A

Products in this catalogue are identified by an **alphanumerical** or **numerical** identification system

ALPHANUMERICAL CATALOGUE NUMBERS

		E	**290**A385	
SC		B	**262**C220	
SC	X(1)	S	**272**A017	TPL 20655
WP		E	**030**B013	E MBMO

prefix
pipe thread
series no.
basic number
suffix
TPL no.

(1) The prefix X is always associated with the TPL (temporary parts list) number

PREFIX - Electrical characteristics, connectors etc.

prefix							description
1	2	3	4	5	6	7	
C	F	S	C				Solenoid with connector DIN 43650, 9,4 mm, pilot 302
C	F	V	T				Solenoid with connector M12, LED and protection, pilot 302
E	F						Explosionproof - NEMA 3, 4, 6, 7, 9
E	V						Explosionproof - NEMA 3, 4, 6, 7, 9 - 316 SS
W	B	L	P				Increased safety / encapsulation - moulded enclosure ATEX-IECEx
E	M						Encapsulated ATEX-IECEx
		E	T				Threaded conduit / ext. thread (M20 x 1.5)
				H	T		Class H - high temperature , +80°C ambient temp.
L	P	K	F				Flameproof - Alum. ATEX-IECEx
N	F						Flameproof - Alum. ATEX-IECEx
P	V						Encapsulated ATEX-IECEx
S	C						Solenoid with spade plug connector
		T					Threaded conduit / ext. thread (1/2" NPT)
W	P						Waterproof IP67 - metal enclosure
L	I						Intrinsically safe - Alum. enclosure ATEX-IECEx
N	F			I	S		I.S. with Aluminium IP67 enclosure ATEX-IECEx
W	S						Waterproof IP67 - 316 SS enclosure
W	S	E	M				Encapsulated ATEX-IECEx, 316 SS enclosure
W	S	L	I				Intrinsically safe - 316L enclosure ATEX-IECEx
W	S	L	P	K	F		Flameproof - 316L SS ATEX-IECEx
W	S	N	F				Flameproof - 316L SS ATEX-IECEx
W	S	N	F	I	S		I.S. with 316 SS IP67 enclosure ATEX-IECEx
S	G						Dust applications - coils and connectors - II 3 D, Ex tc IIIC
						X	Other special constructions *

* If prefix X is used, always specify Temporary Parts List (TPL) number

The catalogue number appears on the product label:

SUFFIX - Seal materials, manual operator etc. (under the "options" column in the SPECIFICATIONS table)

suffix							description
1	2	3	4	5	6	7	
	C	O					Epoxy coating on all external surfaces
E							EPDM (ethylene-propylene)
N							Oxygen service (CR (chloroprene)
N	V						FPM (fluoroelastomer) parts cleaned for oxygen service
H	W						Diaphragm for hot water service
J							CR (chloroprene / neoprene)
			L	T			Low temperature
	M	B					Mounting bracket
			M	O			Impulse or maintained manual operator
			M	S			Maintained manual operator
		P					Dry gas, non-lubricated air construction
		Q					Long life construction
	S	L					Certifiied IEC 61508 Functional Safety data
T							PTFE (polytetrafluoroethylene)
V							FPM (fluoroelastomer)
			V	M			Primary vacuum
			V	H			Secondary vacuum

TPL (temporary parts list) number - always associated with the prefix X **(under "options" in the catalogue)**

TPL	description
20547	Version for external pilot air supply (series 551-553)
20655	Manual operator with pushbutton (series 272-374)
20674	LED and protection (prefix CFSC)
23012	2 Mounting holes øM4, 7 mm depth (stainless steel body, series 370)

