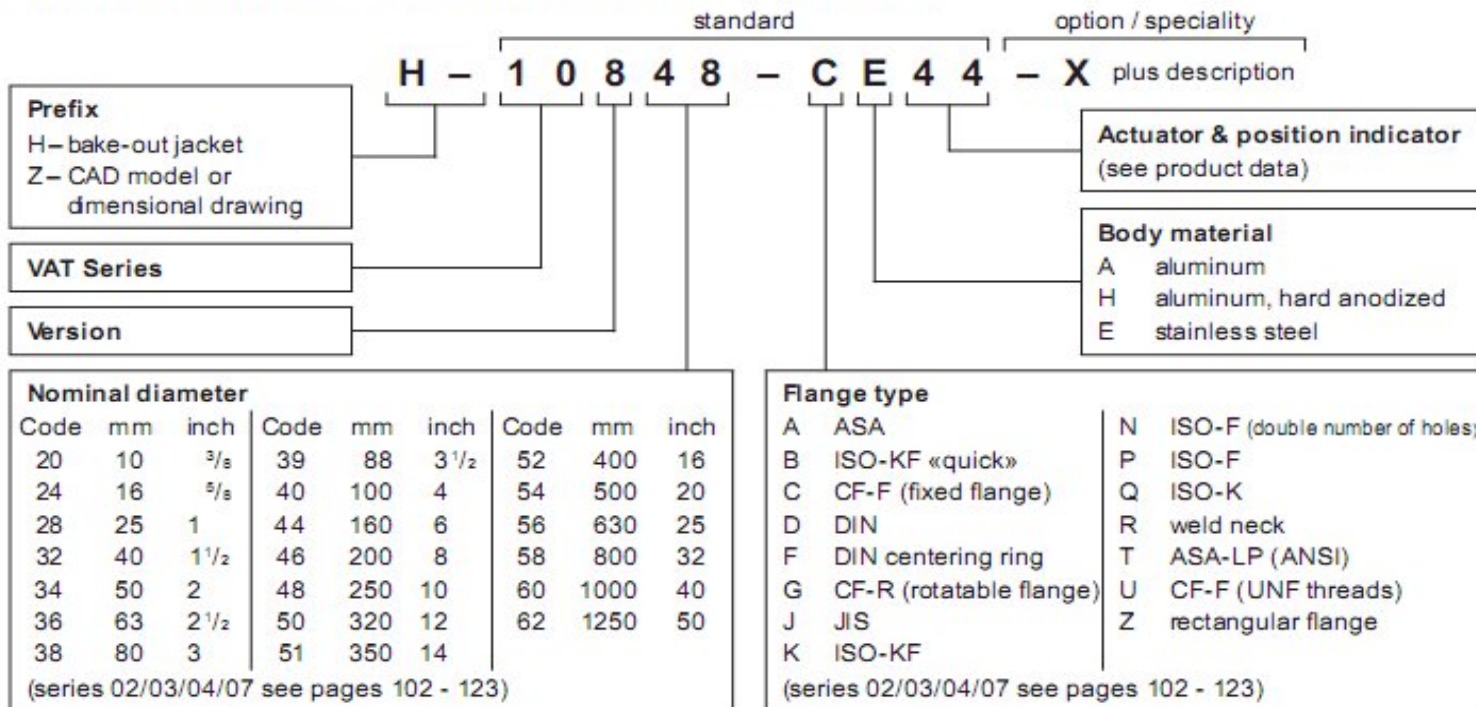




**Ordering number** to explain the ordering numbers used in the catalog



**Fabrication number** of valve  
(effective 1997)

Example:



