

PRODUCT DATA SHEET

Ramén Ball Sector Valve type KS-1E



Ramén Valves

We know the flow

DN 40-300 | Wafer | PN 40 | Stainless steel | Deep metal seat



The Ramén Ball Sector Control Valve in material configuration 1E is a stainless steel control valve with a deep Stellite metal seat and a hard chromed ball sector.

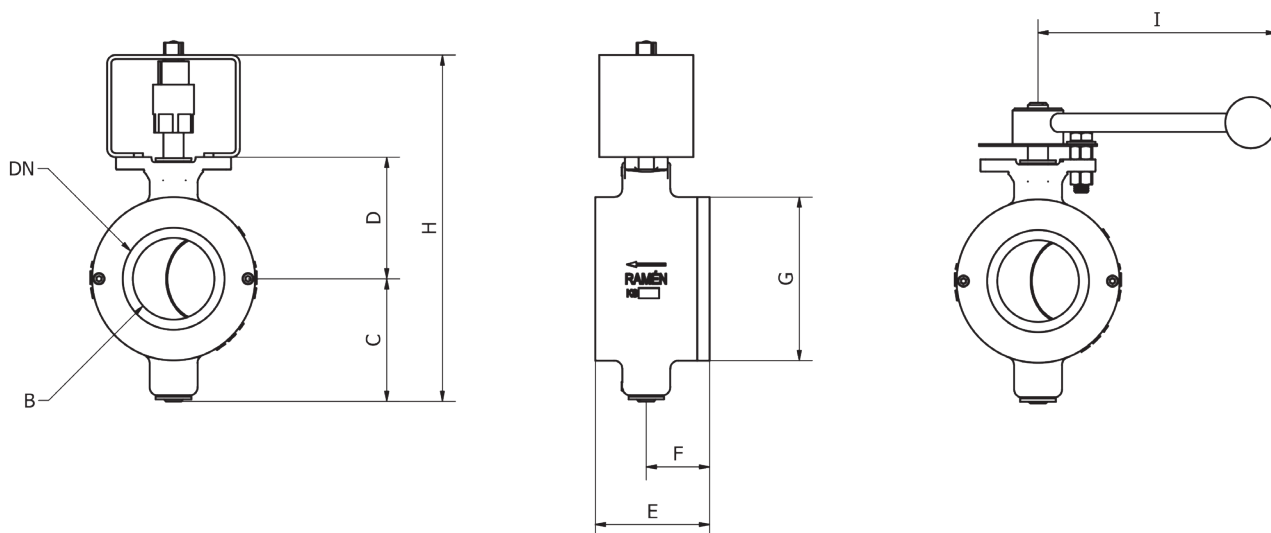
KS-1E is used for abrasive media at moderate pressure or pressure drop. This valve configuration is also used for elevated velocity, temperature and pressure drop which gives a risk for cavitation to occur.

Typical applications

- Slurries
- Liquor (Green, white & black)
- Low pressure steam
- Chemicals
- Water & waste water
- Process water

Technical information			
Design		Flangeless, wafertype (size DN 300 flanged)	
Nominal sizes		DN 40 - DN 300	1"-12"
Material	Body Shafts Ball Sector Seat Seat holding ring O-rings Bearing	EN 1.4409, AISI 316L EN 1.4460, AISI 329 EN 1.4409 +Cr ⁽¹⁾ , AISI 316L+Cr ⁽¹⁾ Deep stellite EN 1.4409+Cr ⁽¹⁾ , AISI 316L+Cr ⁽¹⁾ FKM Rulon®	
Nominal pressure	DN 40- DN 50 DN 80 - DN 100 DN 150 - DN 250 DN 300	PN 40 (for flange PN 10/40, DN40 ANSI 300/600 and DN 50 ANSI 150/300/600) PN 25 (for flange PN 10/25 and ANSI 150/300) PN 16 (for flange PN 10/16 and ANSI 150) PN 16 (Flanged PN 16 or ANSI 150)	
Operating temperature		-40°C - 250°C	-40°F - 482°F
Seat leakage class according to EN60534-4		IV	
Shell test according to EN12266-1		No leakage detectable	
Characteristic		Equal percentage	
Rangeability		Up to 300:1	
Options	O-rings Alloy steels Seat	EPDM, Nitril, Kalrez®, Viton GLT, EPDM 90, FDA approval, Perlast® 904L, 304, 316L, 254 SMO, Hastelloy, Duplex, Super Duplex, Titanium White PTFE, PEEK	
Certificates and approvals		CE marked acc. to PED 2014/68/EU, Category II, Module D1. ATEX according to directive 2014/34/EU. Fugitive emission standards acc. to ISO 15848-1 and VDI 2440 (TA-luft). Fulfills EC declaration 2023/2006 and 1935/2004 for articles intended to come in contact with food.	

