

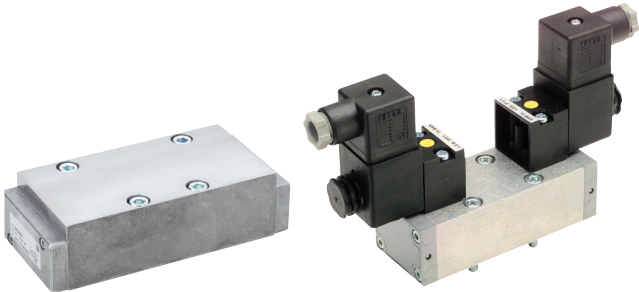


UM/22000 5/2 or 5/3

Solenoid and air pilot actuated soft spool valves



- > Sub-base mounted, ISO 5599-1 sizes 1, 2, 3 and 4
- > Steel reinforced main seals
- > 16 bar and 10 bar CNOMO solenoid pilots with locking or non-locking manual override
- > Low power coils (1,5 W)
- > Wide range of sub-bases and accessories



Technical features

Medium:

Compressed air, 40 µm filtered, lubricated or non-lubricated

Operation:

Spool valve, solenoid pilot or air pilot actuated

Mounting:

On sub-bases

Sizes:

ISO 1, 2, 3 and 4

Maximum operating pressure:

Solenoid pilot actuated valves
10 bar (145 psi)

Air pilot actuated valves and
solenoid pilot actuated
valves

16 bar (232 psi)

Details of minimum and maximum pilot pressure see overleaf

Ambient/Media temperature:

Solenoid pilot actuated valves
-10 ... +50°C (+14 ... +122°F)

Air pilot actuated valves
-10 ... +80°C (+14 ... +176°F)

Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

Materials:

Body: aluminium alloy, die cast aluminium

Spool: light alloy aluminium

Seals: NBR

Electrical details for solenoid operators

Voltage tolerance	± 10%		
Rating	100% continuous duty		
Inlet orifice	1,0 mm		
Electrical connection (corresponding to choosen coil)	EN 175301-803 - Form A, 30 mm		
	EN 175301-803 - Form B, 22 mm		
	Industrial Standard, 22 mm		
Solenoid coil	May be rotated at 90° intervals		
Manual override	10 bar version	Turn to lock (plastic)	# = 60
		Push only (brass)	# = 61
	16 bar version	Turn to lock (plastic)	# = 80
		Push only (brass)	# = 81
Protection class	IP 65 (with sealed plug)		

Maximum suggested torque

Valve size	Thread size	Maximum suggested torque
ISO 1	M5	5.5 Nm
ISO 2	M6	7.5 Nm
ISO 3	M8	14.5 Nm
ISO 4	M8	14.5 Nm





5/2 Solenoid pilot actuated valves – 10 bar models

Symbol	ISO size	Operator/return	Pilot supply	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	Weight (kg)	Drawing No.	Model
	1	Solenoid/spring	Internal	1200	2 ... 10	—	0,45	1	UM/22152/122/6#/*1)
	2	Solenoid/spring and air	Internal	2130	2,5 ... 10	—	0,70	3	UM/22253/172/6#/*1)
	3	Solenoid/spring and air	Internal	4150	2,5 ... 10	—	1,00	3	UM/22354/172/6#/*1)
	4	Solenoid/spring and air	Internal	5660	2,5 ... 10	—	1,27	3	UM/22456/172/6#/*1)
	1	Solenoid/spring	External	1200	-0,9 ... 16	2,3 *2) ... 10	0,45	1	UM/22152/22/6#/*1)
	2	Solenoid/spring	External	2130	-0,9 ... 16	1,8 *2) ... 10	0,70	3	UM/22253/22/6#/*1)
	3	Solenoid/spring	External	4150	-0,9 ... 16	1,8 *2) ... 10	1,00	3	UM/22354/22/6#/*1)
	4	Solenoid/spring	External	5660	-0,9 ... 16	1,8 *2) ... 10	1,27	3	UM/22456/22/6#/*1)
	1	Solenoid/ solenoid	Internal	1200	2 ... 10	—	0,59	2	UM/22152/123/6#/*1)
	2	Solenoid/ solenoid	Internal	2130	2 ... 10	—	0,84	4	UM/22253/123/6#/*1)
	3	Solenoid/ solenoid	Internal	4150	2 ... 10	—	1,14	4	UM/22354/123/6#/*1)
	4	Solenoid/ solenoid	Internal	5660	2 ... 10	—	1,41	4	UM/22456/123/6#/*1)
	1	Solenoid/ solenoid	External	1200	-0,9 ... 16	2,3 *2) ... 10	0,59	2	UM/22152/23/6#/*1)
	2	Solenoid/ solenoid	External	2130	-0,9 ... 16	1,5 *2) ... 10	0,84	4	UM/22253/23/6#/*1)
	3	Solenoid/ solenoid	External	4150	-0,9 ... 16	1,5 *2) ... 10	1,14	4	UM/22354/23/6#/*1)
	4	Solenoid/ solenoid	External	5660	-0,9 ... 16	1,5 *2) ... 10	1,41	4	UM/22456/23/6#/*1)

