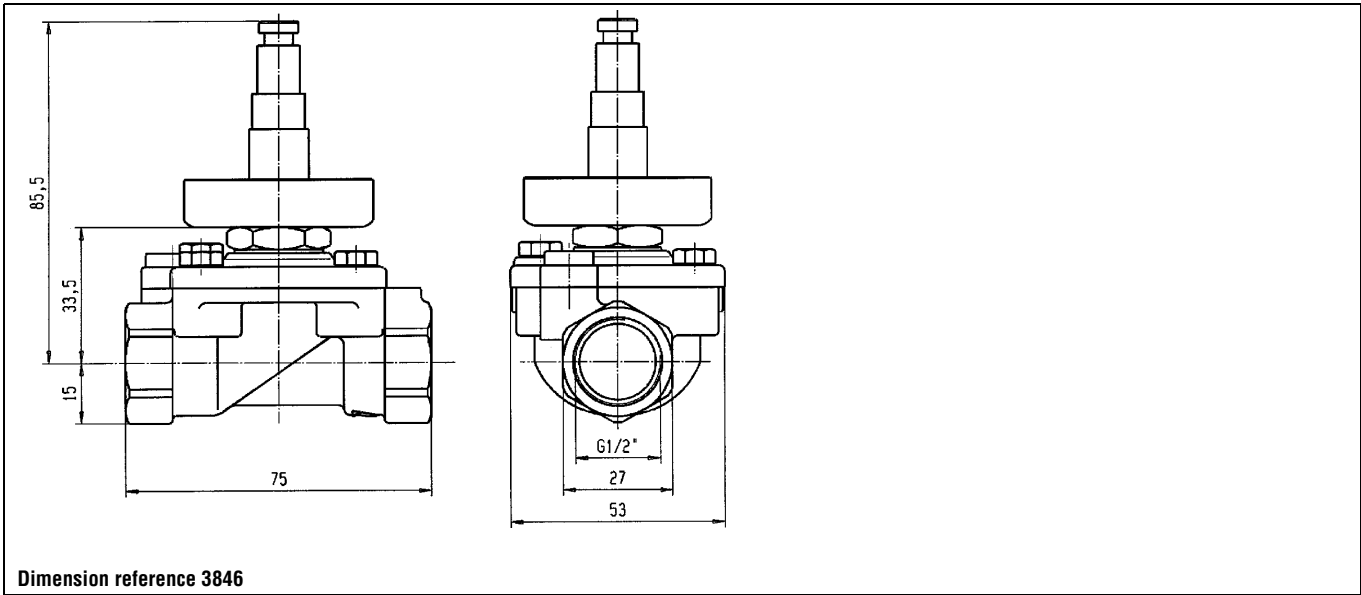
Notes:

1. Valves with model number ending by 30 or 31 are mainly equipped with electrical parts EEx me II T3/T4 No. 492190 or EEx m II T4/T5 No. 492070 or with standard DC coils.

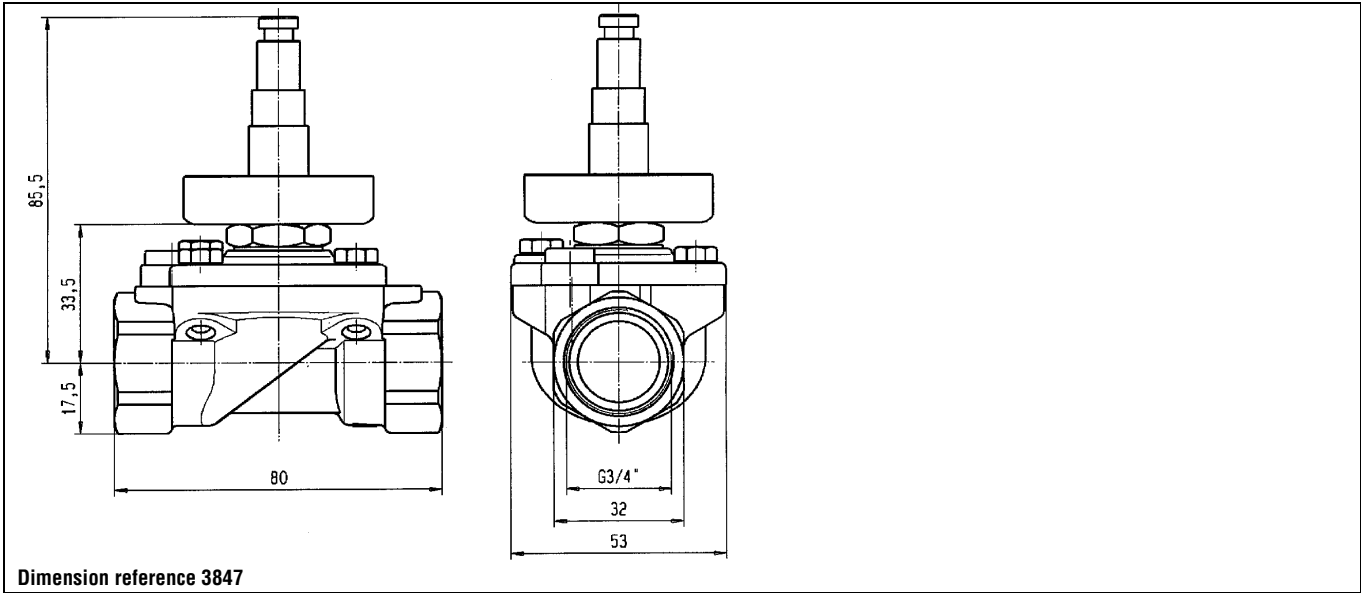
General application valves 2/2 - Magnalift



Dimension reference 10



Dimension reference 3846

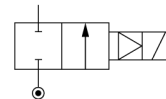


Dimension reference 3847

General application valves 2/2 - Magnalift

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)	Wt. (g)	Dim ref.
		Liquids kv	Qmax	Gases Qn	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC	

Normally closed



Brass body/Pipe mounting

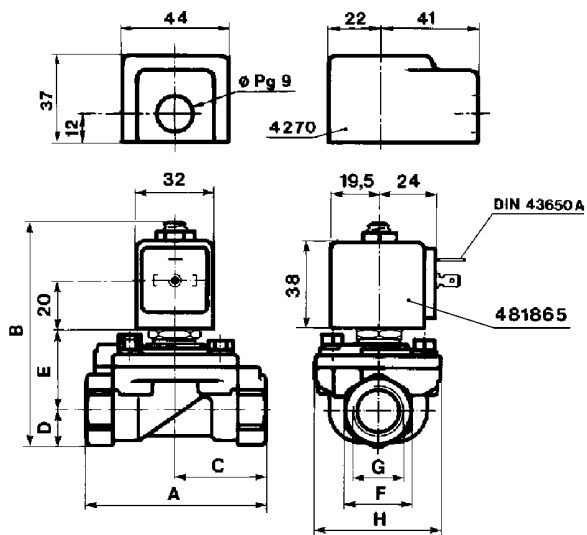
3/4	15	80	80	6000	0	10	-	100	-	100	FKM	7221GBG51VH0	221G2630	2995	481865	¹	9	-	670	10
	15	80	80	6000	0	10	10	65	-	65	FKM			-	492070	¹	8	8	1040	
	15	80	80	6000	0	10	10	75	-	75	FKM			-	492190	¹	9	11	1040	
	15	80	80	6000	0	-	16	100	-	100	FKM	7221GBG51V00	221G26	2995	481865	¹	-	8	670	10
	15	80	80	6000	0	-	16	120	-	120	FKM			4270	481000	-	8	790		
	15	80	65	6000	0	7	20	120	-	140	FKM			4270	486265	14	14	800		
	15	80	80	6000	0	10	-	100	75	100	NBR	7221GBG51NH0	221G1630	2995	481865	¹	9	-	670	10
	15	80	80	6000	0	10	10	65	65	65	NBR			-	492070	¹	8	8	1040	
	15	80	80	6000	0	10	10	75	75	75	NBR			-	492190	¹	9	11	1040	
	15	80	80	6000	0	-	16	100	75	100	NBR	7221GBG51N00	221G16	2995	481865	-	8	670	10	
	15	80	80	6000	0	-	16	100	75	100	NBR			4270	481000	-	8	790		
	15	80	80	6000	0	7	-	100	75	100	NBR			4270	486265	14	-	800		
1	15	80	80	6000	0	-	16	75	-	75	FKM	7221GBG61V1D	221G27001D	-	483250	-	8	1775	3848	
	15	80	80	6000	0	10	-	100	-	100	FKM	7221GBG61VH0	221G2730	2995	481865	¹	9	-	810	10
	15	80	80	6000	0	10	10	65	-	65	FKM			-	492070	¹	8	8	1180	
	15	80	80	6000	0	10	10	75	-	75	FKM			-	492190	¹	9	11	1180	
	15	80	80	6000	0	-	16	100	-	100	FKM	7221GBG61V00	221G27	2995	481865	-	8	810	10	
	15	80	80	6000	0	-	16	120	-	120	FKM			4270	481000	-	8	930		
	15	80	65	6000	0	7	20	120	-	120	FKM			4270	486265	14	14	940		
	15	80	80	6000	0	10	-	100	75	100	NBR	7221GBG61NH0	221G1730	2995	481865	¹	9	-	810	10
	15	80	80	6000	0	10	10	65	65	65	NBR			-	492070	¹	8	8	1180	
	15	80	80	6000	0	10	10	75	75	75	NBR			-	492190	¹	9	11	1180	
	15	80	80	6000	0	-	16	100	75	100	NBR	7221GBG61N00	221G17	2995	481865	-	8	810	10	
	15	80	80	6000	0	-	16	100	75	100	NBR			4270	481000	-	8	930		
	15	80	80	6000	0	7	-	100	75	100	NBR			4270	486265	14	-	940		
	25	160	160	14000	0	-	16	100	-	100	FKM	7221GBG64V00	221G2106	2995	481865	-	8	1170	10	
	25	160	160	14000	0	-	16	100	-	120	FKM			4270	481000	-	8	1290		
	25	160	160	14000	0	6	16	100	-	120	FKM			4270	486265	14	14	1300		
	25	170	160	14000	0	10	-	100	-	100	FKM	7221GBG64VH0	221G2136	2995	481865	¹	9	-	1170	10
	25	170	160	14000	0	10	10	65	-	65	FKM			-	492070	¹	8	8	1540	
	25	170	160	14000	0	10	10	75	-	75	FKM			-	492190	¹	9	11	1540	
	25	170	160	14000	0	10	-	100	75	100	NBR	7221GBG64NH0	221G2130	2995	481865	¹	9	-	1170	10
	25	170	160	14000	0	10	10	65	65	65	NBR			-	492070	¹	8	8	1540	
	25	170	160	14000	0	10	10	75	75	75	NBR			-	492190	¹	9	11	1540	
	25	160	160	14000	0	-	16	100	75	100	NBR	7221GBG64N00	221G21	2995	481865	-	8	1170	10	
	25	160	160	14000	0	-	16	100	75	100	NBR			4270	481000	-	8	1290		
	25	160	160	14000	0	6	-	100	75	100	NBR			4270	486265	14	-	1300		

Table continued on page 20

Notes:

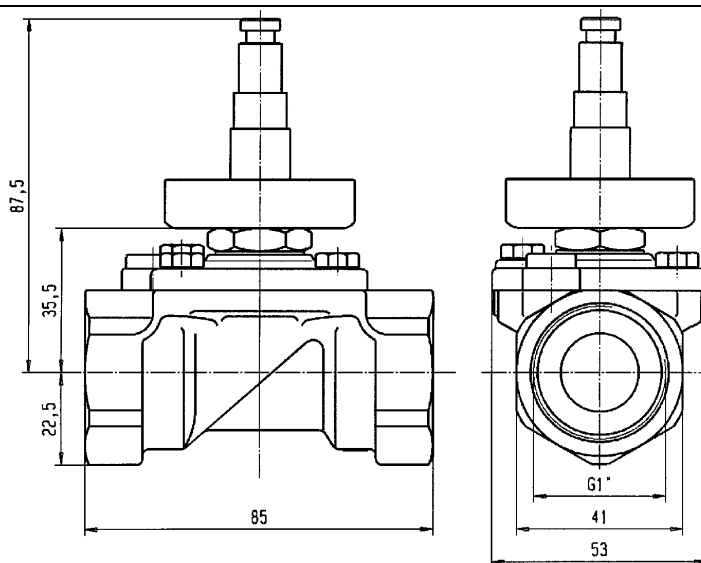
- Valves with model number ending by 30 or 31 are mainly equipped with electrical parts EEx me II T3/T4 No. 492190 or EEx m II T4/T5 No. 492070 or with standard DC coils.

General application valves 2/2 - Magnalift



Dimension reference 10

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G15/25	75	93	37.5	15	34	27	1/2	53
G13/23	75	93	37.5	15	34	27	3/8	53
G16/26	80	95.5	40	17.5	34	32	3/4	53
G17/27	85	102.5	42.5	22.5	36	41	1	53
G21	100	108	50	23	41	41	1	70

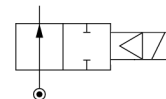
**Dimension reference 3848**

General application valves 2/2 - Magnalift

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim. ref.
		Liquids kv	Qmax	Gases Qn	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil		DC	AC		
G																				

Brass body/Pipe mounting

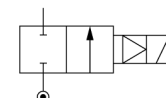
Normally open



3/8	15	43	43	-	0	8.5	8.5	85	85	85	FKM	72228BG3TV00	222G3306	4270	486265	14	14	940	102
1/2	15	58	58	-	0	8.5	8.5	85	85	85	FKM	72228BG4UV00	222G3506	4270	486265	14	14	940	102
3/4	19	72	72	-	0	8.5	8.5	85	85	85	FKM	72228BG5VV00	222G3606	4270	486265	14	14	940	102

303 Stainless steel body/Pipe mounting

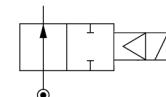
Normally closed



3/8	15	42	42	-	0	-	7	85	85	85	FKM	72218RG3TV00	221G5306	2995	481865	-	8	930	102
	15	42	42	-	0	-	7	85	85	85	FKM			4270	481000	-	8	1050	
	15	42	42	-	0	2.8	-	85	85	85	FKM			4270	486265	14	-	1060	
1/2	15	54	54	-	0	-	7	85	85	85	FKM	72218RG4UV00	221G5506	2995	481865	-	8	930	102
	15	54	54	-	0	-	7	85	85	85	FKM			4270	481000	-	8	1050	
	15	54	54	-	0	2.8	-	85	85	85	FKM			4270	486265	14	-	1060	
3/4	19	71	71	-	0	-	7	85	85	85	FKM	72218RG5VV00	221G5606	2995	481865	-	8	930	102
	19	71	71	-	0	-	7	85	85	85	FKM			4270	481000	-	8	1050	
	19	71	71	-	0	2.8	-	85	85	85	FKM			4270	486265	14	-	1060	

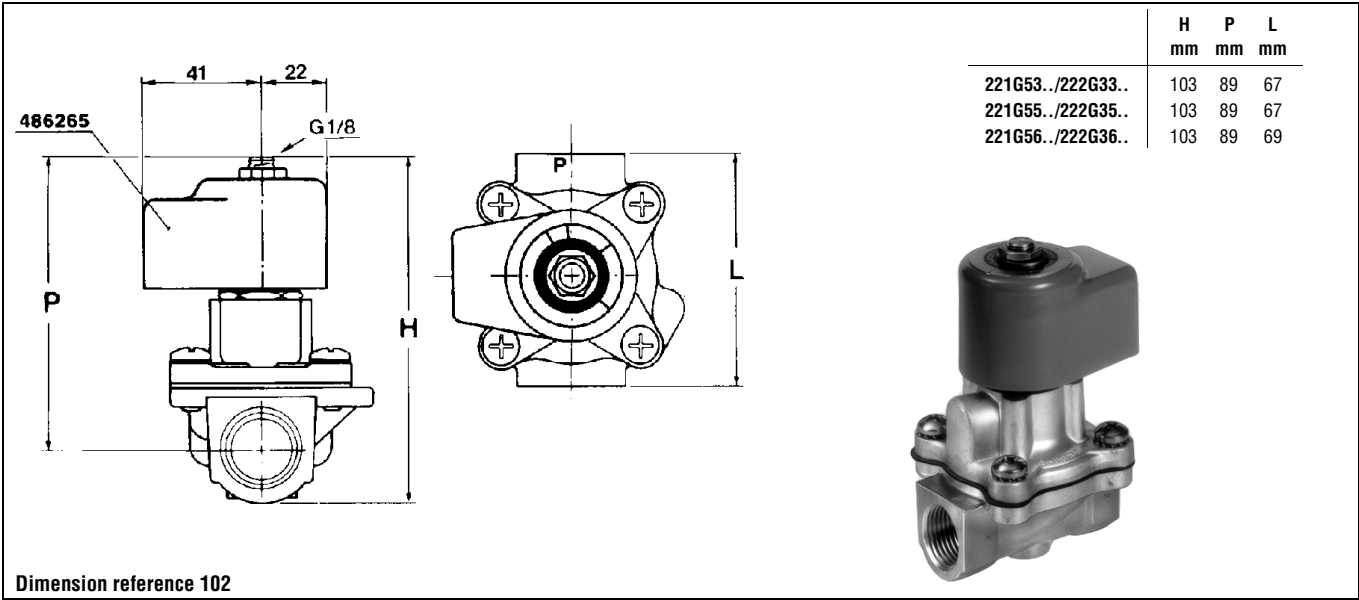
303 Stainless steel body/Pipe mounting

Normally open



3/8	16	43	43	-	0	8.5	8.5	85	85	85	FKM	72228RG3TV00	222G5306	4270	486265	14	14	-	102
1/2	16	58	58	-	0	8.5	8.5	85	85	85	FKM	72228RG4UV00	222G5506	4270	486265	14	14	1050	102

General application valves 2/2 - Magnalift



General application valves for dry or lubricated air, neutral gases and liquids

2/2

Applications

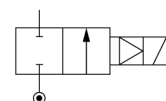
Pilot operated valves are ideally suited to shut-off applications of liquids with high flow and pressure. A minimum operating pressure is required: refer to tables.



Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Gases Qmax	Gases Qn	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC			

Normally closed



Brass body/Pipe mounting

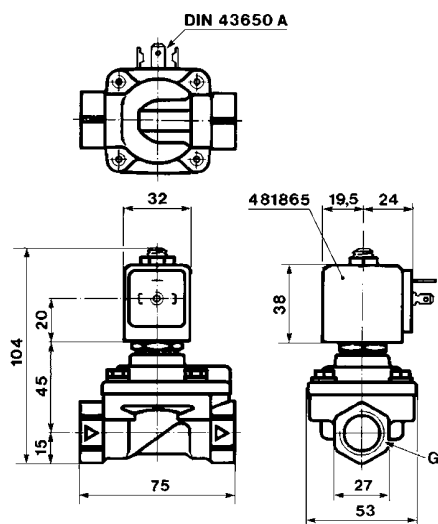
1/4	8	36	36	-	0.3	25	40	-	100	100	FKM	7321HBG2SV00	E321H21	1	2995	481865	9	8	800	2	9	
	8	36	36	-	0.3	30	40	-	100	100	FKM				4270	481000	8	8	920	2		
	8	36	36	-	0.3	40	40	-	100	100	FKM				4270	486265	14	14	930	2		
	8	36	36	1600	0.3	25	40	100	75	100	NBR	7321HBG2SN00	E321H11	1	2995	481865	9	8	800	2	9	
	8	36	36	1600	0.3	30	40	100	75	100	NBR				4270	481000	8	8	920	2		
	12	30	30	2150	0.3	10	10	100	100	100	FKM	-	321K3106		8993	481180	5	4	380	1	72	
	12	30	30	2150	0.3	7	10	75	75	75	FKM				8993	488980	2.5	2	380	1		
	12	30	30	2150	0.3	10	10	100	75	100	NBR	-	321K31		8993	481180	5	4	380	1	72	
	12	30	30	2150	0.3	7	10	75	75	75	NBR				8993	488980	2.5	2	380	1		
3/8	11	50	50	-	0.3	25	40	-	100	100	FKM	7321HBG3TV00	E321H23	1	2995	481865	9	8	780	2	9	
	11	50	50	-	0.3	30	40	-	100	120	FKM				4270	481000	8	8	900	2		
	11	50	50	-	0.3	40	40	-	100	140	FKM				4270	486265	14	14	910	2		
	11	50	50	2800	0.3	25	40	100	75	100	NBR	7321HBG3TN00	E321H13	1	2995	481865	9	8	780	2	9	
	11	50	50	2800	0.3	30	40	100	75	100	NBR				4270	481000	8	8	900	2		
	12	45	45	3050	0.3	10	10	100	100	100	FKM	-	321K3306		8993	481180	5	4	380	1	72	
	12	45	45	3050	0.3	7	10	75	75	75	FKM				8993	488980	2.5	2	380	1		
	12	45	45	3050	0.3	10	10	100	75	100	NBR	-	321K33		8993	481180	5	4	380	1	72	
	12	45	45	3050	0.3	7	10	75	75	75	NBR				8993	488980	2.5	2	380	1		
1/2	12	50	50	3400	0.3	10	10	100	100	100	FKM	-	321K3506		8993	481180	5	4	380	1	72	
	12	50	50	3400	0.3	7	10	75	75	75	FKM				8993	488980	2.5	2	380	1		
	12	50	50	3400	0.3	10	10	100	75	100	NBR	-	321K35		8993	481180	5	4	380	1	72	
	12	50	50	3400	0.3	7	10	75	75	75	NBR				8993	488980	2.5	2	380	1		
	14.5	60	60	-	0.3	25	40	-	100	100	FKM	7321HBG4UV00	E321H25	1	2995	481865	9	8	740	2	9	
	14.5	60	60	-	0.3	30	40	-	100	120	FKM				4270	481000	8	8	860	2		
	14.5	60	60	-	0.3	40	40	-	100	140	FKM				4270	486265	14	14	870	2		
	14.5	60	60	3150	0.3	10	-	75	75	-	NBR	-	321H1590	3	-	483580.01	4	0.4	-	715	7	75

Table continued on page 24

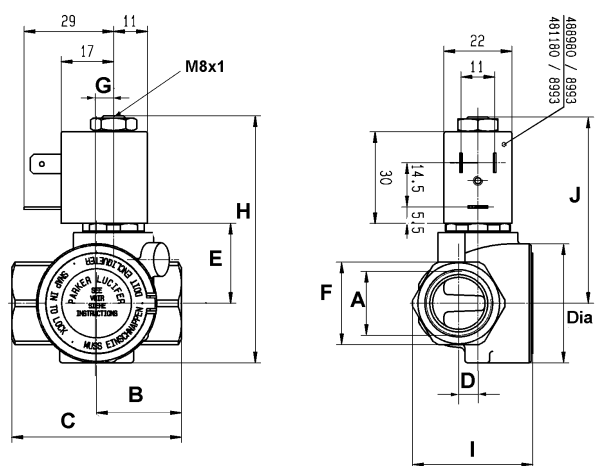
Notes:

- * See Electrical Parts Group table at end of section
- 1. Pilot seat discs from ruby (synthetic)
- 2. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing
- 3. Other coil-housing available: 488650.01, 488660.01, 488670.01 (refer to electrical parts at end of this section)
- 4. This reference no. is for the complete electrical part (coil + housing)

General application valves 2/2 - Pilot operated

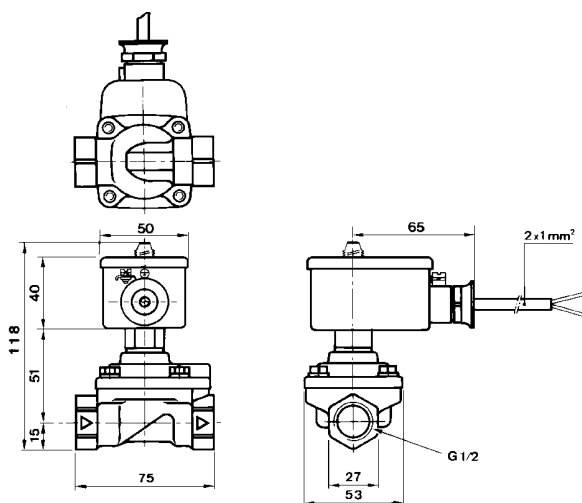


Dimension reference 9

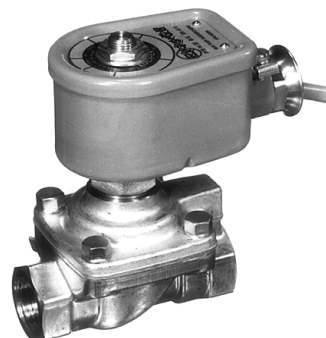


Dimension reference 72

	A inch	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	Dia. mm
K31	1/4	25	50	6.2	26	27	5.5	81	39	61	40
K33	3/8	25	50	6.2	26	27	5.5	81	39	61	40
K35	1/2	27.5	55	6.2	26	27	5.5	81	39	61	40
K36	3/4	40	80	9	33.5	32	8	96.5	46	68.5	56
K37	1	42.5	85	14.2	33.5	41	8	96.5	56	68.5	56



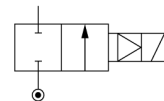
Dimension reference 75



General application valves 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Qmax	Gases Qn	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC			

Normally closed



Brass body/Pipe mounting

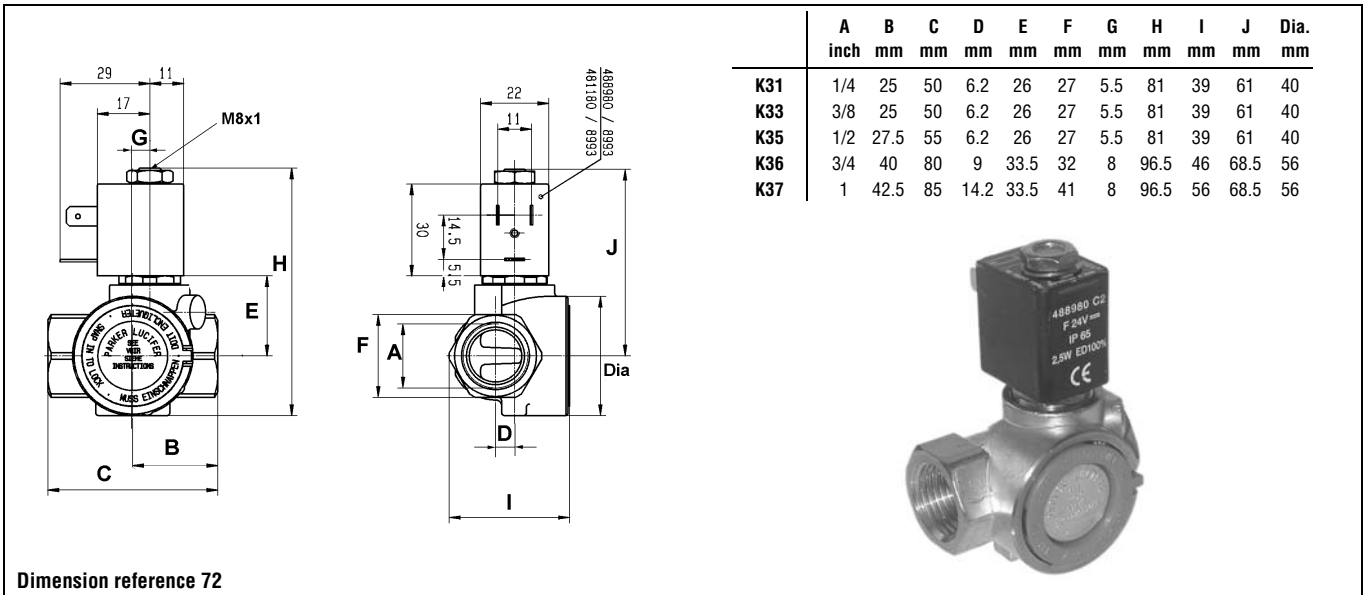
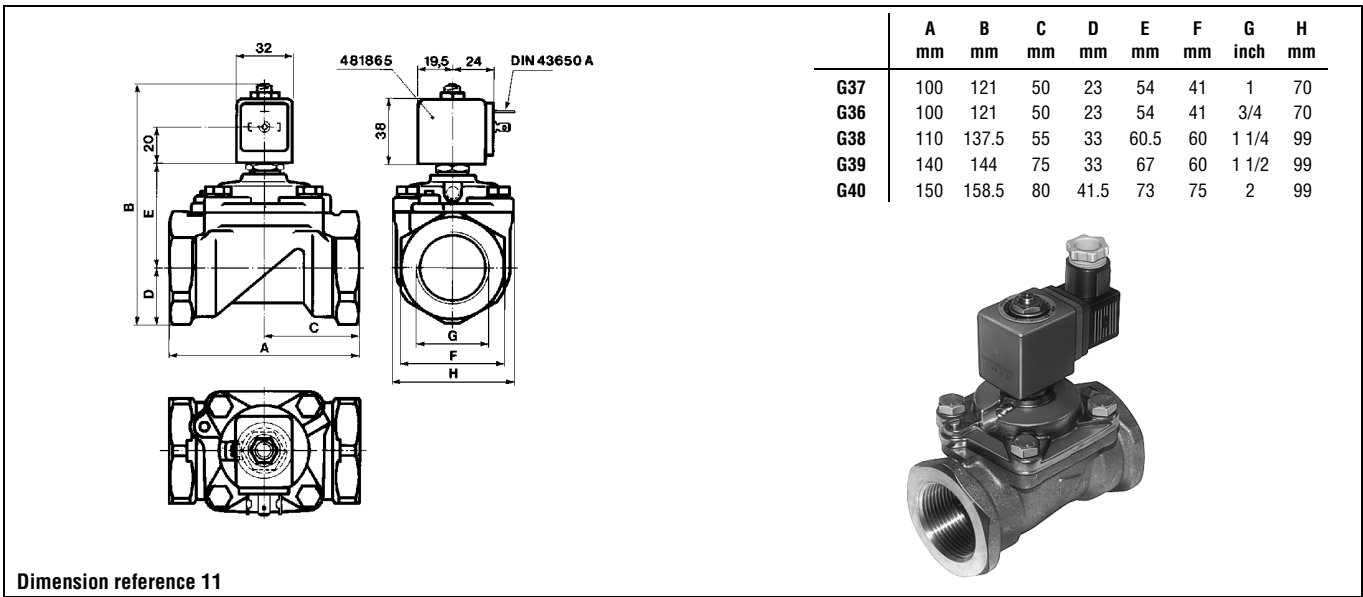
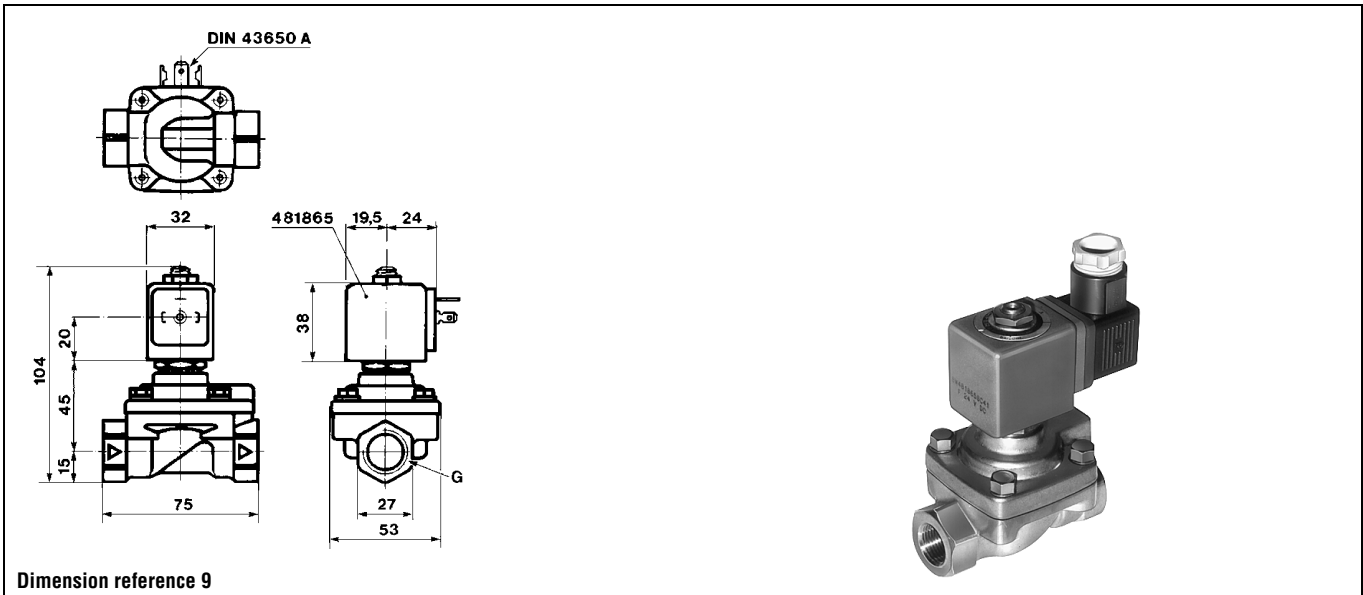
1/2	14.5	60	60	3150	0.3	25	40	100	75	100	NBR	7321HBG4UN00	E321H15	1	2995	481865	9	8	740	2	9
	14.5	60	60	3150	0.3	30	40	100	75	100	NBR				4270	481000	8	8	860	2	
3/4	18	100	100	9400	0.3	10	10	100	100	100	FKM	-	321K3606		8993	481180	5	4	590	1	72
	18	100	100	9400	0.3	7	10	75	75	75	FKM				8993	488980	2.5	2	590	1	
	18	100	100	9400	0.3	10	10	100	75	100	NBR	-	321K36		8993	481180	5	4	590	1	72
	18	100	100	9400	0.3	7	10	75	75	75	NBR				8993	488980	2.5	2	590	1	
	20	135	135	9500	0.3	16	16	100	100	100	FKM	7321GBG53V00	E321G3606		2995	481865	9	8	1430	2	11
	20	135	135	9500	0.3	16	16	120	100	120	FKM				4270	481000	8	8	1550	2	
	20	135	135	9500	0.3	16	16	100	75	100	NBR	7321GBG53N00	E321G36	3	2995	481865	9	8	1430	2	11
	20	135	135	9500	0.3	16	16	100	75	100	NBR				4270	481000	8	8	1550	2	
1	18	110	110	10150	0.3	10	10	100	100	100	FKM	-	321K3706		8993	481180	5	4	735	1	72
	18	110	110	10150	0.3	7	10	75	75	75	FKM				8993	488980	2.5	2	735	1	
	18	110	110	10150	0.3	10	10	100	75	100	NBR	-	321K37		8993	481180	5	4	735	1	72
	18	110	110	10150	0.3	7	10	75	75	75	NBR				8993	488980	2.5	2	735	1	
	25	180	180	14000	0.3	16	16	100	100	100	FKM	7321GBG64V00	E321G3706		2995	481865	9	8	1230	2	11
	25	180	180	14000	0.3	16	16	120	100	120	FKM				4270	481000	8	8	1350	2	

Table continued on page 26

Notes:

- * See Electrical Parts Group table at end of section
- 1. Pilot seat discs from ruby (synthetic)
- 2. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing
- 3. Manual override and 4 position selector for controlled closure rate: see "Anti-waterhammer valves" section

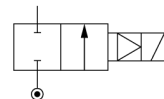
General application valves 2/2 - Pilot operated



General application valves 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)	Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Gases Q _n	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC		

Normally closed



1	25	185	185	14100	0.3	10	-	75	75	-	NBR	-	321G3790	¹	-	483580.01	²	0.4	-	1205	7	76
	25	180	180	14000	0.3	16	16	75	75	75	NBR	7321GBG64N1D	E321G37101D	-	-	483250	-	8	8	2195	5	3849
	25	180	180	14000	0.3	16	16	100	75	100	NBR	7321GBG64N00	E321G37	³	2995	481865	-	9	8	1230	2	11
	25	180	180	14000	0.3	16	16	100	75	100	NBR	-	-	-	4270	481000	-	8	8	1350	2	-
1 1/4	28	280	280	18000	0.3	16	16	100	100	100	FKM	7321GBG76V00	E321G3806	-	2995	481865	-	9	8	1860	2	11
	28	280	280	18000	0.3	16	16	120	100	120	FKM	-	-	-	4270	481000	-	8	8	1980	2	-
	28	280	280	18000	0.3	16	16	100	75	100	NBR	7321GBG76N00	E321G38	³	2995	481865	-	9	8	1860	2	11
	28	280	280	18000	0.3	16	16	100	75	100	NBR	-	-	-	4270	481000	-	8	8	1980	2	-
1 1/2	40	420	420	31500	0.3	7	16	100	100	100	FKM	7321GBG88V00	E321G3906	-	2995	481865	-	9	8	2560	2	11
	40	420	420	31500	0.3	8.5	16	120	100	120	FKM	-	-	-	4270	481000	-	8	8	2680	2	-
	40	425	425	31000	0.5	10	-	75	75	-	NBR	-	321G3990	¹	-	483580.01	²	0.4	-	2635	7	76

Table continued on page 28

Notes:

* See Electrical Parts Group table at end of section

1. Other coil-housing available: 488650.01, 488660.01, 488670.01 (refer to electrical parts at end of this section)

2. This reference no. is for the complete electrical part (coil + housing)

3. Manual override and 4 position selector for controlled closure rate: see "Anti-waterhammer valves" section

General application valves 2/2 - Pilot operated

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G37	100	121	50	23	54	41	1	70
G36	100	121	50	23	54	41	3/4	70
G38	110	137.5	55	33	60.5	60	1 1/4	99
G39	140	144	75	33	67	60	1 1/2	99
G40	150	158.5	80	41.5	73	75	2	99

Dimension reference 11

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G3790	100	135	50	23	60	41	1	70
G3990	140	158	75	33	73	60	1 1/2	99
G4090	150	172.5	80	41.5	79	75	2	99

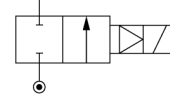
Dimension reference 76

Dimension reference 3849

General application valves 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Qmax	Gases Qn	Min	Max	DC	AC	Gas	Liquid		Oil	Global valve reference	Valve reference no.	Housing	Coil	DC			
G																				

Normally closed



1 1/2	40	420	420	31500	0.3	8.5	16	75	75	75	NBR	7321GBG88N3D	E321G39101D	-	483250	8	8	3525	5	3850
	40	420	420	31500	0.3	7	16	100	75	100	NBR	7321GBG88N00	E321G39	¹ 2995	481865	9	8	2560	2	11
	40	420	420	31500	0.3	8.5	16	100	75	100	NBR			4270	481000	8	8	2680	2	
	40	420	420	31500	0.3	16	16	100	75	100	NBR			4270	486265	14	14	2700	2	
2	40	540	540	40000	0.3	7	16	100	100	100	FKM	7321GBG99V00	E321G4006	2995	481865	9	8	2920	2	11
	40	540	540	40000	0.3	7	16	120	100	120	FKM			4270	481000	8	8	3040	2	
	40	540	540	38100	0.5	10	-	75	75	-	NBR	-	321G4090	² -	483580.01	³ 0.4	-	2885	7	76

Table continued on page 30

Notes:

- * See Electrical Parts Group table at end of section
- 1. Manual override and 4 position selector for controlled closure rate: see "Anti-waterhammer valves" section
- 2. Other coil-housing available: 488650.01, 488660.01, 488670.01 (refer to electrical parts at end of this section)
- 3. This reference no. is for the complete electrical part (coil + housing)

General application valves 2/2 - Pilot operated

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G37	100	121	50	23	54	41	1	70
G36	100	121	50	23	54	41	3/4	70
G38	110	137.5	55	33	60.5	60	1 1/4	99
G39	140	144	75	33	67	60	1 1/2	99
G40	150	158.5	80	41.5	73	75	2	99

Dimension reference 11

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G3790	100	135	50	23	60	41	1	70
G3990	140	158	75	33	73	60	1 1/2	99
G4090	150	172.5	80	41.5	79	75	2	99

Dimension reference 76

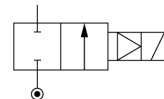
Dimension reference 3850

General application valves 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Gases Q _{max}	Gases Q _n	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC			

Brass body/Pipe mounting

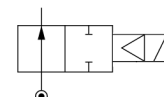
Normally closed



2	40	540	540	40000	0.3	8.5	16	75	75	75	NBR	7321GBG99N3D	E321G40101D	-	483250	8	8	3865	5	3851
	40	540	540	40000	0.3	7	16	100	75	100	NBR	7321GBG99N00	E321G40	¹ 2995	481865	9	8	2900	2	11
	40	540	540	40000	0.3	8.5	16	100	75	100	NBR			4270	481000	8	8	3040	2	
	40	540	540	40000	0.3	16	16	100	75	100	NBR			4270	486265	14	14	3050	2	