⁽¹⁾Hard chromed ball sector



Dimensions								
DN	40	50	80	100	150	200	250	300
B Bore [mm]	25 32	40	64	80	120	150	195	250
C [mm]	95	95	107	118	167	188	233	310
D [mm]	95	95	107	118	167	188	233	310
E [mm]	71	71	95	112	170	210	270	368
F [mm]	38	38	55	62	95	120	150	198
G [mm]	94	94	140	160	220	274	330	460
H [mm]	250	250	315	337	454	503	561	710
I [mm]	160	160	290	290	370	370	N.A. ⁽¹⁾	N.A. ⁽¹⁾
Weight [kg]	4	4	8	12	25	38	67	170
Top mounting flange acc. to EN-ISO 5211 ⁽²⁾	D14 or ⁽³⁾ D17 F05 & 07	D14 or ⁽³⁾ D17 F05 & 07	D17 or ⁽³⁾ D22 F07 & F10	D17 or ⁽³⁾ D22 F07 & F10	D22 or ⁽³⁾ D27 F10 & F12	D22 or ⁽³⁾ D27 F10 & F12	D27 F10 & F12	D36 F14

⁽¹⁾ Gear boxes available on request

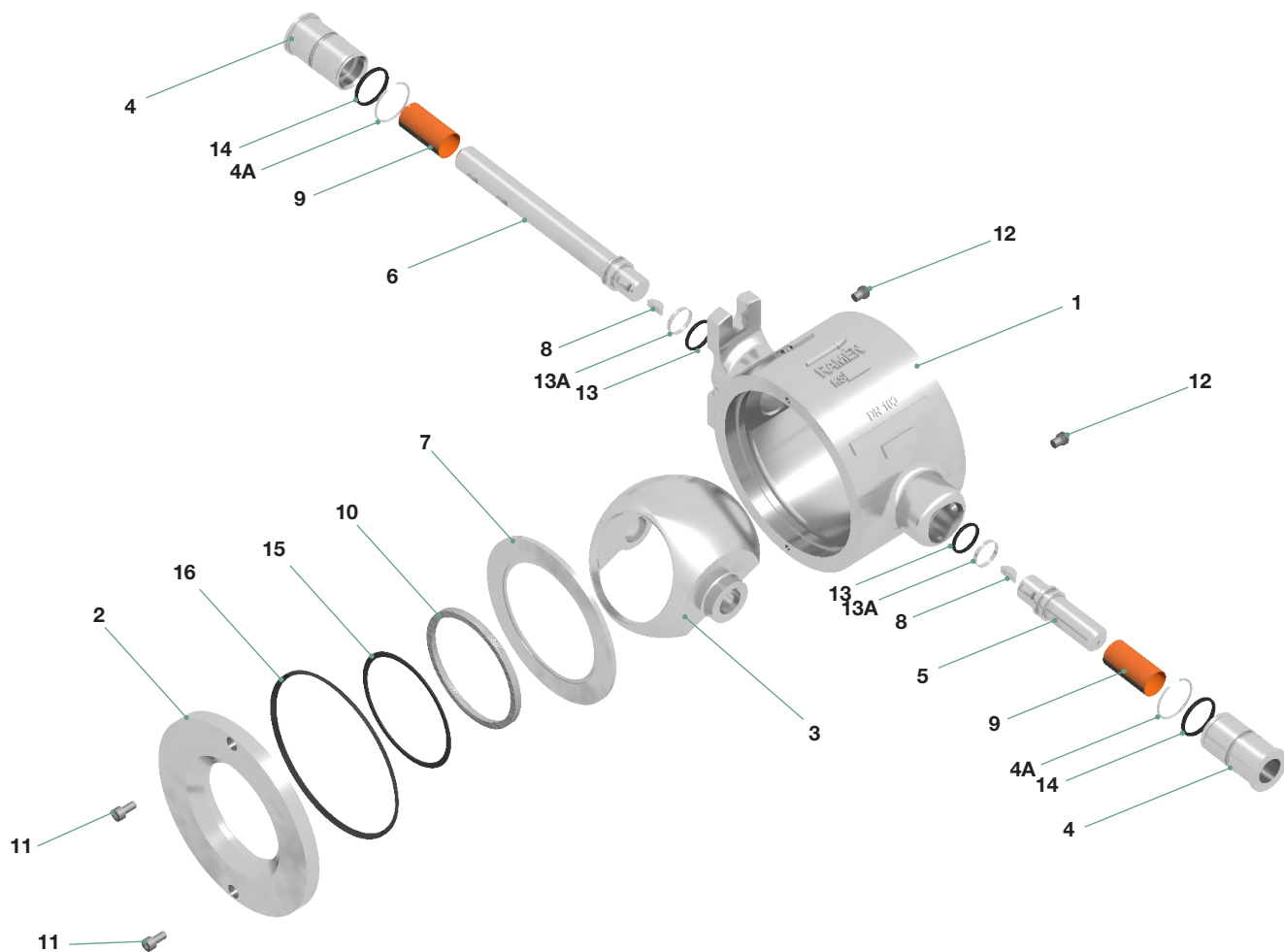
⁽²⁾ D refers to diagonal square size & F refers to hole pattern.