Insert code for manual override: 0 = turn to lock, 1 = push only
*1) Insert voltage code below. Standard are: '13J' for 24 V d.c. or '19J' for 240 V a.c.
*2) plus (0,1 x supply pressure)

5/3 Solenoid pilot actuated valves – 10 bar models

Symbol	ISO size	Function	Operator/return	Pilot supply	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Drawing No.	Model
	1	APB	Solenoid/ solenoid	Internal	660	2,5 ... 10	0,59	2	UM/22152/6123/6#/*1)
	2	APB	Solenoid/ solenoid	Internal	1520	2,8 ... 10	0,84	4	UM/22253/6123/6#/*1)
	3	APB	Solenoid/ solenoid	Internal	3750	2,8 ... 10	1,14	4	UM/22354/6123/6#/*1)
	4	APB	Solenoid/ solenoid	Internal	5490	2,8 ... 10	1,41	4	UM/22456/6123/6#/*1)
	1	COE	Solenoid/ solenoid	Internal	660	2,5 ... 10	0,59	2	UM/22162/6123/6#/*1)
	2	COE	Solenoid/ solenoid	Internal	1520	2,8 ... 10	0,84	4	UM/22263/6123/6#/*1)
	3	COE	Solenoid/ solenoid	Internal	3750	2,8 ... 10	1,14	4	UM/22364/6123/6#/*1)
	4	COE	Solenoid/ solenoid	Internal	5490	2,8 ... 10	1,41	4	UM/22466/6123/6#/*1)

Insert code for manual override: 0 = turn to lock, 1 = push only
*1) Insert voltage code below. Standard are: '13J' for 24 V d.c. or '19J' for 240 V a.c.
Function: APB = All Ports Blocked; COE = Centre Open Exhaust

Voltage codes and spare coils for 10 bar models

22 mm coil for connector interface acc. to industrial standard				
	Voltage	Power Inrush/Hold	Model	Code
	12 V d.c.	2 W	QM/48/12J/21	12J
	24 V d.c	2 W	QM/48/13J/21	13J
	24 V 50/60 Hz	4/2,5 VA	QM/48/14J/21	14J
	48 V 50/60 Hz	4/2,5 VA	QM/48/16J/21	16J
	110/120 V 50/60 Hz	4/2,5 VA	QM/48/18J/21	18J
	220/240 V 50/60 Hz	6/5,0 VA	QM/48/19J/21	19J

22 mm coil for connector interface acc. EN 175 301-803, form B				
	Voltage	Power Inrush/Hold	Model	Code
	12 V d.c.	2 W	V10626-A12L	12L
	24 V d.c	2 W	V10626-A13L	13L
	24 V 50/60 Hz	4/2,5 VA	V10626-A14L	14L
	48 V 50/60 Hz	4/2,5 VA	V10626-A16L	16L
	110/120 V 50/60 Hz	4/2,5 VA	V10626-A18L	18L
	220/240 V 50/60 Hz	6/5,0 VA	V10626-A19L	19L

30 mm coil for connector interface acc. EN 175 301-803, form A				
	Voltage	Power Inrush/Hold	Model	Code
	12 V d.c.	1,5 W	V10633-A22N	22N
	24 V d.c	1,5 W	V10633-A23N	23N
	24 V 50/60 Hz	3/2 VA	V10633-A24N	24N
	48 V 50/60 Hz	3/2 VA	V10633-A26N	26N
	110/120 V 50/60 Hz	3/2 VA	V10633-A28N	28N
	220/240 V 50/60 Hz	3/2 VA	V10633-A29N	29N

Connector plugs - ordered separately

Industrial standard 22 mm 2-pole + PE	22 mm, EN 175301-803 (DIN 43650 B) Form B 2-pole + PE	30 mm, EN 175301-803 (DIN 43650 B) Form A 2-pole + PE
0657868	0680003	0570275