新竹縣308寶山鄉大崎村竹園路82巷11號1樓

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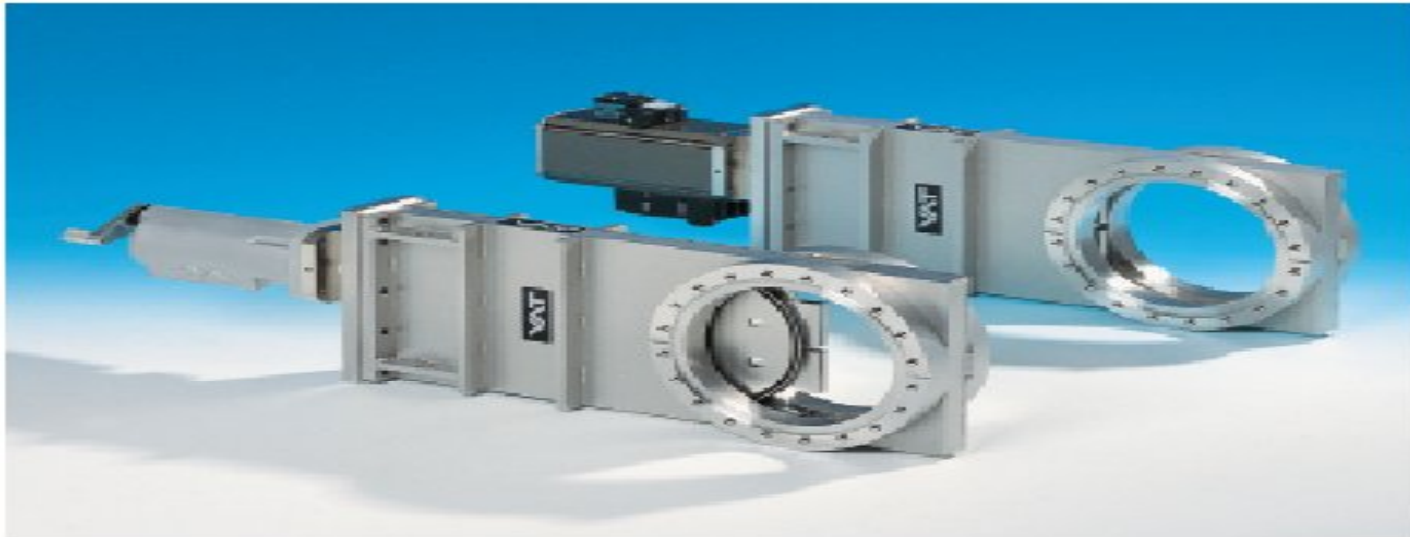
DN		Ordering numbers
mm	inch	
50	2	08234-FA06
63	2 1/2	08136-FA03
80	3	08138-FA03
100	4	08140-FA03
50	2	08234-FA44
63	2 1/2	08136-FA44
80	3	08138-FA44
100	4	08140-FA44

without position indicator, without solenoid: 08 . . . -FA14  
with position indicator, without solenoid: 08 . . . -FA24

