

2-way solenoid valves  
for neutral liquids and  
gases

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## Contents

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<b>2-way solenoid valves</b>	Page
<b>Introduction</b> .....	3
<b>Materials and approvals</b> .....	3
<b>Solenoid valves</b>	
Direct acting valves type EVI 1.5 - 10, NC / NO .....	4
Internal pilot operated valves type EVSI 6 - 22, NC / NO .....	5
Larger servo operated valves anti water hammer type EVSI 15 - 50, NC / NO .....	6
Direct lift, internal pilot operated valves type EVSIT 12 - 22, NC .....	7
Solenoid valves for steam type EVSIS 3 - 25, UL-listed .....	8
Servo operated, proportional valves type EVSIM 6 - 20 .....	9
<b>Coils</b> .....	10
<b>Spare parts</b> .....	11 - 12
<b>Dimensions and weights</b> .....	13 - 14
<b>Capacity diagrams</b> .....	15 - 21
<b>General information for EVI, EVSI and EVSIT</b> .....	22

## Introduction

The Danfoss range of general purpose solenoid valves is a series of modern 2-way valves for use with neutral liquids and gases.

These products are based on more than 50 years of experience in the design, production and application of high quality solenoid valves.

The Danfoss range of solenoid valves is stocking and user friendly, as valve bodies and coils are being supplied separately in most cases.

Many combinations are therefore possible with relatively few code numbers, allowing flexibility through reduction in warehouse costs, installation advantages and optimum delivery conditions.

If there is need for servicing, spare parts sets for all valve types are available from a world wide network of Danfoss distributors.

### Valve Types

*Direct acting valves*, type EVI, with no minimum differential pressure requirement. For smaller flow volumes.

*Pilot operated valves*, type EVSI, which require a minimum differential pressure for correct operation. For medium to large flow volumes.

*Direct lift, pilot operated valves*, type EVSIT, designed for application in closed circuits with low, undefined pressure. For example central

heating systems. The valves have no minimum differential pressure requirement.

*Direct and servo operated valves* for steam type EVSIS.

*Modulating solenoid valves* providing proportional flow regulation as the degree of opening is proportional to the coil current type EVSIM.

### Materials in NC and NO valves

	EVI 1.5 - 10	EVSI 6 - 22 EVSIT 12, 18, 22	EVSI 6 - 22 EVSIT 12, 18, 22	EVSI 15 - 50	EVSI 15 - 50	EVSIM 6 - 20	EVSIS 3 - 25
For media <sup>1)</sup>	OLW	W	OLW	OLW	WD	OLW	WD
Armature and magnet	17% stainless chrome steel						
Armature tube and spring	18% stainless steel, AISI 304						
Valve body	Brass MS 58 <sup>2)</sup>						
O-ring	NBR <sup>3) 4)</sup>	EPDM	FKM	NBR <sup>4)</sup>	EPDM	PTFE	PTFE
Valve plate	NBR <sup>3) 4)</sup>	EPDM	FKM	NBR <sup>4)</sup>	EPDM	FKM	PTFE
Diaphragm	-	EPDM	FKM	FKM	EPDM	PTFE	PTFE

<sup>1)</sup> Media Codes:

O = Oil  
L = Inert Gas (incl. Air)  
W = Water  
D = Steam

<sup>2)</sup> EVSI 50 – gun metal



<sup>3)</sup> EVI 10 – FKM

<sup>4)</sup> NBR also known as Buna "N" or Nitrile

### Ordering

Valve body and coil to be ordered separately (except recognized valves).

### Approvals

-  certified no. 52727
-  file no. MH7648
- UR file no. MH7648 (types EVI 1.5U - 3U and EVSI 6U - 50U)

Data sheet

Type EVI 1.5 - 10, NC / NO  
Direct acting valves

Features



- For neutral liquids (max. 50 cSt / 250 SSU) and gases
- Ambient temperature: Up to 120°F (50°C)
- Brass valve body
- Gasket materials: NBR (For EVI 10: VITON)
- Media temperature: 14°F (-10°C) to 194°F (+90°C)
- Test pressure: Max. 710 psi (50 bar)

Ordering

In the ordering table below, a code number and type designation are stated for each valve. Please use this information for ordering.

Coils must be ordered separately, please see page 11.

Example: EVI 3 - 032U6505.

Normally Closed (Closed when de-energized)

Connection NPT [inch]	Orifice Size [inch]	Flow value		Opening diff. pressure				Max. Wrk. Press.		Media <sup>1)</sup>	Type	Code no. without coil
		C <sub>v</sub> USgal/min	k <sub>v</sub> m <sup>3</sup> /h	Min psi	bar	Max. psi	bar	psi	bar			
1/8	1/16	0.06	0.05	0	0	284	20	500	35	OLW	EVI 1.5	032U6501
1/4	1/16	0.06	0.05	0	0	284	20	500	35	OLW	EVI 1.5	032U6502
1/8	1/32	0.18	0.15	0	0	284	20	500	35	OLW	EVI 2	032U6503
1/4	1/8	0.35	0.3	0	0	284	20	500	35	OLW	EVI 3	032U6505
3/8	1/8	0.35	0.3	0	0	284	20	500	35	OLW	EVI 3	032U6506
3/8	1/4	0.82	0.7	0	0	17	1.2	350	25	OLW	EVI 6	032U6565
1/2	3/8	1.76	1.5	0	0	11	0.8	350	25	OLW	EVI 10	032U6567

Normally Open (Open when de-energized)

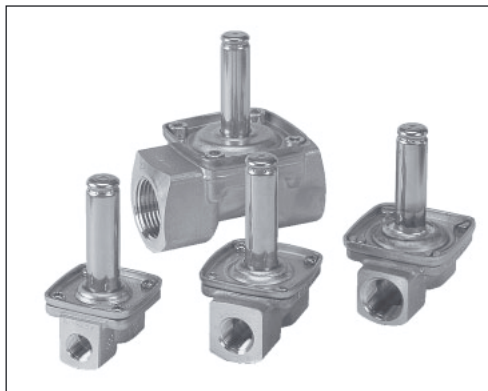
1/8	1/16	0.06	0.05	0	0	284	20	500	35	OLW	EVI 1.5 NO	032U6509
1/4	1/8	0.35	0.3	0	0	86	6	500	35	OLW	EVI 3 NO	032U6511

1) O = Oil; L = Inert Gas (incl. Air); W = Water

## Data sheet

**Type EVSI 6 - 22, NC / NO**  
**Internal pilot operated valves**

## Features



- For neutral liquids (max. 50 cSt / 250 SSU) and gases
- Ambient temperature: Up to 120°F (50°C)
- Brass valve body
- Gasket materials: VITON for Oil/Inert Gas (O/L), EPDM for Water (W)
- Media temperature: 14°F (-10°C) to 194°F (+90°C)
- Test pressure:  
EVSI 6 - 10: Max. 710 psi (50 bar)  
EVSI 12 - 22: Max. 225 psi (16 bar)

## Ordering

In the ordering table below, a code number and type designation are stated for each valve. Please use this information for ordering.

Coils must be ordered separately, please see page 11.

Example: EVSI 10 - 032U6519.