NUMERICAL CATALOGUE NUMBERS

165	0	0088	210555
109	0	0040	970517

series no.
type of standard material
serial number
option code

OPTION CODES (under "options" in the catalogue)

option	description
210555	Protective cover mounted on valves 1/2-3/4-DN15-20 (series 165-166)
210556	Protective cover mounted on valves 1-1 1/4-DN25-32 (series 165-166)
210557	Protective cover mounted on valves 1 1/2-2-DN40-50 (series 165-166)
210558	Protective cover mounted on valves DN65-80 (series 165)
260657	2 explosionproof switches, 1 contact, -20°..+80°C, DN15..32 (series 165-166)
260658	2 explosionproof switches, 1 contact, -20°..+80°C, DN40..80 (series 165-166)
260660	2 explosionproof switches, 2 contacts, -20°..+80°C, DN15..32 (series 165-166)
260661	2 explosionproof switches, 2 contacts, -20°..+80°C, DN40..80 (series 165-166)
260663	2 explosionproof switches, 1 contact, -55°..+82°C, DN15..32 (series 165-166)
260664	2 explosionproof switches, 1 contact, -55°..+82°C, DN40..80 (series 165-166)
970509	Oxygen service (series 165 except for DN65 to 80, series 166)
970517	Oxygen service (series 108-109)
970523	Valve body degreased during assembly (series 165-166)

The catalogue number appears on the product label:

How to use the product's catalogue number (on the label) to find the product characteristics:

ALPHANUMERICAL CATALOGUE NUMBER (with prefix)

example: solenoid valve SC**E238**D006

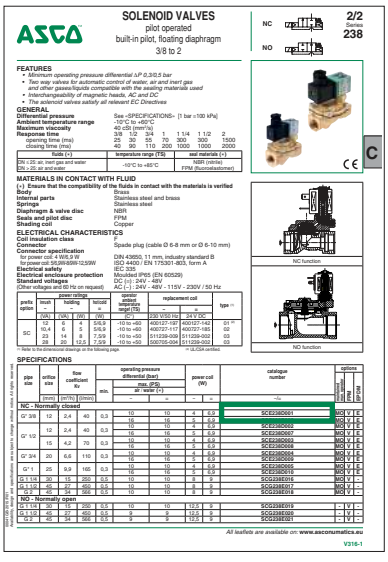
➜ Use the **Catalogue Number Index** (page V001) to:

. Locate the sequence number **E238**
. Locate the prefix **SC**
. Find the full catalogue number **SCE238D006**
. Identify the page number **V316-1**

238913-117	● V1100-
SCE238D001	V316-1
SCE238D002	V316-1
SCE238D003	V316-1
SCE238D004	V316-1
SCE238D005	V316-1
SCE238D006	**V316-1**
SCE238D007	V316-1
SCE238D008	V316-1
SCE238D009	V316-1
SCE238D010	V316-1
SCG238C016	V316-1
SCG238C017	V316-1
SCG238C018	V316-1
SCG238C019	V316-1

page

➜ Consult page **V316-1**



ALPHANUMERICAL CATALOGUE NUMBER (without prefix)

example: pressure-operated valve **E290**A385

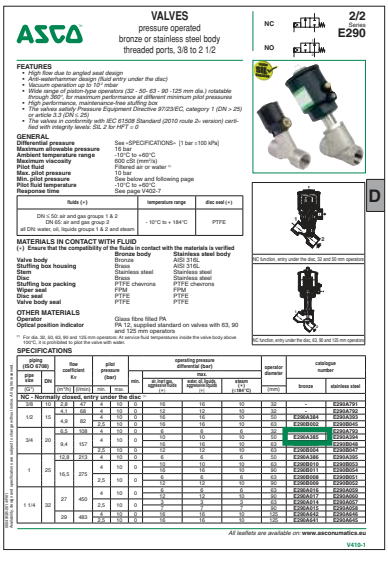
➜ Use the **Catalogue Number Index** (page V001) to:

. Locate the sequence number **E290**
. Find the full catalogue number **E290A385**
. Identify the page number **V410-1**