⁽³⁾ Optional

Technical specifications								
DN	40	50	80	100	150	200	250	300
Kvs [m ³ /h]	34 64	94	255	390	810	1365	2220	3840
Cv [gpm]	40 75	110	300	460	950	1600	2600	4500
Actuator torque [Nm]	Recommended ⁽¹⁾ Max.	30-90	30-90	80-200	80-200	160-400	160-400	250-600
		100	100	200	200	400	400	700
Rotation angle	30°-90° 20°-90°	0°-90°	0°-90°	0°-90°	0°-90°	0°-90°	0°-90°	0°-90°

⁽¹⁾ The lower value of the torque range can be used for on-off applications for clean media at normal temperatures. The higher value of the torque range shall be used for pneumatic actuators with positioner when high control accuracy is needed or for dirty/sticky media. Indicated torque values include safety factor, on valve's break away torque, which is at least x2.

Exploded view DN 40-250



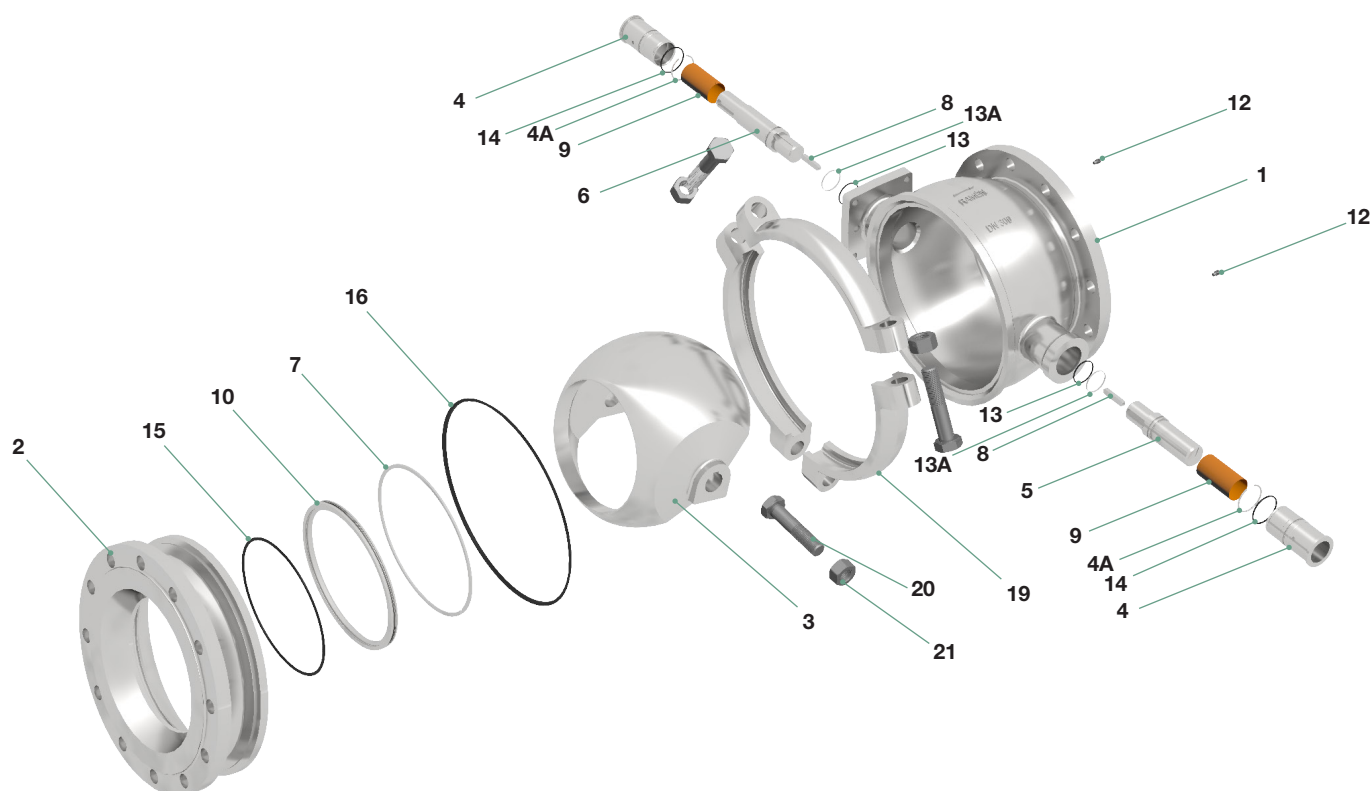
Parts list DN 40-250			
Part	QTY	Name	Material
1	1	Body	EN 1.4409 (AISI 316L)
2	1	Seat holding ring	EN 1.4409 (AISI 316L) +Cr ⁽¹⁾
3	1	Ball sector	EN 1.4409 (AISI 316L) +Cr ⁽¹⁾
4	2	Bearing sleeve	EN 1.4460 (AISI 329)
4A	2	Safety ring	EN 1.4409 (AISI 316L)
5	1	Shaft (trunnion)	EN 1.4460 (AISI 329)
6	1	Shaft	EN 1.4460 (AISI 329)
7	1	Seat support ring	EN 1.4409 (AISI 316L)
8	2	Woodruff key	EN 1.4460 (AISI 329)
9	2	Bearing	Rulon®