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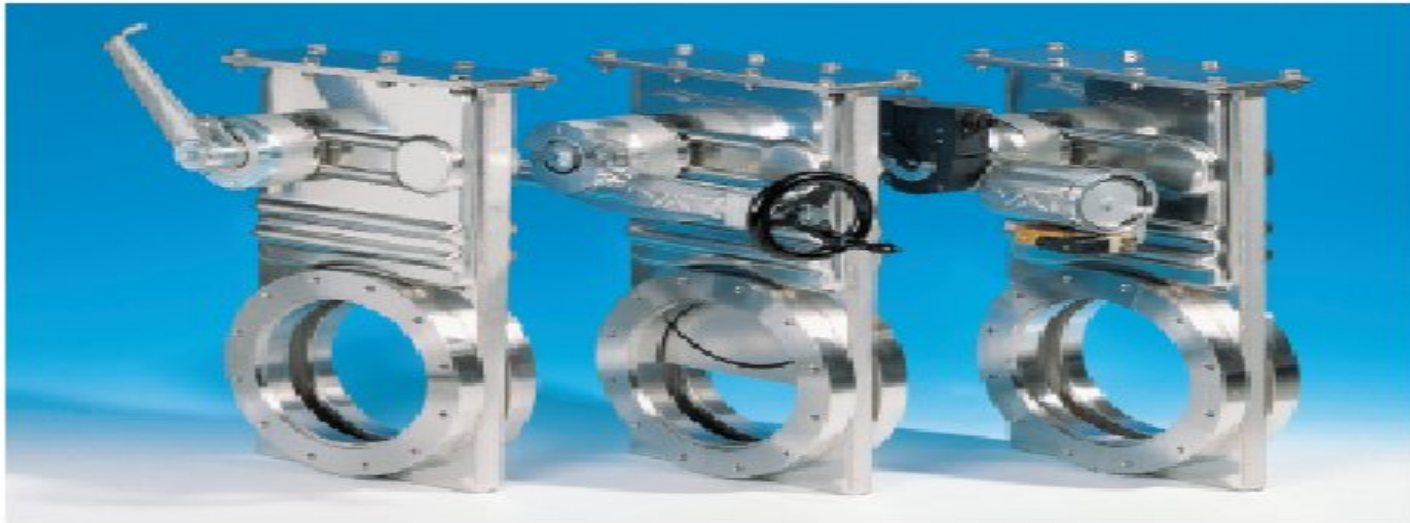
DN		Ordering numbers			
mm	inch	CF-F metric threads	CF-F UNF threads	ISO-F	ASA-LP
63	2 1/2	10836-CE01	10836-UE01	10836-PE01	10836-TE01
80	3	10838-CE01	10838-UE01	10838-PE01	on request
100	4	10840-CE01	10840-UE01	10840-PE01	10840-TE01
160	6	10844-CE01	10844-UE01	10844-PE01	10844-TE01
200	8	10846-CE01	10846-UE01	10846-PE01	10846-TE01
250	10	10848-CE01	10848-UE01	10848-PE01	10848-TE01
320	12	on request	on request	10850-PE01	10850-TE01

with position indicator: 108 . . . - E08

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DN		Ordering numbers				
mm	inch	ISO-F	CF-F metric threads	CF-F UNF threads	ASA-LP (T) ASA (A)	JIS
63	2 1/2	14036-PE06	14036-CE06	14036-UE06	14036-TE06	14036-JE06
80	3	14038-PE06	14038-CE06	14038-UE06	on request	on request
100	4	14040-PE06	14040-CE06	14040-UE06	14040-TE06	14040-JE06
160	6	14044-PE06	14044-CE06	14044-UE06	14044-TE06	14044-JE06
200	8	14046-PE06	14046-CE06	14046-UE06	14046-TE06	14046-JE06
250	10	14048-PE06	14048-CE06	14048-UE06	14048-TE06	14048-JE06
320	12	14050-PE06	on request	on request	14050-TE06	14050-JE06
350	14	on request	on request	on request	on request	on request
400	16	14052-PE01	on request	on request	14052-AE01	14052-JE01

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DN (D1 x D)		Ordering numbers		
mm	inch	type B opening: rear side > seat side with bonnet flange	type C opening: rear side > seat side without bonnet flange	type A opening: rear side = seat side with bonnet flange
32 x 222	1.26 x 8.74	02109-BA24	02109-CA24	02109-AA24
46 x 236	1.8 x 9.3	02110-BA24	02110-CA24	02110-AA24
50 x 336	1.9 x 13.2	02112-BA24	02112-CA24	02112-AA24

with solenoid for impulse actuation: 021 ... - ... 44 (specify control voltage)

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## Vacuum levels, Materials

### Vacuum levels

Different applications require different technical designs of the valves. VAT valves can roughly be divided into 4 vacuum levels. This table shows the major features.