S290B229	V420-2
S290A230	V420-2
S290A231	V420-2
S290A259	V420-2
E290A384	V410-1
E290A385	**V410-1**
E290A386	V410-1
E290A387	V410-2
E290A388	V410-2
E290A389	V410-2
E290A390	V410-2
E290A391	V410-2
E290A392	V410-2
E290A393	V410-1
E290A394	V410-1

page

➜ Consult page **V410-1**



NUMERICAL CATALOGUE NUMBER

example: solenoid valve **109**00040

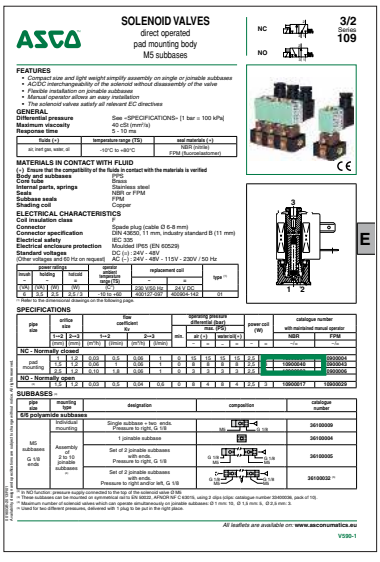
➜ Use the **Catalogue Number Index** (page V001) to:

. Locate the series number **109**
. Find the full catalogue number **10900040**
. Identify the page number **V590-1**

10900003	V590-1
10900004	V590-1
10900006	V590-1
10900017	V590-1
10900029	V590-1
10900040	**V590-1**
10900043	V590-1
123664-017	V572-1
12600013	V905-23-1
12600014	V905-23-1
12600017	V905-23-1
12600018	V905-23-1
12600019	V905-23-1
12600020	V905-23-1

page

➜ Consult page **V590-1**

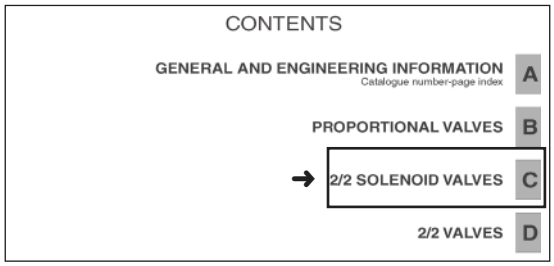


A

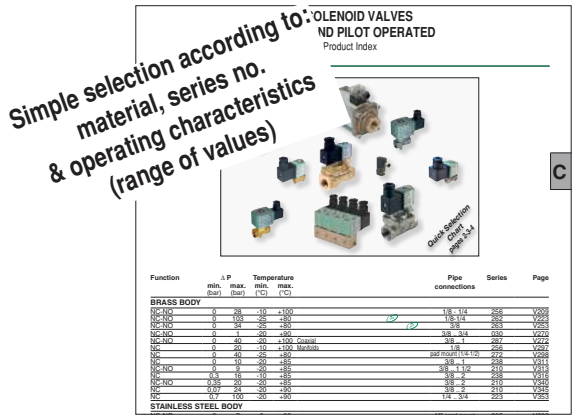
If you know the valve function:

Example: solenoid valve 2/2 NC

➜ Consult the page:
Solenoid valves 2/2, **section C**



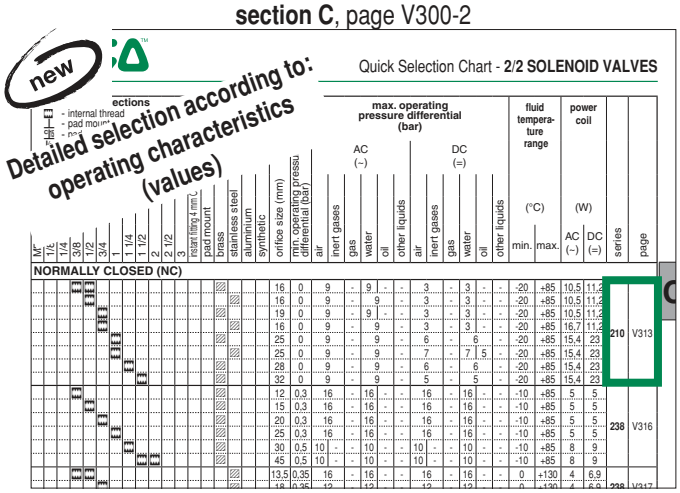
➜ Consult the **Product Index of section C**, page V300-1