*Normally Closed (Closed when de-energized)*

Connection NPT [inch]	Orifice Size [inch]	Flow value		Opening diff. pressure				Max. Wrk. Press.		Media <sup>1)</sup>	Type	Code no. without coil
		C <sub>v</sub> USgal/min	k <sub>v</sub> m <sup>3</sup> /h	Min psi	bar	Max. psi	bar	psi	bar			
1/4	1/4	0.82	0.7	2	0.1	142	10	350	25	OL	EVSI 6	<b>032U6515</b>
1/4	1/4	0.82	0.7	2	0.1	142	10	350	25	W	EVSI 6	032U6513
3/8	1/4	0.82	0.7	2	0.1	142	10	350	25	OL	EVSI 6	<b>032U6516</b>
3/8	1/4	0.82	0.7	2	0.1	142	10	350	25	W	EVSI 6	<b>032U6514</b>
3/8	3/8	1.76	1.5	2	0.1	142	10	350	25	OL	EVSI 10	<b>032U6519</b>
3/8	3/8	1.76	1.5	2	0.1	142	10	350	25	W	EVSI 10	<b>032U6517</b>
1/2	3/8	1.76	1.5	2	0.1	142	10	350	25	OL	EVSI 10	<b>032U6520</b>
1/2	3/8	1.76	1.5	2	0.1	142	10	350	25	W	EVSI 10	<b>032U6518</b>
1/2	1/2	2.93	2.5	4	0.3	142	10	142	10	OL	EVSI 12	<b>032U6522</b>
1/2	1/2	2.93	2.5	4	0.3	142	10	142	10	W	EVSI 12	<b>032U6521</b>
3/4	3/4	7	6	4	0.3	142	10	142	10	OL	EVSI 18	<b>032U6524</b>
3/4	3/4	7	6	4	0.3	142	10	142	10	W	EVSI 18	<b>032U6523</b>
1	3/4	7	6	4	0.3	142	10	142	10	OL	EVSI 22	<b>032U6526</b>
1	3/4	7	6	4	0.3	142	10	142	10	W	EVSI 22	<b>032U6525</b>

*Normally Open (Open when de-energized)*

3/8	1/4	0.82	0.7	2	0.1	142	10	350	25	W	EVSI 6 NO	<b>032U6528</b>
3/8	1/4	0.82	0.7	2	0.1	142	10	350	25	OL	EVSI 6 NO	<b>032U6529</b>
1/2	3/8	0.82	0.7	2	0.1	142	10	350	25	OLW <sup>2)</sup>	EVSI 10 NO	<b>032U6530</b>

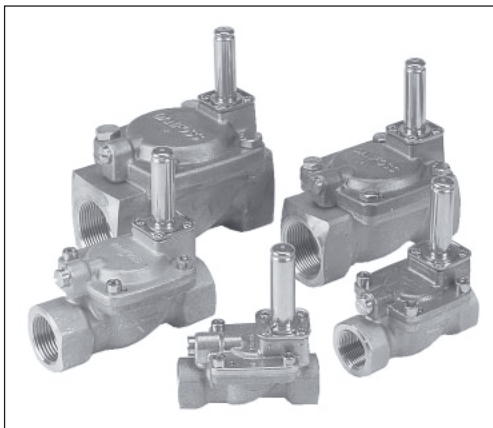
1) O = Oil; L = Inert Gas (incl. Air); W = Water

2) Water: Max. temperature 140°F (+60°C)

## Data sheet

**Type EVSI 15 - 50, NC / NO**  
**Larger servo operated valves anti water hammer**

## Features



- Soft Closing (anti water hammer)
- For neutral liquids (max. 50 cSt / 250 SSU) and gases
- Ambient temperature: Up to 120°F (50°C)
- Brass valve body (except EVSI 50 - Gun Metal)
- Gasket materials: VITON for Oil/Inert Gas (O/L), EPDM for Water (W) and Steam (D)
- Media temperature:  
For Oil (O) and Inert Gas (L):  
14 °F (-10°C) to 212°F (+100°C)  
For Water (W) and Steam (D):  
14 °F (-10°C) to 248°F (+120°C)
- Test pressure: Max. 285 psi (20 bar)

## Ordering

In the ordering table below, a code number and type designation are stated for each valve. Please use this information for ordering.

Coils must be ordered separately, please see page 11.

Example: EVSI 20 - 032U6533.

## Normally Closed (Closed when de-energized)

Connection NPT [inch]	Orifice Size [inch]	Flow value		Opening diff. pressure				Max. Wrk. Press.		Media <sup>1)</sup>	Type	Code no. without coil
		C <sub>v</sub> USgal/min	k <sub>v</sub> m <sup>3</sup> /h	Min psi   bar	Max. psi   bar	psi	bar					
1/2	9/16	4.7	4	4	0.3	142	10	225	16	WD	EVSI 15	032U6532
1/2	9/16	4.7	4	4	0.3	142	10	225	16	OL	EVSI 15	032U6538
3/4	3/4	9.4	8	4	0.3	142	10	225	16	WD	EVSI 20	032U6533
3/4	3/4	9.4	8	4	0.3	142	10	225	16	OL	EVSI 20	032U6539
1	1	12.9	11	4	0.3	142	10	180	12.5	WD	EVSI 25	032U6534
1	1	12.9	11	4	0.3	142	10	180	12.5	OL	EVSI 25	032U6540
1 1/4	1 1/4	21	18	4	0.3	142	10	180	12.5	WD	EVSI 32	032U6535
1 1/4	1 1/4	21	18	4	0.3	142	10	180	12.5	OL	EVSI 32	032U6541
1 1/2	1 1/2	28	24	4	0.3	142	10	180	12.5	WD	EVSI 40	032U6536
1 1/2	1 1/2	28	24	4	0.3	142	10	180	12.5	OL	EVSI 40	032U6542
2	2	46.8	40	4	0.3	142	10	180	12.5	WD	EVSI 50	032U6537
2	2	46.8	40	4	0.3	142	10	180	12.5	OL	EVSI 50	032U6543

## Normally Open (Open when de-energized)

1/2	9/16	4.7	4	4	0.3	142	10	225	16	WD	EVSI 15 NO	032U6544
1/2	9/16	4.7	4	4	0.3	142	10	225	16	OL	EVSI 15 NO	032U6550
3/4	3/4	9.4	8	4	0.3	142	10	225	16	WD	EVSI 20 NO	032U6545
3/4	3/4	9.4	8	4	0.3	142	10	225	16	OL	EVSI 20 NO	032U6551
1	1	12.9	11	4	0.3	142	10	180	12.5	WD	EVSI 25 NO	032U6546
1	1	12.9	11	4	0.3	142	10	180	12.5	OL	EVSI 25 NO	032U6552
1 1/4	1 1/4	21	18	4	0.3	142	10	180	12.5	WD	EVSI 32 NO	032U6547
1 1/4	1 1/4	21	18	4	0.3	142	10	180	12.5	OL	EVSI 32 NO	032U6553
1 1/2	1 1/2	28	24	4	0.3	142	10	180	12.5	WD	EVSI 40 NO	032U6548
1 1/2	1 1/2	28	24	4	0.3	142	10	180	12.5	OL	EVSI 40 NO	032U6554
2	2	46.8	40	4	0.3	142	10	180	12.5	WD	EVSI 50 NO	032U6549
2	2	46.8	40	4	0.3	142	10	180	12.5	OL	EVSI 50 NO	032U6555

1) O = Oil; L = Inert Gas (incl. Air); W = Water, D = Steam

## Data sheet

**Type EVSIT 12 - 22, NC**  
**Direct lift, internal pilot operated valves**

## Features



- Hung diaphragm type
- For neutral liquids (max. 50 cSt / 250 SSU) and gases
- Ambient temperature: Up to 120°F (50°C)
- Brass valve body
- Gasket materials: VITON for Oil / Inert Gas (O/L), EPDM for Water (W)
- Media temperature: 14 °F (-10°C) to 194°F (+90°C)
- Test pressure: Max. 285 psi (20 bar)

## Ordering

In the ordering table below, a code number and type designation are stated for each valve. Please use this information for ordering.

Coils must be ordered separately, please see page 11.

Example: EVSIT 18 - 032U6561.

## Normally Closed (Closed when de-energized)

Connection NPT [inch]	Orifice Size [inch]	Flow value		Opening diff. pressure				Max. Wrk. Press.		Media <sup>1)</sup>	Type	Code no. without coil
		C <sub>v</sub> USgal/min	k <sub>v</sub> m <sup>3</sup> /h	Min psi	bar	Max. psi	bar	psi	bar			
1/2	1/2	2.93	2.5	0	0	86	6	142	10	W	EVSIT 12	<b>032U6558</b>
1/2	1/2	2.93	2.5	0	0	86	6	142	10	OL	EVSIT 12	<b>032U6559</b>
3/4	3/4	5.9	5	0	0	86	6	142	10	W	EVSIT 18	<b>032U6560</b>
3/4	3/4	5.9	5	0	0	86	6	142	10	OL	EVSIT 18	<b>032U6561</b>
1	1	5.9	5	0	0	86	6	142	10	W	EVSIT 22	<b>032U6562</b>
1	1	5.9	5	0	0	86	6	142	10	OL	EVSIT 22	<b>032U6563</b>

1) O = Oil; L = Inert Gas (incl. Air); W = Water

## Data sheet

**Type EVSIS 3 - 25,  $\mathcal{U}$  - listed**  
**Solenoid valves for steam**

## Features



- Direct and servo operated solenoid valves for steam
- Normally closed (NC) when the coil is deenergized
- $\mathcal{U}$  - listed, file MH7648
- Resistant to impurities in the medium
- Ambient temperature: Up to 104°F (40°C)
- Low-friction design
- All standard voltages
- Media temperature: Max. 364°F (184°C)
- Thread connections: NPT 1/4 to NPT 1

## Ordering

In the ordering table below, a code number and type designation are stated for each of the valves and coils.