Vacuum level	Pressure range (mbar)	Maximum temperature (°C)	Seals gate / bonnet	Feedthrough
Vacuum	to $1 \cdot 10^{-7}$	150	VITON / VITON	O-ring shaft seal, sealed with O-ring made of VITON
HV (high vacuum)	to $1 \cdot 10^{-8}$	150	VITON / VITON	rotary feedthrough, sealed with O-ring made of VITON or bellows feedthrough
UHV (ultra high vacuum)	to $1 \cdot 10^{-10}$	200 / 250	VITON / metal	bellows feedthrough
XHV (extreme UHV)	better than $10^{-10}$	300 / 450	metal / metal	bellows feedthrough

### Materials

The following tables present the official denomination and the composition of materials used in VAT valves.

#### Stainless steels

Material No.		Abbreviated designation	Composition (%)			
AISI	DIN	DIN	C	Cr	Ni	Mo
301	1.4310	X 12 Cr Ni 17 7	≤0.12	16 - 18	6 - 9	-
303	1.4305	X 10 Cr NiS 18 9	≤0.12	17 - 19	8 - 10	-
304	1.4301	X 5 Cr Ni 18 9	≤0.07	17 - 20	8 - 10	-
304	1.4303	X 5 Cr Ni 18 12	≤0.07	17 - 19	11 - 13	-
304L	1.4306	X 2 Cr Ni 19 11	≤0.03	18 - 20	10 - 12.5	-
316	1.4401	X 5 Cr Ni Mo 18 10	≤0.07	16 - 18	10 - 13	2-2.5
316L	1.4404	X 2 Cr Ni Mo 18 10	≤0.03	16 - 18	11 - 14	2-2.5
316L	1.4435	X 2 Cr Ni Mo 18 12	≤0.03	16 - 18	12 - 15	2.5 - 3
316LN	1.4429	X 2 Cr Ni Mo N 17 13 3	≤0.03	16.5 - 18.5	11.5 - 14.5	2.5 - 3
316Ti	1.4571	X 6 Cr Ni Mo Ti 17 12 2	≤0.08	16.5 - 18.5	10.5 - 13.5	2-2.5
420	1.4034	X 40 Cr 13	0.4-0.5	12 - 14	-	-
420C	1.3541	X 45 Cr 13	0.42-0.5	12.5 - 14.5	≤1	-
420D	1.4037	X 65 Cr 13	0.58-0.7	12.5 - 14.5	-	-
430	1.4016	X 6 Cr 17	≤0.08	15.5-17.5	-	-
-	1.4122	X 35 Cr Mo 17	0.33-0.45	15.5-17.5	≤1	0.8 - 1.3
631	1.4568	X 7 Cr Ni Al 17 7	≤0.09	16 - 18	6.5-7.75	-

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**Aluminum alloys**

Material No.		Abbreviated designation	Composition (%)			
AA	DIN	DIN	Mg	Si	Mn	
A356	3.2371	G-Al Si 7 Mg	0.2-0.4	6.5-7.5	≤0.05	
5083	3.3547	AlMg4.5Mn	4.0-4.9	0.4	0.4-1.0	
5210	3.3527	Al Mg 2 Mn 0.8	1.6-2.5	0.4	0.5-1.1	
5754	3.3535	Al Mg 3	2.6-3.6	0.4	0.5	
6014			0.4-0.8	0.3-0.6	0.05-0.2	
6060	3.3206	Al Mg Si 0.5	0.45-0.6	0.5-0.6	≤0.1	
6082	3.2315	Al Mg Si 1	0.6-1.2	0.7-1.3	0.4-1.0	

**Other materials**

Material	Composition
AISI 633 (AM 350)	Iron with 16-17% Cr, 4-5% Ni, 2.5-3.3% Mo, 0.5-1.4% Mn, 0.08-0.17% C
Hastelloy C22	Nickel with 22% Cr, 13% Mo, 3% W, 3% Fe, ≤2.5% Co
Inconel 625	Nickel with 20-23% Cr, 8-10% Mo, 5% Fe, 3.2-4.2% Nb and Ta, 1% C
Nimonic 90	Nickel with 15-21% Co, 18-21% Cr, 2-3% Ti, 1-2% Al
PEEK	
PTFE	
Titanium 3.7035	99.3% Ti

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