Function	Δ P min. (bar)	Δ P max. (bar)	Temperature min. (°C)	Temperature max. (°C)	Pipe connections	Series	Page
BRASS BODY							
NC-NO	0	28	-10	+150	1/8 - 1/4	255	V308
NC-NO	0	103	-25	+80	1/8-1/4	262	V308
NC-NO	0	34	-25	+80	3/8	253	V253
NC-NO	0	1	-30	+90	3/8 .. 3/4	220	V270
NC-NO	0	40	-20	+100 Coaxial	3/8 .. 1	267	V272
NC	0	20	-10	+100 Manifolds	1/8	256	V297
NC	0	40	-25	+80	pad mount (1/4-1/2)	272	V298
NC	0	10	-20	+85	3/8 .. 1	238	V311
NC-NO	0	9	-20	+85	3/8 .. 1 1/2	210	V313
NC	0,3	16	-10	+85	3/8 .. 2	238	V316
NC-NO	0,35	20	-20	+85	3/8 .. 2	210	V340
NC	0,07	24	-20	+90	3/8 .. 2	210	V345
NC	0,7	100	-20	+90	1/4 .. 3/4	223	V353
STAINLESS STEEL BODY							
NC	0	10	-20	+85	3/8 .. 1	238	V311
NC-NO	0	9	-20	+85	3/8 .. 1 1/2	210	V313
NC	0,3	16	-10	+85	3/8 .. 2	238	V316