Please use this information for ordering.

Example:

EVSIS 15 with NPT connection - 032U3072

Coil junction box, 120 V AC - 018Z7615

**Only the below mentioned coils can be used for the EVSIS 3 - 25 valves!**

## Valve body

Connection NPT [inch]	Orifice Size [inch]	Flow value		Opening diff. pressure				Max. Wrk. Press.		Media <sup>1)</sup>	Type	Code no. without coil
		C <sub>v</sub> USgal/min	k <sub>v</sub> m <sup>3</sup> /h	Min psi	bar	Max. psi	bar	psi	bar			
1/4	1/8	0.35	0.3	0	0	145	10	350	16	D	EVSIS 3	032U3068
1/4	1/4	1.05	0.9	3	0.2	145	10	350	16	D	EVSIS 6	032U3069
3/8	3/8	2.6	2.2	3	0.2	145	10	350	16	D	EVSIS 10	032U3070
1/2	3/8	2.6	2.2	3	0.2	145	10	350	16	D	EVSIS 10	032U3071
1/2	9/16	3.5	3.0	3	0.2	145	10	350	16	D	EVSIS 15	032U3072
3/4	3/4	5.9	5.0	3	0.2	145	10	350	16	D	EVSIS 20	032U3073
1	1	7.0	6.0	3	0.2	145	10	350	16	D	EVSIS 25	032U3074

1) D = Steam (max. 364°F (184°C))

## Coil

## Technical data

Voltage tolerance	10% / -15%
Power consumption, cut-in	AC: 60 VA
Power consumption, holding	AC: 30 VA, 13 W AC
Insulation of coil windings	Class H according to IEC 85
Connection	Junction box: 2 leads and screw terminal for ground Conduit hub: 14 in. leads
Enclosure, IEC 529	Junction box: Nema 2 (IP 12 - 32) Conduit hub: Nema 4 (IP 54)
Ambient temperature	Max. 104 °F (40°C)
Duty rating	Continuous

## Ordering

Coil voltage	Code no.	
	Junction box	1/2 in. Conduit hub
24 V AC, 60 Hz	018Z7616	018Z7620
120 V AC, 60 Hz	018Z7615	018Z7619
240 V AC, 60 Hz	018Z7614	018Z7618



## Data sheet

**Type EVSIM 6 - 20**  
**Servo operated, proportional valves**

## Features



- For stepless flow regulation in industrial plant
- For water, oil and similar neutral liquids (max. 50 cSt / 250 SSU)
- Short reaction time
- Closes on power failure (fail-safe function)
- Brass valve body
- Ambient temperature: -13°F (-25°C) to 120°F (50°C)
- Pressure range: 7 to 142 psi (0.5 to 10 bar)
- Media temperature: 14 °F (-10°C) to 176°F (+80°C)
- Flow range for water: 3.5 to 22 USgal/min.
- 24 V DC supply voltage

## Ordering

In the ordering table below, a code number and type designation are stated for each of the valves and coils.  
Please use this information for ordering.

Example:

EVSIM 6 with NPT connection - 032U8062  
Coil w. signal converter, 24 V AC - 018Z6987

## Valve body

Connection NPT [inch]	Orifice Size [inch]	Flow Value		Opening diff.pressure				Max.Wrk.Press.		Media <sup>1)</sup>	Type	Code no. Without coil
		c <sub>v</sub> USgal/min	k <sub>v</sub> m <sup>3</sup> /h	Min		Max.		psi	bar			
1/4	1/4	0.94	0.8	7	0.5	145	10	145	10	OLW	EVSIM 6	<b>032U8062</b>
3/8	1/4	0.94	0.8	7	0.5	145	10	145	10	OLW	EVSIM 6	<b>032U8063</b>
3/8	3/8	1.52	1.3	7	0.5	145	10	145	10	OLW	EVSIM 10	<b>032U8064</b>
1/2	3/8	1.52	1.3	7	0.5	145	10	145	10	OLW	EVSIM 10	<b>032U8065</b>
1/2	9/16	2.5	2.1	7	0.5	145	10	145	10	OLW	EVSIM 15	<b>032U8066</b>
3/4	3/4	6.0	5.0	7	0.5	145	10	145	10	OLW	EVSIM 20	<b>032U8067</b>

1) O = Oil; L = Inert Gas (incl. Air); W = Water

## Coil

## Technical data

Output	Max. 20W
Ambient temperature	-13°F (-25°C) to 120°F (50°C)
Resistance	23.5Ω at an ambient temperature of 68°F (20°C)
Insulation of coil windings	Class H according to IEC 85 0 - 10 V pilot signal: 400kΩ, 4 - 20mA pilot signal: 250kΩ

## Ordering

Description	Supply voltage	Connection	Pilot signal	Code no.
Without signal converter	24 V AC <sup>1)</sup>	Terminal box Pg 13.5	300 - 600 mA	<b>018Z6987</b>
With signal converter	21 - 30 V DC	2 m 3-core cable, Pg 13.5	0 - 10 V	<b>018Z0290</b>
			4 - 20 mA	<b>018Z0291</b>

1) ±10% full-wave rectified

Features



- Class: General purpose, indoor
- Junction box c/w leads
- Voltage tolerance = +10% / -15%
- Ambient temperature:  
-40°F (-40°C) to 120°F (50°C)
- Power consumption: 17.5W

Voltage V	Frequency Hz	Cut-in VA	Holding VA	Code Number
24	50 / 60	76	40	018Z7613
110 / 120	50 / 60	76	45	018Z7612
208 / 204	50 / 60	76	45	081Z7611



- Class: Rainproof "NEMA 3R"
- 1/2" Conduit hub
- 18" leads
- Voltage tolerance = +10% / -15%
- Ambient temperature:  
-40°F (-40°C) to 120°F (50°C)
- Power consumption: 17.5W

Voltage V	Frequency Hz	Cut-in VA	Holding VA	Code Number
24	50 / 60	76	40	018Z7623
110 / 120	50 / 60	76	45	018Z7622
208 / 204	50 / 60	76	45	081Z7621

## Spare parts

Spare parts for EVI 1.5 - 10 (NC only)

Spare part sets contain armature with valve plate, spring and O-ring.

Type	Code no.
EVI 1.5, 2, 3	<b>032U1060</b>
EVI 6	<b>032U3204</b>
EVI 10	<b>032U3205</b>

Spare parts for EVSI 6 - 22 (NC only)

Spare part sets contain armature with valve plate, spring and diaphragm. For EVSI 6 and 10, the spare parts set also contain an O-ring.

Type	Media <sup>1)</sup>	Code no.
EVSI 6	W	<b>032U1062</b>
EVSI 6	OL	<b>032U1063</b>
EVSI 10	W	<b>032U1065</b>
EVSI 10	OL	<b>032U1066</b>
EVSI 12	W	<b>032U1068</b>
EVSI 12	OL	<b>032U1067</b>
EVSI 18	W	<b>032U1070</b>
EVSI 18	OL	<b>032U1069</b>
EVSI 22	W	<b>032U1070</b>
EVSI 22	OL	<b>032U1069</b>

Spare parts for Normally Open Units (NO)

Spare part set contain armature tube with armature fitted, and O-ring.

Type	Media <sup>1)</sup>	Code no.
EVI 1.5 - 3 NO	OLW	<b>032U0229</b>
EVSI 6 NO	W	<b>032U0165</b>
EVSI 6 NO	OL	<b>032U0166</b>
EVSI 10 NO	OL(W)	<b>032U0167</b>
EVSI 15 - 50 NO	WD	<b>032U0296</b>
EVSI 15 - 50 NO	OL	<b>032U0295</b>

Spare parts set for EVSIT 12, 18, 22

Spare part sets contain service element, consisting of armature with spring valve plate and diaphragm.