Brass body/Pipe mounting

Normally open



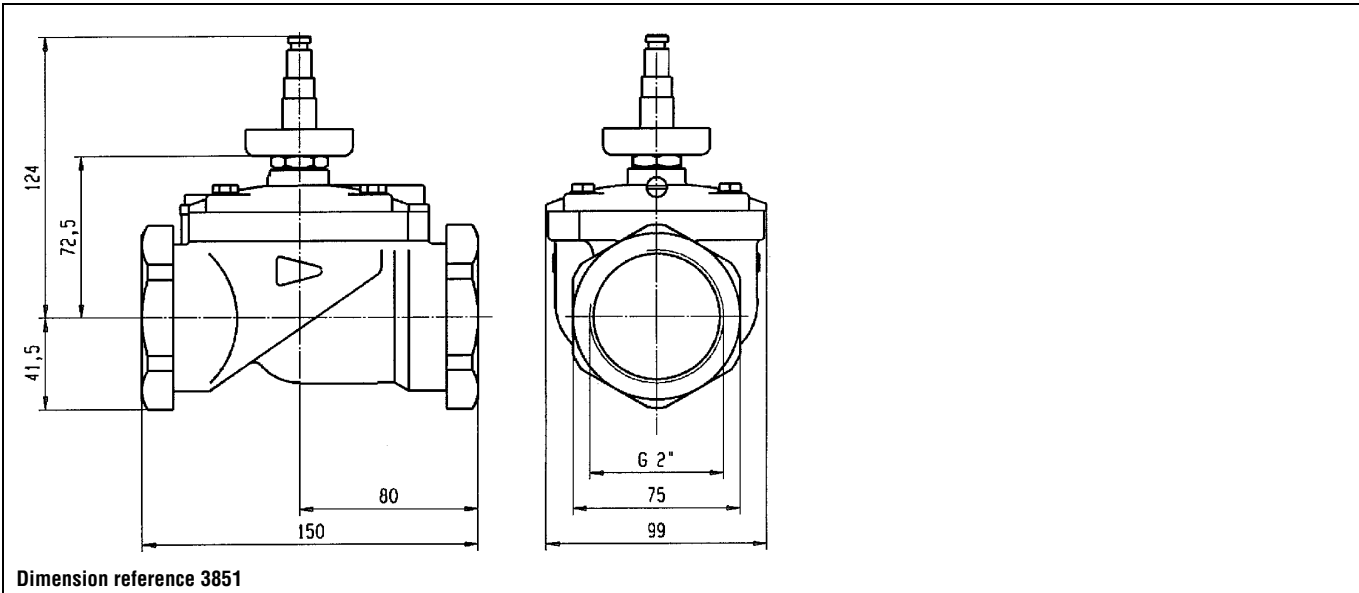
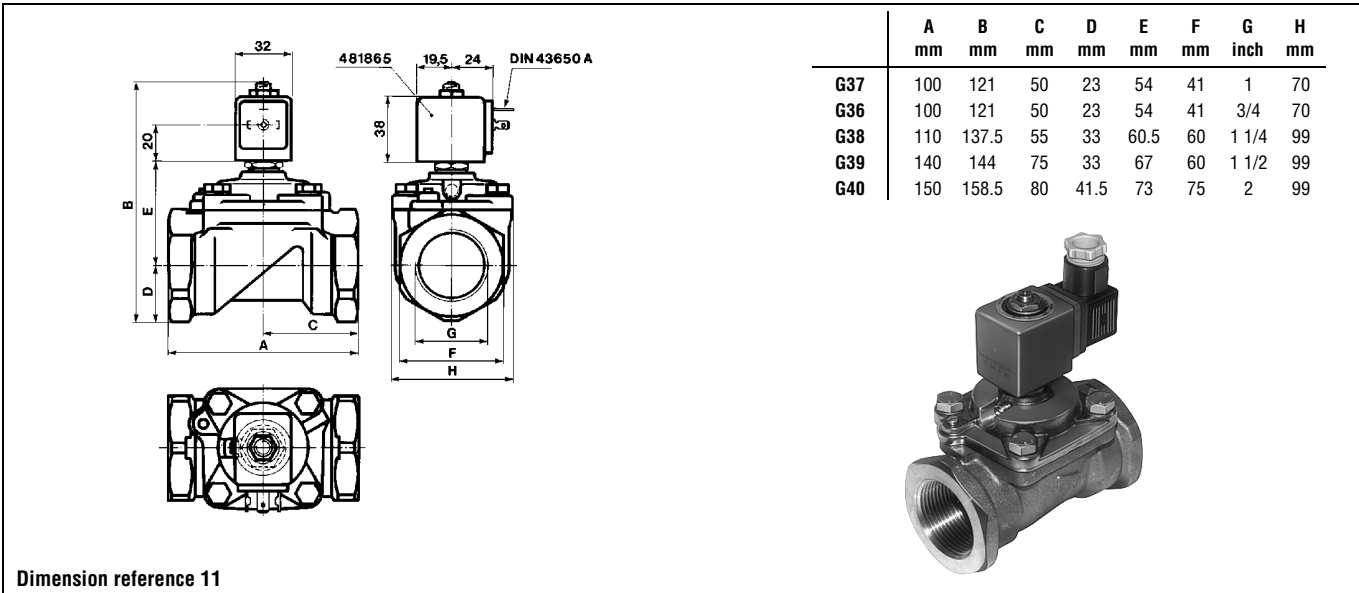
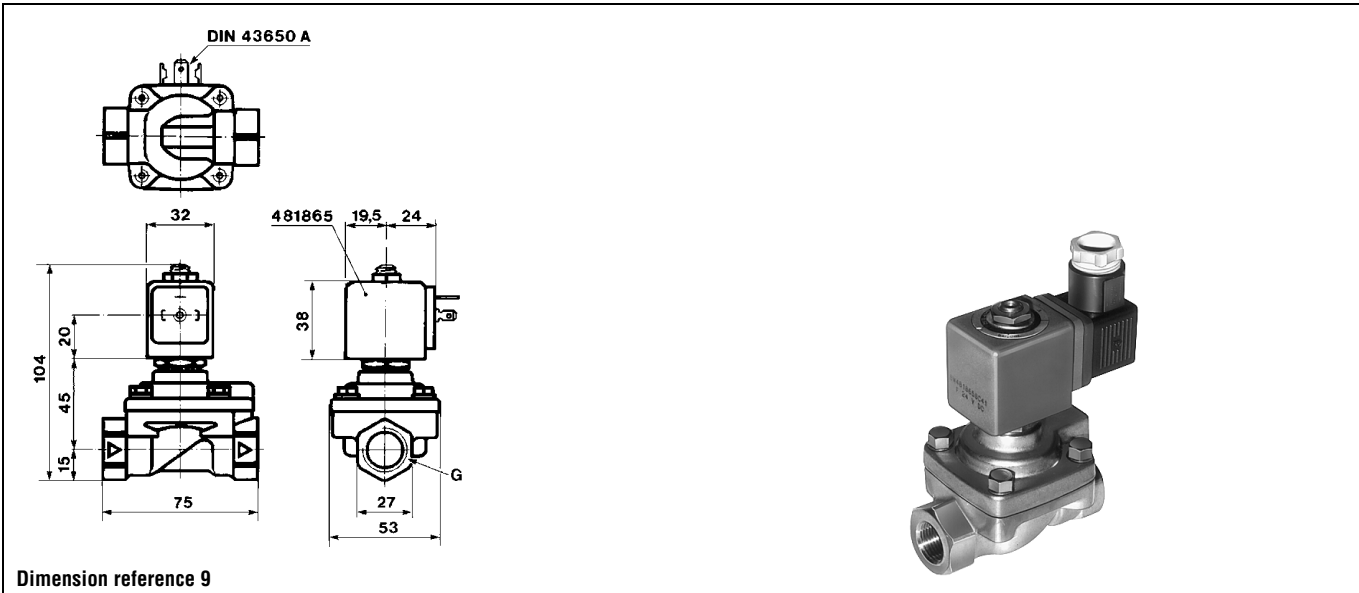
1/4	8	36	36	-	0.3	3	40	40	-	100	100	FKM	7322HBG2SV00	322H7106	² 2995	481865	9	8	820		9
	8	36	36	-	0.3	3	40	40	-	120	120	FKM			4270	481000	8	8	940		
	8	36	36	-	0.3	3	40	40	-	140	140	FKM			4270	486265	14	14	950		
	8	36	36	1600	0.3	3	25	40	100	75	100	NBR	7322HBG2SN00	322H71	² 2995	481865	9	8	840		9
	8	36	36	1600	0.3	3	30	40	100	75	100	NBR			4270	481000	8	8	960		

Table continued on page 32

Notes:

- * See Electrical Parts Group table at end of section
- 1. Manual override and 4 position selector for controlled closure rate: see "Anti-waterhammer valves" section
- 2. Pilot seat discs from ruby (synthetic)
- 3. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing

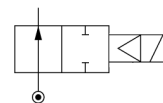
General application valves 2/2 - Pilot operated



General application valves 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Gases Q _{max}	Gases Q _n	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC			

Normally open



Brass body/Pipe mounting

1/4	12	30	30	2150	0.3	12	12	100	100	100	FKM	7322KBG2SVW0	322K4106	2995	481865	9	8	490		73		
	12	30	30	2150	0.3	12	12	120	100	120	FKM			4270	481000	8	8	610				
3/8	11	50	50	-	0.3	2	40	-	75	100	FKM	7322HBG3TV00	322H7306	1	2995	481865	9	8	800		9	
	11	50	50	-	0.3	2	40	40	-	75	100	FKM			4270	481000	8	8	920			
	11	50	50	-	0.3	2	40	40	-	140	140	FKM			4270	486265	14	14	930			
	11	50	50	3240	0.3	2	40	40	100	75	100	NBR	7322HBG3TN00	322H73	1	2995	481865	9	8	800		9
	11	50	50	3240	0.3	2	40	40	100	75	100	NBR			4270	481000	8	8	920			
	12	45	45	3050	0.3	12	12	100	100	100	FKM	7322KBG3TVW0	322K4306	2995	481865	9	8	490		73		
1/2	12	45	45	3050	0.3	12	12	120	100	120	FKM			4270	481000	8	8	610				
	12	50	50	3400	0.3	12	12	100	100	100	FKM	7322KBG4TVW0	322K4506	2995	481865	9	8	490		73		
	12	50	50	3400	0.3	12	12	120	100	120	FKM			4270	481000	8	8	610				
	14.5	60	60	-	0.3	2	40	40	-	100	100	FKM	7322HBG4UV00	322H7506	1	2995	481865	9	8	760		9
	14.5	60	60	-	0.3	2	40	40	-	100	120	FKM			4270	481000	8	8	880			
	14.5	60	60	-	0.3	2	40	40	-	100	140	FKM			4270	486265	14	14	890			
3/4	14.5	60	60	3890	0.3	2	40	40	100	75	100	NBR	7322HBG4UN00	322H75	1	2995	481865	9	8	760		9
	14.5	60	60	3890	0.3	2	40	40	100	75	100	NBR			4270	481000	8	8	880			
	18	100	100	9400	0.3	12	12	100	100	100	FKM	7322KBG51VW0	322K4606	2995	481865	9	8	700		73		
	18	100	100	9400	0.3	12	12	120	100	120	FKM			4270	481000	8	8	820				
	20	135	135	9500	0.3	16	16	100	100	100	FKM	7322GBG53V00	322G3606	2995	481865	9	8	1430		11		
	20	135	135	9500	0.3	16	16	120	100	120	FKM			4270	481000	8	8	1550				
1	20	135	135	9500	0.3	16	16	100	75	100	NBR	7322GBG53N00	322G36	2995	481865	9	8	1430		11		
	20	135	135	9500	0.3	16	16	100	75	100	NBR			4270	481000	8	8	1550				
	18	110	110	10150	0.3	12	12	100	100	100	FKM	7322KBG62VW0	322K4706	2995	481865	9	8	845		73		
	18	110	110	10150	0.3	12	12	120	100	120	FKM			4270	481000	8	8	965				
	25	180	180	14000	0.3	16	16	100	100	100	FKM	7322GBG64V00	322G3706	2995	481865	9	8	1230		11		
	25	180	180	14000	0.3	16	16	120	100	120	FKM			4270	481000	8	8	1350				
1 1/4	25	180	180	14000	0.3	16	16	100	75	100	NBR	7322GBG64N00	322G37	2995	481865	9	8	1230		11		
	25	180	180	14000	0.3	16	16	100	75	100	NBR			4270	481000	8	8	1350				
	28	270	270	18000	0.3	16	16	100	100	100	FKM	7322GBG76V00	322G3806	2995	481865	9	8	1860		11		
	28	270	270	18000	0.3	16	16	120	100	120	FKM			4270	481000	8	8	1980				
1 1/2	28	270	270	18000	0.3	16	16	100	75	100	NBR	7322GBG76N00	322G38	2995	481865	9	8	1860		11		
	28	270	270	18000	0.3	16	16	100	75	100	NBR			4270	481000	8	8	1980				
	40	420	420	31500	0.3	12	12	100	100	100	FKM	7322GBG88V00	322G3906	2995	481865	9	8	2560		11		
	40	420	420	31500	0.3	12	12	120	100	120	FKM			4270	481000	8	8	2680				
2	40	420	420	31500	0.3	12	12	100	75	100	NBR	7322GBG88N00	322G39	2995	481865	9	8	2560		11		
	40	420	420	31500	0.3	12	12	100	75	100	NBR			4270	481000	8	8	2680				
	40	540	540	40000	0.3	12	12	100	100	100	FKM	7322GBG99V00	322G4006	2995	481865	9	8	2900		11		
	40	540	540	40000	0.3	12	12	120	100	120	FKM			4270	481000	8	8	3040				
	40	540	540	40000	0.3	12	12	100	75	100	NBR	7322GBG99N00	322G40	2995	481865	9	8	2900		11		
	40	540	540	40000	0.3	12	12	100	75	100	NBR			4270	481000	8	8	3040				

Table continued on page 34

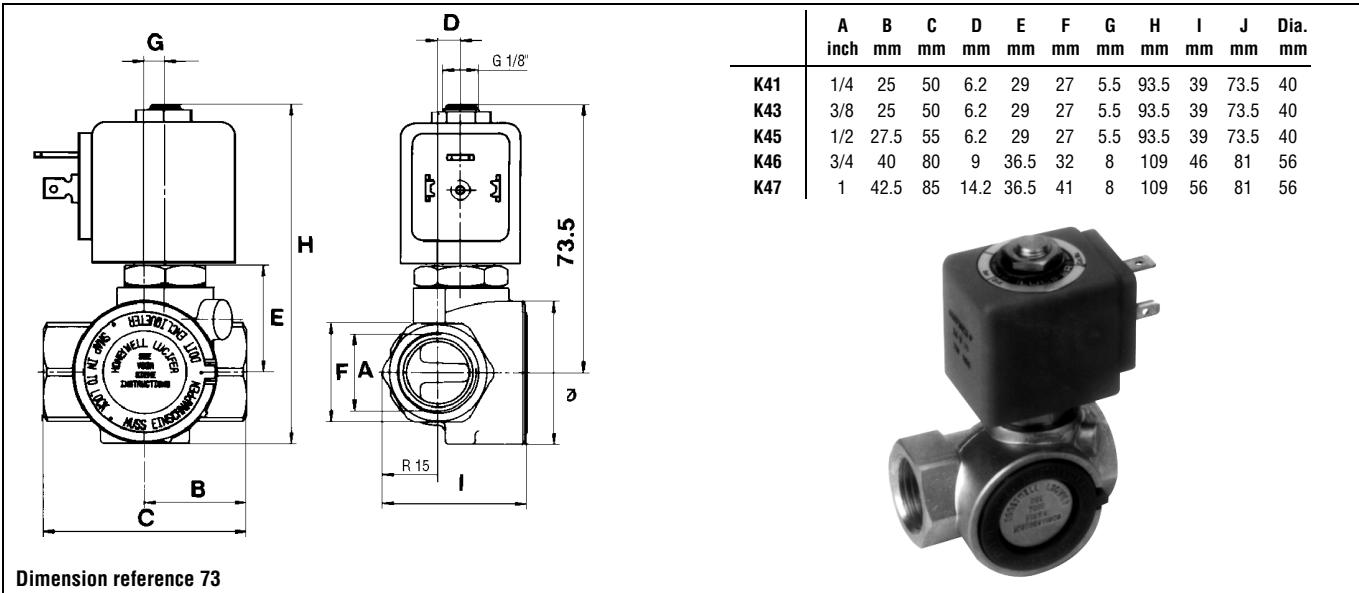
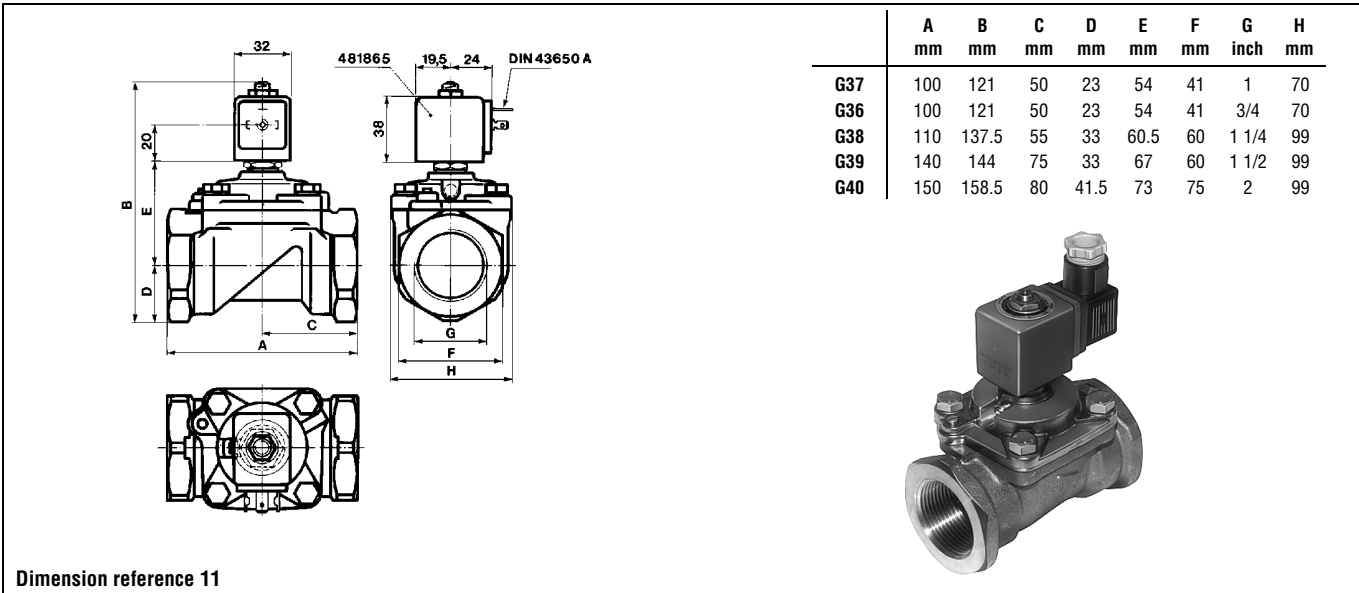
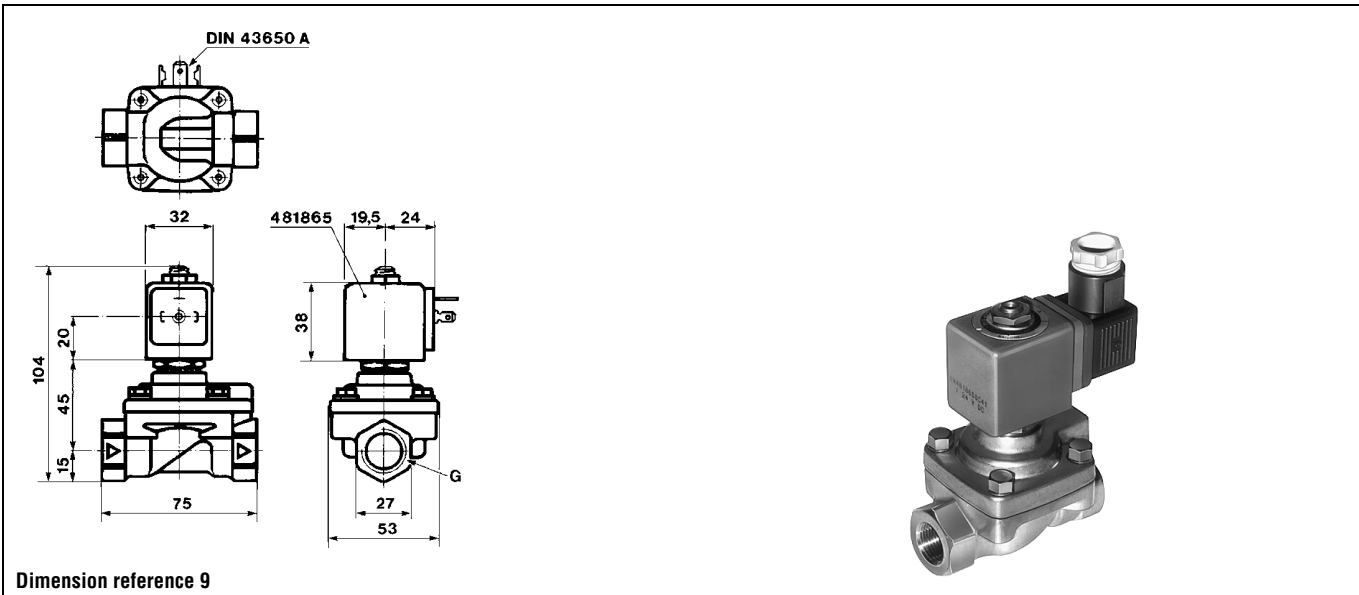
Notes:

* See Electrical Parts Group table at end of section

1. Pilot seat discs from ruby (synthetic)

2. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing

General application valves 2/2 - Pilot operated

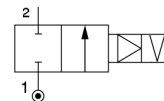


General application valves 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)	Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Gases Qn	Min	Max DC	Max AC	Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC		

Brass body/Pipe mounting

Magnetic latch control

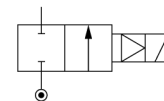


325 K41

1/4	12	30	30	2150	0.3	-	12	100	100	100	FKM	7325KBG2SVW0	325K4106	4269	484990	-	11	630	4	73
	12	30	30	2150	0.3	12	-	100	100	100	FKM			4269	485400	13	-	630	4	
3/8	12	45	45	3050	0.3	-	12	100	100	100	FKM	7325KBG3TVW0	325K4306	4269	484990	-	11	630	4	73
	12	45	45	3050	0.3	12	-	100	100	100	FKM			4269	485400	13	-	630	4	
1/2	12	50	50	3400	0.3	-	12	100	100	100	FKM	7325KBG4TVW0	325K4506	4269	484990	-	11	630	4	73
	12	50	50	3400	0.3	12	-	100	100	100	FKM			4269	485400	13	-	630	4	
3/4	18	100	100	9400	0.3	-	12	100	100	100	FKM	7325KBG51VW0	325K4606	4269	484990	-	11	840	4	73
	18	100	100	9400	0.3	12	-	100	100	100	FKM			4269	485400	13	-	840	4	
1	18	110	110	10150	0.3	-	12	100	100	100	FKM	7325KBG62VW0	325K4706	4269	484990	-	11	985	4	73
	18	110	110	10150	0.3	12	-	100	100	100	FKM			4269	485400	13	-	985	4	

Brass body/Sub-base mounting

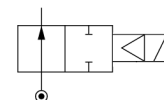
Normally closed



SB	14	45	45	-	0.3	2	25	40	-	100	100	FKM	7321FBF3TV00	E321F3202	1	2995	481865	9	8	650	2	13
	14	45	45	-	0.3	2	30	40	-	100	120	FKM				4270	481000	8	8	770	2	
	14	45	45	-	0.3	2	40	40	-	100	120	FKM				4270	486265	14	14	780	2	
	14	45	45	2100	0.3	2	25	40	100	75	100	NBR	7321FBF3TN00	E321F32	1	2995	481865	9	8	650	2	13
	14	45	45	2100	0.3	2	30	40	100	75	100	NBR				4270	481000	8	8	770	2	
	14	45	45	2100	0.3	2	40	40	100	75	100	NBR				4270	486265	14	14	780	2	

Brass body/Sub-base mounting

Normally open



SB	14	45	45	-	0.3	2	40	40	-	100	100	FKM	7322FBF3TV00	322F7206	1	2995	481865	9	8	650		13
	14	45	45	-	0.3	2	40	40	-	100	120	FKM				4270	481000	8	8	770		
	14	45	45	-	0.3	2	40	40	-	-	140	FKM				4270	486265	14	14	780		
	14	45	45	2100	0.3	2	40	40	75	75	75	NBR	7322FBF3TN00	322F72	1	2995	481865	9	8	650		13
	14	45	45	2100	0.3	2	40	40	75	75	75	NBR				4270	481000	8	8	770		
	14	45	45	2100	0.3	2	40	40	75	75	75	NBR				4270	481000	8	8	770		

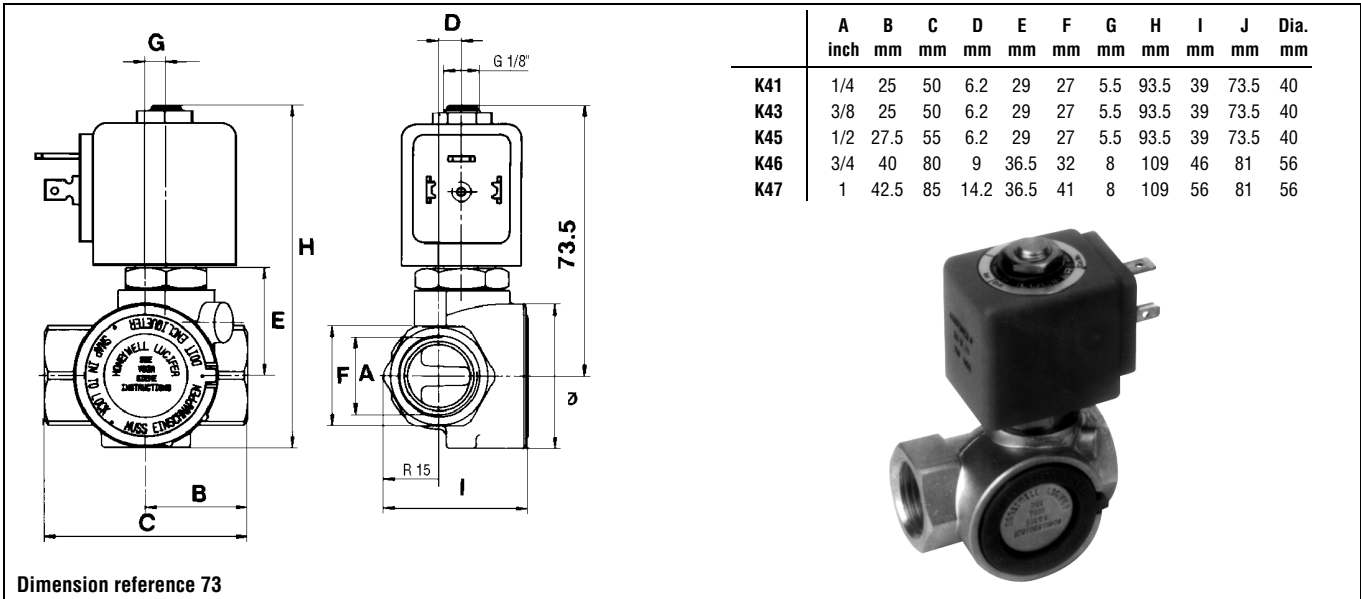
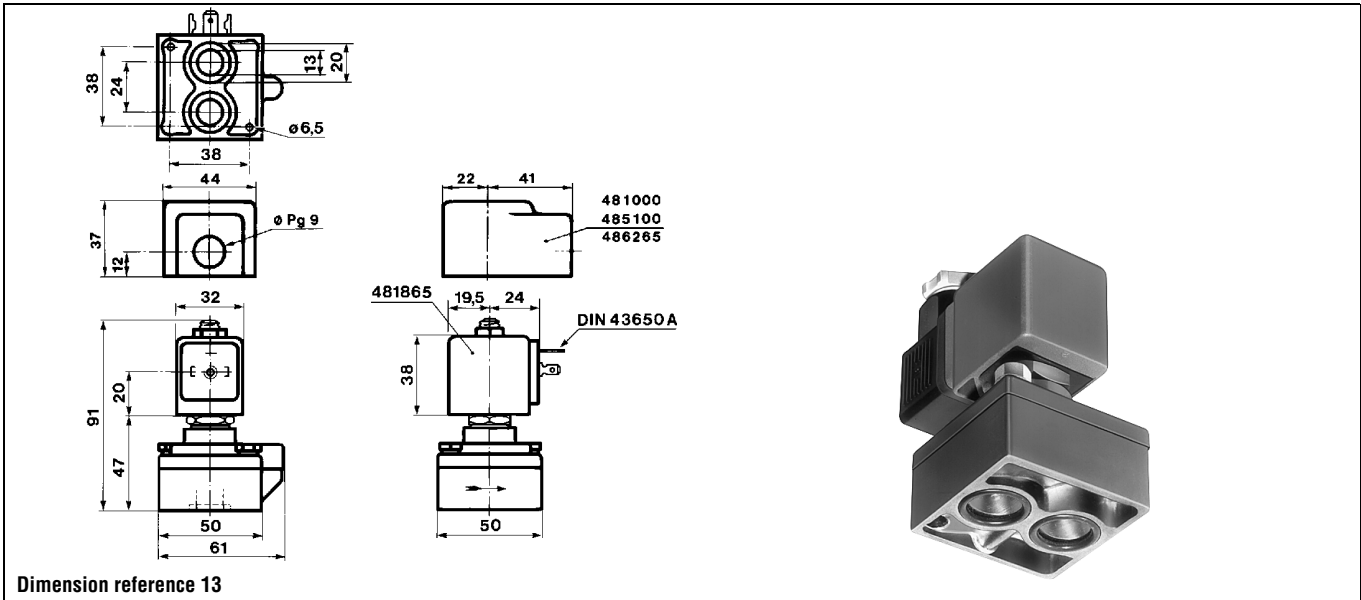
Notes:

* See Electrical Parts Group table at end of section

1. Pilot seat discs from ruby (synthetic)

2. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing

General application valves 2/2 - Pilot operated



Electrical parts options with 2/2 general application valves for dry or lubricated air, neutral gases and liquids

El. part Group	Coil	Protection class	Protection class / Temperature class	Power		Coil Order No.	Coil Ref. No.	Connection	Housing Order No.	Housing Ref. No.	Ambient temp.	
				DC	AC						min.	max.
1	22 mm	IP 65	Class F	2.5 W	2 W	DA01	488980	for DIN plug	A0	8993	-40	50
		IP 65	Class F	2.5 W	2 W	DA02	481045	with DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA03	481180	for DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA04	481530	with DIN plug	A0	8993	-40	50
		IP 65	EEx m II T4	5 W	4 W	VA01	482605	with 1500mm cable	00	-	-40	50
		IP 65	EEx m II T5	2.5 W	2 W	VA02	482606	with 1500mm cable	00	-	-40	50
2	32 mm (Std)	IP 65	Class F	9 W	8 W	DZ02	481865	for DIN plug	N1	2995	-40	50
		IP 65		9 W	8 W	DZ03	482725	with DIN plug	N1	2995	-40	50
		IP 65	Class H	9 W	8 W	DZ04	492453	for DIN plug	N1	2995	-40	50
		IP 65		9 W	8 W	DZ05	492726	with DIN plug	N1	2995	-40	50
		IP 65	Class F, 50/60 Hz	-	9 W	DZ06	483510	for DIN plug	N1	2995	-40	50
		IP 65		-	9 W	DZ07	482635	with DIN plug	N1	2995	-40	50
		IP 65	EEx m II T4	9 W	8 W	HZ05	492670	with 3000mm cable	00	-	-40	40
		IP 65	Class H	14 W	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
	50 mm (Std)	IP 65		14 W	14 W	DZ09	492727	with DIN plug	N1	2995	-40	50
		IP10 / IP 44	Class F	8 W	8 W	EZ01	481000	screw-terminals	E0	4270	-40	50
		IP10 / IP 44	Class H	8 W	8 W	EZ02	485100	screw-terminals	E0	4270	-40	50
		IP10 / IP 44	Class H	14 W	14 W	EZ92	486265	screw-terminals	E0	4270	-40	50
		IP 67	Class F, M20x1.5	8 W	8 W	EZ01	481000	screw-terminals	G1	4538	-40	50
		IP 65	EEx m II T5/T4	9 W	8 W	VZ01	492070	with 1500mm cable	00	-	-40	40/65
		IP 67	EEx me II T4	8 W	8 W	HZ06	483371	for cable connection	00	-	-40	65
		IP 66	EEx me II T3/T4	11 W	9 W	VZ03	492190	for cable connection	00	-	-40	75/40
3	32 mm	IP 65	Class H	-	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
4	50 mm (impulse)	IP10 / IP 44	Class F	-	11 W	MZ01	484990	screw-terminals	E1	4269	-40	50
		IP10 / IP 44	Class F	13 W	-	MZ02	485400	screw-terminals	E1	4269	-40	50
5	50 mm	IP 54	EEx d IIC T4/T5/T6	8 W	8 W	HZ08	483250	for cable 1/2 NPT	00	-	-40	80/75/60
6	32 mm (Miniwatt)	IP 65	Class F	1.6 W	-	DZ10	482740	for DIN plug	N1	2995	-40	50
		IP 65	Class F	1.6 W	-	DZ11	482745	with DIN plug	N1	2995	-40	50
	50 mm (Miniwatt)	IP 67	EEx me II T5	2.5 W	-	VZ04	491117	for cable connection	00	-	-40	65
		IP 67	EEx m II T5/T4	2.5 W	2.5 W	VZ05	492370	with 1500mm cable	00	-	-40	40/65
		IP 66	EEx me II T6/T5	2.5 W	2.5 W	VZ06	492390	for cable connection	00	-	-40	40/75
7	32 mm	IP 65	EEx ia II C T6	0.4 W	-	DZ12	483580.01	for DIN plug	N1	2995	-40	55
		IP 65		0.4 W	-	DZ13	483960.01	with DIN plug	N1	2995	-40	55
	50 mm	IP 66	EEx ia II C T6	0.4 W	-	VZ07	488650.01	for cable connection	00	-	-40	65
		IP 67		0.4 W	-	VZ08	488660.01	with 2000mm cable	00	-	-40	65
		IP 65		0.4 W	-	VZ09	488670.01	with DIN plug	00	-	-40	65

Note: This table is indicative only. Please contact your distributor to confirm your selection.

Miniature valves (2-way direct operated)

2/2

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Direct operated	Brass body	Normally closed	1/8	.8 to 4	56.0	38
		Normally open	1/8	.8 to 2.4	21.0	40
	303 Stainless steel body	Normally closed	1/8	.8 to 4	56.0	40
		Normally open	1/8	.8 to 2.4	21.0	42
	Aluminium alloy body	Normally closed	SB	1.2 to 1.6	35.0	42
		Normally open	SB	1.2 to 2.4	14.0	42

Notes:

Direct operated valves: pressure range from 0 to max pressure.

Miniature valves (2-way direct operated)

2/2

Applications

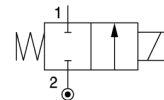
The Miniature Series is a small size and low power consumption valve line. It is available in 2-way (normally closed and normally open) and 3-way (normally closed and normally open) versions. These valves are equipped with integrated molded coils with tab or lead termination.

Direct operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	Dim ref.
		Liquids kv	Qmax	Gases Qn	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference	Housing	Coil	DC	AC		

Brass body/Pipe mounting

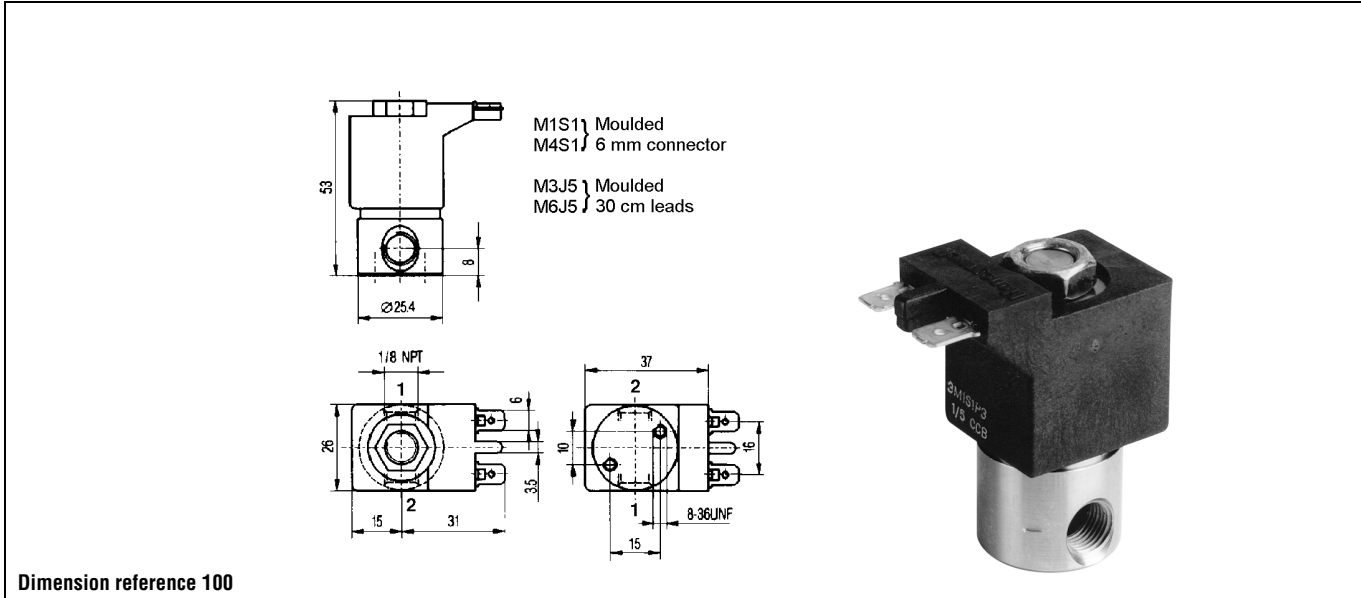
Normally closed



1/8	0.8	0.43	-	-	0	56	56	50	50	50	FKM	3121BBN1AV00	-	NO	M1S1	4.5	4.5	-	100
	0.8	0.43	-	-	0	56	56	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	0.8	0.43	-	-	0	54	54	50	50	50	FKM	3921BBN1AV00	-	NO	M4S1	2.5	2.5	-	100
	0.8	0.43	-	-	0	54	54	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	1.2	0.72	-	-	0	35	35	50	50	50	FKM	3121BBN1EV00	-	NO	M1S1	4.5	4.5	-	100
	1.2	0.72	-	-	0	35	35	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	1.2	0.72	-	-	0	21	21	50	50	50	FKM	3921BBN1EV00	-	NO	M4S1	2.5	2.5	-	100
	1.2	0.72	-	-	0	21	21	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	1.6	1.29	-	-	0	21	21	50	50	50	FKM	3121BBN1GV00	-	NO	M1S1	4.5	4.5	-	100
	1.6	1.29	-	-	0	21	21	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	1.6	1.29	-	-	0	6.6	6.6	50	50	50	FKM	3921BBN1GV00	-	NO	M4S1	2.5	2.5	-	100
	1.6	1.29	-	-	0	6.6	6.6	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	2	1.86	-	-	0	14	14	50	50	50	FKM	3121BBN1JV00	-	NO	M1S1	4.5	4.5	-	100
	2	1.86	-	-	0	14	14	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	2	1.86	-	-	0	4.5	4.5	50	50	50	FKM	3921BBN1JV00	-	NO	M4S1	2.5	2.5	-	100
	2	1.86	-	-	0	4.5	4.5	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	2.4	2.57	-	-	0	12.25	12.25	50	50	50	FKM	3121BBN1LV00	-	NO	M1S1	4.5	4.5	-	100
	2.4	2.57	-	-	0	12.25	12.25	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	2.4	2.57	-	-	0	2.8	2.8	50	50	50	FKM	3921BBN1LV00	-	NO	M4S1	2.5	2.5	-	100
	2.4	2.57	-	-	0	2.8	2.8	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	3.2	3.43	-	-	0	7	7	50	50	50	FKM	3121BBN1NV00	-	NO	M1S1	4.5	4.5	-	100
	3.2	3.43	-	-	0	7	7	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	3.2	3.43	-	-	0	0.28	0.28	50	50	50	FKM	3921BBN1NV00	-	NO	M4S1	2.5	2.5	-	100
	3.2	3.43	-	-	0	0.28	0.28	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	4	4.3	-	-	0	3.5	3.5	50	50	50	FKM	3121BBN1QV00	-	NO	M1S1	4.5	4.5	-	100
	4	4.3	-	-	0	3.5	3.5	50	50	50	FKM			NO	M3J5	4.5	4.5	-	

Table continued on page 40

Miniature valves 2/2 - Direct operated

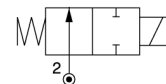


Miniature valves 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	Dim ref.
		Liquids		Gases	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference	Housing	Coil	DC	AC		
		kv	Qmax			DC	AC												
G				Qn															

Brass body/Pipe mounting

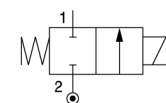
Normally open



1/8	0.8	0.43	-	-	0	21	21	50	50	50	FKM	3129BBN1AV00	-	NO	M1S1	4.5	4.5	-	100
	0.8	0.43	-	-	0	21	21	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	1.2	0.72	-	-	0	14	14	50	50	50	FKM	3129BBN1EV00	-	NO	M1S1	4.5	4.5	-	100
	1.2	0.72	-	-	0	14	14	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	1.6	1.29	-	-	0	10.5	10.5	50	50	50	FKM	3129BBN1GV00	-	NO	M1S1	4.5	4.5	-	100
	1.6	1.29	-	-	0	10.5	10.5	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	2	1.86	-	-	0	5.6	5.6	50	50	50	FKM	3129BBN1JV00	-	NO	M1S1	4.5	4.5	-	100
	2	1.86	-	-	0	5.6	5.6	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	2.4	2.57	-	-	0	2.8	2.8	50	50	50	FKM	3129BBN1LV00	-	NO	M1S1	4.5	4.5	-	100
	2.4	2.57	-	-	0	2.8	2.8	50	50	50	FKM			NO	M3J5	4.5	4.5	-	

303 Stainless steel body/Pipe mounting

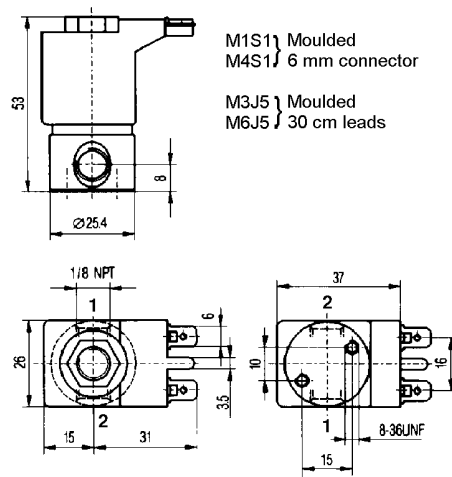
Normally closed



1/8	0.8	0.43	-	-	0	56	56	50	50	50	FKM	3121BSN1AV00	-	NO	M1S1	4.5	4.5	-	100
	0.8	0.43	-	-	0	56	56	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	0.8	0.43	-	-	0	54	54	50	50	50	FKM	3921BSN1AV00	-	NO	M4S1	2.5	2.5	-	100
	0.8	0.43	-	-	0	54	54	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	1.2	0.72	-	-	0	35	35	50	50	50	FKM	3121BSN1EV00	-	NO	M1S1	4.5	4.5	-	100
	1.2	0.72	-	-	0	35	35	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	1.2	0.72	-	-	0	21	21	50	50	50	FKM	3921BSN1EV00	-	NO	M4S1	2.5	2.5	-	100
	1.2	0.72	-	-	0	21	21	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	1.6	1.29	-	-	0	21	21	50	50	50	FKM	3121BSN1GV00	-	NO	M1S1	4.5	4.5	-	100
	1.6	1.29	-	-	0	21	21	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	1.6	1.29	-	-	0	6.6	6.6	50	50	50	FKM	3921BSN1GV00	-	NO	M4S1	2.5	2.5	-	100
	1.6	1.29	-	-	0	6.6	6.6	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	2	1.86	-	-	0	14	14	50	50	50	FKM	3121BSN1JV00	-	NO	M1S1	4.5	4.5	-	100
	2	1.86	-	-	0	14	14	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	2	1.86	-	-	0	4.5	4.5	50	50	50	FKM	3921BSN1JV00	-	NO	M4S1	2.5	2.5	-	100
	2	1.86	-	-	0	4.5	4.5	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	2.4	2.57	-	-	0	12.25	12.25	50	50	50	FKM	3121BSN1LV00	-	NO	M1S1	4.5	4.5	-	100
	2.4	2.57	-	-	0	12.25	12.25	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	2.4	2.57	-	-	0	2.8	2.8	50	50	50	FKM	3921BSN1LV00	-	NO	M4S1	2.5	2.5	-	100
	2.4	2.57	-	-	0	2.8	2.8	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	3.2	3.43	-	-	0	7	7	50	50	50	FKM	3121BSN1NV00	-	NO	M1S1	4.5	4.5	-	100
	3.2	3.43	-	-	0	7	7	50	50	50	FKM			NO	M3J5	4.5	4.5	-	
	3.2	3.43	-	-	0	0.28	0.28	50	50	50	FKM	3921BSN1NV00	-	NO	M4S1	2.5	2.5	-	100
	3.2	3.43	-	-	0	0.28	0.28	50	50	50	FKM			NO	M6J5	2.5	2.5	-	
	4	4.3	-	-	0	3.5	3.5	50	50	50	FKM	3121BSN1QV00	-	NO	M1S1	4.5	4.5	-	100
	4	4.3	-	-	0	3.5	3.5	50	50	50	FKM			NO	M3J5	4.5	4.5	-	

Table continued on page 42

Miniature valves 2/2 - Direct operated



Dimension reference 100

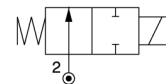


Miniature valves 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
		Liquids		Gases	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference	Housing	Coil		DC	AC		
G		kv	Qmax	Qn		DC	AC													

303 Stainless steel body/Pipe mounting

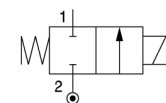
Normally open



1/8	0.8	0.43	-	-	0	21	21	50	50	50	FKM	3129BSN1AV00	-	N0	M1S1	4.5	4.5	-	100
	0.8	0.43	-	-	0	21	21	50	50	50	FKM			N0	M3J5	4.5	4.5	-	
	1.2	0.72	-	-	0	14	14	50	50	50	FKM	3129BSN1EV00	-	N0	M1S1	4.5	4.5	-	100
	1.2	0.72	-	-	0	14	14	50	50	50	FKM			N0	M3J5	4.5	4.5	-	
	1.6	1.29	-	-	0	10.5	10.5	50	50	50	FKM	3129BSN1GV00	-	N0	M1S1	4.5	4.5	-	100
	1.6	1.29	-	-	0	10.5	10.5	50	50	50	FKM			N0	M3J5	4.5	4.5	-	
	2	1.86	-	-	0	5.6	5.6	50	50	50	FKM	3129BSN1JV00	-	N0	M1S1	4.5	4.5	-	100
	2	1.86	-	-	0	5.6	5.6	50	50	50	FKM			N0	M3J5	4.5	4.5	-	
	2.4	2.57	-	-	0	2.8	2.8	50	50	50	FKM	3129BSN1LV00	-	N0	M1S1	4.5	4.5	-	100
	2.4	2.57	-	-	0	2.8	2.8	50	50	50	FKM			N0	M3J5	4.5	4.5	-	