10	1	Seat ring	Deep stellited
11	2	Screw	EN 1.4409 (AISI 316L)
12	2	Grub screw	EN 1.4409 (AISI 316L)
13	2	O-ring	FKM
13A	2	Sliding ring	PTFE
14	2	O-ring	FKM
15	1	O-ring	FKM
16	1	O-ring	FKM

(1) Hard chromed ball sector

All materials acc. to standard configuration. Please contact Ramén Valves for order specific materials.

Standard spare part kit	
Part	Name
9	Shaft bearing
10	Seat ring
13A	Sliding ring
13, 14, 15, 16	O-rings

Exploded view DN 300



Parts list DN 300

Part	QTY	Name	Material
1	1	Body	EN 1.4409 (AISI 316L)
2	1	Seat holding ring	EN 1.4409 (AISI 316L) +Cr ⁽¹⁾
3	1	Ball sector	EN 1.4409 (AISI 316L) +Cr ⁽¹⁾
4	2	Bearing sleeve	EN 1.4460 (AISI 329)
4A	2	Safety ring	EN 1.4409 (AISI 316L)
5	1	Shaft	EN 1.4460 (AISI 329)
6	1	Shaft	EN 1.4460 (AISI 329)
7	1	Seat support ring	EN 1.4409 (AISI 316L)
8	2	Key	EN 1.4460 (AISI 329)
9	2	Bearing	Rulon®
10	1	Seat ring	Stellite
12	2	Grub screw	EN 1.4409 (AISI 316L)
13	2	O-ring	FKM
13A	2	Sliding ring	PTFE
14	2	O-ring	FKM
15	1	O-ring	FKM
16	1	O-ring	FKM
19	1	Clamp ring	EN-GJS-400
20	3	Screw	C.St. Zn.Pl.
21	3	Nut	Stainless steel

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Standard spare part kit

Part	Name
9	Shaft bearing
10	Seat ring
13A	Sliding ring
13, 14, 15, 16	O-rings