5/2 Solenoid pilot actuated valves – 16 bar models

Symbol	ISO size	Operator/return	Pilot supply	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	Weight (kg)	Drawing No.	Model
	1	Solenoid/spring	Internal	1200	2 ... 16	—	0,45	1	UM/22152/122/8#/*1)
	2	Solenoid/spring and air	Internal	2130	2,5 ... 16	—	0,70	3	UM/22253/172/8#/*1)
	3	Solenoid/spring and air	Internal	4150	2,5 ... 16	—	1,00	3	UM/22354/172/8#/*1)
	4	Solenoid/spring and air	Internal	5660	2,5 ... 16	—	1,27	3	UM/22456/172/8#/*1)
	1	Solenoid/spring	External	1200	-0,9 ... 16	2,3 *2) ... 16	0,45	1	UM/22152/22/8#/*1)
	2	Solenoid/spring	External	2130	-0,9 ... 16	1,8 *2) ... 16	0,70	3	UM/22253/22/8#/*1)
	3	Solenoid/spring	External	4150	-0,9 ... 16	1,8 *2) ... 16	1,00	3	UM/22354/22/8#/*1)
	4	Solenoid/spring	External	5660	-0,9 ... 16	1,8 *2) ... 16	1,27	3	UM/22456/22/8#/*1)
	1	Solenoid/ solenoid	Internal	1200	2 ... 16	—	0,59	2	UM/22152/123/8#/*1)
	2	Solenoid/ solenoid	Internal	2130	2 ... 16	—	0,84	4	UM/22253/123/8#/*1)
	3	Solenoid/ solenoid	Internal	4150	2 ... 16	—	1,14	4	UM/22354/123/8#/*1)
	4	Solenoid/ solenoid	Internal	5660	2 ... 16	—	1,41	4	UM/22456/123/8#/*1)
	1	Solenoid/ solenoid	External	1200	-0,9 ... 16	2,3 *2) ... 16	0,59	2	UM/22152/23/8#/*1)
	2	Solenoid/ solenoid	External	2130	-0,9 ... 16	1,5 *2) ... 16	0,84	4	UM/22253/23/8#/*1)
	3	Solenoid/ solenoid	External	4150	-0,9 ... 16	1,5 *2) ... 16	1,14	4	UM/22354/23/8#/*1)
	4	Solenoid/ solenoid	External	5660	-0,9 ... 16	1,5 *2) ... 16	1,41	4	UM/22456/23/8#/*1)

Insert code for manual override: 0 = turn to lock,1 = push only
*1) Insert voltage code below. Standard are: '33N' for 24 V d.c. or '89N' for 240 V a.c.
*2) plus (0,1 x supply pressure)

5/3 Solenoid pilot actuated valves – 16 bar models

Symbol	ISO size	Function	Operator/return	Pilot supply	Flow (l/min)	Operating pressure (bar)	Weight (kg)	Drawing No.	Model
	1	APB	Solenoid/ solenoid	Internal	660	2,5... 16	0,59	2	UM/22152/6123/8#/*1)
	2	APB	Solenoid/ solenoid	Internal	1520	2,8 ... 16	0,84	4	UM/22253/6123/8#/*1)
	3	APB	Solenoid/ solenoid	Internal	3750	2,8 ... 16	1,14	4	UM/22354/6123/8#/*1)
	4	APB	Solenoid/ solenoid	Internal	5490	2,8 ... 16	1,41	4	UM/22456/6123/8#/*1)
	1	COE	Solenoid/ solenoid	Internal	660	2,5 ... 16	0,59	2	UM/22162/6123/8#/*1)
	2	COE	Solenoid/ solenoid	Internal	1520	2,8 ... 16	0,84	4	UM/22263/6123/8#/*1)
	3	COE	Solenoid/ solenoid	Internal	3750	2,8 ... 16	1,14	4	UM/22364/6123/8#/*1)
	4	COE	Solenoid/ solenoid	Internal	5490	2,8 ... 16	1,41	4	UM/22466/6123/8#/*1)

Insert code for manual override: 0 = turn to lock, 1 = push only
*1) Insert voltage code below. Standard are: '33N' for 24 V d.c. or '89N' for 240 V a.c.
Function: APB = All Ports Blocked; COE = Centre Open Exhaust

Voltage codes and spare coils for 16 bar models

30 mm coil for connector interface acc. acc. EN 175 301-803, form A				
Voltage	Power Inrush/Hold	Model	Code	
12 V d.c.	4 W	V10633-A32N	32N	
24 V d.c.	4 W	V10633-A33N	33N	
110 V d.c.	4 W	V10633-A37N	37N	
24 V a.c.	10/8 VA	V10633-A84N	84N	
110/120 V 50/60 Hz	10/8 VA	V10633-A88N	88N	
220/240 V 50/60 Hz	10/8 VA	V10633-A89N	89N	

Other Voltages available on request.