Aluminium alloy body/Sub-base mounting

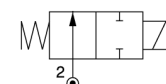
Normally closed



SB	1.2	0.72	-	-	0	35	35	50	50	50	FKM	3121BJA7EVC#	- 1	N0	M1S1	4.5	4.5	-	101
	1.2	0.72	-	-	0	35	35	50	50	50	FKM		1	N0	M3J5	4.5	4.5	-	
	1.2	0.72	-	-	0	21	21	50	50	50	FKM	3921BJA7EVC#	- 1	N0	M4S1	2.5	2.5	-	101
	1.2	0.72	-	-	0	21	21	50	50	50	FKM		1	N0	M6J5	2.5	2.5	-	
	1.6	1.29	-	-	0	21	21	50	50	50	FKM	3121BJA7GVC#	- 1	N0	M1S1	4.5	4.5	-	101
	1.6	1.29	-	-	0	21	21	50	50	50	FKM		1	N0	M3J5	4.5	4.5	-	
	1.6	1.29	-	-	0	6.6	6.6	50	50	50	FKM	3921BJA7GVC#	- 1	N0	M4S1	2.5	2.5	-	101
	1.6	1.29	-	-	0	6.6	6.6	50	50	50	FKM		1	N0	M6J5	2.5	2.5	-	

Aluminium alloy body/Sub-base mounting

Normally open

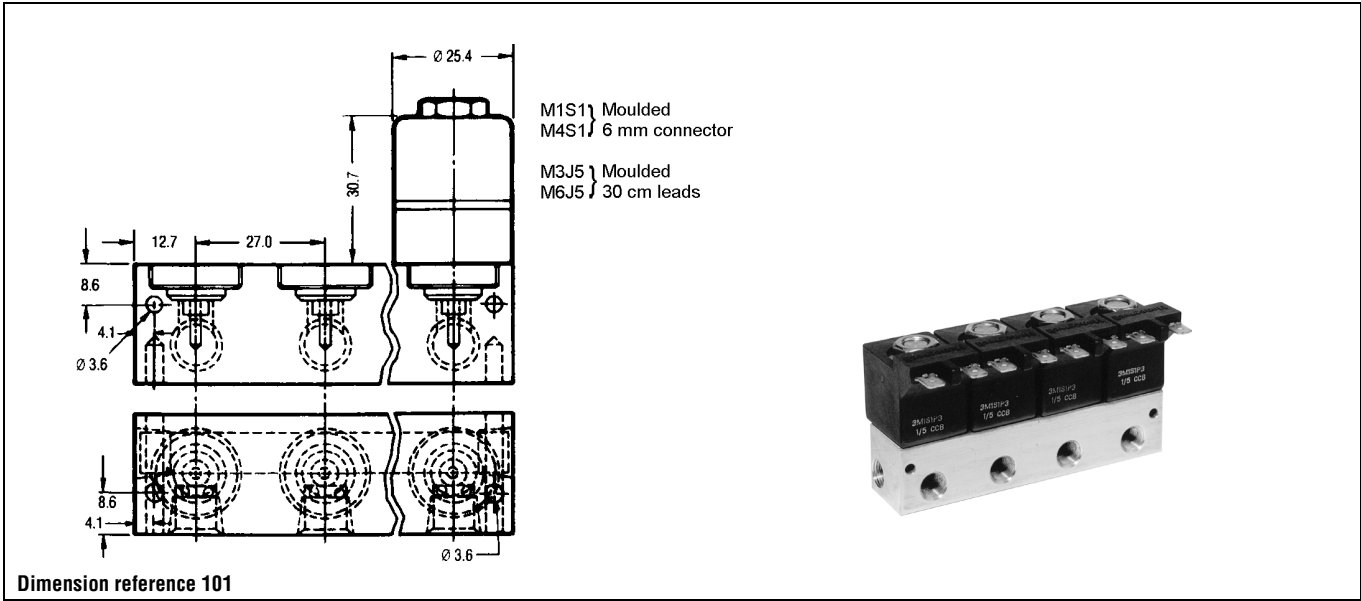
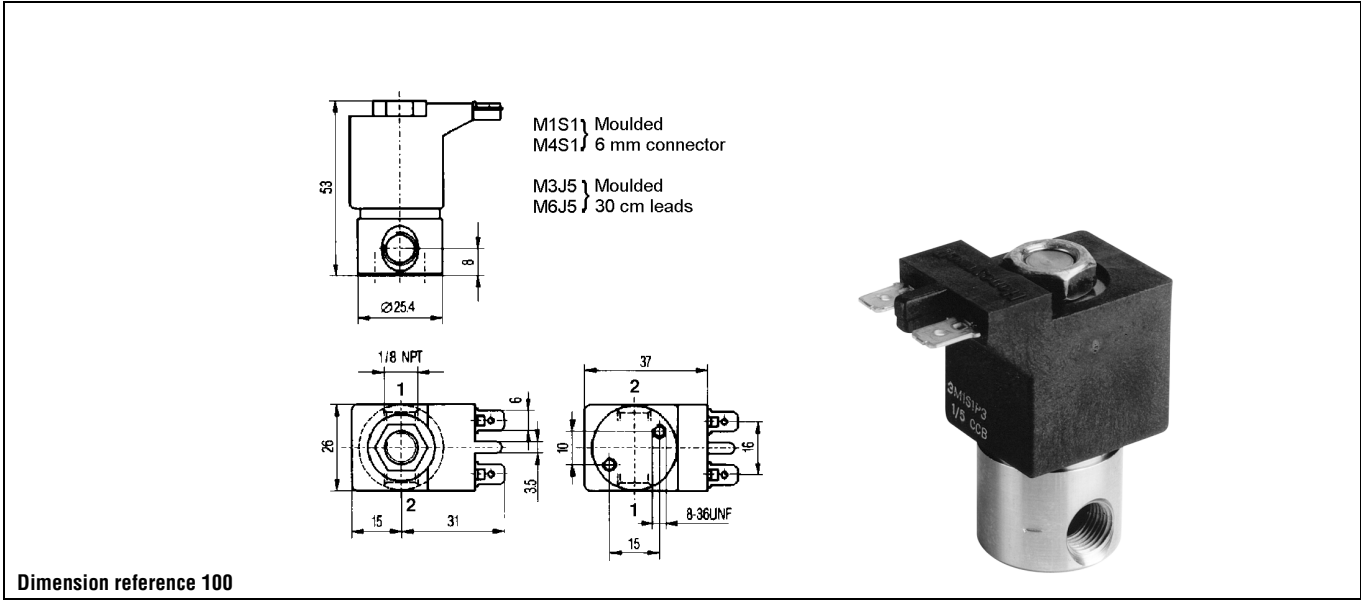


SB	1.2	0.72	-	-	0	14	14	50	50	50	FKM	3129BJA7EVC#	- 1	N0	M1S1	4.5	4.5	-	101
	1.2	0.72	-	-	0	14	14	50	50	50	FKM		1	N0	M3J5	4.5	4.5	-	
	1.6	1.29	-	-	0	10.5	10.5	50	50	50	FKM	3129BJA7GVC#	- 1	N0	M1S1	4.5	4.5	-	101
	1.6	1.29	-	-	0	10.5	10.5	50	50	50	FKM		1	N0	M3J5	4.5	4.5	-	
	2.4	1.29	-	-	0	2.8	2.8	50	50	50	FKM	3129BJA7LVC#	- 1	N0	M1S1	4.5	4.5	-	101
	2.4	1.29	-	-	0	2.8	2.8	50	50	50	FKM		1	N0	M3J5	4.5	4.5	-	

Notes:

1. # Denotes the number of valves in the manifold, from 2 to 4

Miniature valves 2/2 - Direct operated



Valves for water and neutral liquids

2/2

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Direct operated	Brass body	Normally closed	1/8	1.5 to 3	20.0	46
			1/4	1.5 to 5	20.0	46
			3/8	4 to 6	10.0	48
			1/2	8.5 to 11	4.0	48
			SB	1.5 to 3	20.0	50
		Normally open	1/4	1.5 to 2.5	20.0	48
		Magnetic latch control	1/4	5	5.0	50
Magnalift	Brass body	Normally closed	3/8	15	16.0	52
			1/2	15	16.0	52
			3/4	15	16.0	52
			1	15 to 25	16.0	52
		Normally open	3/8	15	8.5	54
			1/2	15	8.5	54
			3/4	19	8.5	54
			1	15 to 25	16.0	52
	303 Stainless steel body	Normally closed	3/8	15	7.0	54
			1/2	15	7.0	54
			3/4	19	7.0	54
		Normally open	3/8	16	8.5	54
			1/2	16	8.5	54
Pilot operated	Brass body	Normally closed	1/4	12	10.0	56
			3/8	12 to 13	20.0	56
			1/2	12 to 13	20.0	56
			3/4	18 to 20	20.0	56
			1	18 to 25	20.0	56
			1 1/4	28 to 35	16.0	58
			1 1/2	40	16.0	58
			2	40 to 50	16.0	58
			2 1/2	65	10.0	58
			3	75	10.0	58
			SB	14	40.0	60
		Normally open	3/8	13	20.0	58
			1/2	13	20.0	58
			3/4	20	20.0	58
			1	25	20.0	60
			1 1/4	28 to 35	16.0	60
			1 1/2	40	12.0	60
			2	40 to 50	12.0	60
			SB	14	40.0	60

Notes:

Direct operated and magnalift valves: pressure range from 0 to max pressure.

Pilot operated valves: pressure range from 0.3 to 0.5 bar to max. pressure (refer to tables).

Valves for water and neutral liquids

2/2

Applications

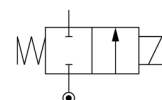
Wide range of valves suited to most industrial applications using liquids compatible with the indicated sealing materials. Typical applications can be found in general water supply, dispensing, industrial washing, laundry, heating-ventilation etc.



Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil					
G		kv	Qmax	Min	Max								DC	AC			

Normally closed



Brass body/Pipe mounting

1/8	1.5	1.5	6	0	20	20	75	FKM	7121ZBG1GV00	-	2995	481865	9	8	270	2	7893
	1.5	1.5	6	0	20	20	75	FKM			4270	481000	8	8	390	2	
	1.5	1.5	6	0	20	20	75	FKM			2995	482730	7	6	270	2	
	1.5	0.9	2.4	0	12	20	75	FKM	-	121M14	8993	481180	5	4	150	1	1
	1.5	0.9	2.4	0	4	20	75	FKM			8993	488980	2.5	2	150	1	
	2	2	8	0	7	10	75	FKM	-	121M13	8993	481180	5	4	150	1	1
	2	2	8	0	2.5	10	75	FKM			8993	488980	2.5	2	150	1	
	2.5	2.8	8.5	0	10	10	75	FKM	7121ZBG1LV00	-	2995	481865	9	8	270	2	7893
	2.5	2.8	8.5	0	10	10	75	FKM			4270	481000	8	8	390	2	
	2.5	2.8	8.5	0	5	10	75	FKM			2995	482730	7	6	270	2	
	3	4.5	9	0	7	10	100	FKM	7121KBG1NVM0	121K1352 1	2995	481865	9	8	300	2	3
	3	4.5	9	0	8	10	120	FKM			4270	481000	8	8	420	2	
	3	4.5	9	0	10	10	120	FKM			4270	486265	14	14	430		
1/4	1.5	1.5	6	0	20	20	100	FKM	7121KBG2GV00	E121K0402	2995	481865	9	8	290	2	3
	1.5	1.5	6	0	20	20	120	FKM			4270	481000	8	8	410	2	
	2.5	3.5	8.5	0	7	14	100	FKM	7121KBG2LV00	121K0706	2995	481865	9	8	290	2	3
	2.5	3.5	8.5	0	9	14	120	FKM			4270	481000	8	8	410	2	
	2.5	3.5	8.5	0	14	14	120	FKM			4270	486265	14	14	420		
	2.5	3.5	8.5	0	7	14	100	FKM	7121KBG2LVM0	121K0756 1	2995	481865	9	8	290	2	3
	2.5	3.5	8.5	0	9	14	120	FKM			4270	481000	8	8	410	2	
	2.5	3.5	8.5	0	14	14	120	FKM			4270	486265	14	14	420		
	3	4.5	9	0	7	10	100	FKM	7121KBG2NV00	E121K0302	2995	481865	9	8	290	2	3
	3	4.5	9	0	8.5	10	120	FKM			4270	481000	8	8	410	2	
	3	4.5	9	0	10	10	120	FKM			4270	486265	14	14	420		
	3	4.5	9	0	7	10	100	FKM	7121KBG2NVM0	E121K0352 1	2995	481865	9	8	290	2	3
	3	4.5	9	0	8.5	10	120	FKM			4270	481000	8	8	410	2	
	3	4.5	9	0	10	10	120	FKM			4270	486265	14	14	420		

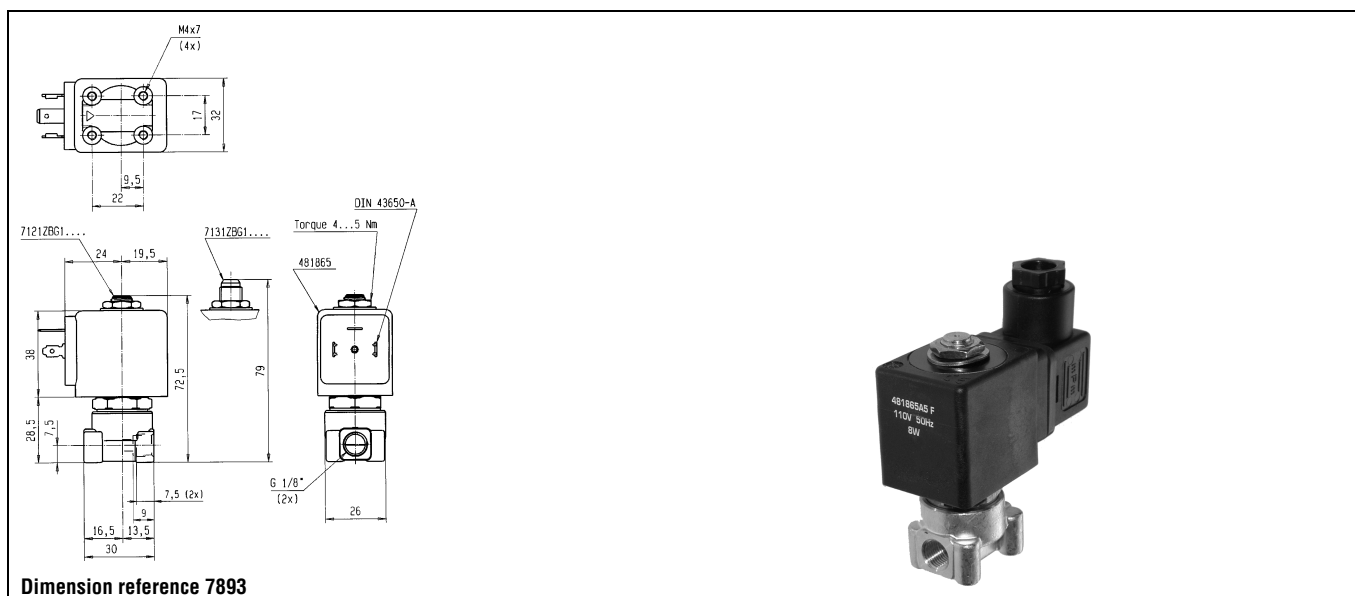
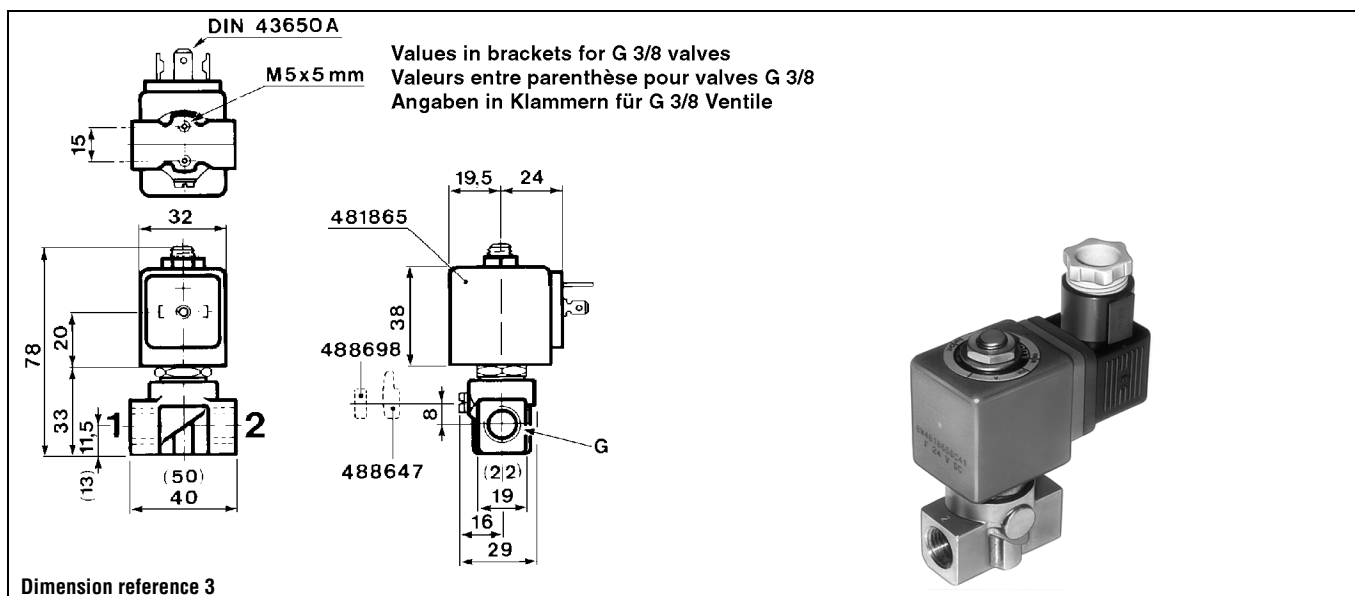
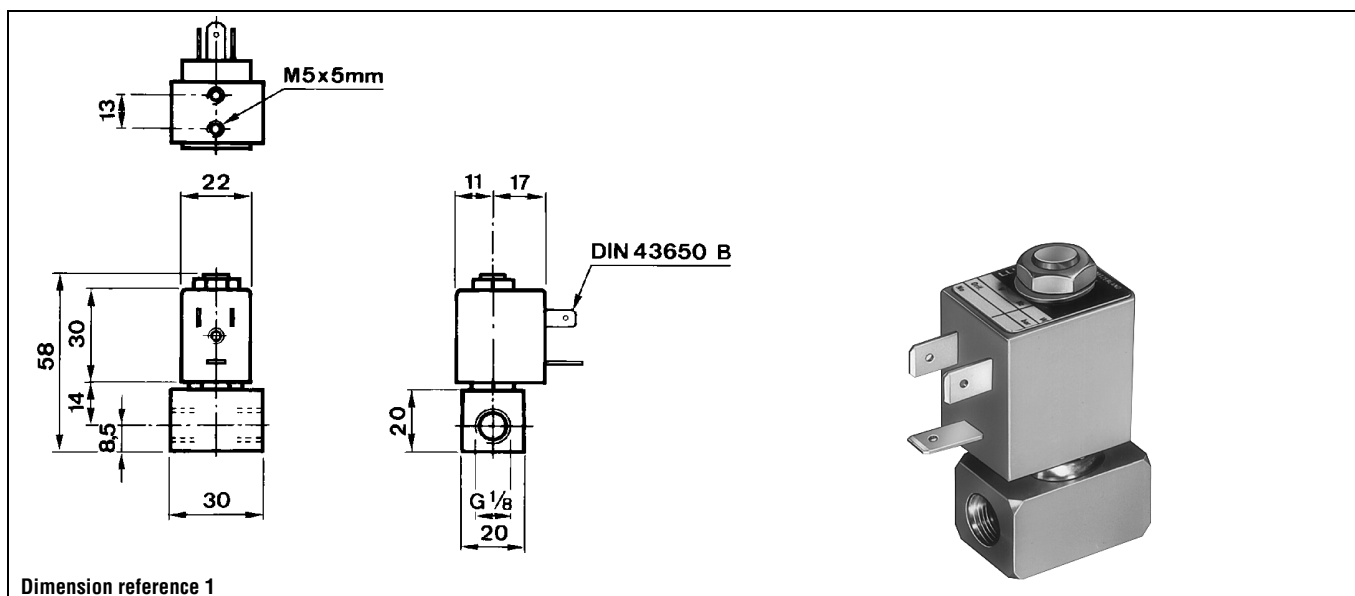
Table continued on page 48

Notes:

* See Electrical Parts Group table at end of section

1. Manual override standard

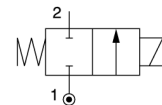
Valves for water and neutral liquids 2/2 - Direct operated



Valves for water and neutral liquids 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil					
G		kv	Qmax	Min	Max								DC	AC			

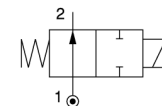
Normally closed



Brass body/Pipe mounting

1/4	4	7.5	10.5	0	4	10	100	FKM	7121KBG2QVM0	121K0250	1	2995	481865	9	8	290	2	3
	4	7.5	10.5	0	5	10	120	FKM				4270	481000	8	8	410	2	
	4	7.5	10.5	0	10	10	120	FKM				4270	486265	14	14	420		
	4	7.5	10.5	0	4	10	100	FKM	7121KBG2QV00	121K02		2995	481865	9	8	290	2	3
	4	7.5	10.5	0	5	10	120	FKM				4270	481000	8	8	410	2	
	4	7.5	10.5	0	10	10	120	FKM				4270	486265	14	14	420		
	5	11	11.5	0	2	7	100	FKM	7121KBG2SVM0	121K0150	1	2995	481865	9	8	290	2	3
	5	11	11.5	0	2.8	7	120	FKM				4270	481000	8	8	410	2	
	5	11	11.5	0	5	7	120	FKM				4270	486265	14	14	420		
	5	11	11.5	0	2	7	100	FKM	7121KBG2SV00	121K01		2995	481865	9	8	290	2	3
	5	11	11.5	0	2.8	7	120	FKM				4270	481000	8	8	410	2	
	5	11	11.5	0	5	7	120	FKM				4270	486265	14	14	420		
3/8	4	7.5	10.5	0	4	10	100	FKM	7121KBG3QV00	121K3206		2995	481865	9	8	340	2	3
	4	7.5	10.5	0	5	10	120	FKM				4270	481000	8	8	460	2	
	4	7.5	10.5	0	10	10	120	FKM				4270	486265	14	14	470		
	5	11	11.5	0	2	7	100	FKM	7121KBG3SV00	121K3106		2995	481865	9	8	340	2	3
	5	11	11.5	0	2.8	7	120	FKM				4270	481000	8	8	460	2	
	5	11	11.5	0	5	7	120	FKM				4270	486265	14	14	470		
	6	12	12.5	0	1.1	5	100	FKM	7121KBG3UV00	121K3306		2995	481865	9	8	340	2	3
	6	12	12.5	0	1.5	5	120	FKM				4270	481000	8	8	460	2	
	6	12	12.5	0	3	5	120	FKM				4270	486265	14	14	470	2	
1/2	8.5	25	15	0	0.5	1.1	100	FKM	7121KBG42V00	E121K46		2995	481865	9	8	430	2	7
	8.5	25	15	0	0.5	2.2	120	FKM				4270	481000	8	8	550	2	
	8.5	25	15	0	1.2	4	120	FKM				4270	486265	14	14	560		
	11	36	20	0	0.3	0.7	100	FKM	7121KBG44V00	E121K45		2995	481865	9	8	430	2	7
	11	36	20	0	0.35	1.2	120	FKM				4270	481000	8	8	550	2	
	11	36	20	0	0.7	2.5	120	FKM				4270	486265	14	14	560		

Normally open



Brass body/Pipe mounting

1/4	1.5	1.5	6	0	20	20	100	FKM	7122KBG2GV00	122K8406		2995	481865	9	8	290	2	3
	1.5	1.5	6	0	20	20	120	FKM				4270	481000	8	8	410	2	
	2.5	3	3.5	0	12	12	100	FKM	7122KBG2LV00	122K8306		2995	481865	9	8	290	2	3
	2.5	3	3.5	0	12	12	120	FKM				4270	481000	8	8	410	2	

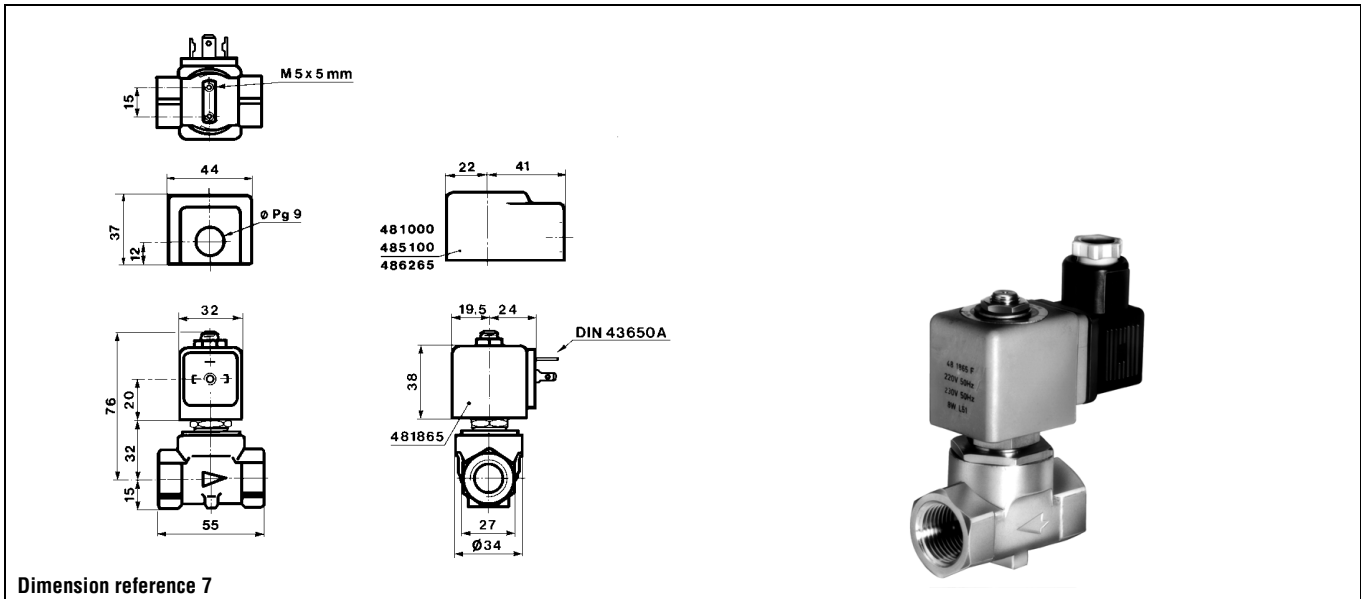
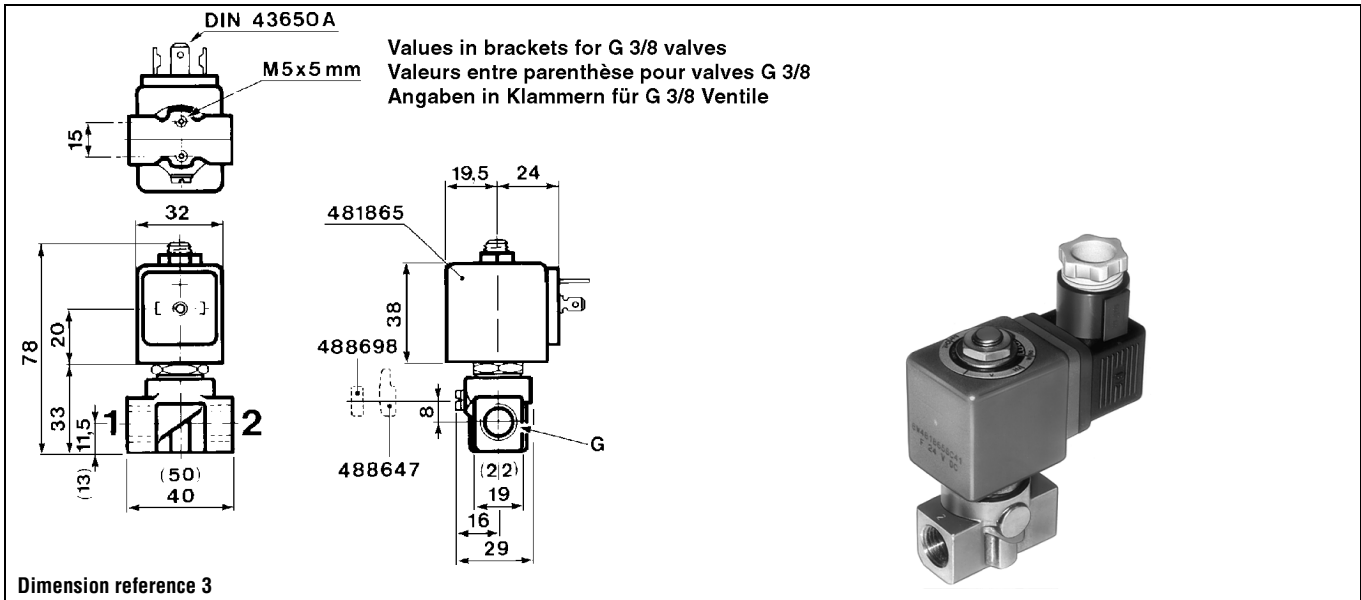
Table continued on page 50

Notes:

* See Electrical Parts Group table at end of section

1. Manual override standard

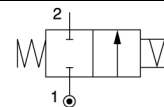
Valves for water and neutral liquids 2/2 - Direct operated



Valves for water and neutral liquids 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil					
G		kv	Qmax	Min	Max	DC	AC						DC	AC			

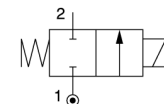
Magnetic latch control



Brass body/Pipe mounting

1/4	5	11	11.5	0	-	5	100	FKM	7125KBG2SV00	125K01	4269	484990	-	11	430	4	3
	5	11	11.5	0	1.5	-	100	FKM			4269	485400	13	-	430	4	

Normally closed



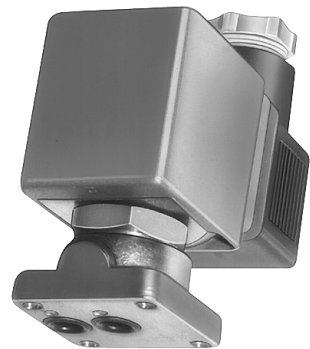
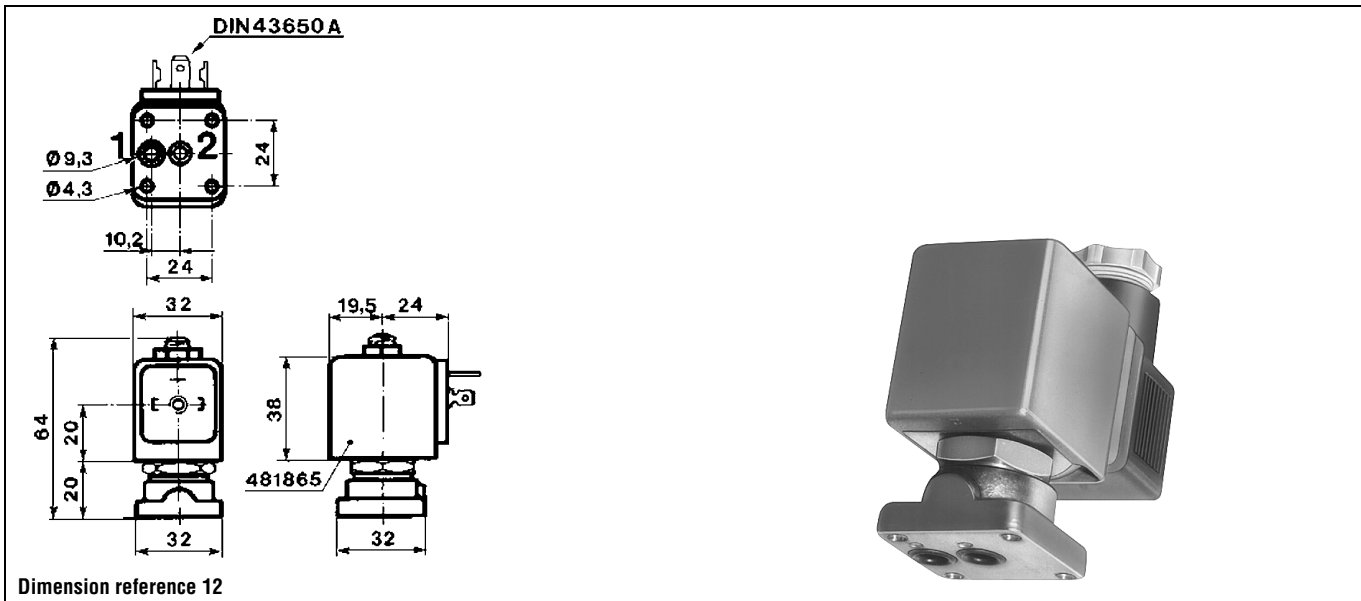
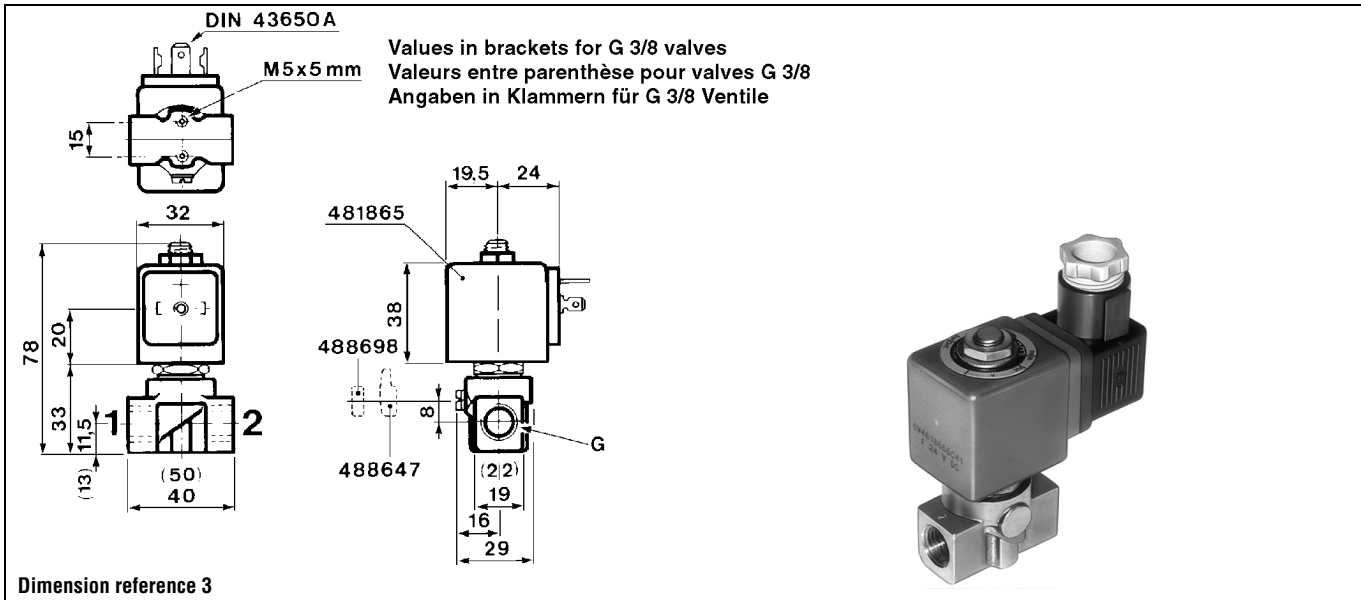
Brass body/Sub-base mounting

SB	1.5	1.6	6	0	20	20	100	FKM	7121FBF4GV00	E121F4406	2995	481865	9	8	250		12
	1.5	1.6	6	0	20	20	120	FKM			4270	481000	8	8	370		
	2.5	3.5	8.5	0	7	14	100	FKM	7121FBF4LV00	121F4706	2995	481865	9	8	250	2	12
	2.5	3.5	8.5	0	9	14	120	FKM			4270	481000	8	8	370	2	
	2.5	3.5	8.5	0	14	14	120	FKM			4270	486265	14	14	380	2	
	3	4.5	9	0	7	10	100	FKM	7121FBF4NV00	E121F4302	2995	481865	9	8	250	2	12
	3	4.5	9	0	8.5	10	120	FKM			4270	481000	8	8	370	2	
	3	4.5	9	0	10	10	120	FKM			4270	486265	14	14	380	2	

Notes:

* See Electrical Parts Group table at end of section

Valves for water and neutral liquids 2/2 - Direct operated



Valves for water and neutral liquids

2/2

Applications

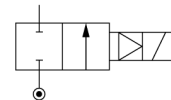
Magnalift valves are recommended in applications where the minimum pressure cannot be held at a sufficient level, i.e. where the effective supply pressure may be zero. This concerns applications like filling/emptying tanks by gravity and any other applications with a minimum pressure of zero.



Magnalift

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar				Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
		kv	Qmax	Min		Max				Global valve reference	Valve reference no.	Housing	Coil		DC	AC		
G																		

Normally closed



Brass body/Pipe mounting

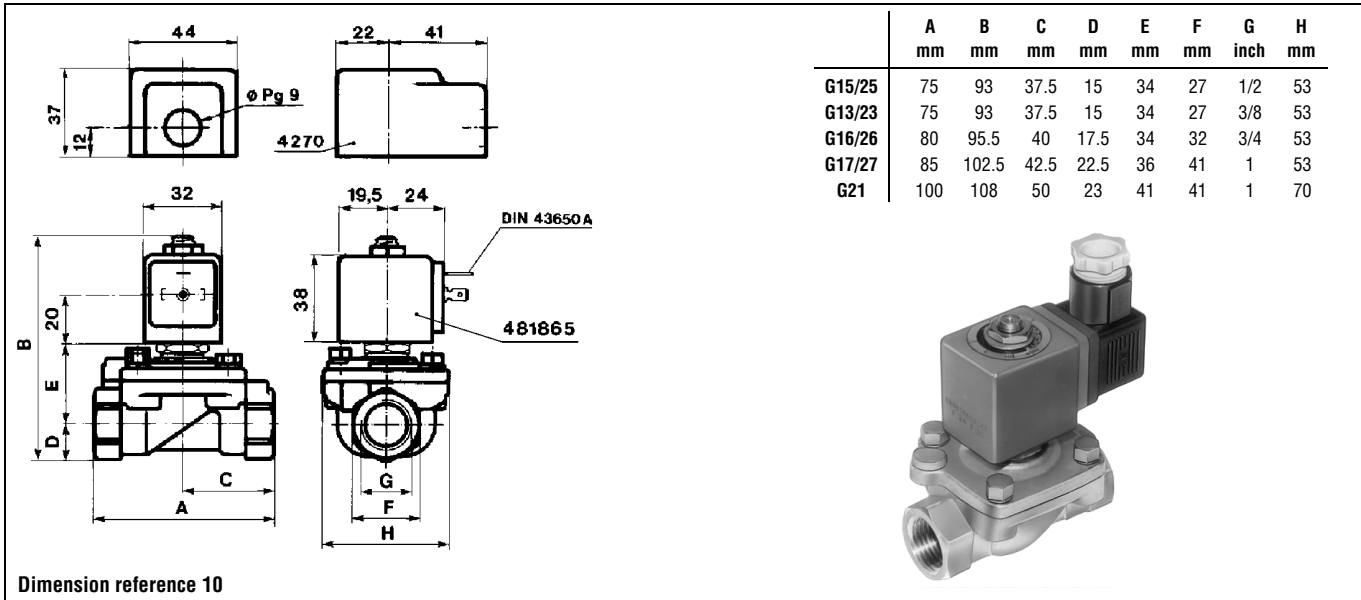
3/8	15	65	65	0	10	-	75	NBR	7221GBG3VNH0	221G1330	2995	481865 ¹	9	-	630	10
	15	65	65	0	10	10	65	NBR			-	492070 ¹	8	8	1000	
	15	65	65	0	10	10	75	NBR			-	492190 ¹	9	11	1000	
	15	65	65	0	-	16	75	NBR	7221GBG3VN00	221G13	2995	481865	-	8	630	10
	15	65	65	0	-	16	75	NBR			4270	481000	-	8	750	
	15	65	65	0	7	-	75	NBR			4270	486265	14	-	760	
1/2	15	65	65	0	10	-	75	NBR	7221GBG4VNH0	221G1530	2995	481865 ¹	9	-	640	10
	15	65	65	0	10	10	65	NBR			-	492070 ¹	8	9	1010	
	15	65	65	0	10	10	75	NBR			-	492190 ¹	9	11	1010	
	15	65	65	0	-	16	75	NBR	7221GBG4VN00	221G15	2995	481865	-	8	640	10
	15	65	65	0	-	16	75	NBR			4270	481000	-	8	760	
	15	65	65	0	7	-	75	NBR			4270	486265	14	-	770	
3/4	15	80	80	0	10	-	75	NBR	7221GBG51NH0	221G1630	2995	481865 ¹	9	-	670	10
	15	80	80	0	10	10	65	NBR			-	492070 ¹	8	8	1040	
	15	80	80	0	10	10	75	NBR			-	492190 ¹	9	11	1040	
	15	80	80	0	-	16	75	NBR	7221GBG51N00	221G16	2995	481865	-	8	670	10
	15	80	80	0	-	16	75	NBR			4270	481000	-	8	790	
	15	80	80	0	7	-	75	NBR			4270	486265	14	-	800	
1	15	80	80	0	10	-	75	NBR	7221GBG61NH0	221G1730	2995	481865 ¹	9	-	810	10
	15	80	80	0	10	10	65	NBR			-	492070 ¹	8	8	1180	
	15	80	80	0	10	10	75	NBR			-	492190 ¹	9	11	1180	
	15	80	80	0	-	16	75	NBR	7221GBG61N00	221G17	2995	481865	-	8	810	10
	15	80	80	0	-	16	75	NBR			4270	481000	-	8	930	
	15	80	80	0	7	-	75	NBR			4270	486265	14	-	940	
	25	170	160	0	10	-	75	NBR	7221GBG64NH0	221G2130	2995	481865 ¹	9	-	1170	10
	25	170	160	0	10	10	65	NBR			-	492070 ¹	8	8	1540	
	25	170	160	0	10	10	75	NBR			-	492190 ¹	9	11	1540	

Table continued on page 54

Notes:

1. Valves with model number ending by 30 or 31 are mainly equipped with electrical parts EEx me II T3/T4 No. 492190 or EEx m II T4/T5 No. 492070 or with standard DC coils.

Valves for water and neutral liquids 2/2 - Magnalift

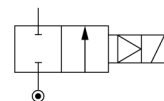


Valves for water and neutral liquids 2/2 - Magnalift

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim. ref.
									Global valve reference	Valve reference no.	Housing	Coil		DC	AC		
G		kv	Qmax	Min	DC	Max AC											

Brass body/Pipe mounting

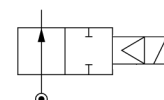
Normally closed



1	25	160	160	0	-	16	75	NBR	7221GBG64N00	221G21	2995	481865	-	8	1170	10
	25	160	160	0	-	16	75	NBR			4270	481000	-	8	1290	
	25	160	160	0	6	-	75	NBR			4270	486265	14	-	1300	

Brass body/Pipe mounting

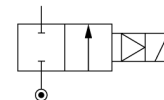
Normally open



3/8	15	43	43	0	8.5	8.5	85	FKM	72228BG3TV00	222G3306	4270	486265	14	14	940	102
1/2	15	58	58	0	8.5	8.5	85	FKM	72228BG4UV00	222G3506	4270	486265	14	14	940	102
3/4	19	72	72	0	8.5	8.5	85	FKM	72228BG5VV00	222G3606	4270	486265	14	14	940	102

303 Stainless steel body/Pipe mounting

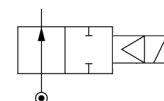
Normally closed



3/8	15	42	42	0	-	7	85	FKM	72218RG3TV00	221G5306	2995	481865	-	8	930	102
	15	42	42	0	-	7	85	FKM			4270	481000	-	8	1050	
	15	42	42	0	2.8	-	85	FKM			4270	486265	14	-	1060	
1/2	15	54	54	0	-	7	85	FKM	72218RG4UV00	221G5506	2995	481865	-	8	930	102
	15	54	54	0	-	7	85	FKM			4270	481000	-	8	1050	
	15	54	54	0	2.8	-	85	FKM			4270	486265	14	-	1060	
3/4	19	71	71	0	-	7	85	FKM	72218RG5VV00	221G5606	2995	481865	-	8	930	102
	19	71	71	0	-	7	85	FKM			4270	481000	-	8	1050	
	19	71	71	0	2.8	-	85	FKM			4270	486265	14	-	1060	

303 Stainless steel body/Pipe mounting

Normally open



3/8	16	43	43	0	8.5	8.5	85	FKM	72228RG3TV00	222G5306	4270	486265	14	14	-	102
1/2	16	58	58	0	8.5	8.5	85	FKM	72228RG4UV00	222G5506	4270	486265	14	14	1050	102

Valves for water and neutral liquids 2/2 - Magnalift

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G15/25	75	93	37.5	15	34	27	1/2	53
G13/23	75	93	37.5	15	34	27	3/8	53
G16/26	80	95.5	40	17.5	34	32	3/4	53
G17/27	85	102.5	42.5	22.5	36	41	1	53
G21	100	108	50	23	41	41	1	70

Dimension reference 10

	H mm	P mm	L mm
221G53../222G33..	103	89	67
221G55../222G35..	103	89	67
221G56../222G36..	103	89	69

Dimension reference 102

Valves for water and neutral liquids

2/2

Applications

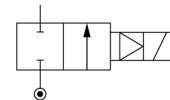
Pilot operated valves are ideally suited to shut-off applications of liquids with high flow and pressure. A minimum operating pressure is required: refer to tables.



Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		kv	Qmax	Min	Max				Global valve reference	Valve reference no.	Housing	Coil	DC	AC			
G																	

Normally closed



Brass body/Pipe mounting

1/4	12	30	30	0.3	10	10	75	NBR	-	321K31	8993	481180	5	4	380	1	72
	12	30	30	0.3	7	10	75	NBR	-		8993	488980	2.5	2	380	1	
3/8	12	45	45	0.3	10	10	75	NBR	-	321K33	8993	481180	5	4	380	1	72
	12	45	45	0.3	7	10	75	NBR	-		8993	488980	2.5	2	380	1	
	13	50	50	0.1	20	20	90	NBR	7321BBG3TN00	-	2995	481865	9	8	560	2	1000
	13	50	50	0.1	20	20	90	NBR	-		4270	481000	8	8	560	2	
	13	50	50	0.1	20	20	90	NBR	7321BBG3TNM0	-	2995	481865	9	8	560	2	1000
	13	50	50	0.1	20	20	90	NBR	-		4269	481000	8	8	560	2	
1/2	12	50	50	0.3	10	10	75	NBR	-	321K35	8993	481180	5	4	380	1	72
	12	50	50	0.3	7	10	75	NBR	-		8993	488980	2.5	2	380	1	
	13	140	140	0.1	20	20	90	NBR	7321BBG4TN00	-	2995	481865	9	8	590	2	1000
	13	140	140	0.1	20	20	90	NBR	-		4269	481000	8	8	590	2	
	13	140	140	0.1	20	20	90	NBR	7321BBG4TNM0	-	2995	481865	9	8	590	2	1000
	13	140	140	0.1	20	20	90	NBR	-		4269	481000	8	8	590	2	
3/4	18	100	100	0.3	10	10	75	NBR	-	321K36	8993	481180	5	4	590	1	72
	18	100	100	0.3	7	10	75	NBR	-		8993	488980	2.5	2	590	1	
	20	140	140	0.1	20	20	90	NBR	7321BBG53N00	-	2995	481865	9	8	1050	2	1000
	20	140	140	0.1	20	20	90	NBR	-		4269	481000	8	8	1050	2	
	20	140	140	0.1	10	10	90	NBR	7321BBG53NM0	-	2995	481865	9	8	1050	2	1000
	20	140	140	0.1	10	10	90	NBR	-		4269	481000	8	8	1050	2	
	20	135	135	0.3	16	16	75	NBR	7321GBG53N00	E321G36	2995	481865	9	8	1430	2	11
	20	135	135	0.3	16	16	75	NBR	-		4270	481000	8	8	1550	2	
1	18	110	110	0.3	10	10	75	NBR	-	321K37	8993	481180	5	4	735	1	72
	18	110	110	0.3	7	10	75	NBR	-		8993	488980	2.5	2	735	1	
	25	160	160	0.1	20	20	90	NBR	7321BBG64N00	-	2995	481865	9	8	1110	2	1000
	25	160	160	0.1	20	20	90	NBR	-		4269	481000	8	8	1110	2	

Table continued on page 58

Notes:

- * See Electrical Parts Group table at end of section
- 1. Manual override standard
- 2. For manual override and closure speed control change M0 by M1
- 3. Manual override and 4 position selector for controlled closure rate: see "Anti-waterhammer valves" section

Valves for water and neutral liquids 2/2 - Pilot operated

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G37	100	121	50	23	54	41	1	70
G36	100	121	50	23	54	41	3/4	70
G38	110	137.5	55	33	60.5	60	1 1/4	99
G39	140	144	75	33	67	60	1 1/2	99
G40	150	158.5	80	41.5	73	75	2	99

Dimension reference 11

	A inch	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	Dia. mm
K31	1/4	25	50	6.2	26	27	5.5	81	39	61	40
K33	3/8	25	50	6.2	26	27	5.5	81	39	61	40
K35	1/2	27.5	55	6.2	26	27	5.5	81	39	61	40
K36	3/4	40	80	9	33.5	32	8	96.5	46	68.5	56
K37	1	42.5	85	14.2	33.5	41	8	96.5	56	68.5	56

Dimension reference 72

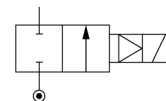
G	Size			
	A mm	B mm	C mm	D mm
3/8	69	99.5	40	44
1/2	72	101.5	40	44
3/4	100	107	65	44
1	104	112.5	65	44
1 1/4	145	134	102	44
1 1/2	145	134	102	44
2	173	148	118	44
2 1/2	245	195	184	44
3	250	195	184	44

Dimension reference 1000

Valves for water and neutral liquids 2/2 - Pilot operated

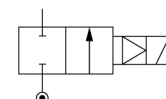
Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		kv	Qmax	Min	DC	Max AC			Global valve reference	Valve reference no.	Housing	Coil		DC	AC			
G																		

Normally closed



1	25	160	160	0.1	10	10	90	NBR	7321BBG64NM0	-	1	2995	481865	9	8	1110	2	1000
	25	160	160	0.1	10	10	90	NBR				4269	481000	9	8	1110	2	
	25	180	180	0.3	16	16	75	NBR	7321GBG64N00	E321G37	2	2995	481865	9	8	1230	2	11
	25	180	180	0.3	16	16	75	NBR				4270	481000	8	8	1350	2	
1 1/4	28	280	280	0.3	16	16	75	NBR	7321GBG76N00	E321G38	2	2995	481865	9	8	1860	2	11
	28	280	280	0.3	16	16	75	NBR				4270	481000	8	8	1980	2	
	35	420	420	0.1	10	10	90	NBR	7321BBG78N00	-		2995	481865	9	8	3120	2	1000
	35	420	420	0.1	10	10	90	NBR				4269	481000	8	8	3120	2	
	35	420	420	0.1	5	5	90	NBR	7321BBG78NM0	-	1	2995	481865	9	8	3120	2	1000
	35	420	420	0.1	5	5	90	NBR				4269	481000	8	8	3120	2	
1 1/2	40	500	500	0.1	10	10	90	NBR	7321BBG88N00	-		2995	481865	9	8	2870	2	1000
	40	500	500	0.1	10	10	90	NBR				4269	481000	8	8	2870	2	
	40	500	500	0.1	5	5	90	NBR	7321BBG88NM0	-	1	2995	481865	9	8	2870	2	1000
	40	500	500	0.1	5	5	90	NBR				4269	481000	8	8	2870	2	
	40	420	420	0.3	7	16	75	NBR	7321GBG88N00	E321G39	2	2995	481865	9	8	2560	2	11
	40	420	420	0.3	8.5	16	75	NBR				4270	481000	8	8	2680	2	
	40	420	420	0.3	16	16	75	NBR				4270	486265	14	14	2700	2	
	40	420	420	0.3	16	16	75	NBR				4270	486265	14	14	2700	2	
2	40	500	500	0.1	5	5	90	NBR	7321BBG99NM0	-	1	2995	481865	9	8	4260	2	1000
	40	500	500	0.1	5	5	90	NBR				4269	481000	8	8	4260	2	
	40	540	540	0.3	7	16	75	NBR	7321GBG99N00	E321G40	2	2995	481865	9	8	2900	2	11
	40	540	540	0.3	8.5	16	75	NBR				4270	481000	8	8	3040	2	
	40	540	540	0.3	16	16	75	NBR				4270	486265	14	14	3050	2	
	50	620	620	0.1	10	10	90	NBR	7321BBG99N00	-		2995	481865	9	8	4260	2	1000
	50	620	620	0.1	10	10	90	NBR				4269	481000	8	8	4260	2	
	50	620	620	0.1	10	10	90	NBR				4269	481000	8	8	4260	2	
2 1/2	65	1050	1050	0.1	10	10	90	NBR	7321BBGCBNM1	-	3	2995	481865	9	8	-	2	1000
	65	1050	1050	0.1	10	10	90	NBR				4269	481000	8	8	-	2	
3	75	1385	1385	0.1	10	10	90	NBR	7321BBGDCNM1	-	3	2995	481865	9	8	-	2	1000
	75	1385	1385	0.1	10	10	90	NBR				4269	481000	8	8	-	2	

Normally open



3/8	13	50	50	0.1	20	20	90	NBR	7322BBG3TN00	-		2995	481865	9	8	560	2	2000
	13	50	50	0.1	20	20	90	NBR				4270	481000	8	8	560	2	
1/2	13	140	140	0.1	20	20	90	NBR	7322BBG4TN00	-		2995	481865	9	8	590	2	2000
3/4	20	140	140	0.1	20	20	90	NBR	7322BBG53N00	-		2995	481865	9	8	1050	2	2000
	20	140	140	0.1	20	20	90	NBR				4270	481000	8	8	1050	2	
	20	135	135	0.3	16	16	75	NBR	7322GBG53N00	322G36		2995	481865	9	8	1430		11
	20	135	135	0.3	16	16	75	NBR				4270	481000	8	8	1550		

Table continued on page 60

Notes:

- * See Electrical Parts Group table at end of section
- 1. For manual override and closure speed control change M0 by M1
- 2. Manual override and 4 position selector for controlled closure rate: see "Anti-waterhammer valves" section
- 3. Manual override and closure speed control standard

Valves for water and neutral liquids 2/2 - Pilot operated

32
481865
19.5 24
DIN 43650 A
20
38
A B C D E F G H

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G37	100	121	50	23	54	41	1	70
G36	100	121	50	23	54	41	3/4	70
G38	110	137.5	55	33	60.5	60	1 1/4	99
G39	140	144	75	33	67	60	1 1/2	99
G40	150	158.5	80	41.5	73	75	2	99

Dimension reference 11

A B C D G

Size					
G	A mm	B mm	C mm	D mm	
3/8	69	99.5	40	44	
1/2	72	101.5	40	44	
3/4	100	107	65	44	
1	104	112.5	65	44	
1 1/4	145	134	102	44	
1 1/2	145	134	102	44	
2	173	148	118	44	
2 1/2	245	195	184	44	
3	250	195	184	44	

Dimension reference 1000

A B C D G

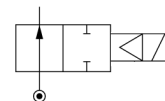
Size					
G	A mm	B mm	C mm	D mm	
3/8	69	99.5	40	44	
1/2	72	101.5	40	44	
3/4	100	107	65	44	
1	104	112.5	65	44	
1 1/4	145	134	102	44	
1 1/2	145	134	102	44	
2	173	148	118	44	
2 1/2	245	195	184	44	
3	250	195	184	44	

Dimension reference 2000

Valves for water and neutral liquids 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil					
G		kv	Qmax	Min	Max								DC	AC			

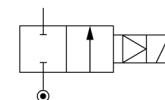
Normally open



Brass body/Pipe mounting

1	25	160	160	0.1	20	20	90	NBR	7322BBG64N00	-	2995	481865	9	8	1110	2	2000
	25	180	180	0.3	16	16	75	NBR	7322GBG64N00	322G37	2995	481865	9	8	1230		11
	25	180	180	0.3	16	16	75	NBR			4270	481000	8	8	1350		
1 1/4	28	270	270	0.3	16	16	75	NBR	7322GBG76N00	322G38	2995	481865	9	8	1860		11
	28	270	270	0.3	16	16	75	NBR			4270	481000	8	8	1980		
	35	420	420	0.1	10	10	90	NBR	7322BBG78N00	-	2995	481865	9	8	3120	2	2000
	35	420	420	0.1	10	10	90	NBR			4270	481000	8	8	3120	2	
1 1/2	40	500	500	0.1	10	10	90	NBR	7322BBG88N00	-	2995	481865	9	8	2870	2	2000
	40	500	500	0.1	10	10	90	NBR			4270	481000	8	8	2870	2	
	40	420	420	0.3	12	12	75	NBR	7322GBG88N00	322G39	2995	481865	9	8	2560		11
	40	420	420	0.3	12	12	75	NBR			4270	481000	8	8	2680		
2	40	540	540	0.3	12	12	75	NBR	7322GBG99N00	322G40	2995	481865	9	8	2900		11
	40	540	540	0.3	12	12	75	NBR			4270	481000	8	8	3040		
	50	620	620	0.1	10	10	90	NBR	7322BBG99N00	-	2995	481865	9	8	4260	2	2000
	50	620	620	0.1	10	10	90	NBR			4270	481000	8	8	4260	2	

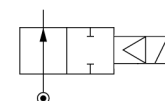
Normally closed



Brass body/Sub-base mounting

SB	14	45	45	0.3	25	40	75	NBR	7321FBF3TN00	E321F32	1	2995	481865	9	8	650	2	13
	14	45	45	0.3	30	40	75	NBR				4270	481000	8	8	770	2	
	14	45	45	0.3	40	40	75	NBR				4270	486265	14	14	780	2	

Normally open



Brass body/Sub-base mounting

SB	14	45	45	0.3	2	40	40	75	NBR	7322FBF3TN00	322F72	1	2995	481865	9	8	650		13
	14	45	45	0.3	2	40	40	75	NBR				4270	481000	8	8	770		

Notes:

* See Electrical Parts Group table at end of section

1. Pilot seat discs from ruby (synthetic)

2. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing

Valves for water and neutral liquids 2/2 - Pilot operated

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G37	100	121	50	23	54	41	1	70
G36	100	121	50	23	54	41	3/4	70
G38	110	137.5	55	33	60.5	60	1 1/4	99
G39	140	144	75	33	67	60	1 1/2	99
G40	150	158.5	80	41.5	73	75	2	99

Dimension reference 11

Dimension reference 13

Size					
G	A mm	B mm	C mm	D mm	
3/8	69	99.5	40	44	
1/2	72	101.5	40	44	
3/4	100	107	65	44	
1	104	112.5	65	44	
1 1/4	145	134	102	44	
1 1/2	145	134	102	44	
2	173	148	118	44	
2 1/2	245	195	184	44	
3	250	195	184	44	

Dimension reference 2000

Electrical parts options with 2/2 valves for water and neutral liquids

El.part Group	Coil	Protection class	Protection class / Temperature class	Power		Coil Order No.	Coil Ref. No.	Connection	Housing Order No.	Housing Ref. No.	Ambient temp.	
				DC	AC						min.	max.
1	22 mm	IP 65	Class F	2.5 W	2 W	DA01	488980	for DIN plug	A0	8993	-40	50
		IP 65	Class F	2.5 W	2 W	DA02	481045	with DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA03	481180	for DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA04	481530	with DIN plug	A0	8993	-40	50
		IP 65	EEx m II T4	5 W	4 W	VA01	482605	with 1500mm cable	00	-	-40	50
		IP 65	EEx m II T5	2.5 W	2 W	VA02	482606	with 1500mm cable	00	-	-40	50
2	32 mm (Std)	IP 65	Class F	9 W	8 W	DZ02	481865	for DIN plug	N1	2995	-40	50
		IP 65		9 W	8 W	DZ03	482725	with DIN plug	N1	2995	-40	50
		IP 65	Class H	9 W	8 W	DZ04	492453	for DIN plug	N1	2995	-40	50
		IP 65			8 W	DZ05	492726	with DIN plug	N1	2995	-40	50
		IP 65	Class F, 50/60 Hz	-	9 W	DZ06	483510	for DIN plug	N1	2995	-40	50
		IP 65		-	9 W	DZ07	482635	with DIN plug	N1	2995	-40	50
		IP 65	EEx m II T4	9 W	8 W	HZ05	492670	with 3000mm cable	00	-	-40	40
		IP 65	Class H	14 W	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
	50 mm (Std)	IP10 / IP 44	Class F	8 W	8 W	EZ01	481000	screw-terminals	E0	4270	-40	50
		IP10 / IP 44	Class H	8 W	8 W	EZ02	485100	screw-terminals	E0	4270	-40	50
		IP10 / IP 44	Class H	14 W	14 W	EZ92	486265	screw-terminals	E0	4270	-40	50
		IP 67	Class F, M20x1.5	8 W	8 W	EZ01	481000	screw-terminals	G1	4538	-40	50
		IP 65	EEx m II T5/T4	9 W	8 W	VZ01	492070	with 1500mm cable	00	-	-40	40/65
		IP 67	EEx me II T4	8 W	8 W	HZ06	483371	for cable connection	00	-	-40	65
		IP 66	EEx me II T3/T4	11 W	9 W	VZ03	492190	for cable connection	00	-	-40	75/40
3	32 mm	IP 65	Class H	-	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
4	50 mm (impulse)	IP10 / IP 44	Class F	-	11 W	MZ01	484990	screw-terminals	E1	4269	-40	50
		IP10 / IP 44	Class F	13 W	-	MZ02	485400	screw-terminals	E1	4269	-40	50
5	50 mm	IP 54	EEx d IIC T4/T5/T6	8 W	8 W	HZ08	483250	for cable 1/2 NPT	00	-	-40	80/75/60
6	32 mm (Miniwatt)	IP 65	Class F	1.6 W	-	DZ10	482740	for DIN plug	N1	2995	-40	50
		IP 65	Class F	1.6W	-	DZ11	482745	with DIN plug	N1	2995	-40	50
	50 mm (Miniwatt)	IP 67	EEx me II T5	2.5 W	-	VZ04	491117	for cable connection	00	-	-40	65
		IP 67	EEx m II T5/T4	2.5 W	2.5 W	VZ05	492370	with 1500mm cable	00	-	-40	40/65
		IP 66	EEx me II T6/T5	2.5 W	2.5 W	VZ06	492390	for cable connection	00	-	-40	40/75
7	32 mm	IP 65	EEx ia II C T6	0.4 W	-	DZ12	483580.01	for DIN plug	N1	2995	-40	55
		IP 65		0.4 W	-	DZ13	483960.01	with DIN plug	N1	2995	-40	55
	50 mm	IP 66	EEx ia II C T6	0.4 W	-	VZ07	488650.01	for cable connection	00	-	-40	65
		IP 67		0.4 W	-	VZ08	488660.01	with 2000mm cable	00	-	-40	65
		IP 65		0.4 W	-	VZ09	488670.01	with DIN plug	00	-	-40	65

Note: This table is indicative only. Please contact your distributor to confirm your selection.

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Magnalift	Brass body	Normally closed	3/8	15	16.0	64
			1/2	15	16.0	64
			3/4	15	16.0	64
			1	15 to 25	16.0	64
Pilot operated	Brass body	Normally closed	1/4	12	12.0	66
			3/8	12	12.0	66
			1/2	12	12.0	66
			3/4	18 to 20	16.0	66
			1	18 to 25	16.0	66
			1 1/4	28	16.0	68
			1 1/2	40	16.0	68
			2	40	16.0	68
		Normally open	3/4	20	16.0	68
			1	25	16.0	68
			1 1/4	28	16.0	68
			1 1/2	40	12.0	68
			2	40	12.0	68

Notes:

Magnalift valves: pressure range from 0 to max pressure.

Pilot operated valves: pressure range from 0.3 to 0.5 bar to max. pressure (refer to tables).

Anti-water hammer valves

2/2

Applications

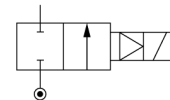
Magnalift valves are recommended in applications where the minimum pressure cannot be held at a sufficient level, i.e. where the effective supply pressure may be zero. This concerns applications like filling/emptying tanks by gravity and any other applications with a minimum pressure of zero.



Magnalift

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil		DC	AC		
G		kv	Qmax	Min	Max												
					DC	AC											

Normally closed



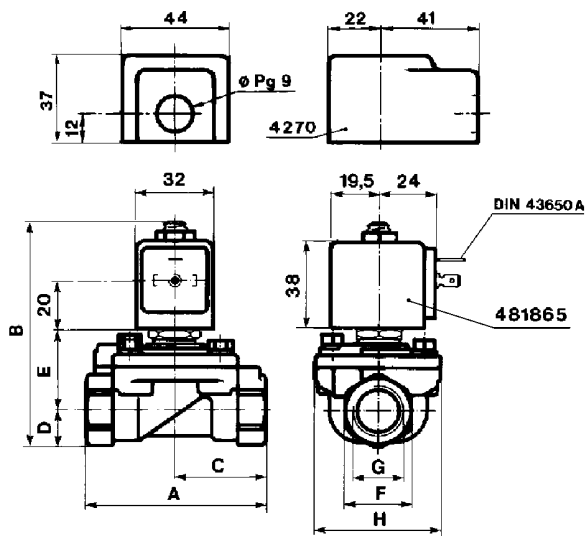
Brass body/Pipe mounting

3/8	15	65	65	0	10	-	75	NBR	7221GBG3VNH0	221G1330	2995	481865 ¹	9	-	630	10
	15	65	65	0	10	10	65	NBR			-	492070 ¹	8	8	1000	
	15	65	65	0	10	10	75	NBR			-	492190 ¹	9	11	1000	
	15	65	65	0	-	16	75	NBR	7221GBG3VN00	221G13	2995	481865	-	8	630	10
	15	65	65	0	-	16	75	NBR			4270	481000	-	8	750	
1/2	15	65	65	0	7	-	75	NBR			4270	486265	14	-	760	
	15	65	65	0	10	-	75	NBR	7221GBG4VNH0	221G1530	2995	481865 ¹	9	-	640	10
	15	65	65	0	10	10	65	NBR			-	492070 ¹	8	9	1010	
	15	65	65	0	10	10	75	NBR			-	492190 ¹	9	11	1010	
	15	65	65	0	-	16	75	NBR	7221GBG4VN00	221G15	2995	481865	-	8	640	10
3/4	15	65	65	0	-	16	75	NBR			4270	481000	-	8	760	
	15	65	65	0	7	-	75	NBR			4270	486265	14	-	770	
	15	80	80	0	-	10	75	NBR	7221GBG51NC0	221G1610 ²	2995	481865	-	8	670	10
	15	80	80	0	-	16	75	NBR			4270	481000	-	8	790	
	15	80	80	0	7	-	75	NBR			4270	486265	14	-	800	
1	15	80	80	0	10	-	75	NBR	7221GBG51NCH	221G1631 ²	2995	481865 ¹	9	-	670	10
	15	80	80	0	10	10	65	NBR			-	492070 ¹	8	8	1040	
	15	80	80	0	10	10	75	NBR			-	492190 ¹	9	11	1040	
	15	80	80	0	-	16	75	NBR	7221GBG61NC0	221G1710 ²	2995	481865	-	8	810	10
	15	80	80	0	-	16	75	NBR			4270	481000	-	8	930	
1	15	80	80	0	7	-	75	NBR			4270	486265	14	-	940	
	15	80	80	0	10	-	75	NBR	7221GBG61NCH	221G1731 ²	2995	481865 ¹	9	8	810	10
	15	80	80	0	10	10	65	NBR			-	492070 ¹	8	8	1180	
	15	80	80	0	10	10	75	NBR			-	492190 ¹	9	11	1180	
	25	160	160	0	-	16	75	NBR	7221GBG64NC0	221G2110 ²	2995	481865	-	8	1170	10
1	25	160	160	0	-	16	75	NBR			4270	481000	-	8	1290	
	25	160	160	0	6	-	75	NBR			4270	486265	14	-	1300	
	25	160	160	0	10	-	75	NBR	7221GBG64NCH	221G2131 ²	2995	481865 ¹	9	-	1170	10
	25	160	160	0	10	10	65	NBR			-	492070 ¹	8	8	1540	
	25	160	160	0	10	10	75	NBR			-	492190 ¹	9	11	1540	

Notes:

- Valves with model number ending by 30 or 31 are mainly equipped with electrical parts EEx me II T3/T4 No. 492190 or EEx m II T4/T5 No. 492070 or with standard DC coils.
- 4 position selector for controlled closure rate

Anti-water hammer valves 2/2 - Magnalift



Dimension reference 10

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G15/25	75	93	37.5	15	34	27	1/2	53
G13/23	75	93	37.5	15	34	27	3/8	53
G16/26	80	95.5	40	17.5	34	32	3/4	53
G17/27	85	102.5	42.5	22.5	36	41	1	53
G21	100	108	50	23	41	41	1	70



Anti-water hammer valves

2/2

Applications

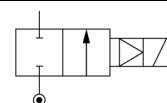
Pilot operated valves are ideally suited to shut-off applications of liquids with high flow and pressure. A minimum operating pressure is required: refer to tables.



Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil					
G		kv	Qmax	Min	Max								DC	AC			
				DC	AC												

Normally closed



Brass body/Pipe mounting

1/4	12	30	30	0.3	12	12	100	FKM	7321KBG2SVW0	321K4106	2995	481865	9	8	490		73	
	12	30	30	0.3	12	12	100	FKM			4270	481000	8	8	610			
	12	30	30	0.3	12	12	100	FKM	7321KBG2SVMW	321K4156	1	2995	481865	9	8	490		73
	12	30	30	0.3	12	12	100	FKM			4270	481000	8	8	610			
3/8	12	45	45	0.3	12	12	100	FKM	7321KBG3TVW0	321K4306	2995	481865	9	8	490		73	
	12	45	45	0.3	12	12	100	FKM			4270	481000	8	8	610			
	12	45	45	0.3	12	12	100	FKM	7321KBG3TVMW	321K4356	1	2995	481865	9	8	490		73
	12	45	45	0.3	12	12	100	FKM			4270	481000	8	8	610			
1/2	12	50	50	0.3	12	12	100	FKM	7321KBG4TVW0	321K4506	2995	481865	9	8	490		73	
	12	50	50	0.3	12	12	100	FKM			4270	481000	8	8	610			
	12	50	50	0.3	12	12	100	FKM	7321KBG4TVMW	321K4556	1	2995	481865	9	8	490		73
	12	50	50	0.3	12	12	100	FKM			4270	481000	8	8	610			
3/4	18	100	100	0.3	12	12	100	FKM	7321KBG51VW0	321K4606	2995	481865	9	8	700		73	
	18	100	100	0.3	12	12	100	FKM			4270	481000	8	8	820			
	18	100	100	0.3	12	12	100	FKM	7321KBG51VMW	321K4656	1	2995	481865	9	8	700		73
	18	100	100	0.3	12	12	100	FKM			4270	481000	8	8	820			
	20	135	135	0.3	16	16	75	NBR	7321GBG53NMC	E321G3610	2	2995	481865	9	8	1430	2	11
	20	135	135	0.3	16	16	75	NBR			4270	481000	8	8	1550	2		
1	18	110	110	0.3	12	12	100	FKM	7321KBG62VW0	321K4706	2995	481865	9	8	845		73	
	18	110	110	0.3	12	12	100	FKM			4270	481000	8	8	965			
	18	110	110	0.3	12	12	100	FKM	7321KBG62VMW	321K4756	1	2995	481865	9	8	845		73
	18	110	110	0.3	12	12	100	FKM			4270	481000	8	8	965			
	25	180	180	0.3	16	16	75	NBR	7321GBG64NMC	E321G3710	2	2995	481865	9	8	1230	2	11
	25	180	180	0.3	16	16	75	NBR			4270	481000	8	8	1350	2		

Table continued on page 68

Notes:

* See Electrical Parts Group table at end of section

1. Manual override standard

2. Manual override and 4 position selector for controlled closure rate standard - without manual override and 4 position selector on request: same type without suffix 10, e.g. : E321G36

Anti-water hammer valves 2/2 - Pilot operated

	A mm	B mm	C mm	D mm	E mm	F mm	G inch	H mm
G37	100	121	50	23	54	41	1	70
G36	100	121	50	23	54	41	3/4	70
G38	110	137.5	55	33	60.5	60	1 1/4	99
G39	140	144	75	33	67	60	1 1/2	99
G40	150	158.5	80	41.5	73	75	2	99

Dimension reference 11

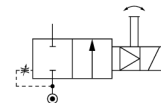
	A inch	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	Dia. mm
K41	1/4	25	50	6.2	29	27	5.5	93.5	39	73.5	40
K43	3/8	25	50	6.2	29	27	5.5	93.5	39	73.5	40
K45	1/2	27.5	55	6.2	29	27	5.5	93.5	39	73.5	40
K46	3/4	40	80	9	36.5	32	8	109	46	81	56
K47	1	42.5	85	14.2	36.5	41	8	109	56	81	56

Dimension reference 73

Anti-water hammer valves 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil					
G		kv	Qmax	Min	Max								DC	AC			
				DC	AC												

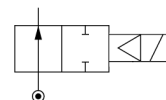
Normally closed



Brass body/Pipe mounting

1 1/4	28	280	280	0.3	16	16	75	NBR	7321GBG76NMC	E321G3810	1	2995	481865	9	8	1860	2	11
	28	280	280	0.3	16	16	75	NBR				4270	481000	8	8	1980	2	
1 1/2	40	420	420	0.3	10	16	75	NBR	7321GBG88NMC	E321G3910	1	2995	481865	9	8	2560	2	11
	40	420	420	0.3	8.5	16	75	NBR				4270	481000	8	8	2680	2	
	40	420	420	0.3	16	16	75	NBR				4270	486265	14	14	2700	2	
2	40	540	540	0.3	10	16	75	NBR	7321GBG99NMC	E321G4010	1	2995	481865	9	8	2900	2	11
	40	540	540	0.3	8.5	16	75	NBR				4270	481000	8	8	3040	2	
	40	540	540	0.3	16	16	75	NBR				4270	486265	14	14	3050	2	

Normally open



Brass body/Pipe mounting

3/4	20	135	135	0.3	16	16	75	NBR	7322GBG53NC0	322G3610	2	2995	481865	9	8	1430		11
	20	135	135	0.3	16	16	75	NBR				4270	481000	8	8	1550		
1	25	185	185	0.3	16	16	75	NBR	7322GBG64NC0	322G3710	2	2995	481865	9	8	1230		11
	25	185	185	0.3	16	16	75	NBR				4270	481000	8	8	1350		
1 1/4	28	270	270	0.3	16	16	75	NBR	7322GBG76NC0	322G3810	2	2995	481865	9	8	1860		11
	28	270	270	0.3	16	16	75	NBR				4270	481000	8	8	1980		
1 1/2	40	425	425	0.3	12	12	75	NBR	7322GBG88NC0	322G3910	2	2995	481865	9	8	2560		11
	40	425	425	0.3	12	12	75	NBR				4270	481000	8	8	2680		
2	40	540	540	0.3	12	12	75	NBR	7322GBG99NC0	322G4010	2	2995	481865	9	8	2900		11
	40	540	540	0.3	12	12	75	NBR				4270	481000	8	8	3040		

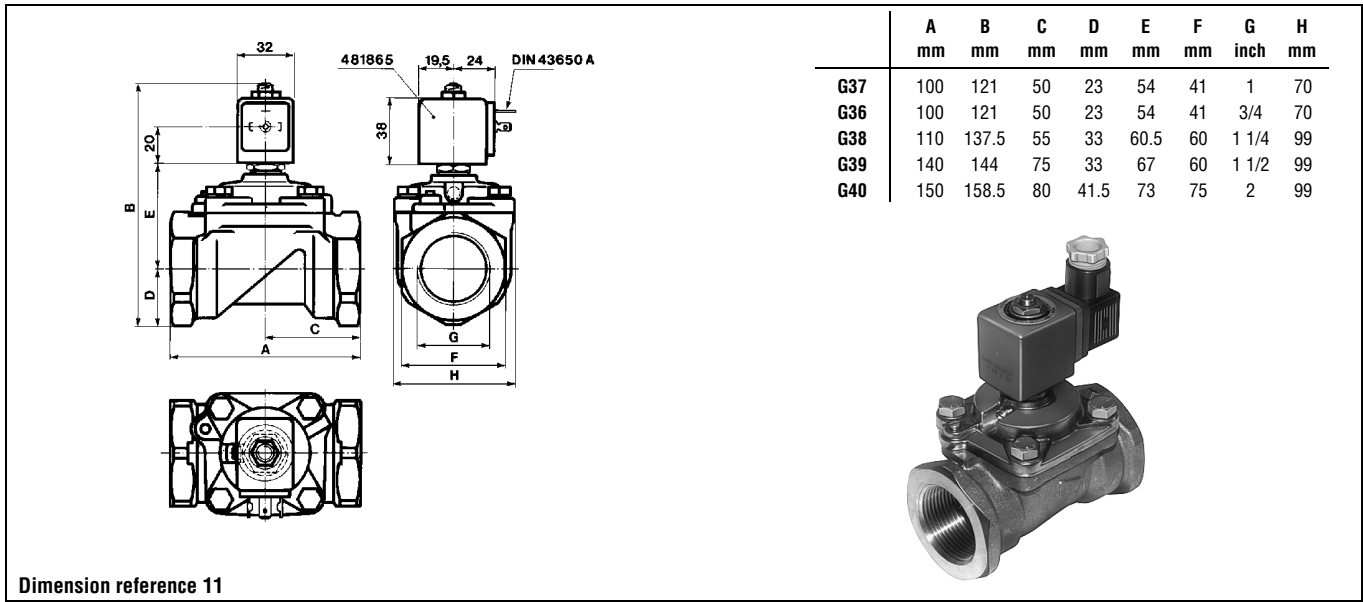
Notes:

* See Electrical Parts Group table at end of section

1. Manual override and 4 position selector for controlled closure rate standard - without manual override and 4 position selector on request: same type without suffix 10, e.g. : E321G36

2. 4 position selector for controlled closure rate standard

Anti-water hammer valves 2/2 - Pilot operated



Electrical parts options with 2/2 anti-waterhammer valves for water and neutral liquids

El.part Group	Coil	Protection class	Protection class / Temperature class	Power		Coil Order No.	Coil Ref. No.	Connection	Housing Order No.	Housing Ref. No.	Ambient temp.	
				DC	AC						min.	max.
1	22 mm	IP 65	Class F	2.5 W	2 W	DA01	488980	for DIN plug	A0	8993	-40	50
		IP 65	Class F	2.5 W	2 W	DA02	481045	with DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA03	481180	for DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA04	481530	with DIN plug	A0	8993	-40	50
		IP 65	EEx m II T4	5 W	4 W	VA01	482605	with 1500mm cable	00	-	-40	50
		IP 65	EEx m II T5	2.5 W	2 W	VA02	482606	with 1500mm cable	00	-	-40	50
2	32 mm (Std)	IP 65	Class F	9 W	8 W	DZ02	481865	for DIN plug	N1	2995	-40	50
		IP 65		9 W	8 W	DZ03	482725	with DIN plug	N1	2995	-40	50
		IP 65	Class H	9 W	8 W	DZ04	492453	for DIN plug	N1	2995	-40	50
		IP 65		9 W	8 W	DZ05	492726	with DIN plug	N1	2995	-40	50
		IP 65	Class F, 50/60 Hz	-	9 W	DZ06	483510	for DIN plug	N1	2995	-40	50
		IP 65		-	9 W	DZ07	482635	with DIN plug	N1	2995	-40	50
		IP 65	EEx m II T4	9 W	8 W	HZ05	492670	with 3000mm cable	00	-	-40	40
		IP 65	Class H	14 W	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
	50 mm (Std)	IP 65		14 W	14 W	DZ09	492727	with DIN plug	N1	2995	-40	50
		IP10 / IP 44	Class F	8 W	8 W	EZ01	481000	screw-terminals	E0	4270	-40	50
		IP10 / IP 44	Class H	8 W	8 W	EZ02	485100	screw-terminals	E0	4270	-40	50
		IP10 / IP 44	Class H	14 W	14 W	EZ92	486265	screw-terminals	E0	4270	-40	50
		IP 67	Class F, M20x1.5	8 W	8 W	EZ01	481000	screw-terminals	G1	4538	-40	50
		IP 65	EEx m II T5/T4	9 W	8 W	VZ01	492070	with 1500mm cable	00	-	-40	40/65
		IP 67	EEx me II T4	8 W	8 W	HZ06	483371	for cable connection	00	-	-40	65
		IP 66	EEx me II T3/T4	11 W	9 W	VZ03	492190	for cable connection	00	-	-40	75/40
3	32 mm	IP 65	Class H	-	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
4	50 mm (impulse)	IP10 / IP 44	Class F	-	11 W	MZ01	484990	screw-terminals	E1	4269	-40	50
		IP10 / IP 44	Class F	13 W	-	MZ02	485400	screw-terminals	E1	4269	-40	50
5	50 mm	IP 54	EEx d IIC T4/T5/T6	8 W	8 W	HZ08	483250	for cable 1/2 NPT	00	-	-40	80/75/60
6	32 mm (Miniwatt)	IP 65	Class F	1.6 W	-	DZ10	482740	for DIN plug	N1	2995	-40	50
		IP 65	Class F	1.6W	-	DZ11	482745	with DIN plug	N1	2995	-40	50
	50 mm (Miniwatt)	IP 67	EEx me II T5	2.5 W	-	VZ04	491117	for cable connection	00	-	-40	65
		IP 67	EEx m II T5/T4	2.5 W	2.5 W	VZ05	492370	with 1500mm cable	00	-	-40	40/65
		IP 66	EEx me II T6/T5	2.5 W	2.5 W	VZ06	492390	for cable connection	00	-	-40	40/75
7	32 mm	IP 65	EEx ia II C T6	0.4 W	-	DZ12	483580.01	for DIN plug	N1	2995	-40	55
		IP 65		0.4 W	-	DZ13	483960.01	with DIN plug	N1	2995	-40	55
	50 mm	IP 66	EEx ia II C T6	0.4 W	-	VZ07	488650.01	for cable connection	00	-	-40	65
		IP 67		0.4 W	-	VZ08	488660.01	with 2000mm cable	00	-	-40	65
		IP 65		0.4 W	-	VZ09	488670.01	with DIN plug	00	-	-40	65

Note: This table is indicative only. Please contact your distributor to confirm your selection.

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Direct operated	Brass body	Normally closed	1/4	3 to 5	10.0	72
			3/8	6	5.0	72
			1/2	8.5 to 11	4.0	72
	303 Stainless steel body		1/4	1.5 to 5	100.0	74
Magnalift	Brass body	Normally closed	3/8	15	10.0	76
			1/2	15	10.0	76
			3/4	15	10.0	76
			1	15 to 25	10.0	76
		Normally open	3/8	15	3.5	78
			1/2	15	3.5	78
			3/4	19	3.5	78
	303 Stainless steel body	Normally closed	3/8	15	7.0	78
			1/2	15	7.0	78
			3/4	15 to 19	7.0	78
		Normally open	3/8	16	8.5	78
			1/2	16	8.5	78
			3/4	19	8.5	78
Pilot operated	Brass body	Normally closed	1/4	12	12.0	80
			3/8	12 to 15	20.0	80
			1/2	12 to 15	12.0	80
			3/4	15 to 20	12.0	80
			1	18 to 27	12.0	80
			1 1/4	29 to 35	8.5	82
			1 1/2	32 to 40	8.5	82
			2	50	4.0	82
		Normally open	3/8	15	8.5	82
			1/2	16	8.5	82
			3/4	15	8.5	82
			1	27	8.5	82
			1 1/4	28	8.5	82
			1 1/2	31	8.5	82

Notes:

Direct operated and magnalift valves: pressure range from 0 to max pressure.

Pilot operated valves: pressure range from 0.3 to 0.5 bar to max. pressure (refer to tables).

Hot water - steam valves

2/2

Applications

Hot water and steam valves are important elements in many industrial applications. They serve to control the flow of steam in various heating applications: steam cookers, autoclaves, air conditioning systems, car washing equipment and food processing equipment.

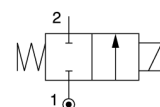
Note: The indicated max. pressures for steam are in bar abs.



Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C		Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
		kv	Qmax	Min	Max		Water	Steam		Global valve reference	Valve reference no.	Housing	Coil		DC	AC		

Normally closed

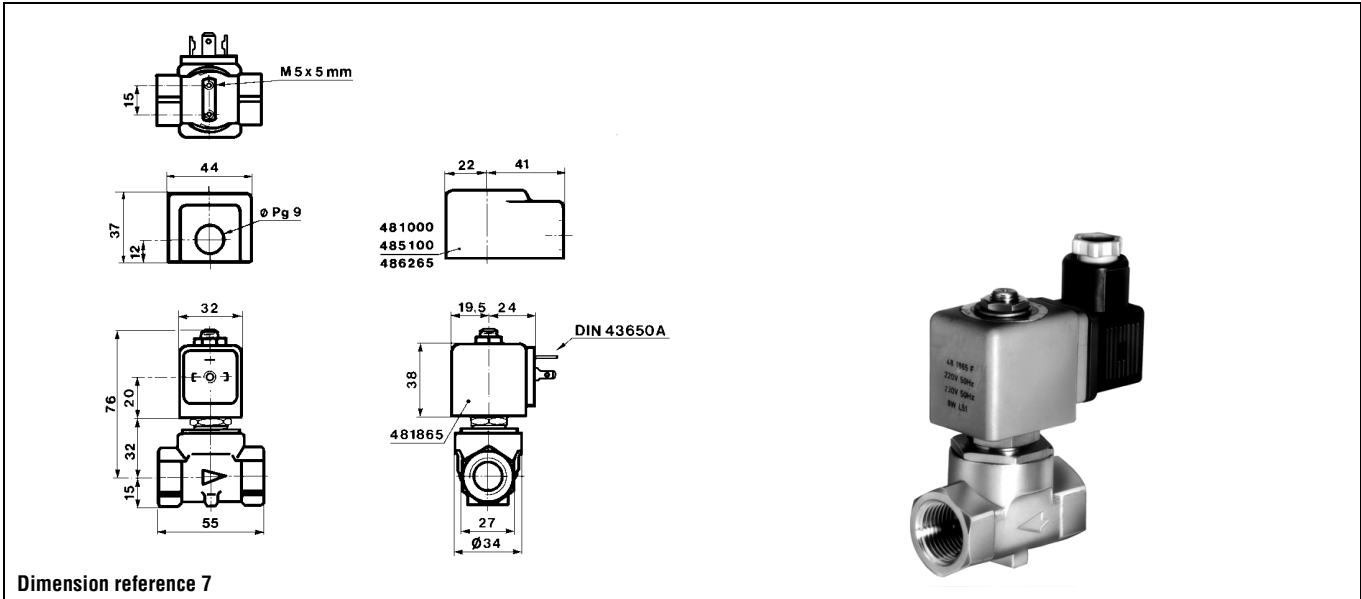
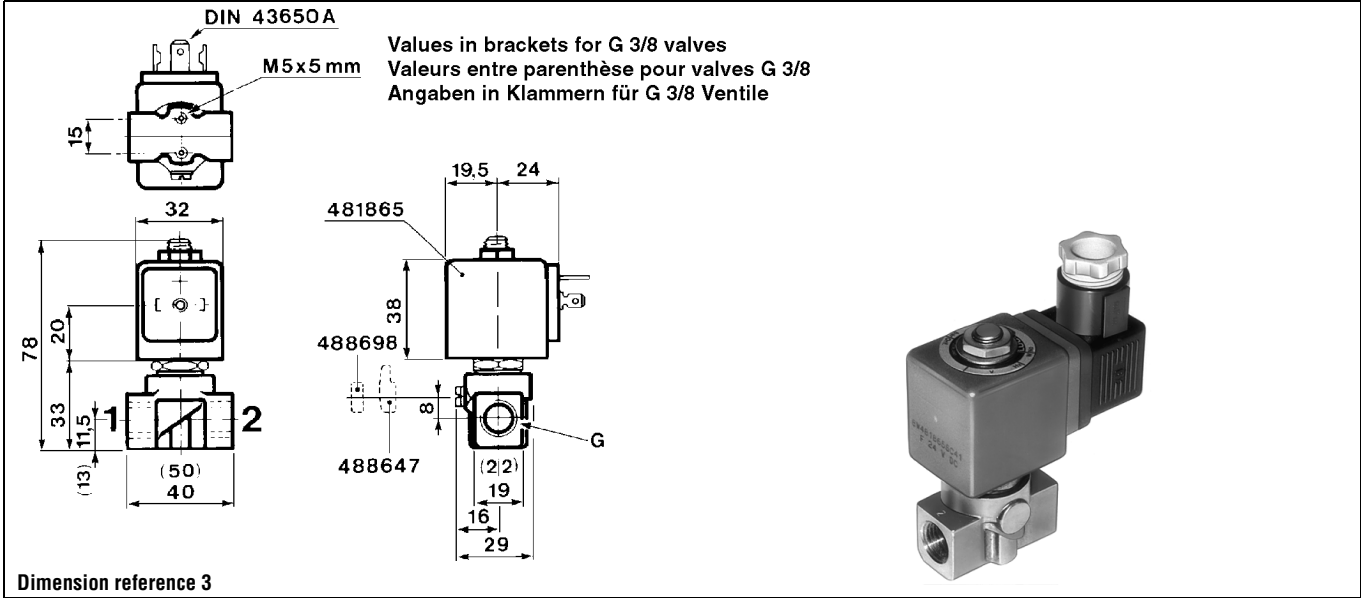


Brass body/Pipe mounting

1/4	3	4.5	9	0	7	10	100	-	EPDM	7121KBG2NE00	121K0323	2995	481865	9	8	290	3
	3	4.5	9	0	8.5	10	120	-	EPDM	7121KBG2NE00		4270	481000	8	8	410	
	3	4.5	9	0	10	10	120	-	EPDM	7121KBG2NE00		4270	486265	14	14	420	
	3	4.5	9	0	4	4	-	140	EPDM	7121KBG2NES0		4270	486265	14	14	420	
	3	4.5	9	0	4	4	-	140	EPDM	7121KBG2NES0		2995	492425	14	14	300	
	5	11	11.5	0	2	7	100	-	EPDM	7121KBG2SE00	121K0103	2995	481865	9	8	290	3
	5	11	11.5	0	2.8	7	120	-	EPDM	7121KBG2SE00		4270	481000	8	8	410	
	5	11	11.5	0	5	7	120	-	EPDM	7121KBG2SE00		4270	486265	14	14	420	
	5	11	11.5	0	4	4	-	140	EPDM	7121KBG2SES0		4270	486265	14	14	420	
	5	11	11.5	0	3.5	4	-	140	EPDM	7121KBG2SES0		2995	492425	14	14	300	
3/8	6	12	12.5	0	1.1	5	100	-	EPDM	7121KBG3UE00	121K3303	2995	481865	9	8	340	3
	6	12	12.5	0	1.5	5	120	-	EPDM	7121KBG3UE00		4270	481000	8	8	460	
	6	12	12.5	0	3	5	120	-	EPDM	7121KBG3UE00		4270	486265	14	14	470	
	6	12	12.5	0	3	4	-	140	EPDM	7121KBG3UES0		4270	486265	14	14	470	
	6	12	12.5	0	2.5	4	-	140	EPDM	7121KBG3UES0		2995	492425	14	14	350	
1/2	8.5	25	15	0	0.5	2.2	120	-	EPDM	7121KBG42E00	E121K4603	4270	481000	8	8	550	7
	8.5	25	15	0	1.2	4	120	-	EPDM	7121KBG42E00		4270	486265	14	14	560	
	8.5	25	15	0	2.2	4	-	140	EPDM	7121KBG42ES0		4270	486265	14	14	560	
	8.5	25	15	0	2	4	-	140	EPDM	7121KBG42ES0		2995	492425	14	14	440	
	11	36	20	0	0.35	1.2	120	-	EPDM	7121KBG44E00	E121K4503	4270	481000	8	8	550	7
	11	36	20	0	-	2	-	140	EPDM	7121KBG44ES0		4270	486265	14	14	560	
	11	36	20	0	0.7	2.5	120	-	EPDM	7121KBG44E00		4270	486265	14	14	560	
	11	36	20	0	-	2.5	-	140	EPDM	7121KBG44ES0		2995	492425	14	14	440	

Table continued on page 74

Hot water - steam valves 2/2 - Direct operated

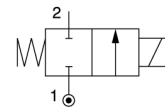


Hot water - steam valves 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C		Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
										Global valve reference	Valve reference no.	Housing	Coil		DC	AC		
G		kv	Qmax	Min	Max		Water	Steam										

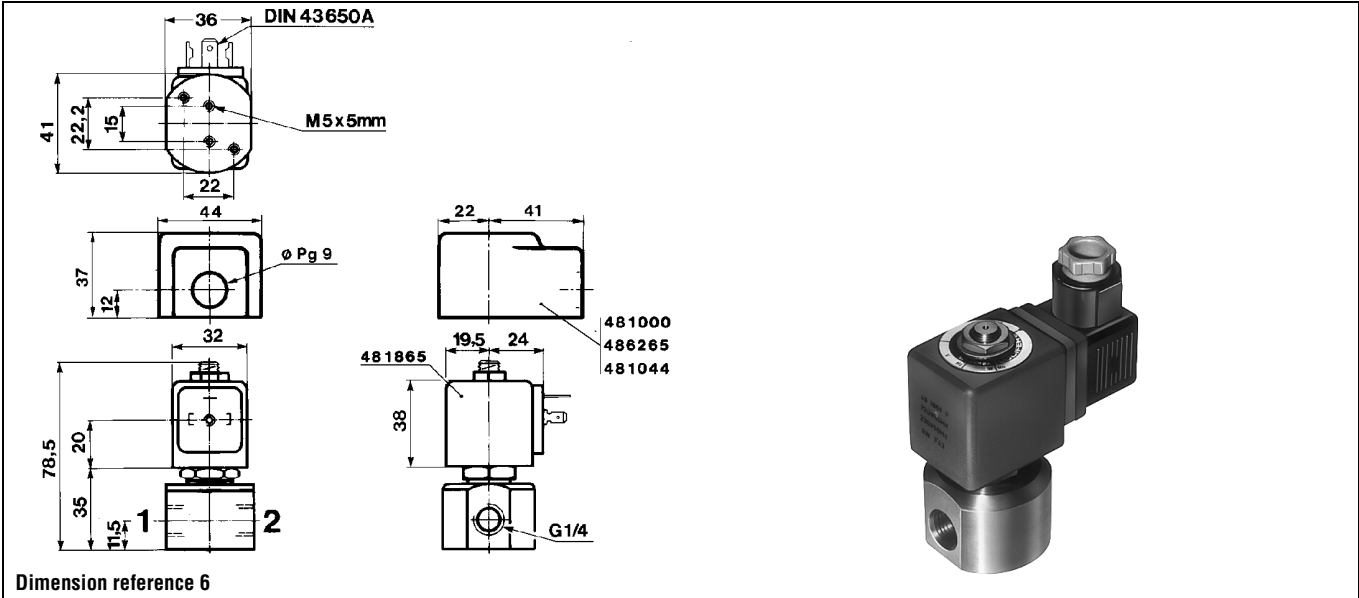
303 Stainless steel body/Pipe mounting

Normally closed



1/4	1.5	1.5	15	0	25	60	100	-	Ruby	7121VVG2GR00	121V5463	2995	481865	9	8	410	6
	1.5	1.5	15	0	30	75	130	-	Ruby	7121VVG2GR00		4270	481000	8	8	530	
	1.5	1.5	15	0	55	100	140	-	Ruby	7121VVG2GR00		4270	486265	14	14	540	
	1.5	1.5	15	0	30	75	-	180	Ruby	7121VVG2GRS0		4270	486265	14	14	540	
	1.5	1.5	15	0	25	60	-	180	Ruby	7121VVG2GRS0		2995	492425	14	14	420	
	2.5	3.5	25	0	10	28	100	-	Ruby	7121VVG2LR00	121V5763	2995	481865	9	8	410	6
	2.5	3.5	25	0	12	34	130	-	Ruby	7121VVG2LR00		4270	481000	8	8	530	
	2.5	3.5	25	0	12	34	-	180	Ruby	7121VVG2LRS0		4270	486265	14	14	540	
	2.5	3.5	25	0	22	50	140	-	Ruby	7121VVG2LR00		4270	486265	14	14	540	
	2.5	3.5	25	0	10	28	-	180	Ruby	7121VVG2LRS0		2995	492425	14	14	420	
	3	4.5	27	0	7	20	100	-	Ruby	7121VVG2NR00	121V5363	2995	481865	9	8	410	6
	3	4.5	27	0	8.5	25	130	-	Ruby	7121VVG2NR00		4270	481000	8	8	530	
	3	4.5	27	0	15	36	140	-	Ruby	7121VVG2NR00		4270	486265	14	14	540	
	3	4.5	27	0	8.5	25	-	180	Ruby	7121VVG2NRS0		4270	486265	14	14	540	
	3	4.5	27	0	7	20	-	180	Ruby	7121VVG2NRS0		2995	492425	14	14	420	
	4	7	35	0	4	12	100	-	Ruby	7121VVG2QR00	121V5263	2995	481865	9	8	410	6
	4	7	35	0	5	15	130	-	Ruby	7121VVG2QR00		4270	481000	8	8	530	
	4	7	35	0	10	22	130	-	Ruby	7121VVG2QR00		4270	486265	14	14	540	
	4	7	35	0	5	15	-	180	Ruby	7121VVG2QRS0		4270	486265	14	14	540	
	4	7	35	0	4	12	-	180	Ruby	7121VVG2QRS0		2995	492425	14	14	420	
	5	10	40	0	2	8.5	100	-	Ruby	7121VVG2SR00	121V5163	2995	481865	9	8	410	6
	5	10	40	0	3.5	10	130	-	Ruby	7121VVG2SR00		4270	481000	8	8	530	
	5	10	40	0	6.5	14	140	-	Ruby	7121VVG2SR00		4270	486265	14	14	540	
	5	10	40	0	3.5	10	-	180	Ruby	7121VVG2SRS0		4270	486265	14	14	540	
	5	10	40	0	2	8.5	-	180	Ruby	7121VVG2SRS0		2995	492425	14	14	420	

Hot water - steam valves 2/2 - Direct operated



Hot water - steam valves

2/2

Applications

Magnalift valves are recommended in applications where the minimum pressure cannot be held at a sufficient level, i.e. where the effective supply pressure may be zero. This concerns applications like filling/emptying tanks by gravity and any other applications with a minimum pressure of zero.

Note: The indicated max. pressures for steam are in bar abs.

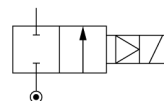


Magnalift

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C		Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
		kv	Qmax	Min	Max		Water	Steam		Global valve reference	Valve reference no.	Housing	Coil		DC	AC		

Brass body/Pipe mounting

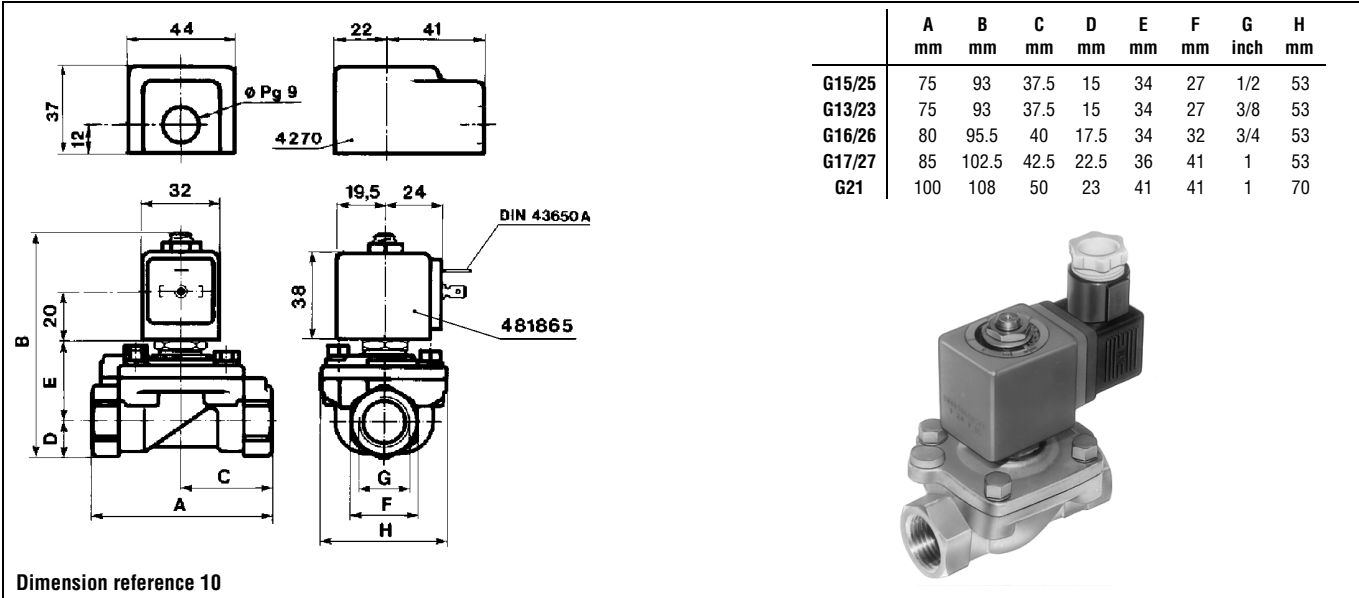
Normally closed



3/8	15	65	65	0	-	10	100	-	EPDM	7221GBG3VE00	221G1303	2995	481865	-	8	630	10
	15	65	65	0	-	10	120	-	EPDM	7221GBG3VE00		4270	481000	-	8	750	
	15	65	65	0	7	10	120	-	EPDM	7221GBG3VE00		4270	486265	14	14	760	
	15	65	65	0	4	4	-	140	EPDM	7221GBG3VES0		4270	486265	14	14	760	
	15	65	65	0	4	4	-	140	EPDM	7221GBG3VES0		2995	492425	14	14	640	
1/2	15	65	65	0	-	10	100	-	EPDM	7221GBG4VE00	221G1503	2995	481865	-	8	640	10
	15	65	65	0	-	10	120	-	EPDM	7221GBG4VE00		4270	481000	-	8	760	
	15	65	65	0	7	10	120	-	EPDM	7221GBG4VE00		4270	486265	14	14	770	
	15	65	65	0	4	4	-	140	EPDM	7221GBG4VES0		4270	486265	14	14	770	
	15	65	65	0	4	4	-	140	EPDM	7221GBG4VES0		2995	492425	14	14	650	
3/4	15	80	80	0	-	10	100	-	EPDM	7221GBG51E00	221G1603	2995	481865	-	8	670	10
	15	80	80	0	-	10	120	-	EPDM	7221GBG51E00		4270	481000	-	8	790	
	15	80	80	0	7	10	120	-	EPDM	7221GBG51E00		4270	486265	14	14	800	
	15	80	80	0	4	4	-	140	EPDM	7221GBG51ES0		4270	486265	14	14	800	
	15	80	80	0	4	4	-	140	EPDM	7221GBG51ES0		2995	492425	14	14	680	
1	15	80	80	0	-	10	100	-	EPDM	7221GBG61E00	221G1703	2995	481865	-	8	810	10
	15	80	80	0	-	10	120	-	EPDM	7221GBG61E00		4270	481000	-	8	930	
	15	80	80	0	7	10	120	-	EPDM	7221GBG61E00		4270	486265	14	14	940	
	15	80	80	0	4	4	-	140	EPDM	7221GBG61ES0		4270	486265	14	14	940	
	15	80	80	0	4	4	-	140	EPDM	7221GBG61ES0		2995	492425	14	14	820	
	25	160	160	0	-	10	100	-	EPDM	7221GBG64E00	221G2103	2995	481865	-	8	1170	10
	25	160	160	0	-	10	120	-	EPDM	7221GBG64E00		4270	481000	-	8	1290	
	25	160	160	0	7	10	120	-	EPDM	7221GBG64E00		4270	486265	14	14	1300	
	25	160	160	0	4	4	-	140	EPDM	7221GBG64ES0		4270	486265	14	14	1300	
	25	160	160	0	4	4	-	140	EPDM	7221GBG64ES0		2995	492425	14	14	1180	

Table continued on page 78

Hot water - steam valves 2/2 - Magnalift

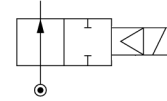


Hot water - steam valves 2/2 - Magnalift

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C		Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
										Global valve reference	Valve reference no.	Housing	Coil		DC	AC		
G		kv	Qmax	Min		Max	Water	Steam										

Brass body/Pipe mounting

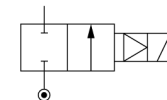
Normally open



3/8	15	43	43	0	-	3.5	-	145	EPDM	72228BG3TES0	222G3303	4270	486265	-	14	940	102
	15	43	43	0	8.5	8.5	100	-	EPDM	72228BG3TE00		4270	486265	14	14	940	
1/2	15	58	58	0	-	3.5	-	145	EPDM	72228BG4UES0	222G3503	4270	486265	-	14	940	102
	15	58	58	0	8.5	8.5	100	-	EPDM	72228BG4UE00		4270	486265	14	14	940	
3/4	19	72	-	0	-	3.5	-	145	EPDM	72228BG5VES0	222G3603	4270	486265	-	14	940	102
	19	72	72	0	8.5	8.5	100	-	EPDM	72228BG5VE00		4270	486265	14	14	940	

303 Stainless steel body/Pipe mounting

Normally closed



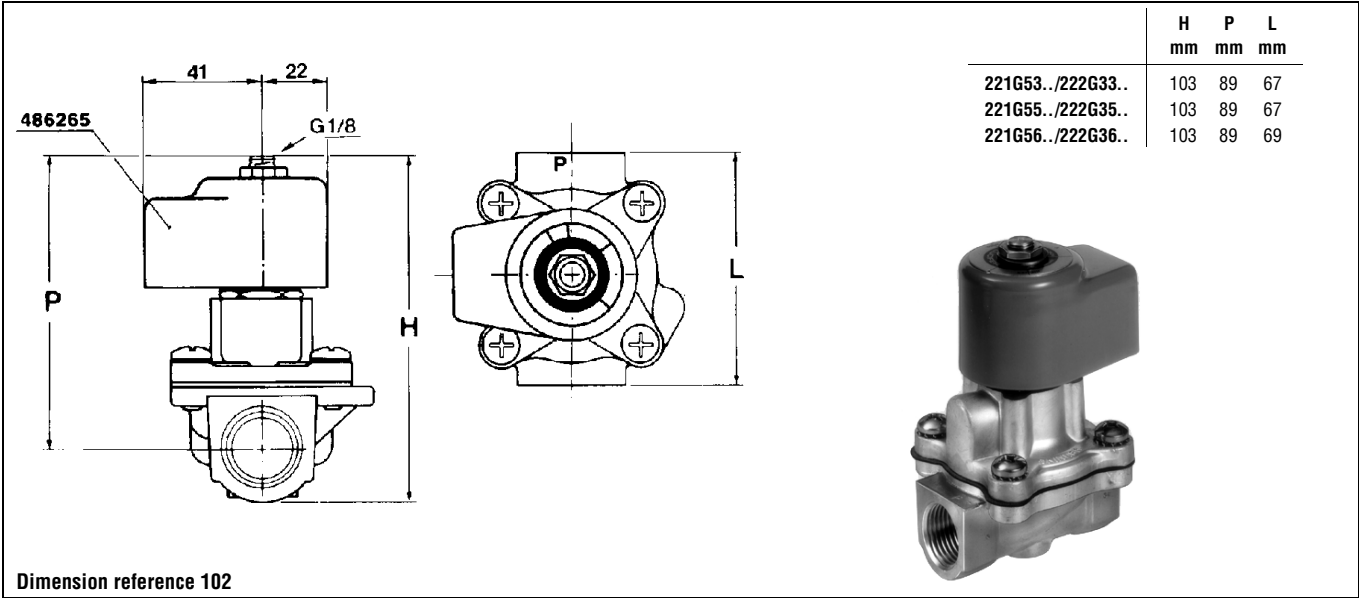
3/8	15	42	-	0	-	7	85	-	EPDM	72218RG3TE00	221G5303	4270	481000	-	8	1050	102
	15	42	-	0	3.8	4	-	145	EPDM	72218RG3TES0		4270	486265	14	14	1060	
	15	42	-	0	2.8	7	100	-	EPDM	72218RG3TE00		4270	486265	14	14	1060	
	15	42	-	0	-	4	-	145	EPDM	72218RG3TES0		2995	492425	-	14	1060	
1/2	15	54	54	0	-	7	85	-	EPDM	72218RG4UE00	221G5503	4270	481000	-	8	1050	102
	15	54	54	0	3.8	4	-	145	EPDM	72218RG4UES0		4270	486265	-	14	1060	
	15	54	54	0	2.8	7	100	-	EPDM	72218RG4UE00		4270	486265	14	14	1060	
	15	54	54	0	-	4	-	140	EPDM	72218RG4UES0		2995	492425	-	14	1060	
3/4	15	71	71	0	2.8	7	100	-	EPDM	72218RG5VE00	221G5603	4270	486265	14	14	1060	102
	19	71	71	0	-	7	85	-	EPDM	72218RG5VE00		4270	481000	-	8	1050	
	19	71	71	0	3.8	4	-	145	EPDM	72218RG5VES0		4270	486265	14	14	1060	
	19	71	71	0	-	4	-	145	EPDM	72218RG5VES0		2995	492425	-	14	1060	

303 Stainless steel body/Pipe mounting

Normally open

3/8	16	43	43	0	8.5	8.5	100	-	EPDM	72228RG3TE00	222G5303	4270	486265	14	14	1060	102
	16	43	43	0	-	3.5	-	145	EPDM	72228RG3TES0		4270	486265	-	14	1060	
1/2	16	58	58	0	8.5	8.5	100	-	EPDM	72228RG4UE00	222G5503	4270	486265	14	14	1060	102
	16	58	58	0	-	3.5	-	145	EPDM	72228RG4UES0		4270	486265	-	14	1060	
3/4	19	72	72	0	8.5	8.5	100	-	EPDM	72228RG5VE00	222G5603	4270	486265	14	14	1060	102
	19	72	72	0	-	3.5	-	145	EPDM	72228RG5VES0		4270	486265	-	14	1060	

Hot water - steam valves 2/2 - Magnalift



Hot water - steam valves

2/2

Applications

Pilot operated valves are ideally suited to shut-off applications of liquids with high flow and pressure.

A minimum operating pressure is required: refer to tables.

Note: The indicated max. pressures for steam are in bar abs.

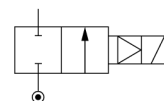


Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C		Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
		kv	Qmax	Min	Max		Water	Steam		Global valve reference	Valve reference no.	Housing	Coil		DC	AC		

Brass body/Pipe mounting

Normally closed



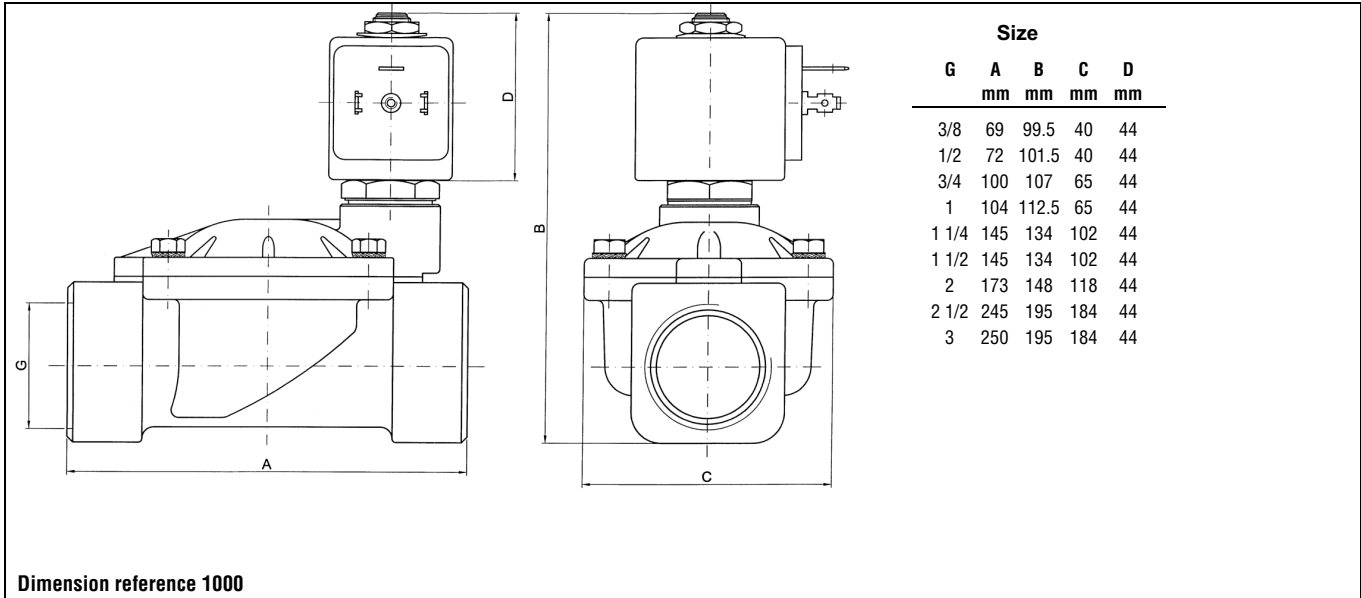
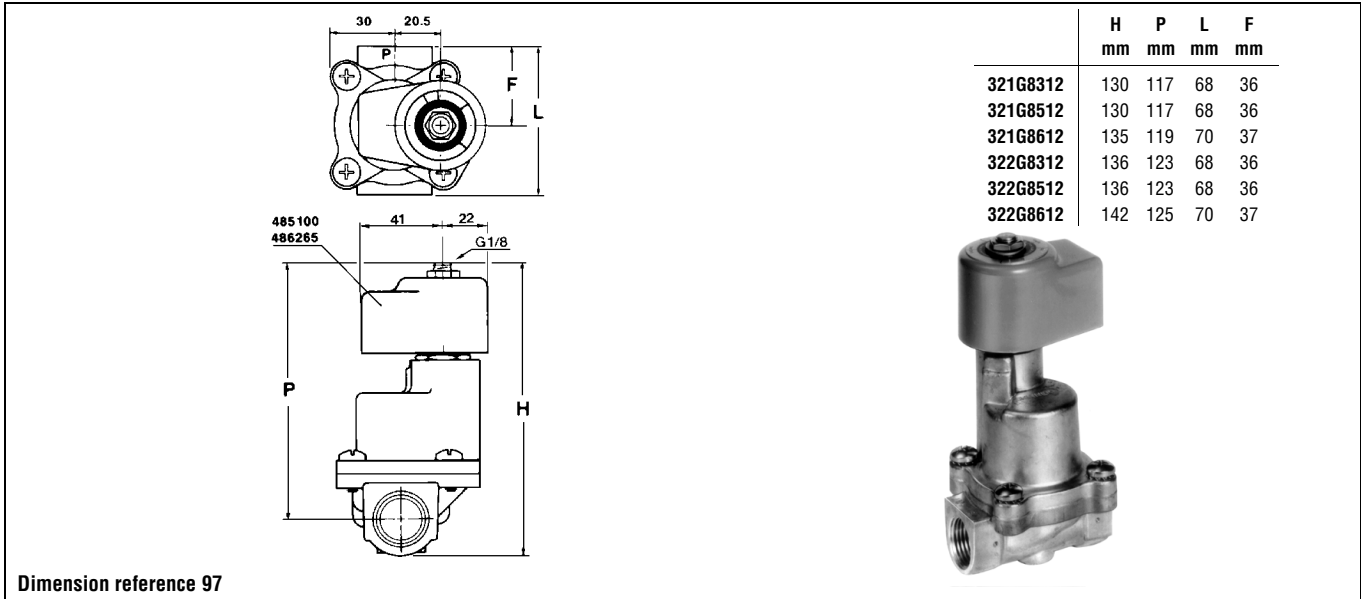
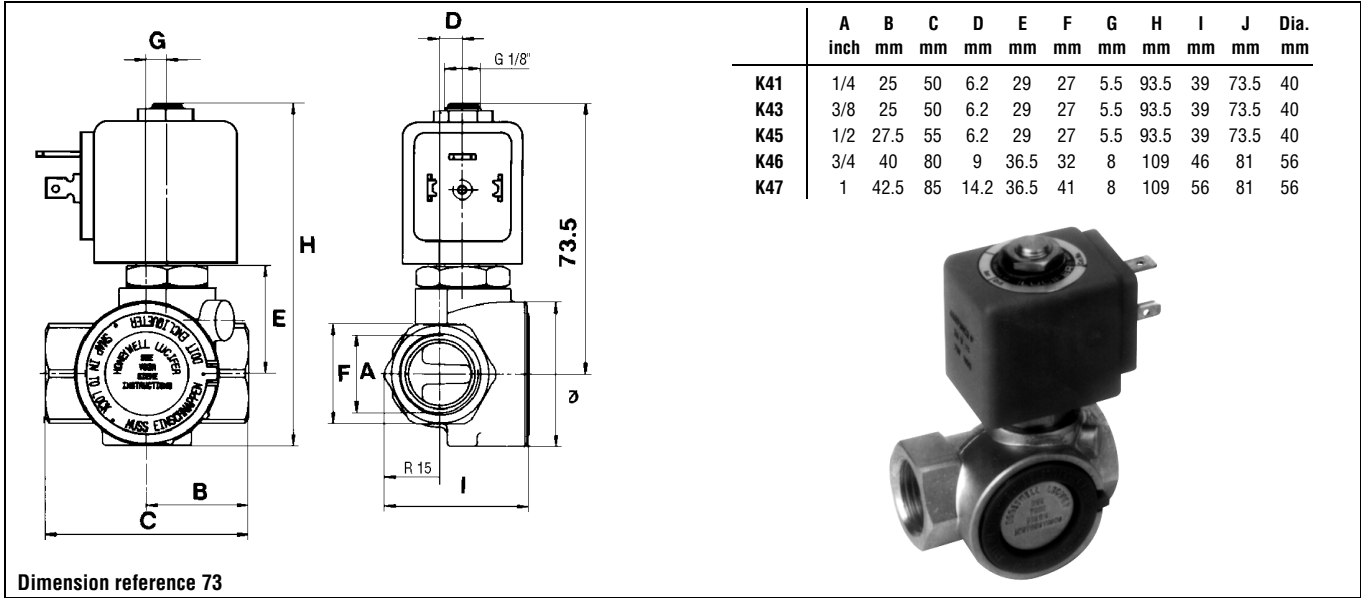
1/4	12	30	30	0.3	12	12	120	-	EPDM	7321KBG2SEW0	321K4103 ¹	4270	481000	8	8	610	73
	12	30	30	0.3	12	12	100	-	EPDM	7321KBG2SEW0		2995	482730	7	6	490	
3/8	12	45	45	0.3	12	12	120	-	EPDM	7321KBG3TEW0	321K4303 ¹	4270	481000	8	8	610	73
	12	45	45	0.3	12	12	100	-	EPDM	7321KBG3TEW0		2995	482730	7	6	490	
	13	50	50	0.1	20	20	140	140	EPDM	7321BBG3TE00	-	4270	486265	14	14	560	1000
	15	42	42	0.3	-	8.5	-	180	PTFE	7321BBG3TTS0	321G8312	4270	486265	-	14	960	97
1/2	12	50	50	0.3	12	12	120	-	EPDM	7321KBG4TEW0	321K4503 ¹	4270	481000	8	8	610	73
	12	50	50	0.3	12	12	100	-	EPDM	7321KBG4TEW0		2995	482730	7	6	490	
	13	140	140	0.1	4	4	140	140	EPDM	7321BBG4TE00	-	4270	486265	14	14	590	1000
	15	56	56	0.3	-	8.5	-	180	PTFE	7321BBG4UTS0	321G8512	4270	486265	-	14	960	97
3/4	15	64	64	0.3	-	8.5	-	180	PTFE	7321BBG5VTS0	321G8612	4270	486265	-	14	960	97
	18	100	100	0.3	12	12	120	-	EPDM	7321KBG51EW0	321K4603 ¹	4270	481000	8	8	820	73
	18	100	100	0.3	12	12	100	-	EPDM	7321KBG51EW0		2995	482730	7	6	700	
	20	140	140	0.1	4	4	140	140	EPDM	7321BBG53E00	-	4270	486265	14	14	1050	1000
1	18	110	110	0.3	12	12	120	-	EPDM	7321KBG62EW0	321K4703 ¹	4270	481000	8	8	965	73
	18	110	110	0.3	12	12	100	-	EPDM	7321KBG62EW0		2995	482730	7	6	845	
	25	160	160	0.1	4	4	140	140	EPDM	7321BBG64E00	-	4270	486265	14	14	1110	1000

Table continued on page 82

Notes:

1. Anti-waterhammer valve

Hot water - steam valves 2/2 - Pilot operated

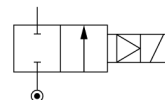


Hot water - steam valves 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C		Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
										Global valve reference	Valve reference no.	Housing	Coil		DC	AC		
G		kv	Qmax	Min		Max	Water	Steam										
				DC		AC												

Brass body/Pipe mounting

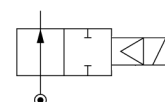
Normally closed



1	27	195	195	0.35	-	8.5	-	180	PTFE	73218BG64TS0	321G8712	4270	486265	-	14	4240	98
1 1/4	29	230	230	0.35	-	8.5	-	180	PTFE	73218BG75TS0	321G8812	4270	486265	-	14	4240	98
	35	420	420	0.1	4	4	140	140	EPDM	7321BBG78E00	-	4270	486265	14	14	3120	1000
1 1/2	32	320	320	0.35	-	8.5	-	180	PTFE	73218BG87TS0	321G8912	4270	486265	-	14	4240	98
	40	500	500	0.1	4	4	140	140	EPDM	7321BBG88E00	-	4270	486265	14	14	2870	1000
2	50	620	620	0.1	4	4	140	140	EPDM	7321BBG99E00	-	4270	486265	14	14	4260	1000

Brass body/Pipe mounting

Normally open



3/8	15	42	42	0.35	-	8.5	-	180	PTFE	73228BG3TTS0	322G8312	4270	486265	-	14	960	97
1/2	16	56	56	0.35	-	8.5	-	180	PTFE	73228BG4UTS0	322G8512	4270	486265	-	14	960	97
3/4	15	64	64	0.35	-	8.5	-	180	PTFE	73228BG52TS0	322G8612	4270	486265	-	14	960	97
1	27	195	195	0.35	-	8.5	-	180	PTFE	73228BG64TS0	322G8712	4270	486265	-	14	4240	98
1 1/4	28	230	230	0.35	-	8.5	-	180	PTFE	73228BG75TS0	322G8812	4270	486265	-	14	4240	98
1 1/2	31	320	320	0.35	-	8.5	-	180	PTFE	73228BG87TS0	322G8912	4270	486265	-	14	4240	98

Hot water - steam valves 2/2 - Pilot operated

	H mm	P mm	L mm	F mm
321G8312	130	117	68	36
321G8512	130	117	68	36
321G8612	135	119	70	37
322G8312	136	123	68	36
322G8512	136	123	68	36
322G8612	142	125	70	37

Dimension reference 97

	W mm	D mm	S mm	P mm	L mm
321G8712	116	94	61	101	98
321G8812	124	98	64	101	98
321G8912	138	109	78	104	114
322G8712	116	94	61	107	98
322G8812	124	98	64	107	98
322G8912	138	109	78	110	114

Dimension reference 98

Size					
G	A mm	B mm	C mm	D mm	
3/8	69	99.5	40	44	
1/2	72	101.5	40	44	
3/4	100	107	65	44	
1	104	112.5	65	44	
1 1/4	145	134	102	44	
1 1/2	145	134	102	44	
2	173	148	118	44	
2 1/2	245	195	184	44	
3	250	195	184	44	

Dimension reference 1000

Valves for oil (hydraulic) and neutral liquids (max. 100 bar)

2/2

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Direct operated	Brass body	Normally closed	1/8	1.5 to 2.5	70.0	86
			1/4	1.2 to 3	100.0	86
			SB	1.5 to 3	100.0	88
		Normally open	1/8	2.5	30.0	88
			1/4	1.5 to 2.5	40.0	88
Pilot operated	Brass body	Normally closed	1/4	8	40.0	90
			3/8	11	40.0	90
			1/2	14.5	40.0	90
			SB	14	40.0	92
		Normally open	1/4	8	40.0	90
			3/8	11	40.0	92
			1/2	14.5	40.0	92
			SB	14	40.0	92

Notes:

Direct operated valves: pressure range from 0 to max pressure.

Pilot operated valves: pressure range from 0.3 to 0.5 bar to max. pressure (refer to tables).

Valves for oil (hydraulic) and neutral liquids (max. 100 bar)

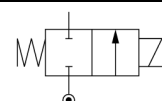
2/2



Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil		DC	AC			
G		kv	Qmax	Min	Max	DC	AC											

Normally closed



Brass body/Pipe mounting

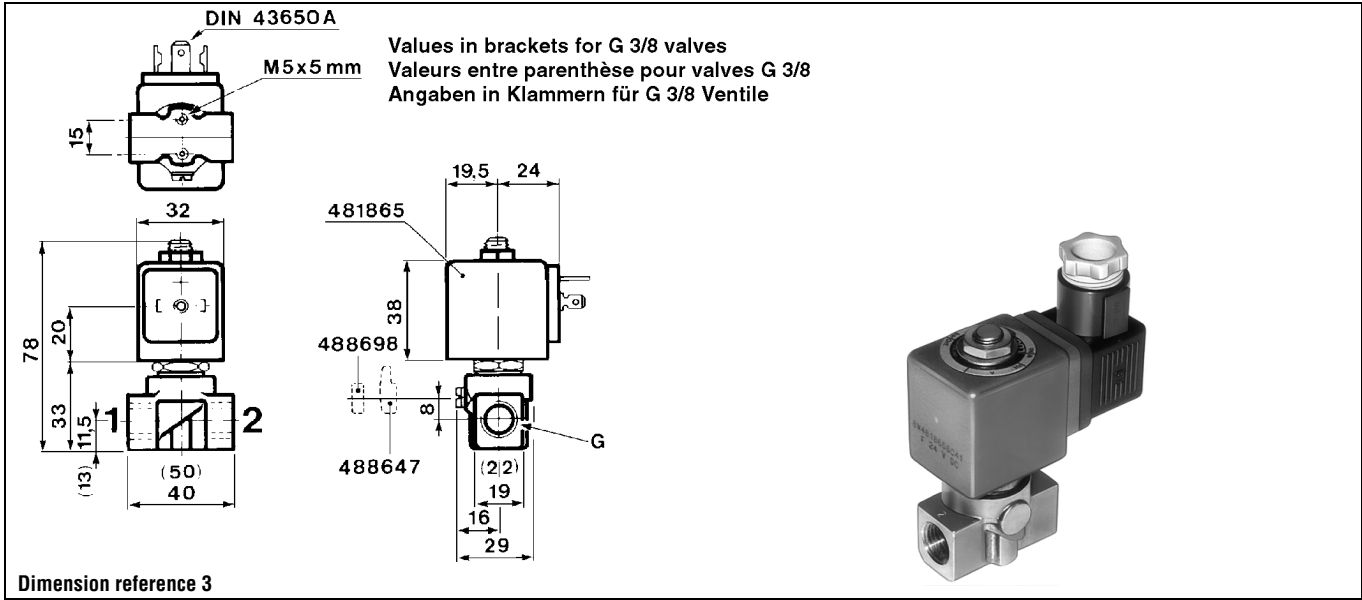
1/8	1.5	1.5	12.5	0	25	60	75	PCTFE	7121KBG1GF00	E121K14	2995	481865	9	8	300	2	3
	1.5	1.5	12.5	0	30	70	75	PCTFE			4270	481000	8	8	420	2	
	1.5	1.5	12.5	0	55	70	75	PCTFE			4270	486265	14	14	430		
	2.5	3.5	25	0	10	28	100	Ruby	7121KBG1LR00	E121K23	2995	481865	9	8	300	2	3
	2.5	3.5	25	0	12	34	130	Ruby			4270	481000	8	8	420	2	
	2.5	3.5	25	0	22	50	120	Ruby			4270	486265	14	14	430		
	1.2	0.85	8.5	0	36	80	100	Ruby	7121KBG2ER00	E121K65	2995	481865	9	8	290		3
	1.2	0.85	8.5	0	43	100	130	Ruby			4270	481000	8	8	410		
	1.2	0.85	8.5	0	75	100	120	Ruby			4270	486265	14	14	420		
1/4	1.5	1.5	12.5	0	25	60	75	PCTFE	7121KBG2GF00	E121K04	2995	481865	9	8	290	2	3
	1.5	1.5	12.5	0	30	70	75	PCTFE			4270	481000	8	8	410	2	
	1.5	1.5	12.5	0	55	70	75	PCTFE			4270	486265	14	14	420		
	1.5	1.5	15	0	25	60	100	Ruby	7121KBG2GR00	E121K67	2995	481865	9	8	290		3
	1.5	1.5	15	0	30	75	130	Ruby			4270	481000	8	8	410		
	1.5	1.5	15	0	55	100	120	Ruby			4270	486265	14	14	420		
	2.5	3.5	25	0	10	28	100	Ruby	7121KBG2LR00	E121K63	2995	481865	9	8	290		3
	2.5	3.5	25	0	12	34	130	Ruby			4270	481000	8	8	410		
	2.5	3.5	25	0	22	50	120	Ruby			4270	486265	14	14	420		
	3	4.5	27	0	7	20	75	PCTFE	7121KBG2NF00	E121K03	2995	481865	9	8	290	2	3
	3	4.5	27	0	8.5	25	75	PCTFE			4270	481000	8	8	410	2	
	3	4.5	27	0	15	36	75	PCTFE			4270	486265	14	14	420		
	3	4.5	27	0	7	20	100	Ruby	7121KBG2NR00	E121K64	2995	481865	9	8	290		3
	3	4.5	27	0	8.5	25	130	Ruby			4270	481000	8	8	410		
	3	4.5	27	0	15	36	120	Ruby			4270	486265	14	14	420		

Table continued on page 88

Notes:

* See Electrical Parts Group table at end of section

Valves for oil (hydraulic) and neutral liquids 2/2 - Direct operated

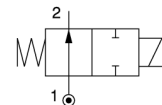


Valves for oil (hydraulic) and neutral liquids 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil						
G		kv	Qmax	Min	Max									DC	AC			

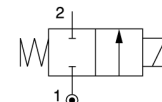
Brass body/Pipe mounting

Normally open



1/8	2.5	3.5	-	0	-	30	140	Ruby	7122KBG1LR00	122K9363	4270	481044	-	14	445		4
	2.5	3.5	-	0	30	30	140	Ruby			4270	486265	14	14	455		
1/4	1.5	1.5	8	0	30	30	100	PCTFE	7122KBG2GF00	122K84	2995	481865	9	8	290	2	3
	1.5	1.5	8	0	30	30	120	PCTFE			4270	481000	8	8	410	2	
	1.5	1.5	9.5	0	40	40	100	Ruby	7122KBG2GR00	122K8408	2995	481865	9	8	290	2	3
	1.5	1.5	9.5	0	40	40	130	Ruby			4270	481000	8	8	410	2	
	2.5	3.5	-	0	-	30	140	Ruby	7122KBG2LR00	122K8363	4270	481044	-	14	425		4
	2.5	3.5	-	0	30	30	140	Ruby			4270	486265	14	14	435		

Normally closed



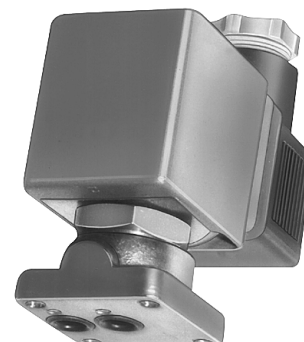
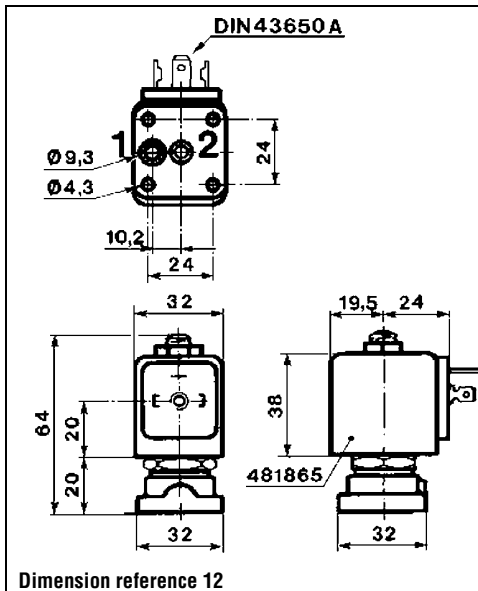
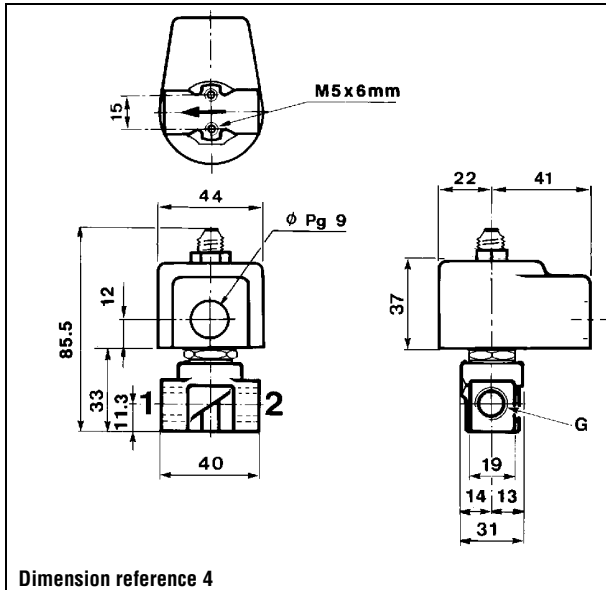
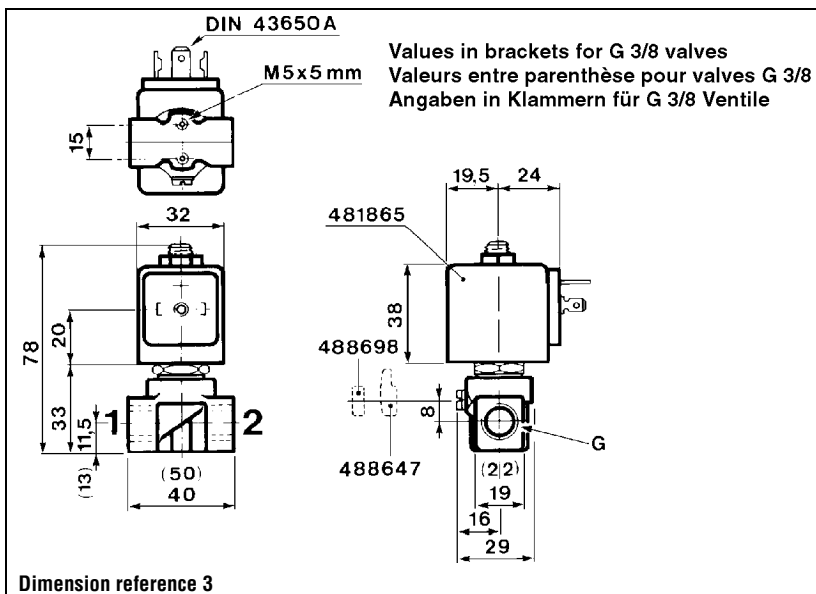
Brass body/Sub-base mounting

SB	1.5	1.5	12.5	0	25	60	75	PCTFE	7121FBF4GF00	E121F44	2995	481865	9	8	250	2	12
	1.5	1.5	12.5	0	30	70	75	PCTFE			4270	481000	8	8	370	2	
	1.5	1.5	12.5	0	55	70	75	PCTFE			4270	486265	14	14	380	2	
	1.5	1.5	15	0	25	60	100	Ruby	7121FBF4GR00	121F67	2995	481865	9	8	255	2	12
	1.5	1.5	15	0	30	75	130	Ruby			4270	481000	8	8	375	2	
	1.5	1.5	15	0	55	100	120	Ruby			4270	486265	14	14	385	2	
	2.5	3.5	25	0	10	28	100	Ruby	7121FBF4LR00	121F63	2995	481865	9	8	255	2	12
	2.5	3.5	25	0	12	34	130	Ruby			4270	481000	8	8	375	2	
	2.5	3.5	25	0	22	50	120	Ruby			4270	486265	14	14	385	2	
	3	4.5	27	0	7	20	75	PCTFE	7121FBF4NF00	E121F43	2995	481865	9	8	250	2	12
	3	4.5	27	0	8.5	25	75	PCTFE			4270	481000	8	8	370	2	
	3	4.5	27	0	15	36	75	PCTFE			4270	486265	14	14	380	2	
	3	4.5	27	0	7	20	100	Ruby	7121FBF4NR00	121F64	2995	481865	9	8	255	2	12
	3	4.5	27	0	8.5	25	130	Ruby			4270	481000	8	8	375	2	
	3	4.5	27	0	15	36	120	Ruby			4270	486265	14	14	385	2	

Notes:

* See Electrical Parts Group table at end of section

Valves for oil (hydraulic) and neutral liquids 2/2 - Direct operated



Valves for oil (hydraulic) and neutral liquids

2/2

Applications

Pilot operated valves are ideally suited to shut-off applications of liquids with high flow and pressure. A minimum operating pressure is required: refer to tables.