Type	Media <sup>1)</sup>	Code no.
EVSIT 12	W	<b>032U0288</b>
EVSIT 12	OL	<b>032U0088</b>
EVSIT 18	W	<b>032U0289</b>
EVSIT 18	OL	<b>032U0089</b>
EVSIT 22	W	<b>032U0289</b>
EVSIT 22	OL	<b>032U0089</b>

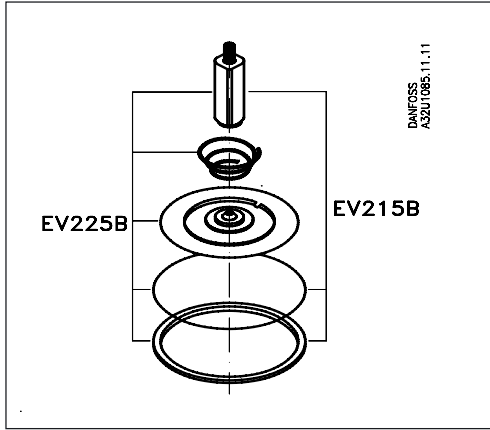
Spare parts set for EVSI 15 - 50 (NC only)

Spare part sets contain O-ring for armature tube, spring and diaphragm, two O-rings for the pilot system, O-ring and gasket for equalizing orifice.

Type	Media <sup>1)</sup>	Code no.
EVSI 15	WD	<b>032U1071</b>
EVSI 15	OL	<b>032U1072</b>
EVSI 20	WD	<b>032U1073</b>
EVSI 20	OL	<b>032U1074</b>
EVSI 25	WD	<b>032U1075</b>
EVSI 25	OL	<b>032U1076</b>
EVSI 32	WD	<b>032U1077</b>
EVSI 32	OL	<b>032U1078</b>
EVSI 40	WD	<b>032U1079</b>
EVSI 40	OL	<b>032U1080</b>
EVSI 50	WD	<b>032U1081</b>
EVSI 50	OL	<b>032U1082</b>

<sup>1)</sup> O = Oil; L = Inert Gas (incl. Air); W = Water; D = Steam

Spare parts



Spare part set for EVSIS 3-25

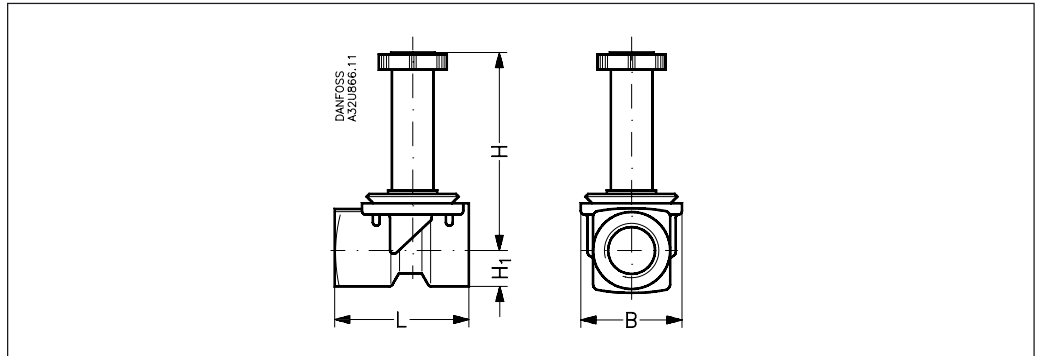
Type	Code no.
EVSIS 3	032U3170
EVSIS 6 and 10	032U3171
EVSIS 15	032U3172
EVSIS 20 and 25	032U3173

Spare part set for EVSIS 3.  
The spare part set includes armature with valve plate and spring, O-ring, and teflon gasket.

Spare part set for EVSIS 6-25.  
The spare part set includes armature with valve plate and spring, diaphragm, O-ring, and teflon gasket.

Dimensions and weight

Valves without coil

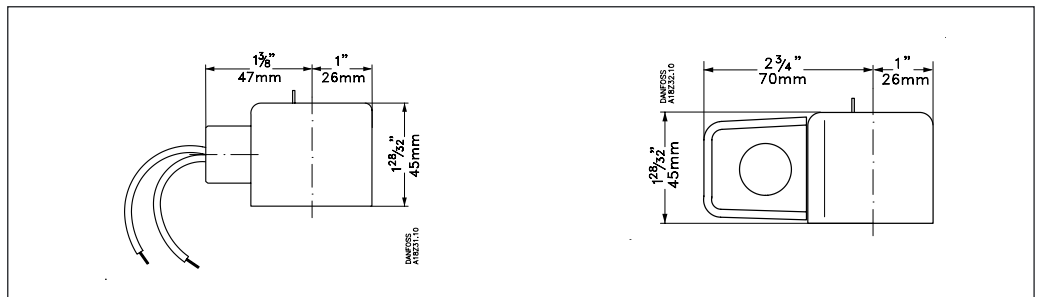


Type	L		B		H <sub>1</sub>		H <sup>1)</sup>		Weight w/o coil	
	in	mm	in	mm	in	mm	in	mm	Lbs	kg
EVI 1.5 - 2	1 3/8 <sup>2)</sup>	35 <sup>2)</sup>	1 5/16	34	1/2	12	2 3/4	70	0.33	0.15
EVI 3	1 5/8	41	1 5/16	34	1/2	13	2 3/4	71	0.44	0.2
EVI 6	1 25/32	45.5	1 3/4	43.5	1/2	13	15/16	74	0.5	0.22
EVI 10	2 9/32	58	1 7/8	48	1/2	13	3	77	0.64	0.29
EVSI 6	1 25/32	45.5	1 3/4	43.5	1/2	13	2 15/16	74	0.5	0.22
EVSI 10	2 9/32	58	1 7/8	48	1/2	13	3	77	0.64	0.29
EVSI 12	2 7/16	62	2	50	1/2	13	3	77	0.78	0.35
EVSI 15	3 3/12	80	2 1/16	52	9/16	15	3 11/16	94	1.8	0.80
EVSI 18	3 17/32	90	2 3/16	56	11/16	18	3 1/4	83	1.4	0.65
EVSI 20	3 11/16	94	2 1/4	58	11/16	18	3 7/8	98	2.2	1.0
EVSI 22	3 17/32	90	2 1/2	64	7/8	23	3 5/8	92	2.1	0.95
EVSI 25	4 9/16	116	2 3/4	70	7/8	22	4 1/4	108	3.1	1.4
EVSI 32	4 13/16	122	3 1/4	82	11/16	27	4 1/2	115	4.4	2.0
EVSI 40	5 3/16	132	3 3/4	95	1 1/4	32	4 7/8	124	7.1	3.2
EVSI 50	6 3/8	162	4 7/16	113	1 7/16	37	5 1/8	130	9.6	4.3
EVSIT 12	2 7/16	62	2	50	1/2	13	3	77	0.78	0.35
EVSIT 18	3 17/32	89	2 3/16	56	11/16	18	3 1/4	83	1.4	0.65
EVSIT 22	3 17/32	90	2 1/2	64	7/8	23	5 3/8	92	2.1	0.95

<sup>1)</sup> For de-energized open valves (NO) + 3/16 in (5 mm). The dimension is the same with coil fitted.

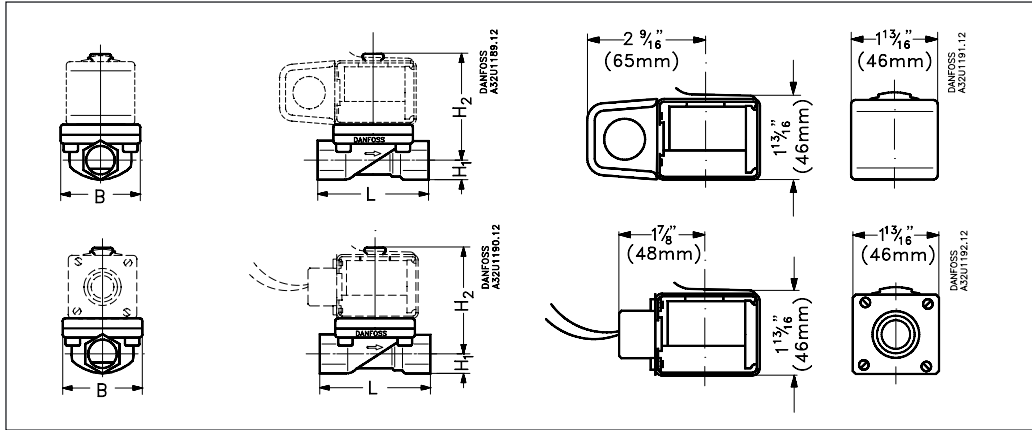
<sup>2)</sup> For EVI 1.5 1/4" (032U7502) 1 1/2 in (39 mm).