Connector plug - ordered separately

30 mm, EN 175301-803 (DIN 43650 B) Form A 2-pole + PE

0570275



Option selector
(solenoid actuated valves)

ISO size	Substitute
1	1
2	2
3	3
4	4
Valve function	Substitute
5/2 monostable & bistable, 5/3 APB	5
5/3 COE only	6
Port size	Substitute
ISO 1 (1/4")	2
ISO 2 (3/8")	3
ISO 3 (1/2")	4
ISO 4 (3/4")	6

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Voltage code	Substitute
For voltage code see tables on page 2 and 3	
Manual override	Substitute
Push and turn	0
Push only	1
Pressure	Substitute
10 bar	6
16 bar	8
Valve function	Substitute
5/2 Solenoid/spring, external pilot, monostable	22
5/2 Solenoid/Solenoid, external pilot, bistable	23
5/2 Solenoid/spring, internal pilot, monostable	122
5/2 Solenoid/Solenoid, internal pilot, bistable	123
5/2 Solenoid/airspring & spring, internal pilot, monostable	172
5/3 - APB & COE Solenoid/Solenoid, internal pilot, monostable	6123

5/2 Air pilot actuated valves – 16 bar models

Symbol	ISO size	Operator/return	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	Weight (kg)	Drawing No.	Model
	1	Air/spring	1200	-0,9 ... 16	2,3 *2) ... 16	0,34	6	UM/22152/40
	2	Air/spring	2130	-0,9 ... 16	1,8 *2) ... 16	0,60	6	UM/22253/40
	3	Air/spring	4150	-0,9 ... 16	2,8 *2) ... 16	1,00	6	UM/22354/40
	4	Air/spring	5660	-0,9 ... 16	1,8 *2) ... 16	1,30	6	UM/22456/40
	1	Air/air	1200	-0,9 ... 16	1,0 *2) ... 16	0,34	5	UM/22152/3
	2	Air/air	2130	-0,9 ... 16	1,5 *2) ... 16	0,50	5	UM/22253/3
	3	Air/air	4150	-0,9 ... 16	1,5 *2) ... 16	0,90	5	UM/22354/3
	4	Air/air	5660	-0,9 ... 16	1,5 *2) ... 16	1,20	5	UM/22456/3

*2) plus (0,1 x supply pressure)

Standard version

5/3 Air pilot actuated valves – 16 bar models

Symbol	ISO size	Function	Operator/return	Flow (l/min)	Operating pressure (bar)	Pilot pressure (bar)	Weight (kg)	Drawing No.	Model
	1	APB	Air/air	660	-0,9 ... 16	2,3 *2) ... 16	0,34	5	UM/22152/63
	2	APB	Air/air	1520	-0,9 ... 16	2,8 *2) ... 16	0,50	5	UM/22253/63
	3	APB	Air/air	3750	-0,9 ... 16	2,8 *2) ... 16	0,90	5	UM/22354/63
	4	APB	Air/air	5490	-0,9 ... 16	2,8 *2) ... 16	1,20	5	UM/22456/63
	1	COE	Air/air	660	-0,9 ... 16	2,3 *2) ... 16	0,34	5	UM/22162/63
	2	COE	Air/air	1520	-0,9 ... 16	2,8 *2) ... 16	0,50	5	UM/22263/63
	3	COE	Air/air	3750	-0,9 ... 16	2,8 *2) ... 16	0,90	5	UM/22364/63
	4	COE	Air/air	5490	-0,9 ... 16	2,8 *2) ... 16	1,20	5	UM/22466/63

*2) plus (0,1 x supply pressure)

Function: APB = All Ports Blocked; COE = Centre Open Exhaust

Option selector
(pilot actuated valves)

ISO size	Substitute
1	1
2	2
3	3
4	4
Valve function	Substitute
5/2 monostable & bistable, 5/3 APB	5
5/3 COE only	6

UM/22****/**

Valve function	Substitute
5/2 Air/air, bistable	3
5/2 Air/air, bistable, priority port 14	33
5/2 Air/spring, monostable	40
5/3 - APB & COE Air/air, monostable	63
Port size	Substitute
ISO 1 (1/4")	2
ISO 2 (3/8")	3
ISO 3 (1/2")	4
ISO 4 (3/4")	6