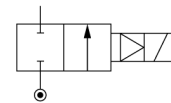


Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil		DC	AC			
G		kv	Qmax	Min	Max													
				DC	AC													

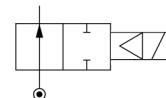
Brass body/Pipe mounting

Normally closed



1/4	8	36	36	0.3	2	25	40	100	FKM	7321HBG2SV00	E321H21	1	2995	481865	9	8	800	2	9
	8	36	36	0.3		30	40	100	FKM				4270	481000	8	8	920	2	
	8	36	36	0.3	2	40	40	100	FKM				4270	486265	14	14	930	2	
	8	36	36	0.3	2	25	40	100	NBR	7321HBG2SN00	E321H11	1	2995	481865	9	8	800	2	9
	8	36	36	0.3		30	40	100	NBR				4270	481000	8	8	920	2	
	8	36	36	0.3	2	40	40	100	NBR				4270	486265	14	14	930	2	
3/8	11	50	50	0.3	2	25	40	100	FKM	7321HBG3TV00	E321H23	1	2995	481865	9	8	780	2	9
	11	50	50	0.3		30	40	120	FKM				4270	481000	8	8	900	2	
	11	50	50	0.3	2	40	40	140	FKM				4270	486265	14	14	910	2	
	11	50	50	0.3	2	25	40	100	NBR	7321HBG3TN00	E321H13	1	2995	481865	9	8	780	2	9
	11	50	50	0.3		30	40	100	NBR				4270	481000	8	8	900	2	
	11	50	50	0.3	2	40	40	100	NBR				4270	486265	14	14	910	2	
1/2	14.5	60	60	0.3	2	25	40	100	FKM	7321HBG4UV00	E321H25	1	2995	481865	9	8	740	2	9
	14.5	60	60	0.3		30	40	120	FKM				4270	481000	8	8	860	2	
	14.5	60	60	0.3	2	40	40	140	FKM				4270	486265	14	14	870	2	
	14.5	60	60	0.3	2	25	40	100	NBR	7321HBG4UN00	E321H15	1	2995	481865	9	8	740	2	9
	14.5	60	60	0.3		30	40	100	NBR				4270	481000	8	8	860	2	
	14.5	60	60	0.3	2	40	40	100	NBR				4270	486265	14	14	870	2	

Normally open



Brass body/Pipe mounting

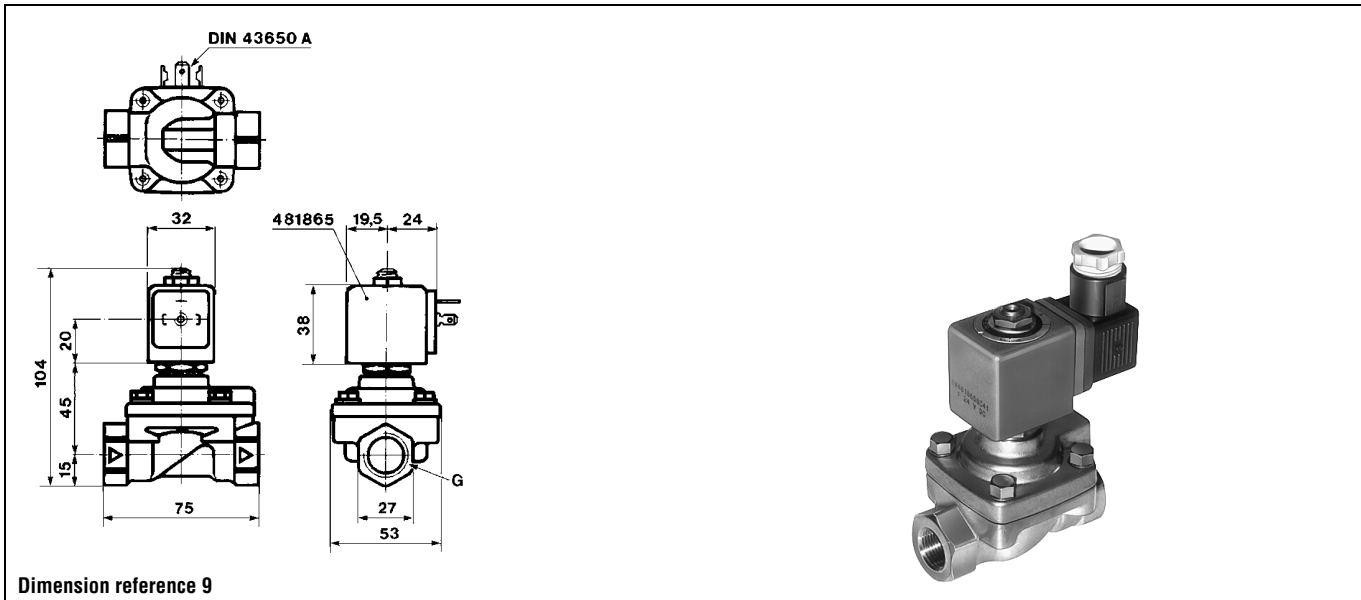
1/4	8	36	36	0.3	2	40	40	100	FKM	7322HBG2SV00	322H7106	1	2995	481865	9	8	820		9
	8	36	36	0.3		40	40	120	FKM				4270	481000	8	8	940		
	8	36	36	0.3	2	40	40	140	FKM				4270	486265	14	14	950		

Table continued on page 92

Notes:

- * See Electrical Parts Group table at end of section
- 1. Pilot seat discs from ruby (synthetic)
- 2. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing

Valves for oil (hydraulic) and neutral liquids 2/2 - Pilot operated

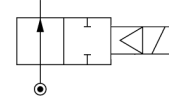


Valves for oil (hydraulic) and neutral liquids 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil						
G		kv	Qmax	Min	Max									DC	AC			

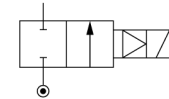
Brass body/Pipe mounting

Normally open



1/4	8	36	36	0.3	2	25	40	100	NBR	7322HBG2SN00	322H71	¹	2995	481865	9	8	840		9
	8	36	36	0.3	2	30	40	100	NBR				4270	481000	8	8	960		
3/8	11	50	50	0.3	2	40	40	100	FKM	7322HBG3TV00	322H7306	¹	2995	481865	9	8	800		9
	11	50	50	0.3	2	40	40	100	FKM				4270	481000	8	8	920		
	11	50	50	0.3	2	40	40	140	FKM				4270	486265	14	14	930		
	11	50	50	0.3	2	40	40	100	NBR	7322HBG3TN00	322H73	¹	2995	481865	9	8	800		9
1/2	14.5	60	60	0.3	2	40	40	100	FKM	7322HBG4UV00	322H7506	¹	2995	481865	9	8	760		9
	14.5	60	60	0.3	2	40	40	120	FKM				4270	481000	8	8	880		
	14.5	60	60	0.3	2	40	40	140	FKM				4270	486265	14	14	890		
	14.5	60	60	0.3	2	40	40	100	NBR	7322HBG4UN00	322H75	¹	2995	481865	9	8	760		9
	14.5	60	60	0.3	2	40	40	100	NBR				4270	481000	8	8	880		

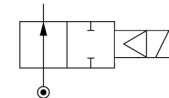
Normally closed



Brass body/Sub-base mounting

SB	14	45	45	0.3	2	25	40	100	FKM	7321FBF3TV00	E321F3202	¹	2995	481865	9	8	650	2	13
	14	45	45	0.3	2	30	40	120	FKM				4270	481000	8	8	770	2	
	14	45	45	0.3	2	40	40	120	FKM				4270	486265	14	14	780	2	
	14	45	45	0.3		25	40	100	NBR	7321FBF3TN00	E321F32	¹	2995	481865	9	8	650	2	13
	14	45	45	0.3		30	40	100	NBR				4270	481000	8	8	770	2	
	14	45	45	0.3		40	40	100	NBR				4270	486265	14	14	780	2	

Normally open



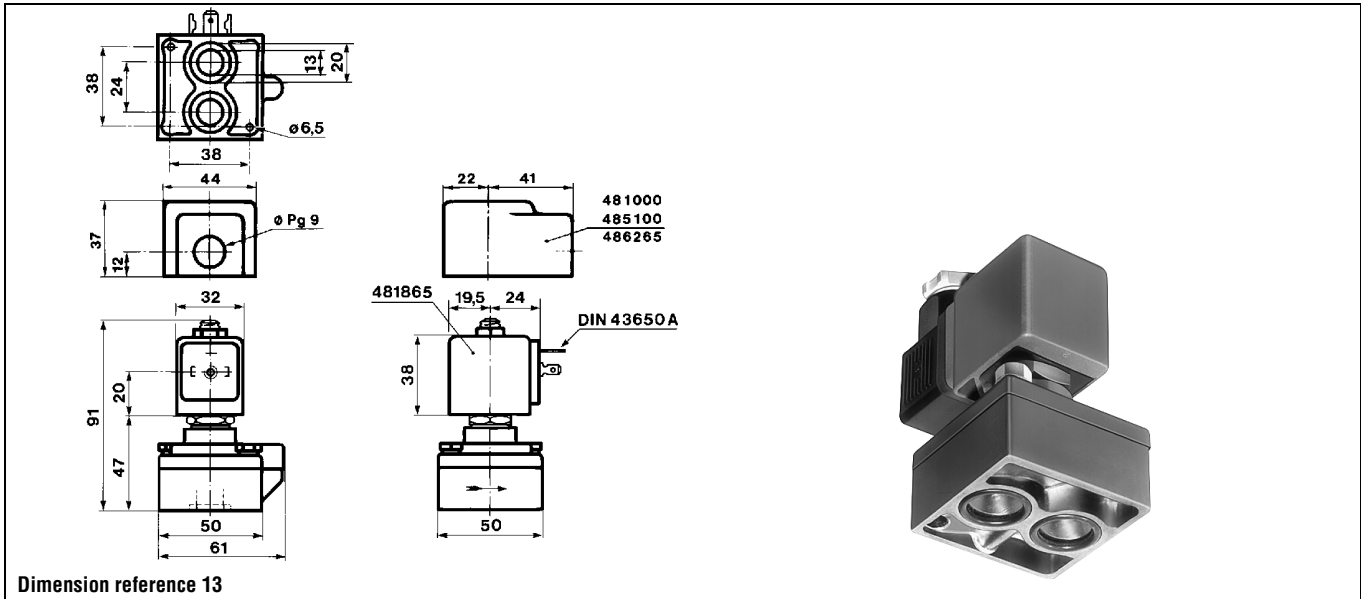
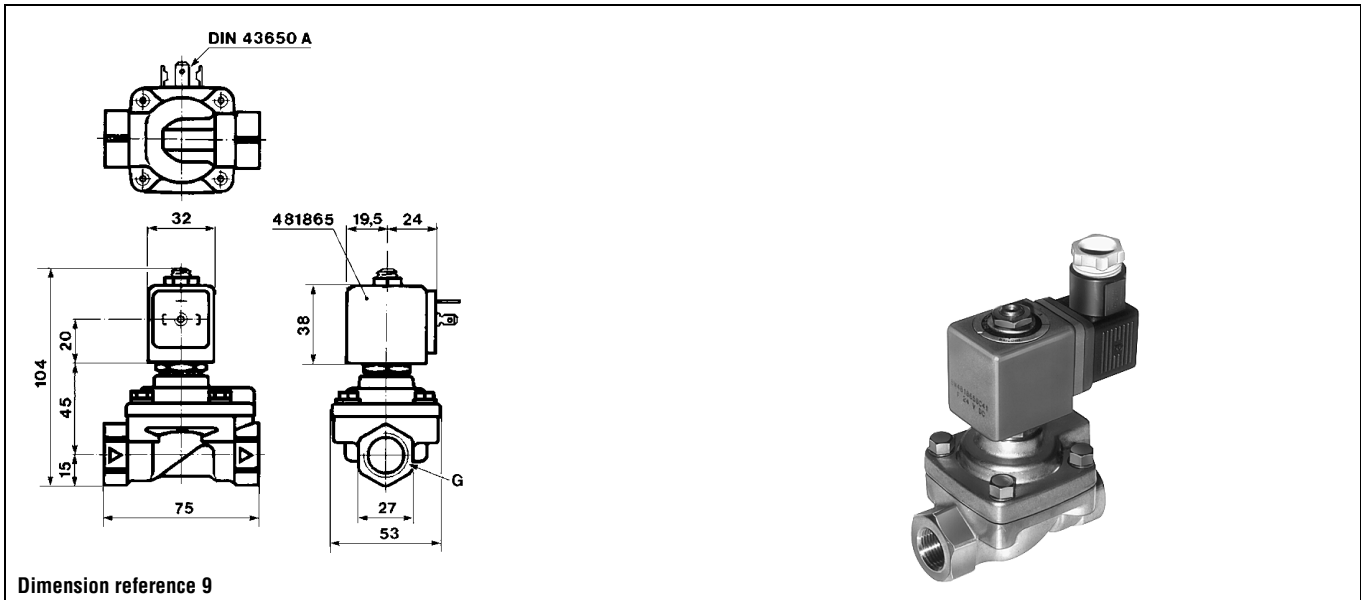
Brass body/Sub-base mounting

SB	14	45	45	0.3	2	40	40	100	FKM	7322FBF3TV00	322F7206	¹	2995	481865	9	8	650		13
	14	45	45	0.3	2	40	40	120	FKM				4270	481000	8	8	770		
	14	45	45	0.3	2	40	40	140	FKM				4270	486265	14	14	780		
	14	45	45	0.3	2	40	40	75	NBR	7322FBF3TN00	322F72	¹	2995	481865	9	8	650		13
	14	45	45	0.3	2	40	40	75	NBR				4270	481000	8	8	770		

Notes:

- * See Electrical Parts Group table at end of section
- 1. Pilot seat discs from ruby (synthetic)
- 2. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing

Valves for oil (hydraulic) and neutral liquids 2/2 - Pilot operated



Electrical parts options with 2/2 valves for oil (hydraulic) and neutral liquids

El. part Group	Coil	Protection class	Protection class / Temperature class	Power		Coil Order No.	Coil Ref. No.	Connection	Housing Order No.	Housing Ref. No.	Ambient temp.	
				DC	AC						min.	max.
1	22 mm	IP 65	Class F	2.5 W	2 W	DA01	488980	for DIN plug	A0	8993	-40	50
		IP 65	Class F	2.5 W	2 W	DA02	481045	with DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA03	481180	for DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA04	481530	with DIN plug	A0	8993	-40	50
		IP 65	EEx m II T4	5 W	4 W	VA01	482605	with 1500mm cable	00	-	-40	50
		IP 65	EEx m II T5	2.5 W	2 W	VA02	482606	with 1500mm cable	00	-	-40	50
2	32 mm (Std)	IP 65	Class F	9 W	8 W	DZ02	481865	for DIN plug	N1	2995	-40	50
		IP 65		9 W	8 W	DZ03	482725	with DIN plug	N1	2995	-40	50
		IP 65	Class H	9 W	8 W	DZ04	492453	for DIN plug	N1	2995	-40	50
		IP 65		9 W	8 W	DZ05	492726	with DIN plug	N1	2995	-40	50
		IP 65	Class F, 50/60 Hz	-	9 W	DZ06	483510	for DIN plug	N1	2995	-40	50
		IP 65		-	9 W	DZ07	482635	with DIN plug	N1	2995	-40	50
		IP 65	EEx m II T4	9 W	8 W	HZ05	492670	with 3000mm cable	00	-	-40	40
		IP 65	Class H	14 W	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
	50 mm (Std)	IP 10 / IP 44	Class F	8 W	8 W	EZ01	481000	screw-terminals	E0	4270	-40	50
		IP 10 / IP 44	Class H	8 W	8 W	EZ02	485100	screw-terminals	E0	4270	-40	50
		IP 10 / IP 44	Class H	14 W	14 W	EZ92	486265	screw-terminals	E0	4270	-40	50
		IP 67	Class F, M20x1.5	8 W	8 W	EZ01	481000	screw-terminals	G1	4538	-40	50
		IP 65	EEx m II T5/T4	9 W	8 W	VZ01	492070	with 1500mm cable	00	-	-40	40/65
		IP 67	EEx me II T4	8 W	8 W	HZ06	483371	for cable connection	00	-	-40	65
		IP 66	EEx me II T3/T4	11 W	9 W	VZ03	492190	for cable connection	00	-	-40	75/40
3	32 mm	IP 65	Class H	-	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
4	50 mm (impulse)	IP 10 / IP 44	Class F	-	11 W	MZ01	484990	screw-terminals	E1	4269	-40	50
		IP 10 / IP 44	Class F	13 W	-	MZ02	485400	screw-terminals	E1	4269	-40	50
5	50 mm	IP 54	EEx d IIC T4/T5/T6	8 W	8 W	HZ08	483250	for cable 1/2 NPT	00	-	-40	80/75/60
6	32 mm (Miniwatt)	IP 65	Class F	1.6 W	-	DZ10	482740	for DIN plug	N1	2995	-40	50
		IP 65	Class F	1.6W	-	DZ11	482745	with DIN plug	N1	2995	-40	50
	50 mm (Miniwatt)	IP 67	EEx me II T5	2.5 W	-	VZ04	491117	for cable connection	00	-	-40	65
		IP 67	EEx m II T5/T4	2.5 W	2.5 W	VZ05	492370	with 1500mm cable	00	-	-40	40/65
		IP 66	EEx me II T6/T5	2.5 W	2.5 W	VZ06	492390	for cable connection	00	-	-40	40/75
7	32 mm	IP 65	EEx ia II C T6	0.4 W	-	DZ12	483580.01	for DIN plug	N1	2995	-40	55
		IP 65		0.4 W	-	DZ13	483960.01	with DIN plug	N1	2995	-40	55
	50 mm	IP 66	EEx ia II C T6	0.4 W	-	VZ07	488650.01	for cable connection	00	-	-40	65
		IP 67		0.4 W	-	VZ08	488660.01	with 2000mm cable	00	-	-40	65
		IP 65		0.4 W	-	VZ09	488670.01	with DIN plug	00	-	-40	65

Note: This table is indicative only. Please contact your distributor to confirm your selection.

High corrosion-resistant valves (Stainless Steel)

2/2

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Direct operated	303 Stainless steel body	Normally closed	1/4	1.5 to 5	100.0	96

Notes:
Direct operated valves: pressure range from 0 to max pressure.

High corrosion-resistant valves (Stainless Steel)

2/2

Applications

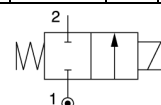
The valves in this section are made of corrosion-resistant material internally and externally. Please refer to the fluid compatibility chart in this catalogue for detailed fluid compatibility.



Direct operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Gases Qmax	Gases Qn	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC			

Normally closed



303 Stainless steel body/Pipe mounting

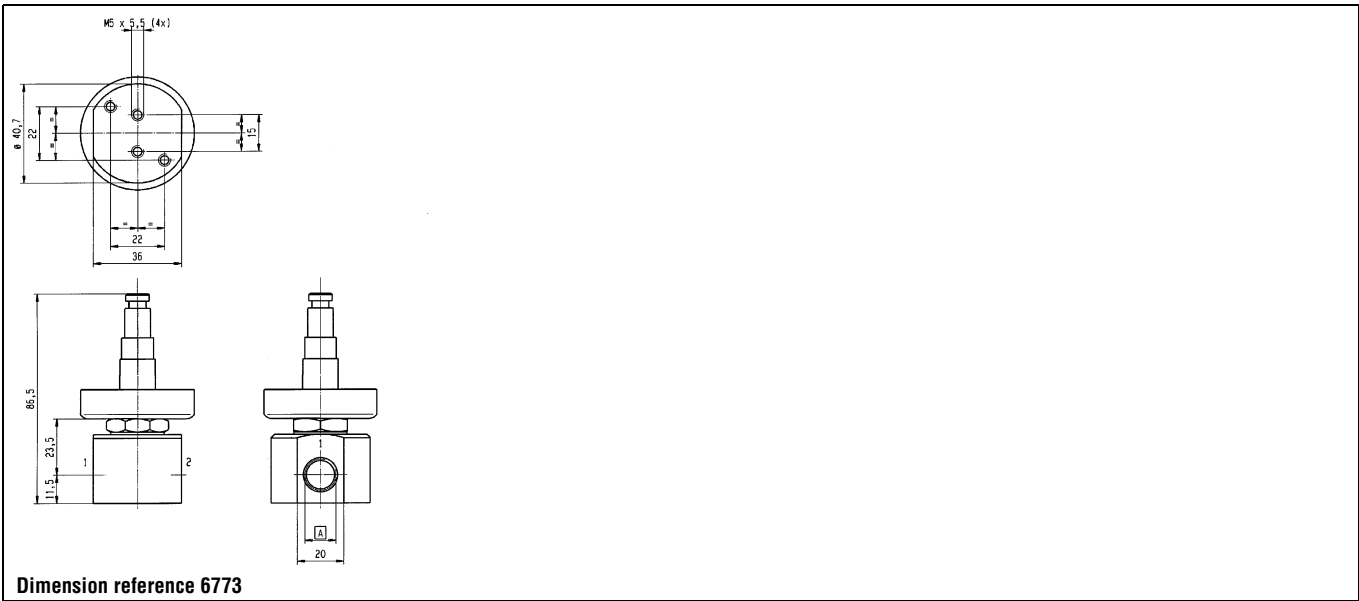
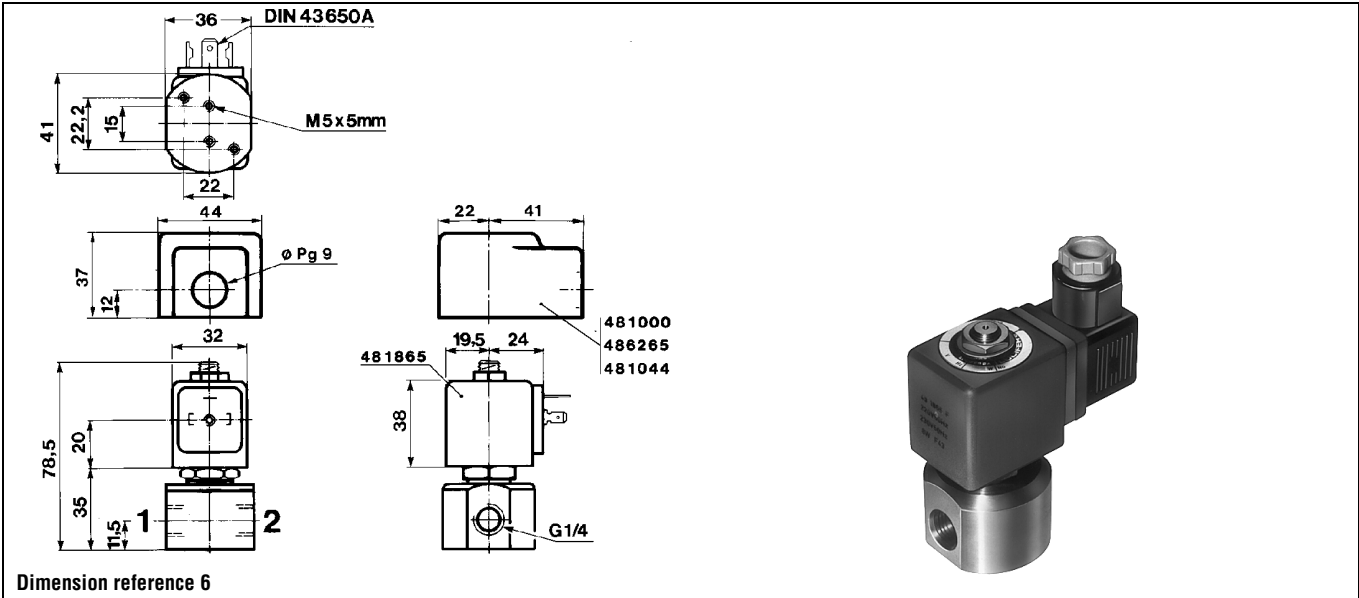
1/4	1.5	1.5	12.5	80	0	20	20	100	100	100	FKM	7121VVG2GV00	121V5406	2995	481865	9	8	410	2	6
	1.5	1.5	12.5	80	0	20	20	120	120	120	FKM			4270	481000	8	8	530	2	
	1.5	1.5	15	80	0	25	60	-	100	-	Ruby	7121VVG2GR00	121V5463	2995	481865	9	8	410	2	6
	1.5	1.5	15	80	0	30	75	-	130	-	Ruby			4270	481000	8	8	530	2	
	1.5	1.5	15	80	0	55	100	-	140	-	Ruby			4270	486265	14	14	540		
	2.5	3.5	8.5	220	0	7	14	100	100	100	FKM	7121VVG2LV00	121V5706	2995	481865	9	8	410	2	6
	2.5	3.5	8.5	220	0	9	14	120	120	120	FKM			4270	481000	8	8	530	2	
	2.5	3.5	8.5	220	0	14	14	120	120	120	FKM			4270	486265	14	14	540		
	2.5	3.5	25	220	0	10	28	-	100	-	Ruby	7121VVG2LR00	121V5763	2995	481865	9	8	410	2	6
	2.5	3.5	25	220	0	12	34	-	130	-	Ruby			4270	481000	8	8	530	2	
	2.5	3.5	25	220	0	22	50	-	140	-	Ruby			4270	486265	14	14	540		
	3	4.5	9	315	0	8.5	10	75	75	75	FKM	7121VVG2NV1D	121V53061D	-	483250	8	8	1375	5	6773
	3	4.5	27	315	0	7	10	100	100	100	FKM	7121VVG2NV00	121V5306	2995	481865	9	8	410	2	6
	3	4.5	27	315	0	8.5	10	120	120	120	FKM			4270	481000	8	8	530	2	
	3	4.5	27	315	0	10	10	120	120	120	FKM			4270	486265	14	14	530		
	3	4.5	27	315	0	7	20	-	100	-	Ruby	7121VVG2NR00	121V5363	2995	481865	9	8	410	2	6
	3	4.5	27	315	0	8.5	25	-	130	-	Ruby			4270	481000	8	8	530	2	
	3	4.5	27	315	0	15	36	-	140	-	Ruby			4270	486265	14	14	540		
	4	7	10.5	450	0	4	10	100	100	100	FKM	7121VVG2QV00	121V5206	2995	481865	9	8	410	2	6
	4	7	10.5	450	0	5	10	120	120	120	FKM			4270	481000	8	8	530	2	
	4	7	10.5	450	0	10	-	120	120	120	FKM			4270	486265	14	-	540		
	4	7	35	450	0	4	12	-	100	-	Ruby	7121VVG2QR00	121V5263	2995	481865	9	8	410	2	6
	4	7	35	450	0	5	15	-	130	-	Ruby			4270	481000	8	8	530	2	
	4	7	35	450	0	10	22	-	130	-	Ruby			4270	486265	14	14	540		
	4	7	35	450	0	3.5	3.5	-	-	100	PTFE	7121VVG2QT00	121V5212	2995	481865	9	8	410	2	6
	4	7	35	450	0	3.5	3.5	-	-	130	PTFE			4270	481000	8	8	530	2	

Table continued on page 98

Notes:

* See Electrical Parts Group table at end of section

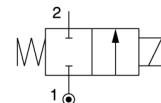
High corrosion-resistant valves (Stainless Steel) 2/2 - Direct operated



High corrosion-resistant valves (Stainless Steel) 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)			Admissible differential pressure bar			Fluid temp. °C			Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	El. Part Group *	Dim ref.
		Liquids kv	Qmax	Gases Qn	Min	Max		Gas	Liquid	Oil		Global valve reference	Valve reference no.	Housing	Coil	DC	AC			

Normally closed



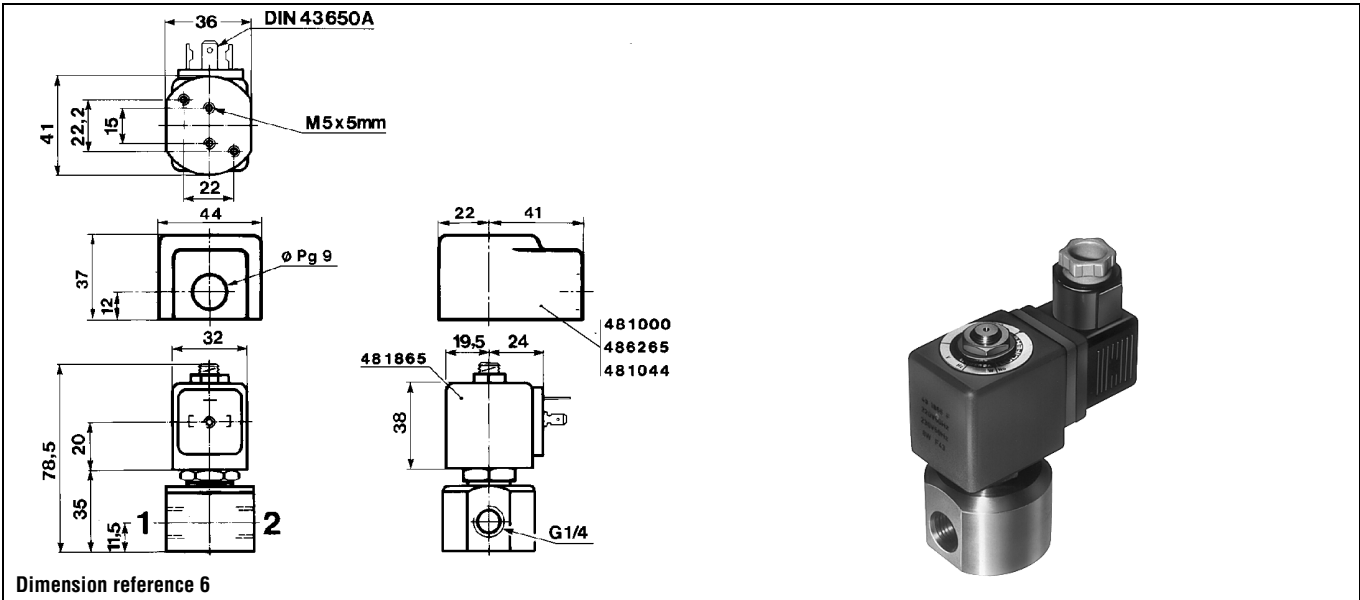
303 Stainless steel body/Pipe mounting

1/4	5	10	11.5	750	0	2.8	7	75	75	75	FKM	7121VVG2SV1D	121V51061D	-	483250	8	8	1375	5	6773
	5	10	11.5	750	0	2	7	100	100	100	FKM	7121VVG2SV00	121V5106	2995	481865	9	8	410	2	6
	5	10	11.5	750	0	2.8	7	120	100	120	FKM			4270	481000	8	8	530	2	
	5	10	11.5	750	0	5	7	120	120	120	FKM			4270	486265	14	14	540		
	5	10	40	750	0	2	8.5	-	100	-	Ruby	7121VVG2SR00	121V5163	2995	481865	9	8	410	2	6
	5	10	40	750	0	3.5	10	-	130	-	Ruby			4270	481000	8	8	530	2	
	5	10	40	750	0	6.5	14	-	140	-	Ruby			4270	486265	14	14	540		
	5	10	35	750	0	2	2.8	100	100	100	PTFE	7121VVG2ST00	121V5112	2995	481865	9	8	410	2	6
	5	10	35	750	0	2.8	2.8	130	130	130	PTFE			4270	481000	8	8	530	2	

Notes:

* See Electrical Parts Group table at end of section

High corrosion-resistant valves (Stainless Steel) 2/2 - Direct operated



Electrical parts options with 2/2 high corrosion resistant stainless steel valves

El.part Group	Coil	Protection class	Protection class / Temperature class	Power		Coil Order No.	Coil Ref. No.	Connection	Housing Order No.	Housing Ref. No.	Ambient temp.	
				DC	AC						min.	max.
1	22 mm	IP 65	Class F	2.5 W	2 W	DA01	488980	for DIN plug	A0	8993	-40	50
		IP 65	Class F	2.5 W	2 W	DA02	481045	with DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA03	481180	for DIN plug	A0	8993	-40	50
		IP 65	Class F	5 W	4 W	DA04	481530	with DIN plug	A0	8993	-40	50
		IP 65	EEx m II T4	5 W	4 W	VA01	482605	with 1500mm cable	00	-	-40	50
		IP 65	EEx m II T5	2.5 W	2 W	VA02	482606	with 1500mm cable	00	-	-40	50
2	32 mm (Std)	IP 65	Class F	9 W	8 W	DZ02	481865	for DIN plug	N1	2995	-40	50
		IP 65		9 W	8 W	DZ03	482725	with DIN plug	N1	2995	-40	50
		IP 65	Class H	9 W	8 W	DZ04	492453	for DIN plug	N1	2995	-40	50
		IP 65		9 W	8 W	DZ05	492726	with DIN plug	N1	2995	-40	50
		IP 65	Class F, 50/60 Hz	-	9 W	DZ06	483510	for DIN plug	N1	2995	-40	50
		IP 65		-	9 W	DZ07	482635	with DIN plug	N1	2995	-40	50
		IP 65	EEx m II T4	9 W	8 W	HZ05	492670	with 3000mm cable	00	-	-40	40
		IP 65	Class H	14 W	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
	50 mm (Std)	IP 65		14 W	14 W	DZ09	492727	with DIN plug	N1	2995	-40	50
		IP10 / IP 44	Class F	8 W	8 W	EZ01	481000	screw-terminals	E0	4270	-40	50
		IP10 / IP 44	Class H	8 W	8 W	EZ02	485100	screw-terminals	E0	4270	-40	50
		IP10 / IP 44	Class H	14 W	14 W	EZ92	486265	screw-terminals	E0	4270	-40	50
		IP 67	Class F, M20x1.5	8 W	8 W	EZ01	481000	screw-terminals	G1	4538	-40	50
		IP 65	EEx m II T5/T4	9 W	8 W	VZ01	492070	with 1500mm cable	00	-	-40	40/65
		IP 67	EEx me II T4	8 W	8 W	HZ06	483371	for cable connection	00	-	-40	65
		IP 66	EEx me II T3/T4	11 W	9 W	VZ03	492190	for cable connection	00	-	-40	75/40
3	32 mm	IP 65	Class H	-	14 W	DZ08	492425	for DIN plug	N1	2995	-40	50
4	50 mm (impulse)	IP10 / IP 44	Class F	-	11 W	MZ01	484990	screw-terminals	E1	4269	-40	50
		IP10 / IP 44	Class F	13 W	-	MZ02	485400	screw-terminals	E1	4269	-40	50
5	50 mm	IP 54	EEx d IIC T4/T5/T6	8 W	8 W	HZ08	483250	for cable 1/2 NPT	00	-	-40	80/75/60
6	32 mm (Miniwatt)	IP 65	Class F	1.6 W	-	DZ10	482740	for DIN plug	N1	2995	-40	50
		IP 65	Class F	1.6W	-	DZ11	482745	with DIN plug	N1	2995	-40	50
	50 mm (Miniwatt)	IP 67	EEx me II T5	2.5 W	-	VZ04	491117	for cable connection	00	-	-40	65
		IP 67	EEx m II T5/T4	2.5 W	2.5 W	VZ05	492370	with 1500mm cable	00	-	-40	40/65
		IP 66	EEx me II T6/T5	2.5 W	2.5 W	VZ06	492390	for cable connection	00	-	-40	40/75
7	32 mm	IP 65	EEx ia II C T6	0.4 W	-	DZ12	483580.01	for DIN plug	N1	2995	-40	55
		IP 65		0.4 W	-	DZ13	483960.01	with DIN plug	N1	2995	-40	55
	50 mm	IP 66	EEx ia II C T6	0.4 W	-	VZ07	488650.01	for cable connection	00	-	-40	65
		IP 67		0.4 W	-	VZ08	488660.01	with 2000mm cable	00	-	-40	65
		IP 65		0.4 W	-	VZ09	488670.01	with DIN plug	00	-	-40	65

Note: This table is indicative only. Please contact your distributor to confirm your selection.

Oil burner valves (incl. TÜV approved types)

2/2

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Direct operated	Brass body	Normally closed	1/8	2.2 to 3	50.0	102
			1/4	1.2 to 3	100.0	104
			3/8	4 to 11	30.0	104
			1/2	14	30.0	104
		Normally open	1/8	2.5	30.0	106
			1/4	2.5 to 4	30.0	106
Pilot operated	Brass body	Normally closed	1/4	8	40.0	108
			3/8	11	40.0	108
			1/2	14.5 to 15	40.0	108
			SB	14	40.0	110
		Normally open	1/4	8	40.0	108
			3/8	11	40.0	108
			1/2	14.5	40.0	110
			SB	14	40.0	110

Notes:

Direct operated valves: pressure range from 0 to max pressure.

Pilot operated valves: pressure range from 0.3 to 0.5 bar to max. pressure (refer to tables).

Oil burner valves (incl. TÜV approved types)

2/2

Applications

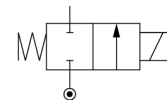
TÜV approved types are described in more detail in Data Sheet 8634/GB.
TÜV approved models are safety shut-off solenoid valves for oil burner systems according to DIN EN 264 and fuel oils EL, L, M and S according to DIN 51603.



Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)	Wt. (g)	Dim ref.
		kv	Qmax	Min	Max				Global valve reference	Valve reference no.	Housing	Coil	DC	AC	

Normally closed



Brass body/Pipe mounting

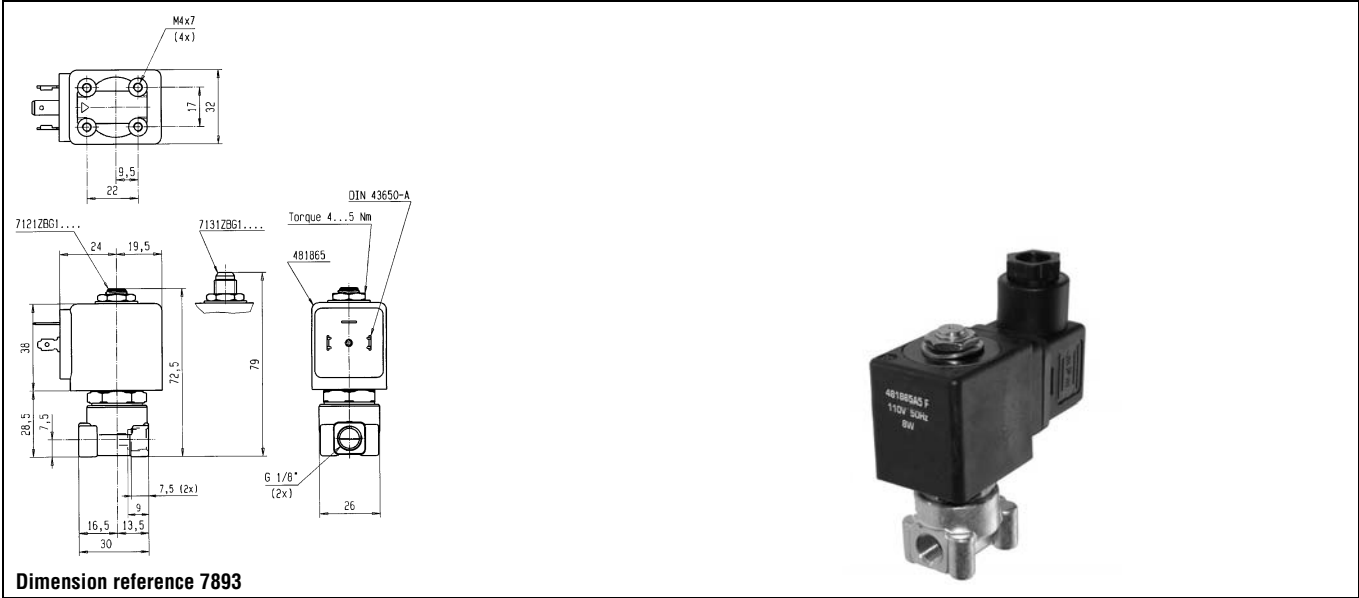
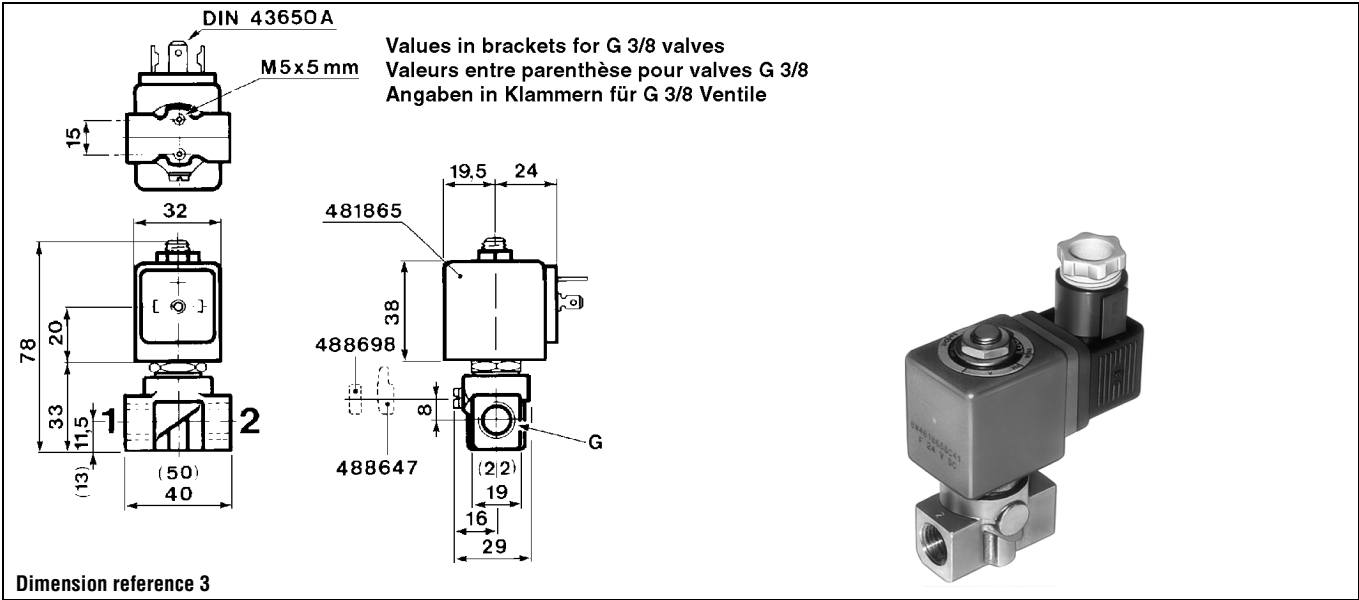
1/8	2.2	2.8	11	0	-	25	120	Ruby	7121ZBG1LRT0	-	1	2995.20	483764	-	9	270	7863
	2.2	2.8	11	0	-	33	120	Ruby				2995.20	492425	-	14	270	
	2.5	2.8	16	0	10	24	75	Ruby	7121ZBG1LR00	-		2995	481865	9	8	270	7893
	2.5	2.8	16	0	5	13	75	Ruby				2995	482730	7	6	270	
	2.5	2.8	16	0	10	33	-	Ruby	7121ZCBG1LR00	-		4270	481000	8	8	390	7893
	2.5	3.5	25	0	10	28	100	Ruby	7121KBG1LR00	E121K23		2995	481865	9	8	300	3
	2.5	3.5	25	0	12	34	130	Ruby				4270	481000	8	8	420	
	2.5	3.5	25	0	22	50	120	Ruby				4270	486265	14	14	430	

Table continued on page 104

Notes:

1. TÜV approved for oil burners

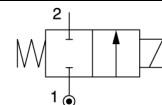
Oil burner valves 2/2 - Direct operated



Oil burner valves 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)	Wt. (g)	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil	DC	AC	

Normally closed



Brass body/Pipe mounting

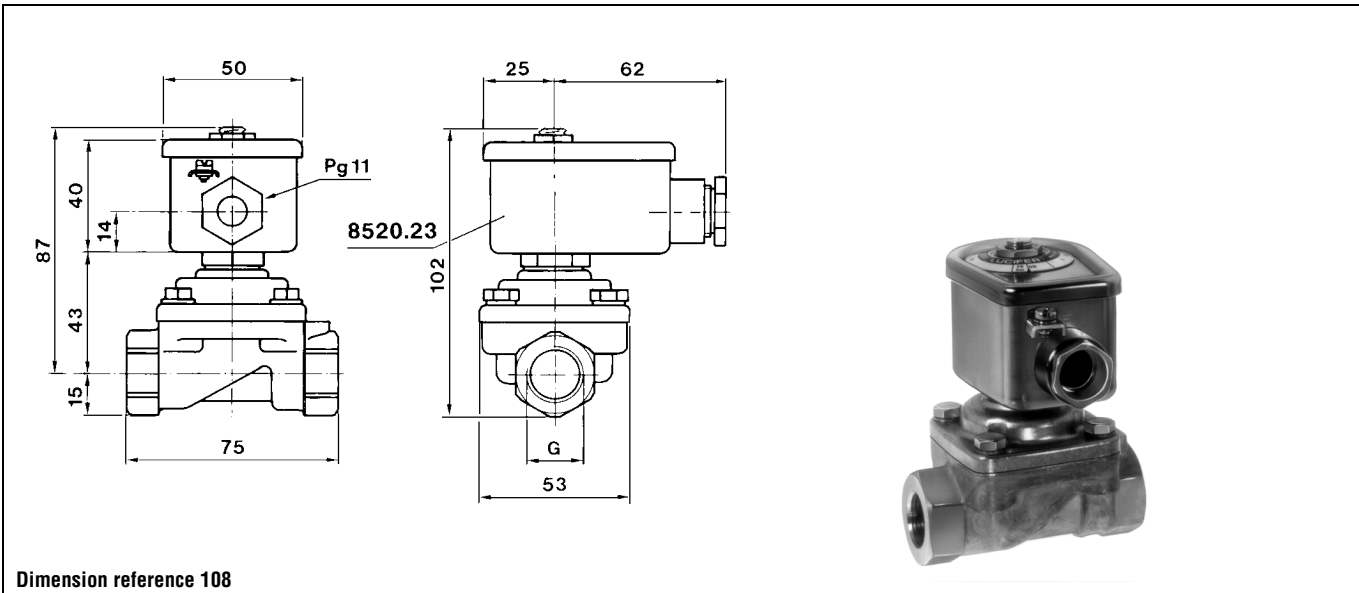
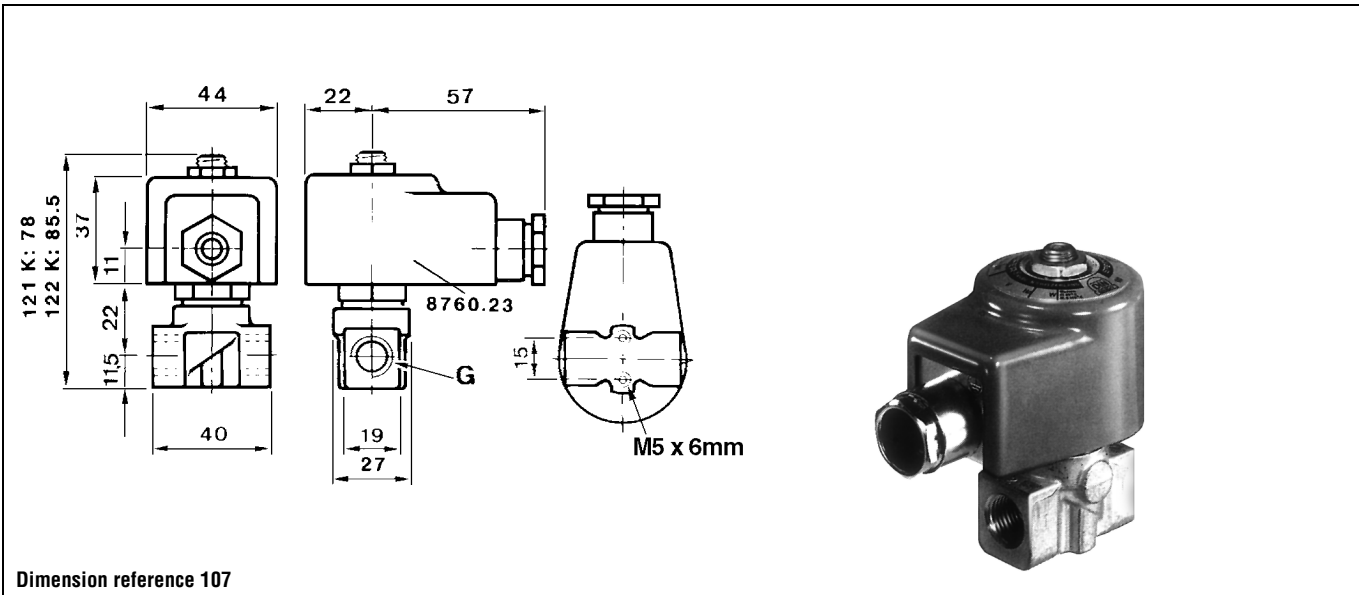
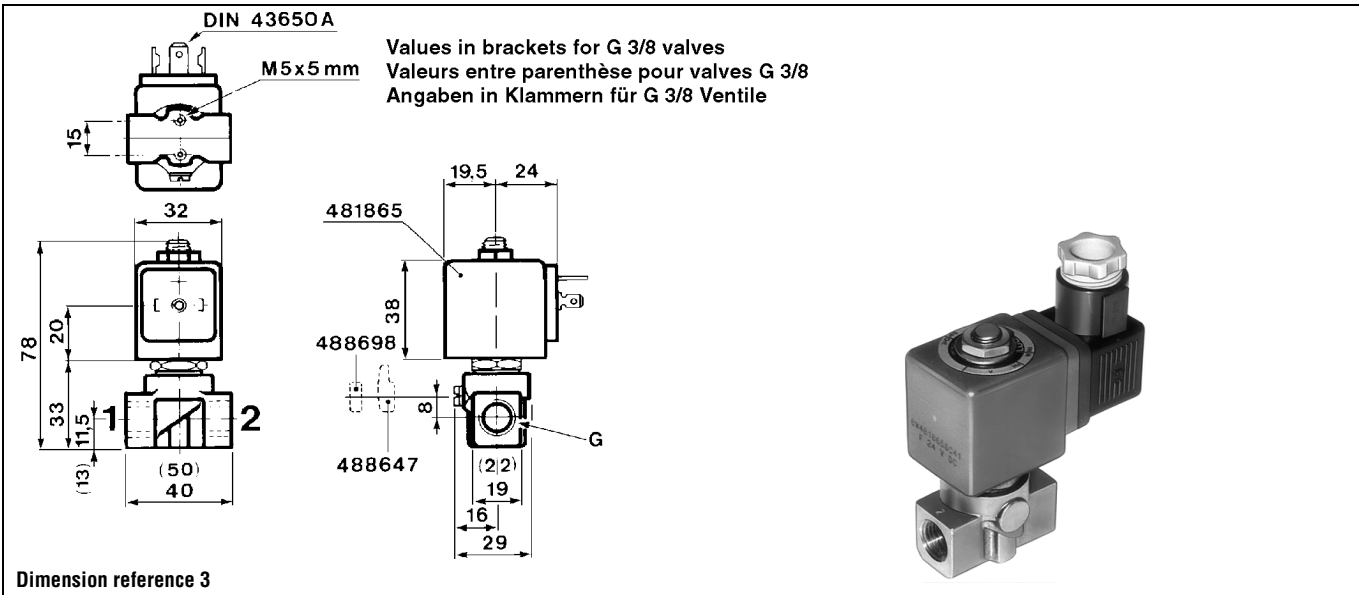
1/8	3	4	-	0	-	30	160	Ruby	7121KBG1NRT0	121K2423 ¹	8760.23	483824	-	19	420	107
	3	4	-	0	-	30	160	Ruby			8520.23	483824	-	19	480	
1/4	1.2	0.85	8.5	0	36	80	100	Ruby	7121KBG2ER00	E121K65	2995	481865	9	8	290	3
	1.2	0.85	8.5	0	43	100	130	Ruby			4270	481000	8	8	410	
	1.2	0.85	8.5	0	75	100	120	Ruby			4270	486265	14	14	420	
	1.5	1.5	15	0	25	60	100	Ruby	7121KBG2GR00	E121K67	2995	481865	9	8	290	3
	1.5	1.5	15	0	30	75	130	Ruby			4270	481000	8	8	410	
	1.5	1.5	15	0	55	100	120	Ruby			4270	486265	14	14	420	
	2.5	3.5	25	0	10	28	100	Ruby	7121KBG2LR00	E121K63	2995	481865	9	8	290	3
	2.5	3.5	25	0	12	34	130	Ruby			4270	481000	8	8	410	
	2.5	3.5	25	0	22	50	120	Ruby			4270	486265	14	14	420	
	3	4.5	-	0	-	30	160	Ruby	-	121K6423 ¹	8520.23	483824	-	19	470	107
	3	4.5	-	0	-	30	160	Ruby	7121KBG2NRT0	121K6423	8760.23	483824	-	19	410	107
	3	4.5	27	0	7	20	100	Ruby	7121KBG2NR00	E121K64	2995	481865	9	8	290	3
	3	4.5	27	0	8.5	25	130	Ruby			4270	481000	8	8	410	
	3	4.5	27	0	15	36	120	Ruby			4270	486265	14	14	420	
3/8	4	7.5	10.5	0	4	10	100	FKM	7121KBG3QV00	121K3206	2995	481865	9	8	340	3
	4	7.5	10.5	0	5	10	120	FKM			4270	481000	8	8	460	
	4	7.5	10.5	0	10	10	120	FKM			4270	486265	14	14	470	
	5	11	11.5	0	2	7	100	FKM	7121KBG3SV00	121K3106	2995	481865	9	8	340	3
	5	11	11.5	0	2.8	7	120	FKM			4270	481000	8	8	460	
	5	11	11.5	0	5	7	120	FKM			4270	486265	14	14	470	
	6	12	12.5	0	1.1	5	100	FKM	7121KBG3UV00	121K3306	2995	481865	9	8	340	3
	6	12	12.5	0	1.5	5	120	FKM			4270	481000	8	8	460	
	6	12	12.5	0	3	5	120	FKM			4270	486265	14	14	470	
	11	22	13.5	0	-	30 ²	160	FKM	7121GBG34VT0	121G2320 ¹	8760.23	483541	-	20	-	108
1/2	14	25	15	0	-	30 ²	160	FKM	7121GBG45VT0	121G2520 ¹	8760.23	483541	-	20	-	108
	14	25	15	0	-	30 ²	160	FKM			8520.23	483541	-	20	-	
	14	25	15	0	-	19	160	FKM	7121GBG45VT1	121G2523 ¹	8520.23	483824	-	19	480	107

Table continued on page 106

Notes:

1. TUV approved for oil burners
2. Max. static pressure = 30 bar; max pressure differential = 0.2 bar

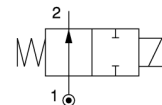
Oil burner valves 2/2 - Direct operated



Oil burner valves 2/2 - Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil		DC	AC		
G		kv	Qmax	Min	DC	Max	AC										

Normally open



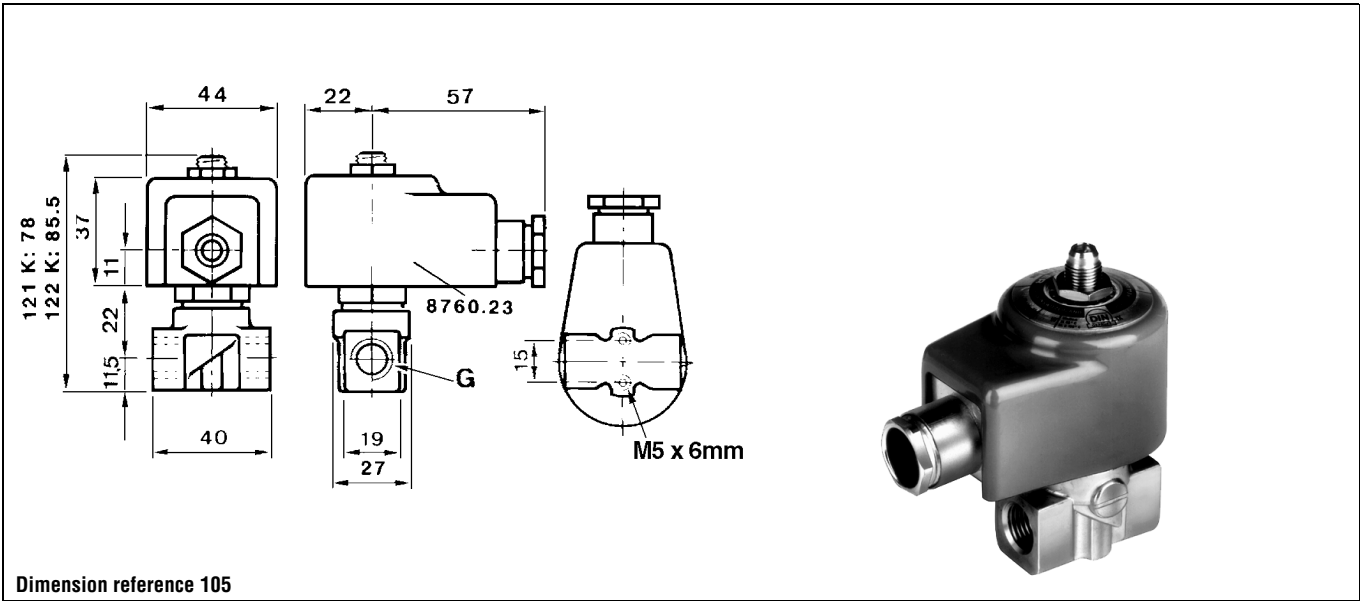
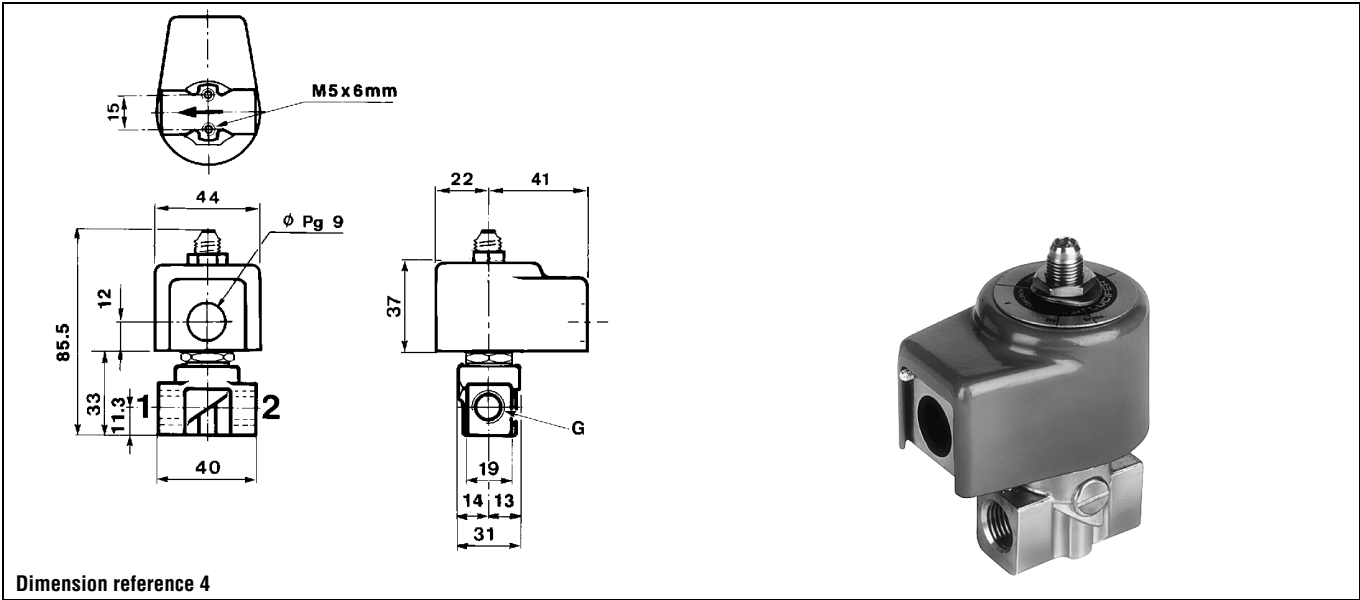
Brass body/Pipe mounting

1/8	2.5	3.5	-	0	-	30	160	Ruby	7122KBG1LRT0	122K9321	¹	8760.23	483824	-	19	455	105
	2.5	3.5	-	0	-	30	160	Ruby				8520.23	483824	-	19	515	
	2.5	3.5	-	0	-	30	140	Ruby	7122KBG1LR00	122K9363		4270	481044	-	14	445	4
	2.5	3.5	-	0	30	30	140	Ruby				4270	486265	14	14	455	
1/4	2.5	3.5	-	0	-	30	160	Ruby	7122KBG2LRT0	122K8321	¹	8760.23	483824	-	19	435	105
	2.5	3.5	-	0	-	30	160	Ruby				8520.23	483824	-	19	495	
	2.5	3.5	-	0	-	30	140	Ruby	7122KBG2LR00	122K8363		4270	481044	-	14	425	4
	2.5	3.5	-	0	30	30	140	Ruby				4270	486265	14	14	435	
	4	6.5	-	0	-	30	160	Ruby	7121KBG2QRT0	121K6220	¹	8520.23	483541	-	20	-	105
	4	6.5	-	0	-	30	160	Ruby				8760.23	483541	-	20	-	

Notes:

1. TUV approved for oil burners

Oil burner valves 2/2 - Direct operated



Oil burner valves 2/2 - Pilot operated

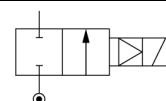


2/2

Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)	Wt. (g)	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil	DC	AC	
G		kv	Qmax	Min		Max									
						DC	AC								

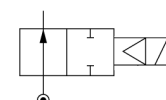
Normally closed



Brass body/Pipe mounting

1/4	8	36	36	0.3	2	25	40	100	FKM	7321HBG2SV00	E321H21	1	2995	481865	9	8	800	9
	8	36	36	0.3	2	30	40	100	FKM				4270	481000	8	8	920	
	8	36	36	0.3	2	40	40	100	FKM				4270	486265	14	14	930	
3/8	11	40	40	0.3	2	-	30	160	FKM	7321HBG3TVT0	321H2322	3	8760.23	483541	-	20	1070	104
	11	40	40	0.3	2	-	30	160	FKM				8520.23	483541	-	20	1010	
	11	50	50	0.3	2	25	40	100	FKM	7321HBG3TV00	E321H23	1	2995	481865	9	8	780	9
	11	50	50	0.3	2	30	40	120	FKM				4270	481000	8	8	900	
	11	50	50	0.3	2	40	40	140	FKM				4270	486265	14	14	910	
1/2	14.5	60	60	0.3	2	25	40	100	FKM	7321HBG4UV00	E321H25	1	2995	481865	9	8	740	9
	14.5	60	60	0.3	2	30	40	120	FKM				4270	481000	8	8	860	
	14.5	60	60	0.3	2	40	40	140	FKM				4270	486265	14	14	870	
	15	60	60	0.3	2	-	30	160	FKM	7321HBG4UVT0	321H2522	3	8760.23	483541	-	20	870	104
	15	60	60	0.3	2	-	30	160	FKM				8520.23	483541	-	20	870	

Normally open



Brass body/Pipe mounting

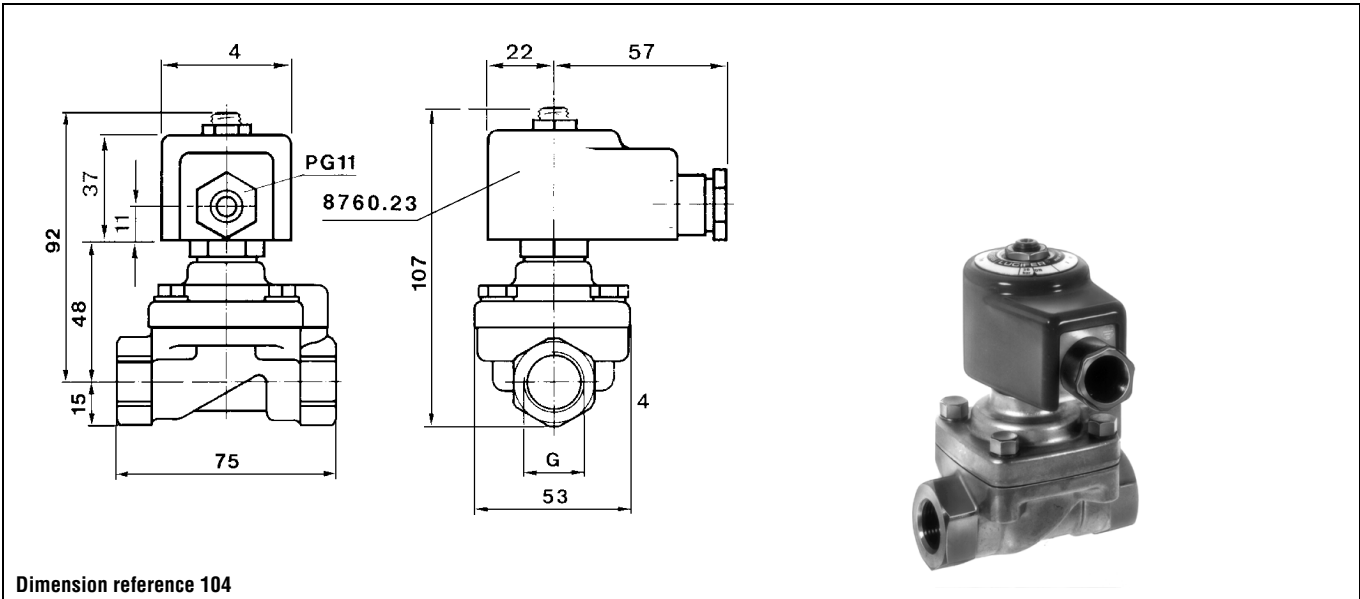
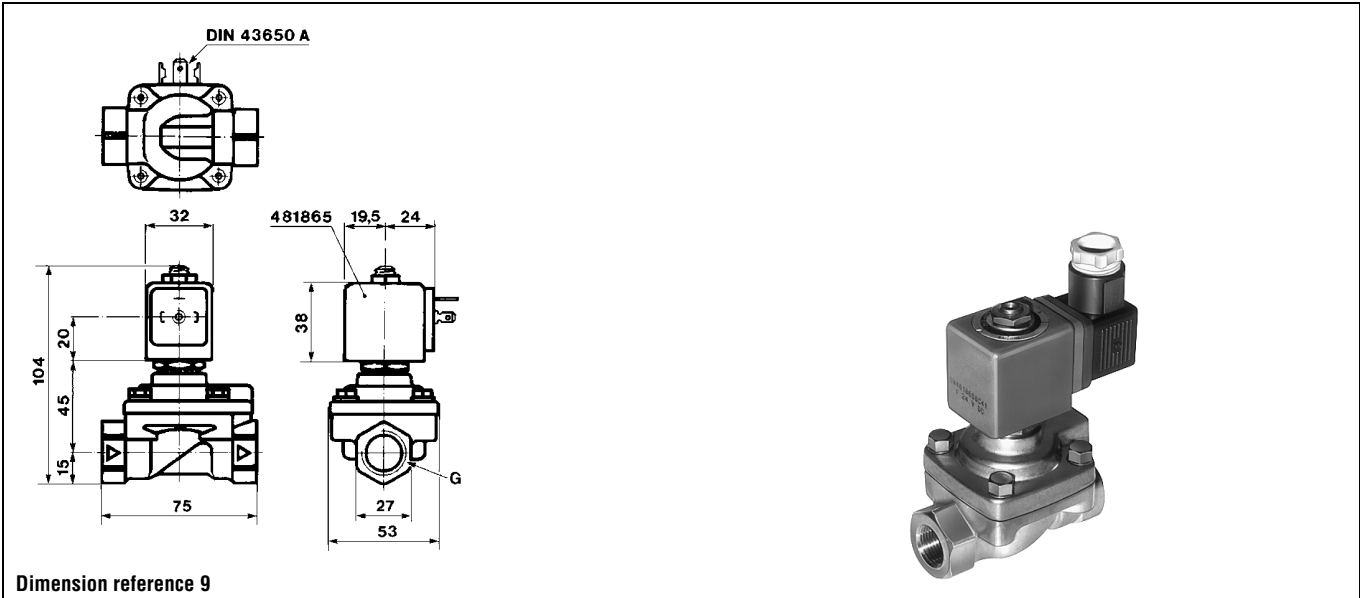
1/4	8	36	36	0.3	2	40	40	100	FKM	7322HBG2SV00	322H7106	1	2995	481865	9	8	820	9
	8	36	36	0.3	2	40	40	120	FKM				4270	481000	8	8	940	
	8	36	36	0.3	2	40	40	140	FKM				4270	486265	14	14	950	
3/8	11	50	50	0.3	2	40	40	100	FKM	7322HBG3TV00	322H7306	1	2995	481865	9	8	800	9
	11	50	50	0.3	2	40	40	100	FKM				4270	481000	8	8	920	
	11	50	50	0.3	2	40	40	140	FKM				4270	486265	14	14	930	

Table continued on page 110

Notes:

1. Pilot seat discs from ruby (synthetic)
2. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing
3. TUV approved for oil burners

Oil burner valves 2/2 - Pilot operated

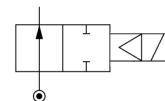


Oil burner valves 2/2 - Pilot operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				OR	Power consumption (W)		Wt. (g)	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil		DC	AC		
G		kv	Qmax	Min		Max											
					DC	AC											

Brass body/Pipe mounting

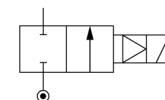
Normally open



1/2	14.5	60	60	0.3	1	20	20	100	FKM	7322GBG4UV00	322G7506	2995	481865	9	8	760	9
	14.5	60	60	0.3	1	20	20	100	FKM			4270	481000	8	8	880	
	14.5	60	60	0.3	1	40	40	100	FKM	7322HBG4UV00	322H7506	2995	481865	9	8	760	9
	14.5	60	60	0.3	1	40	40	120	FKM			4270	481000	8	8	880	
	14.5	60	60	0.3	1	40	40	140	FKM			4270	486265	14	14	890	

Brass body/Sub-base mounting

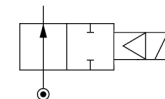
Normally closed



SB	14	45	45	0.3	1	25	40	100	FKM	7321FBF3TV00	E321F3202	2995	481865	9	8	650	13
	14	45	45	0.3	1	30	40	120	FKM			4270	481000	8	8	770	
	14	45	45	0.3	1	40	40	120	FKM			4270	486265	14	14	780	

Brass body/Sub-base mounting

Normally open

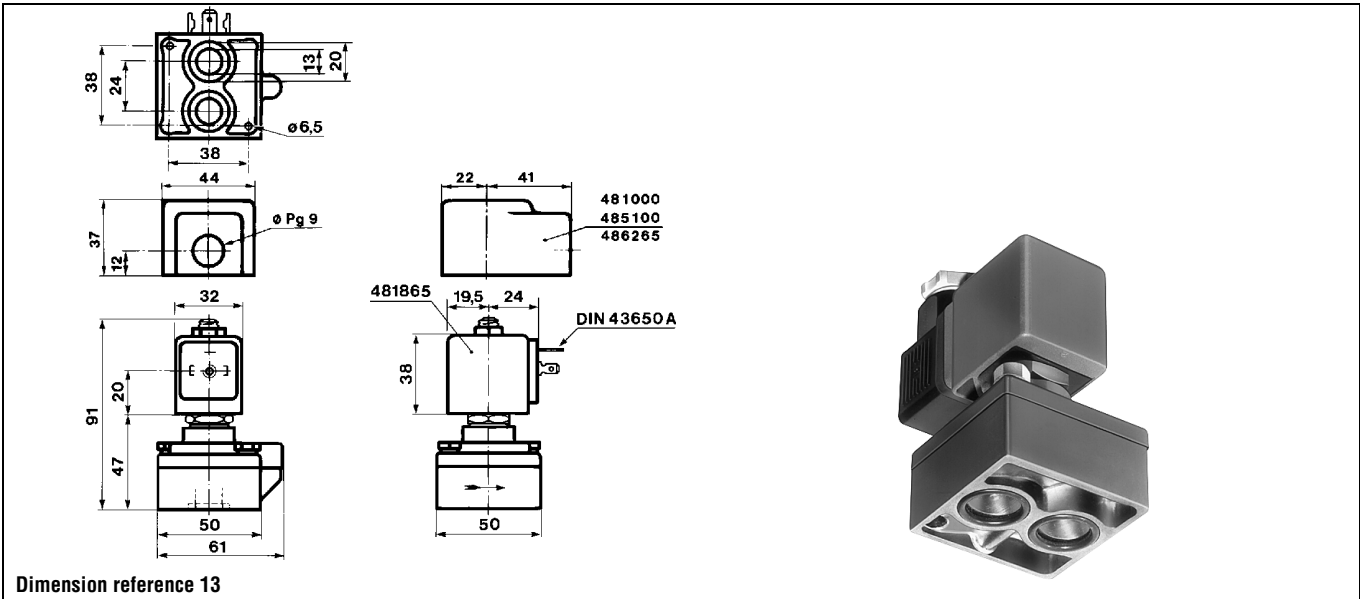
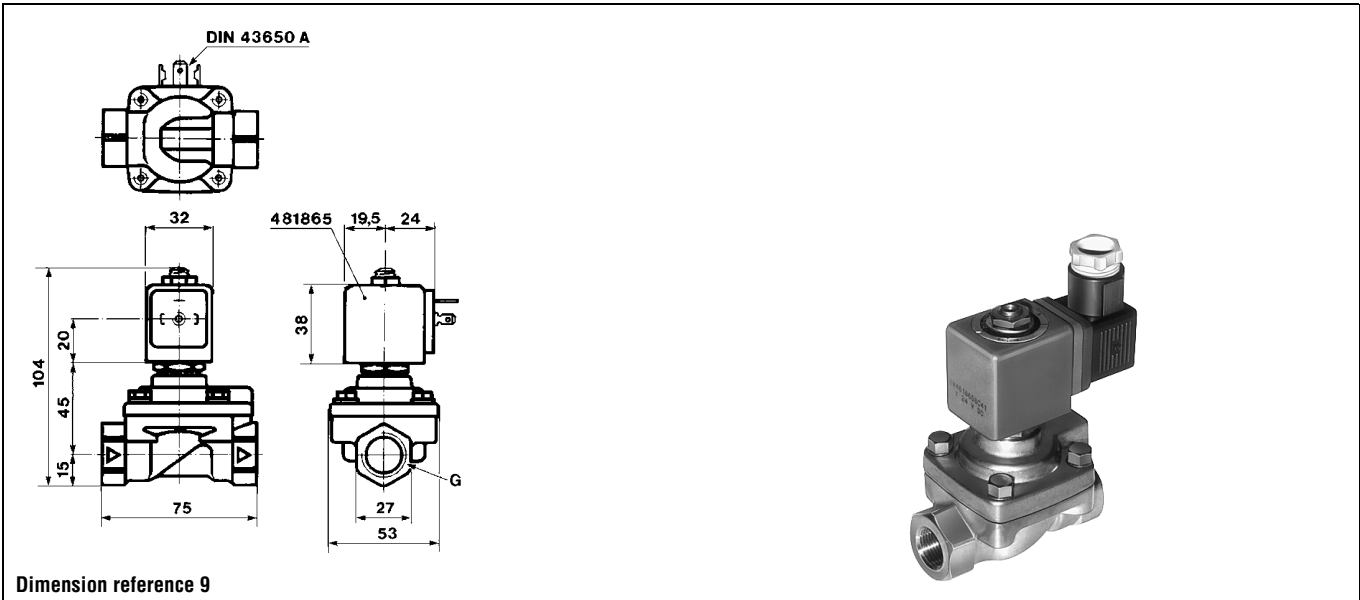


SB	14	45	45	0.3	1	40	40	100	FKM	7322FBF3TV00	322F7206	2995	481865	9	8	650	13
	14	45	45	0.3	1	40	40	100	FKM			4270	481000	8	8	770	
	14	45	45	0.3	1	40	40	140	FKM			4270	486265	14	14	780	

Notes:

1. Minimum pressure differential = 0.3 bar for opening and 0 bar for closing
2. Pilot seat discs from ruby (synthetic)

Oil burner valves 2/2 - Pilot operated



Dry operator valves for corrosive fluids

2/2

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Direct operated	303 Stainless steel body	Normally closed	1/4 NPT	2 to 4.5	5.0	114
	Teflon body		1/4 NPT	2 to 4.5	5.0	114

Notes:
Direct operated valves: pressure range from 0 to max pressure.

Dry operator valves for corrosive fluids

2/2

Applications

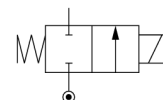
The plunger is physically separated from the fluid by a soft diaphragm, isolating the plunger and the pilot tube from the main corrosive fluid. The fluid is only in contact with the body and the diaphragm.



Direct operated

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)		Wt. (g)	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil				
NPT		kv	Qmax	Min	Max								DC	AC		

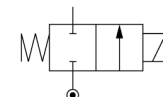
Normally closed



303 Stainless steel body/Pipe mounting

1/4 NPT	2	2.3	-	0	5	5	60	BunaN	71214VN2KN00	-	2995	481865	9	8	480	113
	2	2.3	-	0	5	5	60	PTFE	71214VN2KT00	-	2995	481865	9	8	480	113
	3	3.3	-	0	3.5	3.5	60	BunaN	71214VN2MN00	-	2995	481865	9	8	480	113
	3	3.3	-	0	3.5	3.5	60	PTFE	71214VN2MT00	-	2995	481865	9	8	480	113
	4	5	-	0	2.5	2.5	60	BunaN	71214VN2QN00	-	2995	481865	9	8	480	113
	4	5	-	0	2.5	2.5	60	PTFE	71214VN2QT00	-	2995	481865	9	8	480	113
	4.5	6.7	-	0	1.4	1.4	60	BunaN	71214VN2SN00	-	2995	481865	9	8	480	113
	4.5	6.7	-	0	1.4	1.4	60	PTFE	71214VN2ST00	-	2995	481865	9	8	480	113

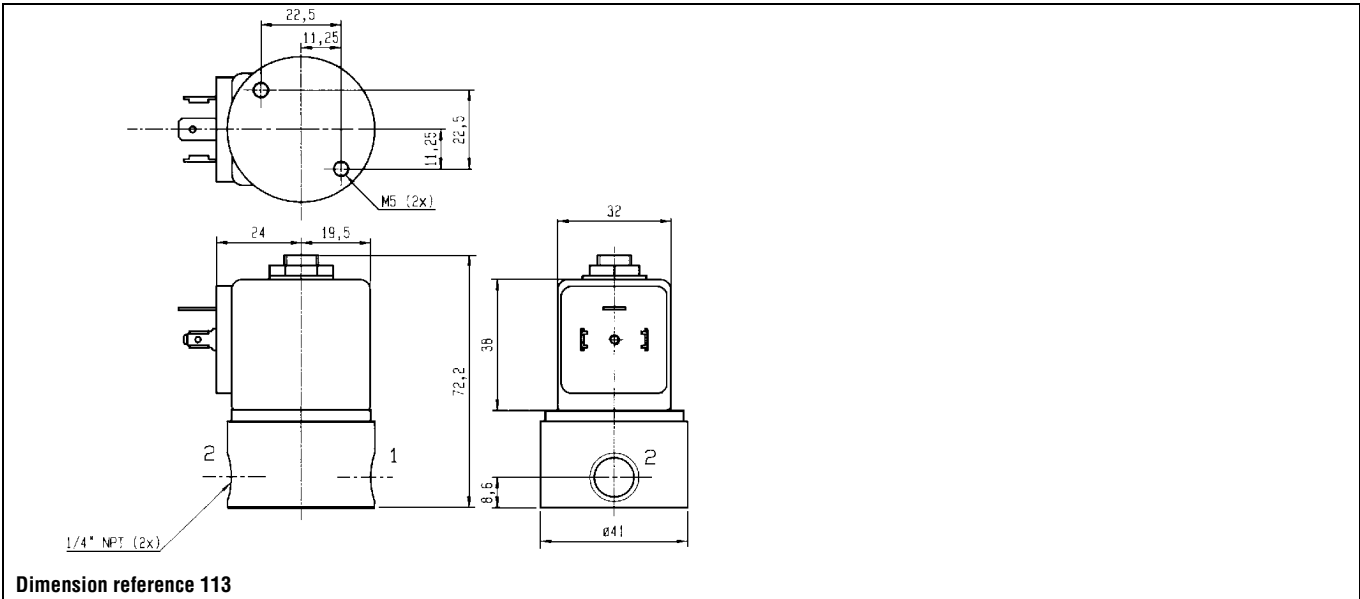
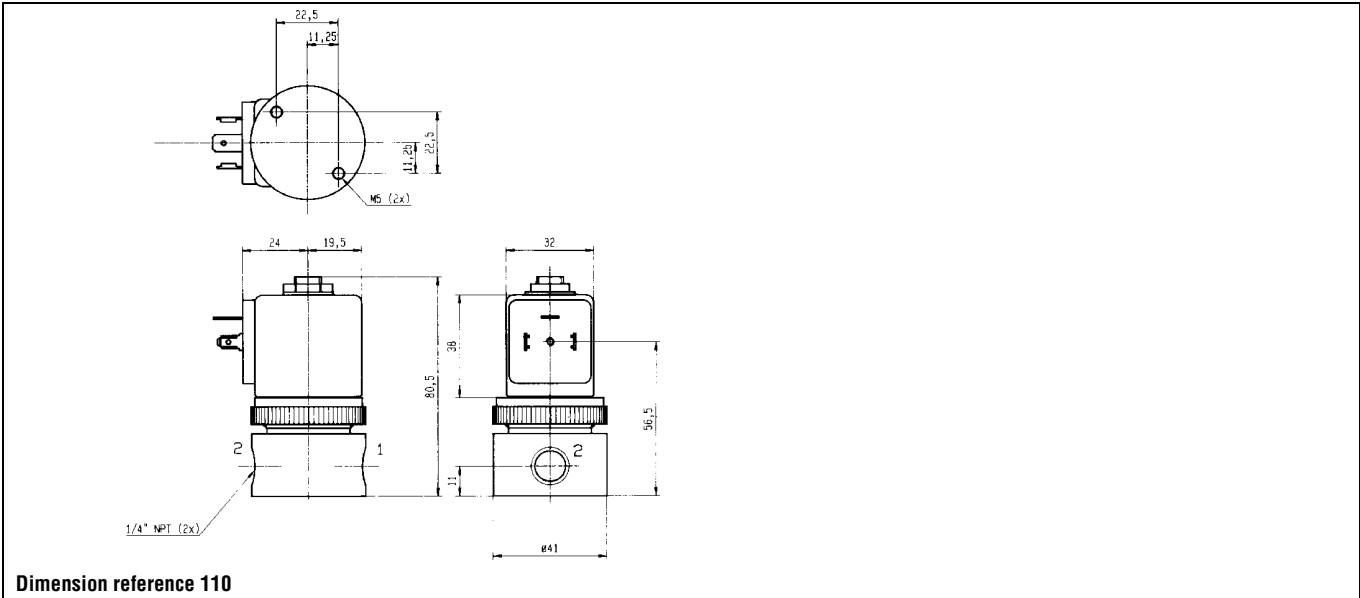
Normally closed



Teflon body/Pipe mounting

1/4 NPT	2	2.3	-	0	5	5	60	PTFE	71214TN2KT00	-	2995	481865	9	8	365	110
	3	3.3	-	0	3.5	3.5	60	PTFE	71214TN2MT00	-	2995	481865	9	8	365	110
	4	5	-	0	2.5	2.5	60	PTFE	71214TN2QT00	-	2995	481865	9	8	365	110
	4.5	6.7	-	0	1.4	1.4	60	PTFE	71214TN2ST00	-	2995	481865	9	8	365	110

Dry operator valves for corrosive fluids 2/2 - Direct operated



Dry operator valves for corrosive fluids

Fluid compatibility chart

	Stainless Steel 18-8, 302, 303, 304, 305	BUNA N (Nitrile)	Teflon*	Noryl		Stainless Steel 18-8, 302, 303, 304, 305	BUNA N (Nitrile)	Teflon*	Noryl
Acetic Acid 8%	S	NR	S	S	Nickle Nitrate	T	T	S	S
Acetone	S	NR	S	NR	Nitrobenzene	NR	NR	S	NR
Acetylene Dry	S	S	S	U	Nitrogen	S	S	S	S
Air Lubricated 120°C (248°F)	S	NR	S	S	Nitrous Oxide	T	S	S	U
Air Lubricated 82°C (180°F)	S	S	S	S	n-Octyl Alcohol	U	T	S	U
Air Unlubricated 120°C (248°F)	S	NR	S	S	Olive Oil	S	S	S	S
Air Unlubricated 82°C (180°F)	S	S	S	S	Oxygen	S	NR	S	S
Alcohol Ethyl (Ethanol)	S	NR	S	F	Ozone	T	NR	S	U
Alcohol Methyl (Methanol)	S	S	S	F	Perchloroethylene	F	NR	S	NR
Ammonia Gas Anhydrous 20	S	S	S	S	n-Propyl Acetobne	U	NR	S	U
Argon	S	S	S	U	Propyl Alcohol	S	T	S	U
Beer	S	S	S	S	Pyridine	S	NR	S	T
Benzene	S	NR	S	NR	Pyrolube	U	NR	U	U
Boric Acid	S	NR	S	S	Quick Silver	U	S	S	U
Citric Acid 10%	S	S	S	S	Red Oil	U	S	S	U
Cod Liver Oil	S	S	S	U	Rust Inhibitors	U	S	U	U
Coffee	S	S	S	U	Shellac	S	S	S	U
Diesel Fuel	S	T	S	NR	Silicone Oil	S	S	S	S
Ethylene Glycol (Antifreeze)	S	S	S	S	Sodium Phosphates	T	S	S	S
Freon 12	S	S	S	NR	Steam 140°C (298°F)	S	NR	S	S
Freon 22	S	NR	S	NR	Steam 180°C (356°F)	S	NR	S	T
Fuel Oil	S	T	S	S	Stoddard Solvent	S	S	S	NR
Gasoline Leaded	S	S	S	NR	Sucrose Solution	S	S	S	S
Gasoline Unleaded	S	NR	S	NR	Sulfur	T	NR	S	S
Helium	S	S	S	S	Sulfur Hexafluoride	S	NR	S	U
Hydraulic Fluids - Fire Resistant	S	NR	S	U	Toluene	S	NR	S	NR
Cellulube Phosphate Ester					Trichloroethylene	T	NR	S	NR
Pydraul	S	NR	S	U	Trimethylpentane	U	S	S	U
Skydrol	S	NR	S	NR	Trisodium Phosphate	T	F	S	S
Petroleum	S	S	S	NR	Turpentine	S	S	S	S
Jet Fuel	S	T	-	NR	Urea	S	T	S	S
Kerosene	S	S	S	NR	Varnish	S	T	S	U
Ketones	T	NR	S	NR	Vegetable Oil	S	S	S	U
Lard (Animal Fat)	S	S	S	U	Vinegar	T	T	S	S
Lead Acetate	NR	NR	S	F	Water Boiler Feed	S	S	S	U
Linseed Oil	S	S	S	S	Water Deionized Distilled	S	T	S	S
Lime & Water	NR	S	S	U	Water Fresh <82°C (180°F)	S	S	S	S
Lubricating Oil	S	S	S	T	Water Fresh <100°C (212°F)	S	NR	S	S
Methane	S	S	S	U	Water Return Condensate	S	S	S	U
Methanol Alcohol-Methyl	S	S	S	T	Water Sea/Salt	T	S	S	S
Methyl Ethyl Ketone (MEK)	F	NR	S	NR	Whiskey	S	S	S	S
Mineral Spirits	S	S	S	T	Wine	S	S	S	S
Motor Oil	S	S	S	S	Xylene	S	NR	S	NR
Naptha	S	S	S	NR	Zinc Chloride	NR	S	S	S
Natural Gas	S	S	S	U	Zinc Sulfate	T	T	S	S

Notes

The data should be used as a guide, and not as a final recommendation.