Coils



Type	Weight	
	Lbs	kg
Conduit	0.9	0.4
Junction	0.98	0.44

Dimensions and weight

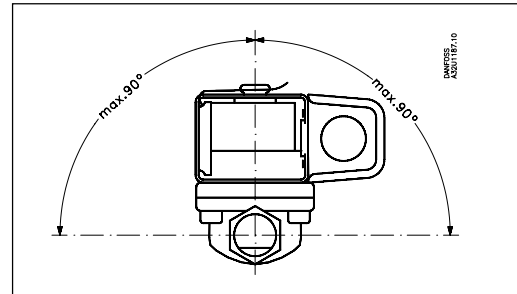


Type	L		B		H <sub>1</sub>		H <sub>2</sub>		Weight with coil	
	in	mm	in	mm	in	mm	in	mm	Lbs	kg
EVSIS 3	1 1/2	38.0	1 11/32	34.0	7/16	11.5	3 1/8	79.5	0.25	0.56
EVSIS 6	2 7/16	62.0	1 13/16	46.0	1/2	13.0	3 17/32	90.0	0.35	0.78
EVSIS 10	2 7/16	62.0	1 13/16	46.0	1/2	13.0	3 17/32	90.0	0.37	0.82
EVSIS 15	3 9/16	81.0	2 7/32	56.0	19/32	15.0	3 19/32	91.5	0.44	0.96
EVSIS 20	3 27/32	98.0	2 27/32	72.0	23/32	18.0	3 27/32	98.0	0.64	1.40
EVSIS 25	4 9/16	106.0	2 27/32	72.0	27/32	21.0	4 3/16	106.0	0.82	1.80

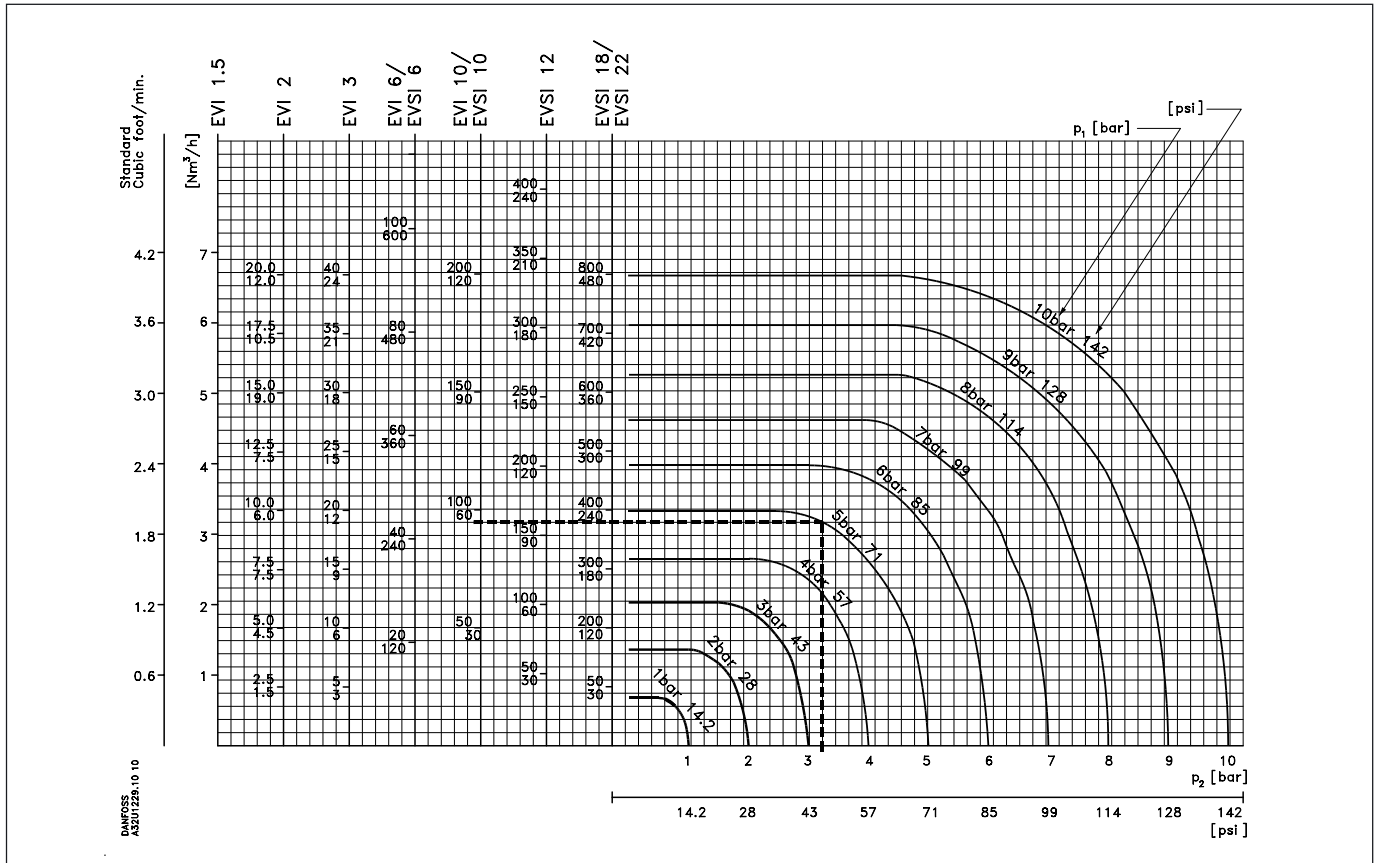
Installation

The following general conditions apply to the installation of solenoid valves:

1. The aim should be to install the solenoid valve with coil upward. This reduces the risk of deposits forming in the amature tube.
2. Before installation, piping must be flushed clean.
3. To avoid operational failure from impurities, a filter should always be installed ahead of the solenoid valve. A Danfoss type FV filter is recommended for water filtration.