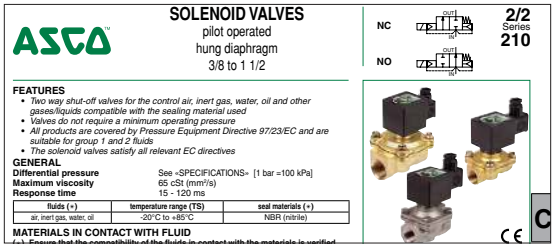
page

or ➜ Consult the **Quick Selection Chart section C**, page V300-2



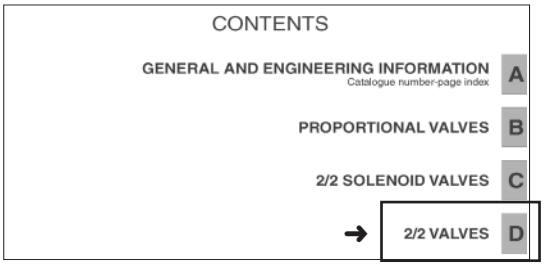
page

➜ Consult page **V313-1**

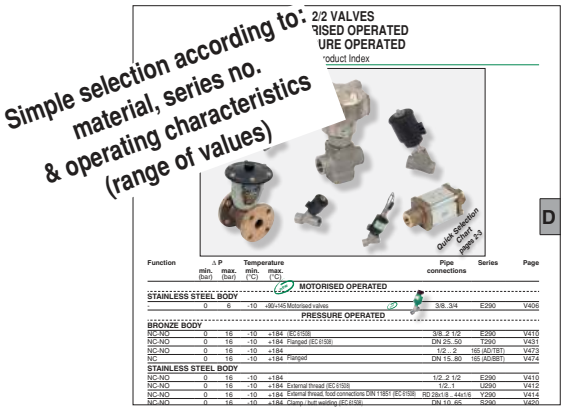


Example: pressure-operated valve 2/2 NC

➜ Consult the page:
Pressure-operated valves 2/2, **section D**



➜ Consult the **Product Index of section D**, page V400-1

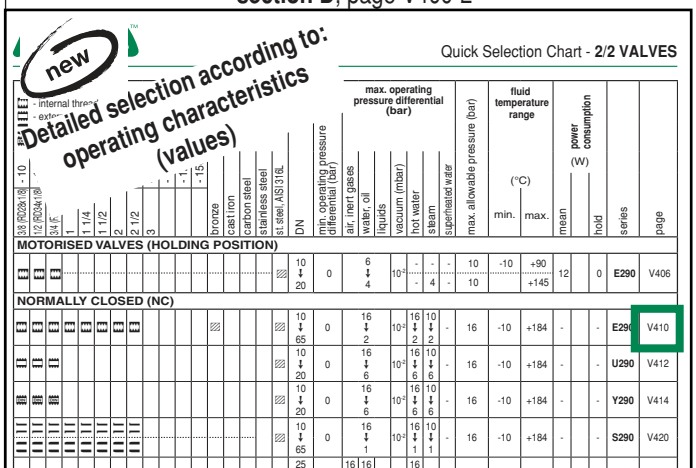


Function	Δ P min. (bar)	Δ P max. (bar)	Temperature min. (°C)	Temperature max. (°C)	Pipe connections	Series	Page
MOTORISED OPERATED							
STAINLESS STEEL BODY							
NC-NO	0	6	-10	+90÷145 Motorised valves	3/8, 3/4	E290	V406
PRESSURE OPERATED							
BRONZE BODY							
NC-NO	0	16	-10	+184 (EC-1538)	3/8..2 1/2	E290	V410
NC-NO	0	16	-10	+184 Flanged (EC-1538)	DN 25..50	T290	V431
NC-NO	0	16	-10	+184	1/2..2	16S (AD/TBT)	V473
NC	0	16	-10	+184 Flanged	DN 15..80	16S (AD/BT)	V474
STAINLESS STEEL BODY							
NC-NO	0	16	-10	+184	1/2..2 1/2	E290	V410
NC-NO	0	16	-10	+184 External thread (EC-1538)	1/2..1	U290	V412
NC-NO	0	16	-10	+184 External thread, food connections DIN 11851 (EC-1538)	RD 28x1/8 ..44x1/6	Y290	V414
NC-NO	0	16	-10	+184 Clamp / butt welding (EC-1538)	DN 10..65	S290	V420

STAINLESS STEEL BODY							
NC-NO	0	16	-10	+184	1/2..2 1/2	E290	V410
NC-NO	0	16	-10	+184 External thread	1/2..1	U290	V412

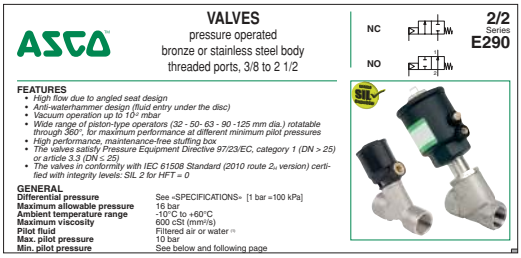
page

or ➜ Consult the **Quick Selection Chart section D**, page V400-2



page

➜ Consult page **V410-1**



SOLENOID VALVES WITH CONNECTOR

Ordering example (alphanumerical catalogue number)

\+ 2 mounting holes øM4, depth 7 mm + voltage/frequency (AC) or voltage (DC)

full catalogue number: **SCXE370A031**

TPL: **23012**

230V/AC 50 Hz

Ordering example (numerical catalogue number)

\+ oxygen service + voltage/frequency (AC) or voltage (DC)

full catalogue number: **10900040**

option code: **970517**

24V/DC

PRESSURE-OPERATED VALVES

Ordering example (piston-type valve)

=

\+

full catalogue number: **E290A384**

solenoid pilot valve: **18900032**

Ordering example (diaphragm-type valve)

=

\+

\+

guard mounted on valve

full catalogue number: **16500088**

solenoid pilot valve: **E314K151S1N01F8**

option code: **210555**

Example: You have selected a 2/2 NC series **262** solenoid valve (from **section C**) and would like to choose a solenoid for this valve for use in explosive atmosphere zones 1-21, protection type “em”.