S = Satisfactory; T = Test to Verify; F = fair; U = No Data Available, NR = Not Recommended Unless Otherwise Stated, Media are at 100% Concentration and at Room Temperature.

ACTUATION	BODY MATERIAL	FUNCTION	CONNECTION	ORIFICE (MM)	MAX. PRESSURE (BAR)	PAGE
Magnalift	Brass body	Normally closed	3/8	8	7.0	118

Notes:
Magnalift valves: pressure range from 0 to max pressure.

Fast switching valves

2/2

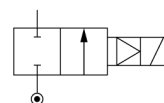
Applications

- Where extremely short response times and/or dry air service are required
- Textile weaving machines
- Printing machines
- Sorting machines
- Banknote counting machines.

Magnalift

Port size	Orifice (mm)	Flow factors (L/min)		Admissible differential pressure bar			Fluid temp. °C	Seat disc	Reference numbers				Power consumption (W)	Wt. (g)	Dim ref.
									Global valve reference	Valve reference no.	Housing	Coil	DC	AC	
G		kv	Qmax	Min	DC	Max AC									

Normally closed



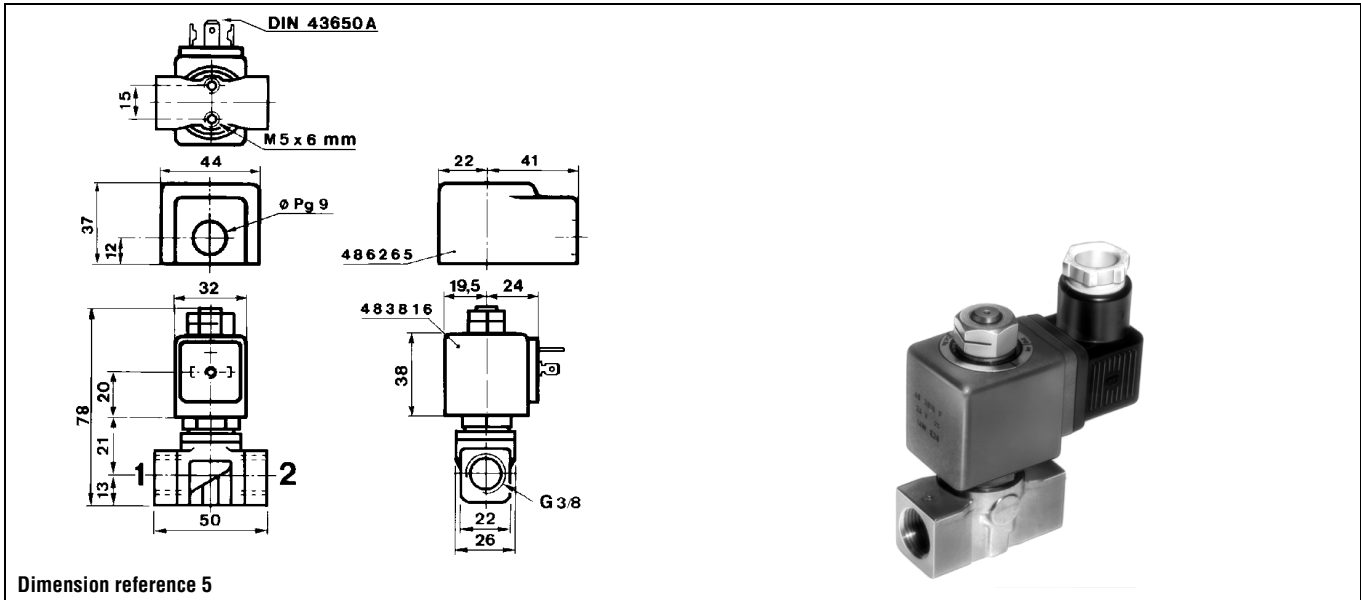
Brass body/Pipe mounting

3/8	8	-	40	0	7	-	-	PUR	-	221J3301E 1	2995.60	483816	14	-	360	5
	8	-	40	0	7	-	-	PUR			4270.60	486265	14	-	490	

Notes:

1. Fast response and long life

Fast switching valves 2/2 - Magnalift



Index by reference numbers

Valve reference number - global reference number

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U 033X5156	7033XRN2SN00	274/294
U 033X51561D	7033XRN2SN1D	274/292
U 033X5256	7033XRN3SN00	276/294
U 033X52561D	7033XRN3SN1D	274/294
E 121F43	7121FBF4NF00	14/88
E 121F4302	7121FBF4NV00	14/50
E 121F44	7121FBF4GF00	14/88
E 121F4406	7121FBF4GV00	14/50
121F47	7121FBF4LF00	14
121F4706	7121FBF4LV00	14/50
121F63	7121FBF4LR00	14/88
121F64	7121FBF4NR00	14/88
121F67	7121FBF4GR00	14/88
121G2320	7121GBG34VT0	104
121G2520	7121GBG45VT0	104
121G2523	7121GBG45VT1	104
121K01	7121KBG2SV00	12/48
121K0103	7121KBG2SE00	72
121K0150	7121KBG2SVM0	10/48
121K02	7121KBG2QV00	10/48
121K0250	7121KBG2QVM0	10/48
E 121K03	7121KBG2NF00	10/86
E 121K0302	7121KBG2NV00	10/46
121K0323	7121KBG2NE00	72
E 121K0352	7121KBG2NVM0	10/46
E 121K04	7121KBG2GF00	10/86
E 121K0402	7121KBG2GV00	8/46
E 121K07	7121KBG2LF00	10
121K0706	7121KBG2LV00	10/46
121K0756	7121KBG2LVM0	10/46
121K1302	7121KBG1NV00	8
121K1352	7121KBG1NVM0	8/46
E 121K14	7121KBG1GF00	8/86
E 121K23	7121KBG1LR00	8/86/102
121K2423	7121KBG1NRT0	104
121K3106	7121KBG3SV00	12/48/104
121K3206	7121KBG3QV00	12/48/104
121K3303	7121KBG3UE00	72
121K3306	7121KBG3UV00	12/48/104
E 121K45	7121KBG44V00	12/48
E 121K4503	7121KBG44E00	72
E 121K46	7121KBG42V00	12/48
E 121K4603	7121KBG42E00	72
121K6220	7121KBG2QRT0	106
E 121K63	7121KBG2LR00	10/86/104
E 121K64	7121KBG2NR00	10/86/104
121K6423	-	104/104
E 121K65	7121KBG2ER00	8/86/104
E 121K67	7121KBG2GR00	10/86/104
121M13	-	8/46
121M14	-	8/46
121V5106	7121VVG2SV00	118
121V51061D	7121VVG2SV1D	118
121V5112	7121VVG2ST00	118
121V5163	7121VVG2SR00	74/118

Valve reference	Global valve ref.	Page
121V5206	7121VVG2QV00	116
121V5212	7121VVG2QT00	116
121V5263	7121VVG2QR00	74/116
121V5306	7121VVG2NV00	116
121V53061D	7121VVG2NV1D	116
121V5363	7121VVG2NR00	74/116
121V5406	7121VVG2GV00	116
121V5463	7121VVG2GR00	74/116
121V5706	7121VVG2LV00	116
121V5763	7121VVG2LR00	74/116
122K83	7122KBG2LF00	12
122K8306	7122KBG2LV00	12/48
122K8321	7122KBG2LRT0	106
122K8363	7122KBG2LR00	12/88/106
122K84	7122KBG2GF00	12/88
122K8406	7122KBG2GV00	12/48
122K8408	7122KBG2GR00	12/88
122K9321	7122KBG1LRT0	106
122K9363	7122KBG1LR00	12/88/106
125K01	7125KBG2SV00	14/50
125K03	7125KBG2NF00	12
E 131E03	7131EBG2LN00	130/228
E 131F26	7131FDF2JV00	148
E 131F43	7131FBF4LV00	144
E 131F4350	7131FBF4LVM0	144
E 131F44	7131FBF4GV00	144
E 131F4450	7131FBF4GVM0	144
131F4480	7131FBF4GLV5	140
131F4490	-	136
131F46	7131FBF4JV00	144
131F4650	7131FBF4JVM0	144
U 131F5695	7131FRF2LV95	276/292
U 131F56951D	7131FRF2LV1D	278
E 131K03	7131KBG2LV00	128
E 131K03001D	7131KBG2LV1D	228
E 131K0308	7131KBG2LP00	130/228
E 131K03081D	7131KBG2LP1D	130/228
E 131K0350	7131KBG2LVM0	128/228
E 131K0358	7131KBG2LPM0	130/228
E 131K04	7131KBG2GV00	126/226
E 131K0450	7131KBG2GVM0	126/226
131K0480	7131KBG2GLV5	126/226
131K0490	7131KBG2CV90	126/226
131K05	7131KBG2BF00	176
E 131K06	7131KBG2JV00	126/226
E 131K06081D	7131KBG2JP1D	128/228
E 131K0650	7131KBG2JVM0	126/226
E 131K13	7131KBG1LV00	124
E 131K14	7131KBG1GV00	124
131K16	7131KBG1JV00	124
131K1650	7131KBG1JVM0	124
E 131K63	7131KBG2LR00	130
E 131K6350	7131KBG2LRM0	130
E 131K64	7131KBG2ER00	126
E 131K6450	7131KBG2ERM0	126

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131M15	-	124/226
131M74	-	142
131M7450	-	142
131M75	-	138
131M7550	-	138
131T21	7131TBG2RV00	132
131T2101	7131TBG2RVM0	132
131T22	7131TBG2NVA0	132
131T23	7131TBG2JV00	126
131T2301	7131TBG2JVM0	126
131T29	7131TBG2LV00	128
131T2901	7131TBG2LVM0	128
131V5306	7131VVG2LV00	182
131V5363	7131VVG2LR00	182
131V5406	7131VVG2GV00	182
131V5463	7131VVG2GR00	182
131V5490	-	182
131V65	7131WVG2BR00	176
131X1101	7131XAKLVN00	230
U 131X1201	7131XRKMVN00	276/292
132F43	7132FBF4LV00	144
132F44	7132FBF4GV00	144
132F46	7132FBF4JV00	144
132K03	7132KBG2LV00	132
132K04	7132KBG2GV00	132
132K06	7132KBG2JV00	132
132T22	7132TBG2NVA0	134
132T23	7132TBG2JV00	132
132T2301	7132TBG2JVM0	132
132T29	7132TBG2LV00	132
E 133F43	7133FBF4LV00	146
E 133F4350	7133FBF4LVM0	144
E 133F44	7133FBF4GV00	144
E 133F4450	7133FBF4GVM0	144
133F46	7133FBF4JV00	144
133F4650	7133FBF4JVM0	144
E 133K03	7133KBG2LV00	134
E 133K0350	7133KBG2LVM0	134
E 133K04	7133KBG2GV00	134
E 133K04001D	7133KBG2GV1D	134
E 133K0450	7133KBG2GVM0	134
E 133K05	7133KBG2BV00	176
E 133K06	7133KBG2JV00	134
E 133K0650	7133KBG2JVM0	134
E 133K13	7133KBG1LV00	134
E 133K14	7133KBG1GV00	134
E 133K16	7133KBG1JV00	134
133T21	7133TBG2NV00	134
133T2101	7133TBG2NVM0	134
133T23	7133TBG2JV00	134
133T2301	7133TBG2JVM0	134
133V5306	7133VVG2LV00	182
133V5363	7133VVG2LR00	182

Valve reference number - global reference number

Valve reference	Global valve ref.	Page	Valve reference	Global valve ref.	Page	Valve reference	Global valve ref.	Page
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U 133V5695	7133VRN2LV95	278/288	222G5303	72228RG3TE00	78	321K4356	7321KBG3TVMW	66
U 133V56951D	7133VRN2LV9D	278/288	222G5306	72228RG3TV00	20/54	321K4503	7321KBG4TEW0	80
133X01	-	230	222G5503	72228RG4UE00	78	321K4506	7321KBG4TVW0	66
U 133X5156	7133XRN2SV00	280/290	222G5506	72228RG4UV00	20/54	321K4556	7321KBG4TVMW	66
U 133X51561D	7133XRN2SV1D	280/288	222G5603	72228RG5VE00	78	321K4603	7321KBG51EW0	80
U 133X5196	7133XRN2VN96	280	E 321F32	7321FBF3TN00	34/60/92	321K4606	7321KBG51VW0	66
U 133X51961D	7133XRN2VN9H	280	E 321F3202	7321FBF3TV00	34/92/110	321K4656	7321KBG51VMW	66
U 133X5296	7133XRN3SN96	282/290	E 321G36	7321GBG53N00	24/56	321K4703	7321KBG62EW0	80
U 133X52961D	7133XRN3SN9H	282/290	E 321G3606	7321GBG53V00	24	321K4706	7321KBG62VW0	66
135K03	7135KBG2LV00	136/228	E 321G3610	7321GBG53NMC	66	321K4756	7321KBG62VMW	66
135K04	7135KBG2GV00	136/228	E 321G37	7321GBG64N00	26/58	322F72	7322FBF3TN00	34/60/92
221G13	7221GBG3VN00	16/52/64	E 321G3706	7321GBG64V00	24	322F7206	7322FBF3TV00	34/92/110
221G1303	7221GBG3VE00	76	E 321G3710	7321GBG64NMC	66	322G36	7322GBG53N00	32/58
221G1330	7221GBG3VNH0	16/52/64	E 321G37101D	7321GBG64N1D	26	322G3606	7322GBG53V00	32
221G15	7221GBG4VN00	16/52/64	321G3790	-	26	322G3610	7322GBG53NC0	68
221G1503	7221GBG4VE00	76	E 321G38	7321GBG76N00	26/58	322G37	7322GBG64N00	32/60
221G1530	7221GBG4VNH0	16/52/64	E 321G3806	7321GBG76V00	26	322G3706	7322GBG64V00	32
221G16	7221GBG51N00	18/52	E 321G3810	7321GBG76NMC	68	322G3710	7322GBG64NC0	68
221G1603	7221GBG51E00	76	E 321G39	7321GBG88N00	28/58	322G38	7322GBG76N00	32/60
221G1610	7221GBG51NC0	64	E 321G3906	7321GBG88V00	26	322G3806	7322GBG76V00	32
221G1630	7221GBG51NH0	18/52	E 321G3910	7321GBG88NMC	68	322G3810	7322GBG76NC0	68
221G1631	7221GBG51NCH	64	E 321G39101D	7321GBG88N3D	28	322G39	7322GBG88N00	32/60
221G17	7221GBG61N00	18/52	321G3990	-	26	322G3906	7322GBG88V00	32
221G1703	7221GBG61E00	76	E 321G40	7321GBG99N00	30/58	322G3910	7322GBG88NC0	68
221G1710	7221GBG61NC0	64	E 321G4006	7321GBG99V00	28	322G40	7322GBG99N00	32/60
221G1730	7221GBG61NH0	18/52	E 321G4010	7321GBG99NMC	68	322G4006	7322GBG99V00	32
221G1731	7221GBG61NCH	64	E 321G40101D	7321GBG99N3D	30	322G4010	7322GBG99NC0	68
221G21	7221GBG64N00	18/54	321G4090	-	28	322G7506	7322GBG4UV00	110
221G2103	7221GBG64E00	76	321G8312	73218BG3TTS0	80	322G8312	73228BG3TTS0	82
221G2106	7221GBG64V00	18	321G8512	73218BG4UTS0	80	322G8512	73228BG4UTS0	82
221G2110	7221GBG64NC0	64	321G8612	73218BG5VTS0	80	322G8612	73228BG52TS0	82
221G2130	7221GBG64NH0	18/52	321G8712	73218BG64TS0	82	322G8712	73228BG64TS0	82
221G2131	7221GBG64NCH	64	321G8812	73218BG75TS0	82	322G8812	73228BG75TS0	82
221G2136	7221GBG64VH0	18	321G8912	73218BG87TS0	82	322G8912	73228BG87TS0	82
221G23	7221GBG3VV00	16	E 321H11	7321HBG2SN00	22/90	322H71	7322HBG2SN00	30/92
221G2330	7221GBG3VVH0	16	E 321H13	7321HBG3TN00	22/90	322H7106	7322HBG2SV00	30/90/108
221G25	7221GBG4VV00	16	E 321H15	7321HBG4UN00	24/90	322H73	7322HBG3TN00	32/92
221G25001D	7221GBG4VV1D	16	321H1590	-	22	322H7306	7322HBG3TV00	32/92/108
221G2530	7221GBG4VVH0	16	E 321H21	7321HBG2SV00	22/90/108	322H75	7322HBG4UN00	32/92
221G26	7221GBG51V00	18	E 321H23	7321HBG3TV00	22/90/108	322H7506	7322HBG4UV00	32/92/110
221G26001D	7221GBG51V1D	16	321H2322	7321HBG3TVT0	108	322K4106	7322KBG2SVW0	32
221G2630	7221GBG51VH0	18	E 321H25	7321HBG4UV00	22/90/108	322K4306	7322KBG3TVW0	32
221G27	7221GBG61V00	18	321H2522	7321HBG4UVT0	108	322K4506	7322KBG4TVW0	32
221G27001D	7221GBG61V1D	18	321K31	-	22/56	322K4606	7322KBG51VW0	32
221G2730	7221GBG61VH0	18	321K3106	-	22	322K4706	7322KBG62VW0	32
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221G5306	72218RG3TV00	20/54	321K3306	-	22	325K4306	7325KBG3TVW0	34
221G5503	72218RG4UE00	78	321K35	-	22/56	325K4506	7325KBG4TVW0	34
221G5506	72218RG4UV00	20/54	321K3506	-	22	325K4606	7325KBG51VW0	34
221G5603	72218RG5VE00	78	321K36	-	24/56	325K4706	7325KBG62VW0	34
221G5606	72218RG5VV00	20/54	321K3606	-	24	E 331B01	7331BAG2QN00	152
221J3301E	-	118	321K37	-	24/56	331B02	7331BAG2KN00	150/178
222G3303	72228BG3TES0	78	321K3706	-	24	E 331B21	7331BAG4QN00	152
222G3306	72228BG3TV00	20/54	321K4103	7321KBG2SEW0	80	E 331B74	7331BAG2KNMO	150
222G3503	72228BG4UES0	78	321K4106	7321KBG2SVW0	66	331B7480	7331BAG2KNL2	150
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E 331L21001D	7331LAV4TN1D	156	341P01	2341PAG1JNM0	238	-	3121BBN1EV00	38
E 332B01	7332BAG2QN00	154	U 341P0150	2341PRN2JNM1	296	-	3121BBN1GV00	38
332B02	7332BAG2KN00	152/178	341P02	2341PAG2HNM0	242	-	3121BBN1JV00	38
E 332B21	7332BAG4QN00	154	U 341P0250	2341PRN3NNM1	298	-	3121BBN1LV00	38
E 341B01	7341BAG2PN00	198	341P21	7341PAG1JNM0	238	-	3121BBN1NV00	38
341B02	7341BAG2KN00	198	341P21001D	7341PAG1JN1D	240	-	3121BBN1QV00	38
E 341B11	7341BAG3PN00	200	341P2108	7341PAG1JPM0	238	-	3121BJA7EVC#	42
E 341B21	7341BAG4TN00	212	341P2180	7341PAG1JNL2	238	-	3121BJA7GVC#	42
341B34	7341BAG2JNMR	188	341P2190	7341PAG1JN90	238	-	3121BSN1AV00	40
341B3403	7341BAG2JNM0	188	341P22	7341PAG2PNM0	244	-	3121BSN1EV00	40
341B3480	7341BAG2JNL8	188	341P22001D	7341PAG2PN1D	246	-	3121BSN1GV00	40
341B3490	-	188	341P2280	7341PAG2PNL2	244	-	3121BSN1JV00	40
341F34	7341FAS3JNMR	190	341P2290	7341PAG2PN90	244	-	3121BSN1LV00	40
341F3403	7341FAS3JNM0	190	U 341P3150	7341PRN2JN00	296	-	3121BSN1NV00	40
E 341L01	7341LDC1LNM8	218	U 341P3192	7341PRN2JN92	296	-	3121BSN1QV00	40
341L0180	7341LDC1LNL8	218	U 341P3195	7341PRN2JN95	298	-	3129BBN1AV00	40
E 341L02	7341LDC1LNM1	218	U 341P31951D	7341PRN2JN9D	298	-	3129BBN1EV00	40
341L04	-	218	U 341P3250	7341PRN3NN00	300	-	3129BBN1GV00	40
341L05	-	218	U 341P3292	7341PRN3NN92	300	-	3129BBN1JV00	40
341L11	-	202/256	U 341P3295	7341PRN3NN95	300	-	3129BBN1LV00	40
E 341L1130	7341LMG2NNM0	204/260	U 341P32951D	7341PRN3NN9D	302	-	3129BJA7EVC#	42
341L1190	-	204/260	345B04	7345BAG2PN00	200	-	3129BJA7GVC#	42
E 341L21	7341LAV4TNM0	218	345B24	7345BAG4TN00	212	-	3129BJA7LVC#	42
341L2190	7341LAV4TN90	216	345B34	7345BAG2JNMR	192	-	3129BSN1AV00	42
341L9101	-	196/254	345F34	7345FAS3JNMR	194	-	3129BSN1EV00	42
341L9201	-	214	345L01	7345LDC1LNM8	220	-	3129BSN1GV00	42
341L9504	-	270	345L21	7345LAV4TNM0	218	-	3129BSN1JV00	42
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341L9584	7341LAKBGNL2	270	E 347L1130	7347LMG2NNM0	208	-	3131BBN1EV00	162
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341L9594	7341LAKBGN90	270	347L9201	-	214	-	3131BBN1JV00	162
341L9598	-	270	347N11	2347NAKBHNM0	262	-	3131BBN1LV00	162
341N01	2341NAKBJNM1	258	347N12	2347NAKBPNM0	268	-	3131BBN1NV00	162
U 341N0150	2341NRKDJNM1	308	347N31	7347NAKBHNM0	262	-	3131BBN1QV00	162
341N02	2341NAKBPNM1	264	U 347N3150	7347NRKDHNM0	314	-	3131BJA7EVC#	170
U 341N0250	2341NRKNNNM1	310	U 347N3192	7347NRKDHN92	314	-	3131BJA7GVC#	170
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341N12	2341NAKBNNM0	264	U 347N3250	7347NRKNNN00	314	-	3131BSN1EV00	166
341N21	7341NAKBJNM1	258	347P01	2347PAG1HNM0	240	-	3131BSN1GV00	166
341N22	7341NAKBPNM1	264	347P02	2347PAG2PNM0	246	-	3131BSN1JV00	166
341N31	7341NAKBJNM0	260	347P21	7347PAG1HNM0	240	-	3131BSN1LV00	166
341N31001D	7341NAKBJN1D	260	347P2190	7347PAG1HN90	240	-	3131BSN1NV00	166
341N3108	7341NAKBJPM0	260	347P22	7347PAG2PNM0	244	-	3131BSN1QV00	166
341N31081D	7341NAKBJP1D	260	U 347P3150	7347PRN2JN00	304	-	3133BBN1AV00	164
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U 341N31501D	7341NRKDJN1D	308	U 347P3250	7347PRN3NN00	304	-	3133BBN1GV00	164
341N3180	7341NAKBJNL2	260	U 347P3295	7347PRN3NN95	306	-	3133BBN1JV00	164
341N3190	7341NAKBHN90	260	441N3108	7441NAKBJPM0	266	-	3133BBN1LV00	164
U 341N3192	7341NRKDJN92	310	441P2108	7441PAG1JPM0	242	-	3133BBN1NV00	164
U 341N3195	7341NRKDJN95	310	U 441P3250	7441PRN3NN00	302	-	3133BBN1QV00	164
341N32	7341NAKBPNM0	266	541L01	7541LDC1LNR0	220	-	3133BJA7EVC#	170
341N32001D	7341NAKBPN1D	266	541N01	7541NAKBJN00	262	-	3133BJA7GVC#	170
U 341N3250	7341NRKNNN00	312	541N0108	7541NAKBJN00	268	-	3133BSN1AV00	168
341N3280	7341NAKBPNL2	266	541P0108	7541PAG1JPM0	244	-	3133BSN1EV00	168
341N3290	7341NAKBPN90	266	U 541P0250	7541PRN3NNM1	302	-	3133BSN1GV00	168
U 341N3292	7341NRKNNN92	312	547L11	7547LMG2NN00	210	-	3133BSN1JV00	168

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-	3138BBN1LV00	166	-	3933BSN1GV00	168
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-	3138BSN1EV00	170	-	71214VN2KN00	114
-	3138BSN1GV00	170	-	71214VN2KT00	114
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-	3931BSN1LV00	166	-	7322BBG78N00	60
-	3931BSN1NV00	166	-	7322BBG88N00	60
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2341NRKNNNM1	U 341N0250	310	3133BBN1EV00	-	164	3921BSN1AV00	-	40
2341PAG1JNM0	341P01	238	3133BBN1GV00	-	164	3921BSN1EV00	-	40
2341PAG2HNM0	341P02	242	3133BBN1JV00	-	164	3921BSN1GV00	-	40
2341PRN2JNM1	U 341P0150	296	3133BBN1LV00	-	164	3921BSN1JV00	-	40
2341PRN3NNM1	U 341P0250	298	3133BBN1NV00	-	164	3921BSN1LV00	-	40
2347NAKBHNM0	347N11	262	3133BBN1QV00	-	164	3921BSN1NV00	-	40
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2347PAG1HNM0	347P01	240	3133BJA7GVC#	-	170	3931BBN1LV00	-	162
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7121KBG2GR00	E 121K67	10/86/104	7131FBF4GV00	E 131F44	144	7133FBF4GVM0	E 133F4450	144
7121KBG2GV00	E 121K0402	8/46	7131FBF4GVM0	E 131F4450	144	7133FBF4JV00	133F46	144
7121KBG2LF00	E 121K07	10	7131FBF4JV00	131F46	144	7133FBF4JVM0	133F4650	144
7121KBG2LR00	E 121K63	10/86/104	7131FBF4JVM0	131F4650	144	7133FBF4LV00	E 133F43	146
7121KBG2LV00	121K0706	10/46	7131FBF4LV00	E 131F43	144	7133FBF4LVM0	E 133F4350	144
7121KBG2LVM0	121K0756	10/46	7131FBF4LVM0	E 131F4350	144	7133KBG1GV00	E 133K14	134
7121KBG2NE00	121K0323	72	7131FDF2JV00	E 131F26	148	7133KBG1JV00	E 133K16	134
7121KBG2NF00	E 121K03	10/86	7131FRF2LV1D	U 131F56951D	278	7133KBG1LV00	E 133K13	134
7121KBG2NR00	E 121K64	10/86/104	7131FRF2LV95	U 131F5695	276/292	7133KBG2BV00	E 133K05	176
7121KBG2NRT0	121K6423	104	7131KBG1GV00	E 131K14	124	7133KBG2GV00	E 133K04	134
7121KBG2NV00	E 121K0302	10/46	7131KBG1JV00	131K16	124	7133KBG2GV1D	E 133K04001D	134
7121KBG2NVM0	E 121K0352	10/46	7131KBG1JVM0	131K1650	124	7133KBG2GVM0	E 133K0450	134
7121KBG2QRT0	121K6220	106	7131KBG1LV00	E 131K13	124	7133KBG2JV00	E 133K06	134
7121KBG2QV00	121K02	10/48	7131KBG2BF00	131K05	176	7133KBG2JVM0	E 133K0650	134
7121KBG2QVM0	121K0250	10/48	7131KBG2BR00	131K65	176	7133KBG2LV00	E 133K03	134
7121KBG2SE00	121K0103	72	7131KBG2CV90	131K0490	126/226	7133KBG2LVM0	E 133K0350	134
7121KBG2SV00	121K01	12/48	7131KBG2ER00	E 131K64	126	7133TBG2JV00	133T23	134
7121KBG2SVM0	121K0150	10/48	7131KBG2ERM0	E 131K6450	126	7133TBG2JVM0	133T2301	134
7121KBG3QV00	121K3206	12/48/104	7131KBG2GV00	E 131K04	126/226	7133TBG2NV00	133T21	134
7121KBG3SV00	121K3106	12/48/104	7131KBG2GVL5	131K0480	126/226	7133TBG2NVM0	133T2101	134
7121KBG3UE00	121K3303	72	7131KBG2GVM0	E 131K0450	126/226	7133VRN2LV95	U 133V5695	278/288
7121KBG3UV00	121K3306	12/48/104	7131KBG2JP1D	E 131K06081D	128/228	7133VRN2LV9D	U 133V56951D	278/288
7121KBG42E00	E 121K4603	72	7131KBG2JV00	E 131K06	126/226	7133VVG2GR00	133V5463	182
7121KBG42V00	E 121K46	12/48	7131KBG2JVM0	E 131K0650	126/226	7133VVG2GV00	133V5406	182
7121KBG44E00	E 121K4503	72	7131KBG2LPO0	E 131K0308	130/228	7133VVG2LR00	133V5363	182
7121KBG44V00	E 121K45	12/48	7131KBG2LP1D	E 131K03081D	130/228	7133VVG2LV00	133V5306	182
7121VVG2GR00	121V5463	74/116	7131KBG2LPM0	E 131K0358	130/228	7133XRN2SV00	U 133X5156	280/290
7121VVG2GV00	121V5406	116	7131KBG2LR00	E 131K63	130	7133XRN2SV1D	U 133X51561D	280/288
7121VVG2LR00	121V5763	74/116	7131KBG2LRM0	E 131K6350	130	7133XRN2VN96	U 133X5196	280
7121VVG2LV00	121V5706	116	7131KBG2LV00	E 131K03	128	7133XRN2VN9H	U 133X51961D	280
7121VVG2NR00	121V5363	74/116	7131KBG2LV1D	E 131K03001D	228	7133XRN3SN96	U 133X5296	282/290
7121VVG2NV00	121V5306	116	7131KBG2LVM0	E 131K0350	128/228	7133XRN3SN9H	U 133X52961D	282/290
7121VVG2NV1D	121V53061D	116	7131TBG2JV00	131T23	126	7135KBG2GV00	135K04	136/228
7121VVG2QR00	121V5263	74/116	7131TBG2JVM0	131T2301	126	7135KBG2LV00	135K03	136/228
7121VVG2QT00	121V5212	116	7131TBG2LV00	131T29	128	72218RG3TE00	221G5303	78
7121VVG2QV00	121V5206	116	7131TBG2LVM0	131T2901	128	72218RG3TV00	221G5306	20/54
7121VVG2SR00	121V5163	74/118	7131TBG2NVA0	131T22	132	72218RG4UE00	221G5503	78
7121VVG2ST00	121V5112	118	7131TBG2RV00	131T21	132	72218RG4UV00	221G5506	20/54
7121VVG2SV00	121V5106	118	7131TBG2RVM0	131T2101	132	72218RG5VE00	221G5603	78
7121VVG2SV1D	121V51061D	118	7131VVG2GR00	131V5463	182	72218RG5VV00	221G5606	20/54
7121ZBG1GV00	-	8/46	7131VVG2GV00	131V5406	182	7221GBG3VE00	221G1303	76
7121ZBG1LR00	-	102	7131VVG2LR00	131V5363	182	7221GBG3VNO0	221G13	16/52/64
7121ZBG1LRT0	-	102	7131VVG2LV00	131V5306	182	7221GBG3VNH0	221G1330	16/52/64
7121ZBG1LV00	-	8/46	7131VVG2BR00	131V65	176	7221GBG3VV00	221G23	16
7121ZCBG1LR00	-	102	7131XAKLVN00	131X1101	230	7221GBG3VVH0	221G2330	16
7122KBG1LR00	122K9363	12/88/106	7131XRKMVN00	U 131X1201	276/292	7221GBG4VE00	221G1503	76
7122KBG1LRT0	122K9321	106	7131ZBG1JV00	-	124	7221GBG4VN00	221G15	16/52/64
7122KBG2GF00	122K84	12/88	7132FBF4GV00	132F44	144	7221GBG4VNH0	221G1530	16/52/64
7122KBG2GR00	122K8408	12/88	7132FBF4JV00	132F46	144	7221GBG4VV00	221G25	16

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7221GBG4VVH0	221G2530	16	7321BBG88NM0	-	58	7322BBG64N00	-	60
7221GBG51E00	221G1603	76	7321BBG99E00	-	82	7322BBG78N00	-	60
7221GBG51N00	221G16	18/52	7321BBG99N00	-	58	7322BBG88N00	-	60
7221GBG51NC0	221G1610	64	7321BBG99NM0	-	58	7322BBG99N00	-	60
7221GBG51NCH	221G1631	64	7321BBGCBNM1	-	58	7322FBF3TN00	322F72	34/60/92
7221GBG51NH0	221G1630	18/52	7321BBGDCNM1	-	58	7322FBF3TV00	322F7206	34/92/110
7221GBG51V00	221G26	18	7321FBF3TN00	E 321F32	34/60/92	7322GBG4UV00	322G7506	110
7221GBG51V1D	221G26001D	16	7321FBF3TV00	E 321F3202	34/92/110	7322GBG53N00	322G36	32/58
7221GBG51VH0	221G2630	18	7321GBG53N00	E 321G36	24/56	7322GBG53NC0	322G3610	68
7221GBG61E00	221G1703	76	7321GBG53NMC	E 321G3610	66	7322GBG53V00	322G3606	32
7221GBG61N00	221G17	18/52	7321GBG53V00	E 321G3606	24	7322GBG64N00	322G37	32/60
7221GBG61NC0	221G1710	64	7321GBG64N00	E 321G37	26/58	7322GBG64NC0	322G3710	68
7221GBG61NCH	221G1731	64	7321GBG64N1D	E 321G37101D	26	7322GBG64V00	322G3706	32
7221GBG61NH0	221G1730	18/52	7321GBG64NMC	E 321G3710	66	7322GBG76N00	322G38	32/60
7221GBG61V00	221G27	18	7321GBG64V00	E 321G3706	24	7322GBG76NC0	322G3810	68
7221GBG61V1D	221G27001D	18	7321GBG76N00	E 321G38	26/58	7322GBG76V00	322G3806	32
7221GBG61VH0	221G2730	18	7321GBG76NMC	E 321G3810	68	7322GBG88N00	322G39	32/60
7221GBG64E00	221G2103	76	7321GBG76V00	E 321G3806	26	7322GBG88NC0	322G3910	68
7221GBG64N00	221G21	18/54	7321GBG88N00	E 321G39	28/58	7322GBG88V00	322G3906	32
7221GBG64NC0	221G2110	64	7321GBG88N3D	E 321G39101D	28	7322GBG99N00	322G40	32/60
7221GBG64NCH	221G2131	64	7321GBG88NMC	E 321G3910	68	7322GBG99NC0	322G4010	68
7221GBG64NH0	221G2130	18/52	7321GBG88V00	E 321G3906	26	7322GBG99V00	322G4006	32
7221GBG64V00	221G2106	18	7321GBG99N00	E 321G40	30/58	7322HBG2SN00	322H71	30/92
7221GBG64VH0	221G2136	18	7321GBG99N3D	E 321G40101D	30	7322HBG2SV00	322H7106	30/90/108
72228BG3TES0	222G3303	78	7321GBG99NMC	E 321G4010	68	7322HBG3TN00	322H73	32/92
72228BG3TV00	222G3306	20/54	7321GBG99V00	E 321G4006	28	7322HBG3TV00	322H7306	32/92/108
72228BG4UES0	222G3503	78	7321HBG2SN00	E 321H11	22/90	7322HBG4UN00	322H75	32/92
72228BG4UV00	222G3506	20/54	7321HBG2SV00	E 321H21	22/90/108	7322HBG4UV00	322H7506	32/92/110
72228BG5VES0	222G3603	78	7321HBG3TN00	E 321H13	22/90	7322KBG2SVW0	322K4106	32
72228BG5VV00	222G3606	20/54	7321HBG3TV00	E 321H23	22/90/108	7322KBG3TVW0	322K4306	32
72228RG3TE00	222G5303	78	7321HBG3TVT0	321H2322	108	7322KBG4TVW0	322K4506	32
72228RG3TV00	222G5306	20/54	7321HBG4UN00	E 321H15	24/90	7322KBG51VW0	322K4606	32
72228RG4UE00	222G5503	78	7321HBG4UV00	E 321H25	22/90/108	7322KBG62VW0	322K4706	32
72228RG4UV00	222G5506	20/54	7321HBG4UVT0	321H2522	108	7325KBG2SVW0	325K4106	34
72228RG5VE00	222G5603	78	7321KBG2SEW0	321K4103	80	7325KBG3TVW0	325K4306	34
73218BG3TTS0	321G8312	80	7321KBG2SVMW	321K4156	66	7325KBG4TVW0	325K4506	34
73218BG4UTS0	321G8512	80	7321KBG2SVW0	321K4106	66	7325KBG51VW0	325K4606	34
73218BG5VTS0	321G8612	80	7321KBG3TEW0	321K4303	80	7325KBG62VW0	325K4706	34
73218BG64TS0	321G8712	82	7321KBG3TVMW	321K4356	66	7331BAG2KN00	331B02	150/178
73218BG75TS0	321G8812	82	7321KBG3TVW0	321K4306	66	7331BAG2KNL2	331B7480	150
73218BG87TS0	321G8912	82	7321KBG4TEW0	321K4503	80	7331BAG2KNMO	E 331B74	150
7321BBG3TE00	-	80	7321KBG4TVMW	321K4556	66	7331BAG2QN00	E 331B01	152
7321BBG3TN00	-	56	7321KBG4TVW0	321K4506	66	7331BAG4QN00	E 331B21	152
7321BBG3TNM0	-	56	7321KBG51EW0	321K4603	80	7331LAV4TN1D	E 331L21001D	156
7321BBG4TE00	-	80	7321KBG51VMW	321K4656	66	7331LAV4TNM0	E 331L21	158
7321BBG4TN00	-	56	7321KBG51VW0	321K4606	66	7332BAG2KN00	332B02	152/178
7321BBG4TNM0	-	56	7321KBG62EW0	321K4703	80	7332BAG2QN00	E 332B01	154
7321BBG53E00	-	80	7321KBG62VMW	321K4756	66	7332BAG4QN00	E 332B21	154
7321BBG53N00	-	56	7321KBG62VW0	321K4706	66	7341BAG2JNL8	341B3480	188
7321BBG53NM0	-	56	73228BG3TTS0	322G8312	82	7341BAG2JNM0	341B3403	188
7321BBG64E00	-	80	73228BG4UTS0	322G8512	82	7341BAG2JNMR	341B34	188
7321BBG64N00	-	56	73228BG52TS0	322G8612	82	7341BAG2KN00	341B02	198
7321BBG64NM0	-	58	73228BG64TS0	322G8712	82	7341BAG2PN00	E 341B01	198
7321BBG78E00	-	82	73228BG75TS0	322G8812	82	7341BAG3PN00	E 341B11	200
7321BBG78N00	-	58	73228BG87TS0	322G8912	82	7341BAG4TN00	E 341B21	212
7321BBG78NM0	-	58	7322BBG3TN00	-	58	7341FAS3JNM0	341F3403	190
7321BBG88E00	-	82	7322BBG4TN00	-	58	7341FAS3JNMR	341F34	190

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7341LAKBGNL2	341L9584	270	7347PAG1HN90	347P2190	240
7341LAKBGNM0	341L9534	270	7347PAG1HNM0	347P21	240
7341LAPBGPL2	341L9588	270	7347PAG2PNM0	347P22	244
7341LAV4TN90	341L2190	216	7347PRN2JN00	U 347P3150	304
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7341NAKBHN90	341N3190	260	7441PRN3NN00	U 441P3250	302
7341NAKBJN1D	341N31001D	260	7541LDC1LNR0	541L01	220
7341NAKBJNL2	341N3180	260	7541NAKBJN00	541N01	262
7341NAKBJNM0	341N31	260	7541PAG1JP00	541P0108	244
7341NAKBJNM1	341N21	258	7541PRN3NNM1	U 541P0250	302
7341NAKBJP1D	341N31081D	260	7547LMG2NN00	547L11	210
7341NAKBJPM0	341N3108	260	-	121K6423	104
7341NAKBPN1D	341N32001D	266	-	121M13	8/46
7341NAKBPN90	341N3290	266	-	121M14	8/46
7341NAKBPNL2	341N3280	266	-	131F4490	136
7341NAKBPNM0	341N32	266	-	131M14	124/226
7341NAKBPNM1	341N22	264	-	131M15	124/226
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7341NRKDJN95	U 341N3195	310	-	131M7550	138
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7341NRKNNN92	U 341N3292	312	-	133X01	230
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7341PAG1JN90	341P2190	238	-	321G3990	26
7341PAG1JNL2	341P2180	238	-	321G4090	28
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7341PRN2JN00	U 341P3150	296	-	321K3506	22
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7341PRN3NN00	U 341P3250	300	-	321K3706	24
7341PRN3NN92	U 341P3292	300	-	331B7490	150
7341PRN3NN95	U 341P3295	300	-	341B3490	188
7341PRN3NN9D	U 341P32951D	302	-	341L04	218
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7345FAS3JNMR	345F34	194	-	341L9101	196/248
7345LAV4TNM0	345L21	218	-	341L9201	214
7345LDC1LNM8	345L01	220	-	341L9504	270
7345PAG1JNM0	345P21	242	-	341L9598	270
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NOTES



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