EVI 1.5 - 10 and EVSI 6 - 22



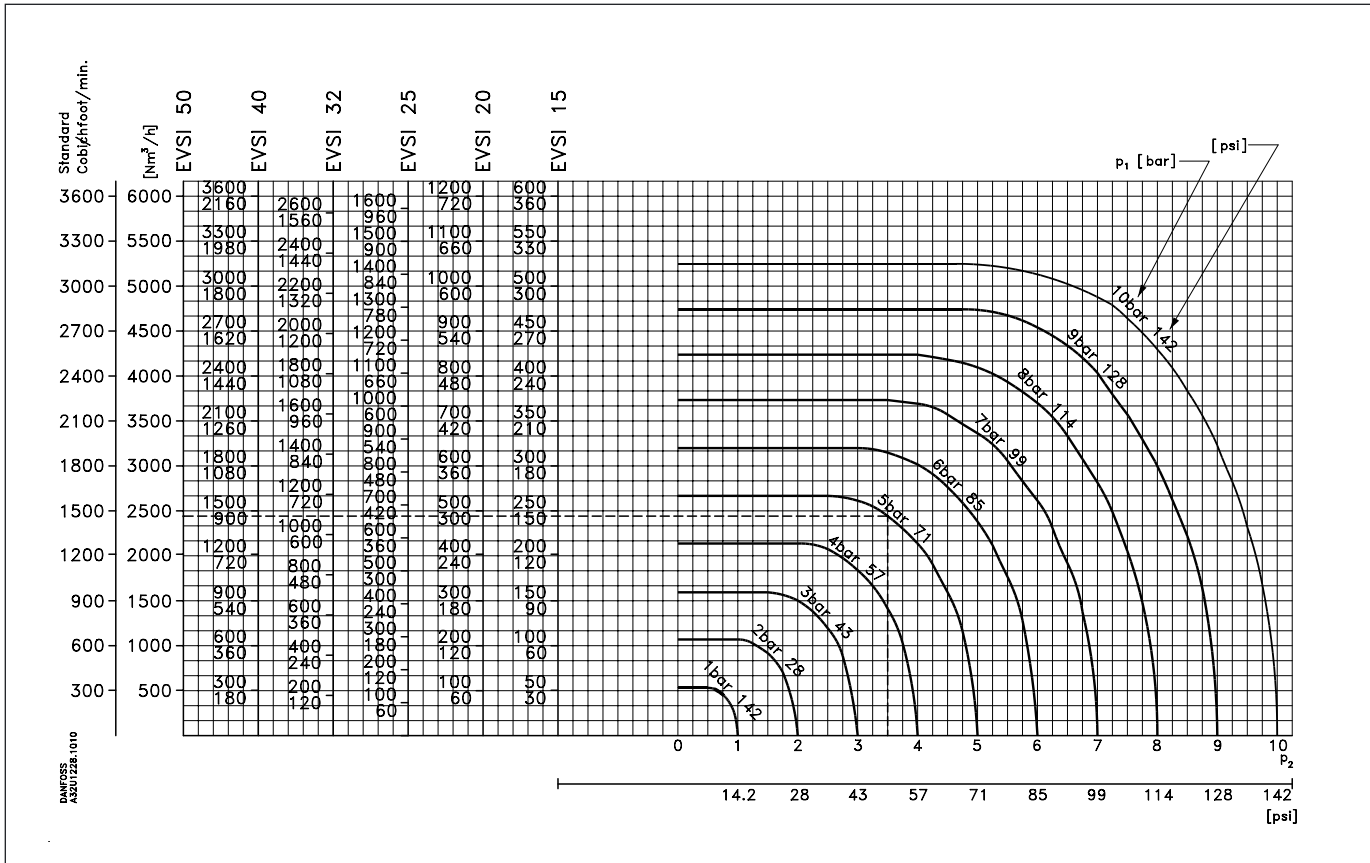
Example

Required capacity: 100  $\text{Nm}^3/\text{h}$  or 60 SCFM  
 Inlet pressure: 5 bar (71 psi)  
 Outlet pressure: 3.15 bar (45 psi)

The required capacity can be obtained with an EVSI 10 (actual capacity = 95  $\text{Nm}^3/\text{h}$  or 57 SCFM).

Take a vertical line from 3.15 bar (45 psi) until it intersects an inlet pressure of 5 bar (71 psi). From this point take a horizontal line until it intersects the capacity curves.

EVSI 15 - 50



Example

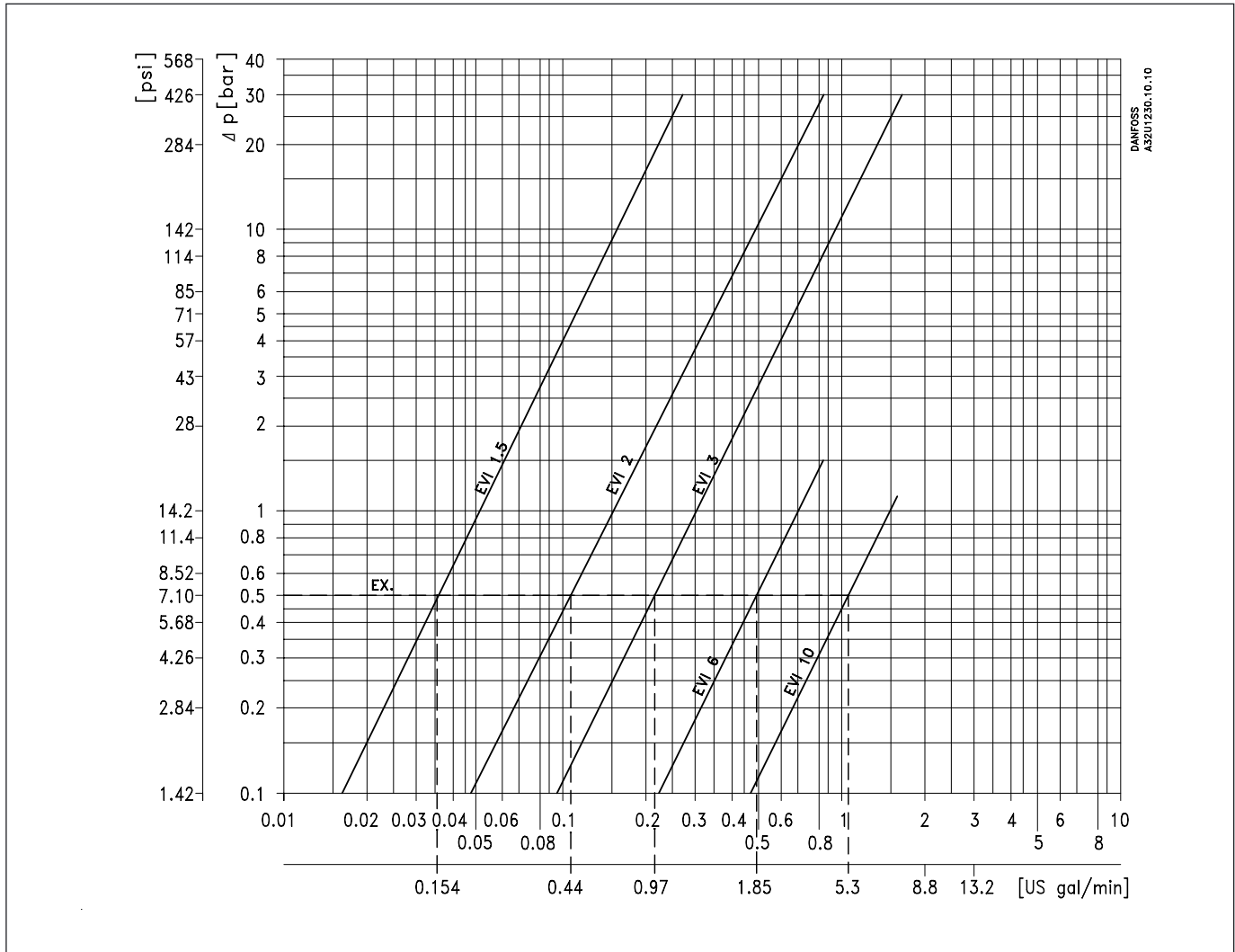
What capacity is obtainable from EVSI 15 - 50 with an inlet pressure of 5 bar (71 psi) and an outlet pressure of 3.6 bar (51 psi)?

Take a vertical line from the outlet pressure of 3.6 bar (51 psi) until it intersects the curve for an inlet pressure of 5 bar (71 psi). From this point take a horizontal line to the valve capacities.

- The following capacities are given:
- EVSI 15 = 240 Nm<sup>3</sup>/h or 144 SCFM
  - EVSI 20 = 485 Nm<sup>3</sup>/h or 291 SCFM
  - EVSI 25 = 670 Nm<sup>3</sup>/h or 450 SCFM
  - EVSI 32 = 1100 Nm<sup>3</sup>/h or 660 SCFM
  - EVSI 40 = 1400 Nm<sup>3</sup>/h or 840 SCFM
  - EVSI 50 = 2450 Nm<sup>3</sup>/h or 1470 SCFM