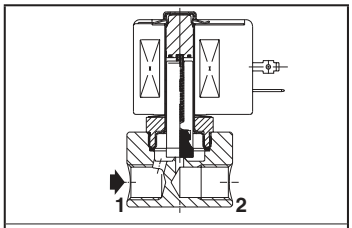
➜ Product page **V235-1** (standard solenoid valve)

ves

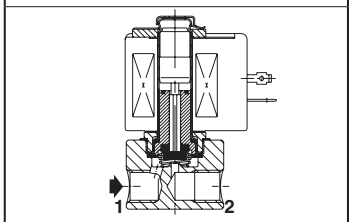
IONS» [1 bar =100 kPa]

seal materials (*)
NBR (nitrile)
UR (cast urethane)

t with the materials is verified
AISI 303 SS



NC function



NO function

e Ø 6-10 mm)
75301-803, form A

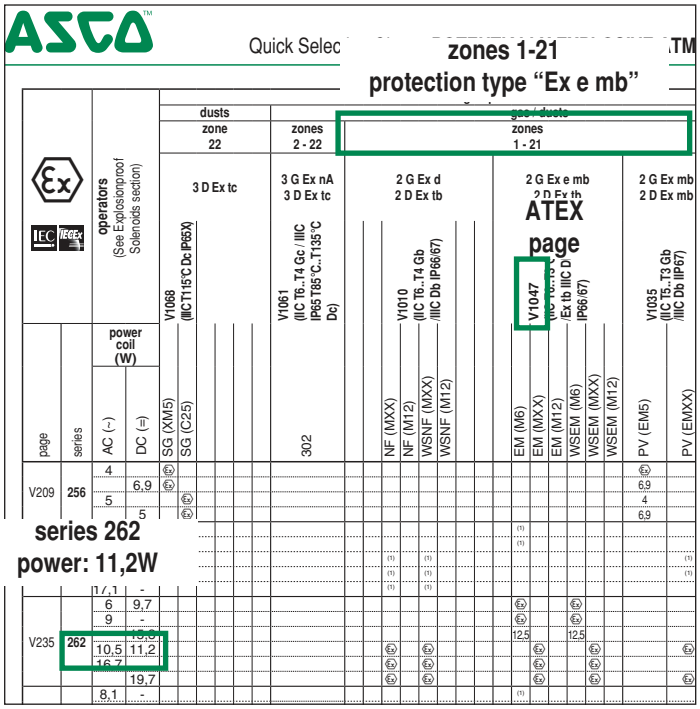
N 60529)
V
V - 115V - 230V / 50 Hz

replacement coil ~ /50 Hz	replacement coil = 24 V DC	type (1)
25-117	400325-142	01
25-217	400325-242	01
25-117	400425-142	02
25-217	-	02
-	400425-342	02

ure r) S)	oil (*)		power coi (W)		coil power: 11.2W DC catalogue number:	options				
=	~	=	~	=		maintained man. operator	FPM	EPDM	CR	PTFE
5	35	35	6	9,7	SCB262C080	-	V	E	J	T
8	11	8	6	9,7	SCB262C086	MO	V	E	J	T
4	8	4	6	9,7	SCB262C007	-	V	E	J	T
,5	10	3	10,5	11,2	SCB262C220	-	V	E	J	T
7	6,5	1,7	10,5	11,2	SCB252C225	-	V	E	J	T

➜ Consult the Ⓔx Quick Selection Chart, **Section C,** page **V200/V300-5**

. **in the rows**: locate the series number **262** and the coil power **11,2 W**
. **in the columns**: locate ATEX zones 1-21 and protection type “e mb”
. **at the row/column intersection**: find the ATEX-compatible solenoids (identified by the logo Ⓔx)
. and identify the ATEX page number **V1047-1**



➜ Consult page **V1047-1**: **solenoid operators** Ⓔx zone 1-21 “e mb”

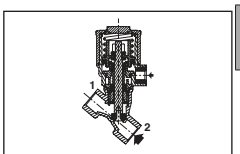
CATALOGUE NUMBER IDENTIFICATION
How to select a product for use in potentially explosive atmospheres

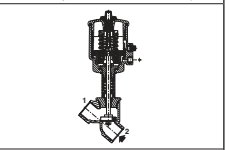
Example: You have selected a series **290** pressure-operated valve 2/2 NC (from **section D**) and would like to use it in explosive atmosphere zone 22.