EVI 1.5 - 10

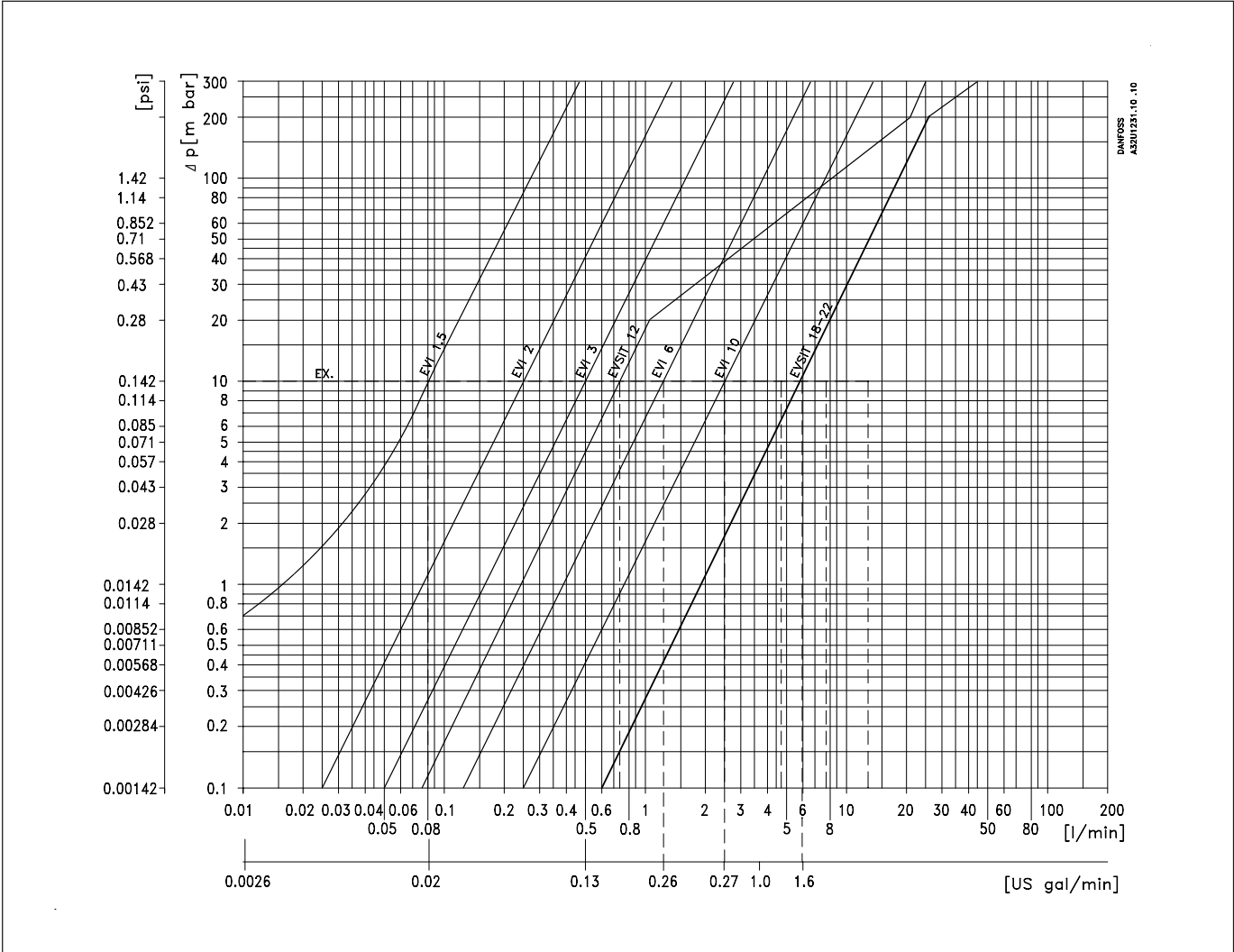


Example

Differential pressure: 0.5 bar (7.1 psi)

Type	m <sup>3</sup> /h	GPM
EVI 1.5	0.035	0.154
EVI 2	0.10	0.44
EVI 2	0.22	0.97
EVI 6	0.42	1.85
EVI 10	1.2	5.3

EVI 1.5 - 10 and EVSIT 12 - 22

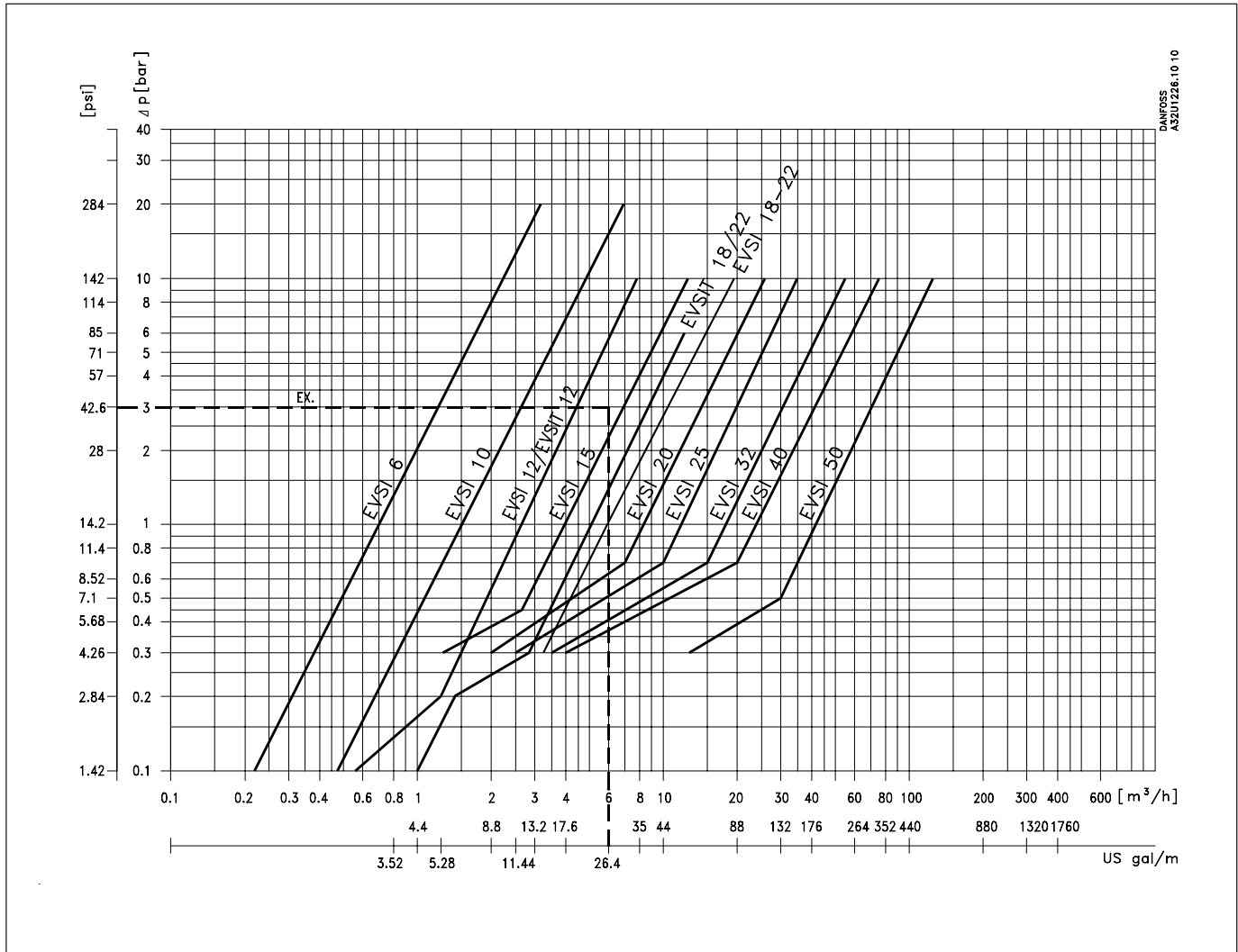


Example

Differential pressure: 10 mBar or 0.142 psi

Type	l/min	GPM
EVI 1.5	0.08	0.02
EVI 2	0.25	0.65
EVI 3	0.5	0.13
EVI 6	1.0	0.26
EVI 10	2.7	0.7
EVSIT 12	0.8	0.2
EVSIT 18 - 22	6	1.6