➜ Product page **V410-1** (standard pressure-operated valve)

VALVES
pressure operated
bronze or stainless steel body
threaded ports, 3/8 to 2 1/2

NC
NO
2/2
Series
E290


NC function, entry under the disc, 32 and 50 mm operators


NC function, entry under the disc, 63, 90 and 125 mm operators

D

ds (*)	temperature range	disc seal (*)
d gas groups 1 & 2 nd gas group 2 s groups 1 & 2 and steam	- 10°C to + 184°C	PTFE

NTACT WITH FLUID
mpatibility of the fluids in contact with the materials is verified

	Bronze body	Stainless steel body
	Bronze	AISI 316L
g	Brass	AISI 316L
	Stainless steel	Stainless steel
	Brass	Stainless steel
g	PTFE chevrons	PTFE chevrons
	FPM	FPM
	PTFE	PTFE
	PTFE	PTFE

LS
ator: Glass fibre filled PA
PA 12, supplied standard on valves with 63, 90 and 125 mm operators

nd 125 mm operators: At service fluid temperatures inside the valve body above pilot the valve with water.

ow icient v	pilot pressure (bar)		operating pressure differential (bar) min.	max. air, inert gas, aggressive fluids (*)	max. water, oil, liqu aggressive liq (*)	operator		catalogue ess steel
(l/min)	min.	max.						
ed, entry under the disc (1)								
47	4	10	0	16	16	10	32	-	E290A791
68	4	10	0	12	12	10	32	-	E290A792
82	4	10	0	16	16	10	50	E290A384	E290A393

catalogue number selected:
E290A384

➜ Consult page **V436: pressure-operated valves** ⟨Ex⟩

➜ Consult the ⟨Ex⟩ Quick Selection Chart, **Section D,** page **V400-4**

. **in the rows**: locate the series number **E290**
. **in the columns**: locate ATEX zone 22
. **at the row/column intersection**: find the ATEX-compatible products (identified by the logo ⟨Ex⟩)
. and identify the ATEX page number **V436**

ASCO Quick Selection Chart - **POTENTIALLY EXPLOSIVE ATI**

PRESSURE OPERATED VALVES

page	series	DN	group II dusts zone 22	gas zone 2 IIA	gas zone 2 IIB	gas zone 2 IIC	dusts zone 21	gas zone 1 IIA	gas zone 1 IIB	gas zone 1 IIC	dust
SERIES 290 VALVES ATEX 94/9/EC (see page V436)											
V410	E290	10 → 65	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩		
V412	E290	10 → 20	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩		
V414	series	10 → 20	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩		
V420	E290	10 → 65	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩		
V431		25 → 50	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩		
SERIES 2		**X 94/9/EC (see page V461)**									
V451	E298	15 → 50	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩		
V453	T298	15 → 50	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩	⟨Ex⟩		

ATEX page

TEX 94/9/EC
CCESSORIES
psive atmospheres
0 and 390

2/2 - 3/2
Series
290 - 390

ly explosive atmospheres in accordance with ATEX-Directive 94/9/EC,
uirements has been assured by compliance with European Standards EN
as and paint coating industries etc.

	classification (zones)									
	category 2					category 3				
	dusts	gas IIA	gas IIB	gas IIC	safety code	dusts	gas IIA	gas IIB	gas IIC	safety code
	21	1	1	-	⟨Ex⟩ II 2 GD c IIB T4 T135°C	22	2	2	2	⟨Ex⟩ II 3 GD c T4 T135°C
	21	1	1	-		22	2	2	2	
	21	1	1	-	⟨Ex⟩ II 2 GD c IIB T4 T135°C	22	2	2	2	⟨Ex⟩ II 3 GD c T4 T135°C
	21	-	-	-	⟨Ex⟩ II 2 D c T135°C	22	2	2	2	⟨Ex⟩ II 3 GD c T4 T135°C

D

suffix to be added to the valve's catalogue number (1)	
category 2	category 3
GD2	GD3

esigned for use in zones 1 and 21 (category 2), catalogue number: **E290B010GD2**

see page	catalogue page

Suffix GD3 behind the selected catalogue number:
E290A384 GD3