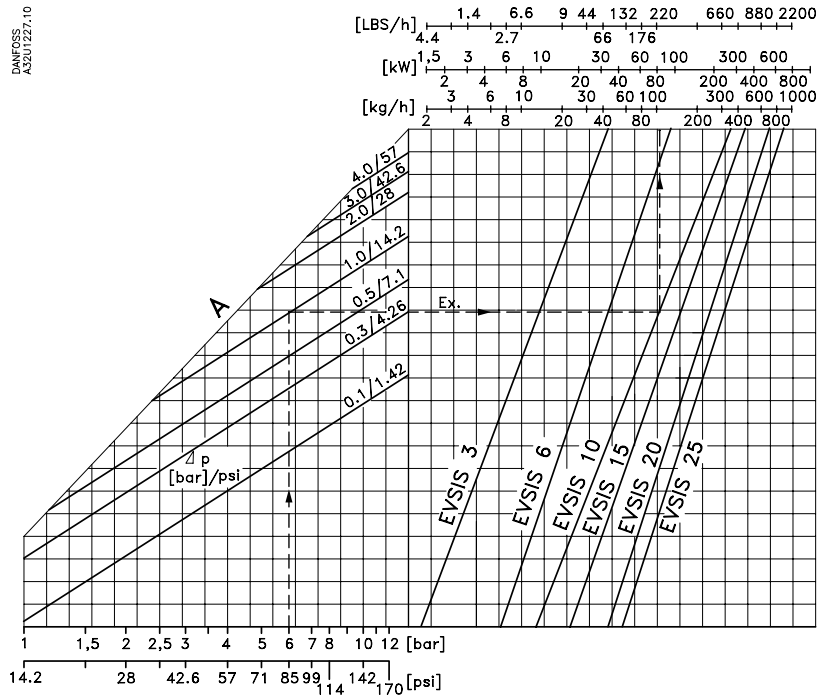
EVSI 6 - 50



Example

Type	m <sup>3</sup> /h	GPM
EVSI 6	1.2	5.28
EVSI 10	2.6	11.44
EVSI / EVSIT I 2	4.4	19.36
EVSI 15	8.4	37.0
EVSI 18 - 22	10.2	44.9
EVSI 20	13	57.2
EVSI 25	19	83.6
EVSI 32	33	145.2
EVSI 40	42	184.8
EVSI 50	70	308.0

EVSIS 3 - 25 UL



A: Critical pressure drop

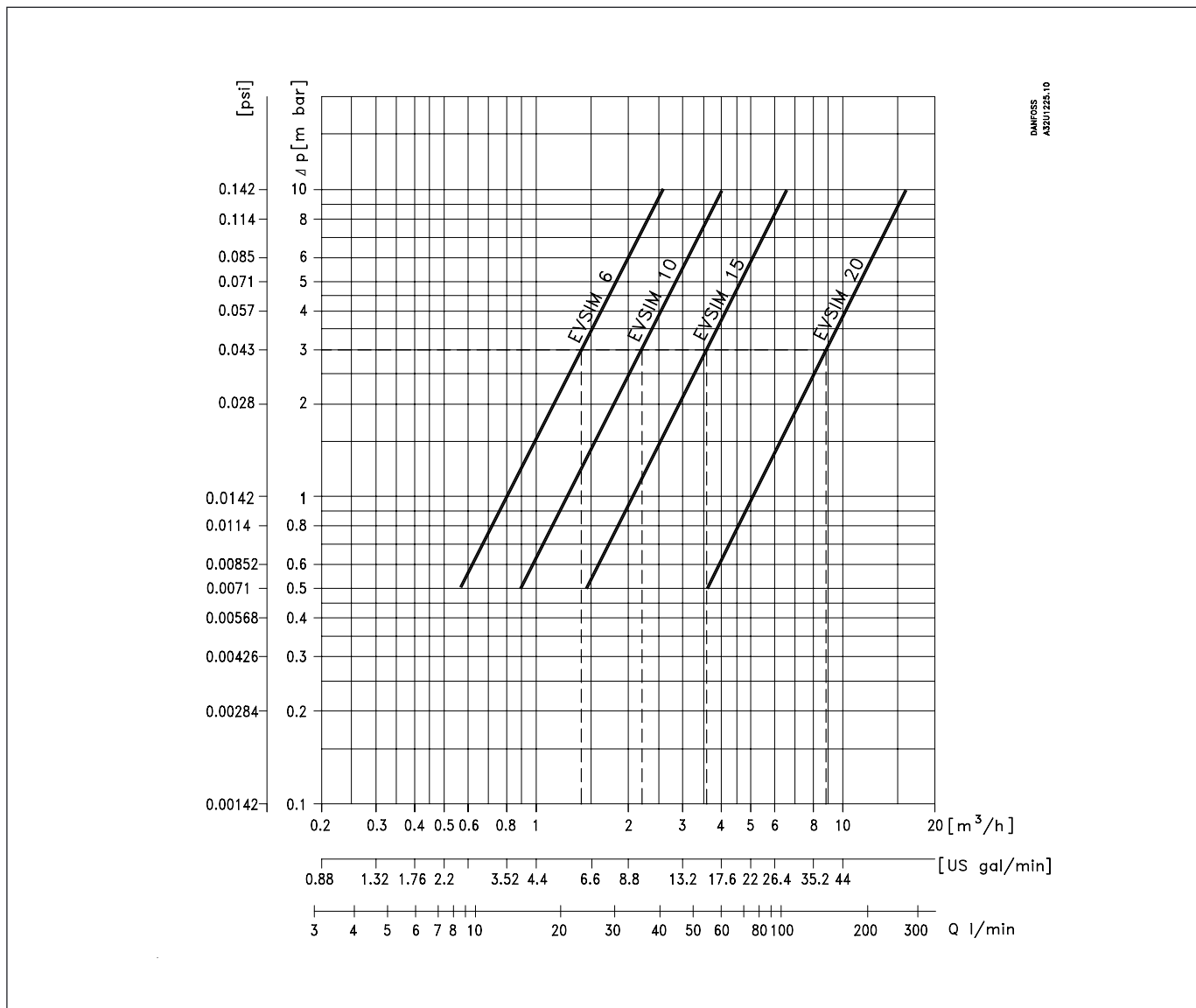
Example

Inlet pressure: 6 bar (85 psi)  
 Differential pressure: 1 bar (14.2 psi)

Take a vertical line from the inlet pressure (6 bar) until it intersects the differential pressure curve (1 bar). From this point take a horizontal line until it intersects the capacity curves. Now take a vertical line to read the capacity scales.

The capacity of EVSIS 10 is approx. 220 LBS/h (100 kg/h.)

EVSIM 6 - 20



Example

The following capacities are given:

Type	m <sup>3</sup> /h	GPM
EVSIM 6	1.4	6.2
EVSIM 10	2.2	9.7
EVSIM 15	3.6	15.8
EVSIM 20	8.7	38.3

## Data sheet

**EVI, EVSI and EVSIT**  
**General information**
**Back pressure**

In general, solenoid valves should never be installed so that the pressure on the outlet side can become greater than the pressure on the inlet side.

As a guide the table gives values that indicate when the different types will begin to open if back pressure occurs.

Type	Max. psi	Max. bar
EVI 1.5	89.2	6.0
EVI 2	28.4	2.0
EVI 3	21.3	1.5
EVI 6	4.3	0.3
EVI 10	1.4	0.1
EVSI 6	4.3	0.3
EVSI 10	0.3	0.02
EVSI 12	1.4	0.1
EVSI 18	0.14	0.01
EVSI 22	0.14	0.01
EVSI 15	1.4	0.1
EVSI 20	0.7	0.05
EVSI 25	1.4	0.1
EVSI 32	0.7	0.05
EVSI 40	1.14	0.08
EVSI 50	0.7	0.05
EVSIT 12	1.4	0.1
EVSIT 18/22	0.14	0.01

**Valve opening / closing times**

With larger valves, very short closing times can cause water hammer.

EVSI 15-50 pilot operated valves incorporate water hammer dampening. The table gives opening and closing times for the different types. Operating conditions, specifically pressure, can cause deviations from these values.

Type	Opening sec.	Closing sec.
EVI 1.5	0.01	0.02
EVI 2	0.01	0.02
EVI 3	0.02	0.02
EVI 6	0.02	0.02
EVI 10	0.02	0.03
EVSI 6	0.04	0.25
EVSI 10	0.05	0.30
EVSI 12	0.06	0.30
EVSI 18	0.20	0.50
EVSI 22	0.20	0.50
EVSI 15	0.04	0.35
EVSI 20	0.04	1.00
EVSI 25	0.30	1.00
EVSI 32	1.00	2.50
EVSI 40	1.50	4.00
EVSI 50	5.00	10.00
EVSIT 12	0.10	0.10
EVSIT 18/22	2.15	0.10



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