

Ball valve type 21 with electric actuator



Body material	PVC-U	PVC-C	PP	PVDF
Ball seat	PTFE			
Other seats	• EPDM	• FKM	• *)	• FKM-F
Working temperature	0 °C up to 50 °C ¹⁾	0 °C up to 90 °C ¹⁾	-20 °C up to 80 °C ¹⁾	-20 °C up to 100 °C ¹⁾
Nominal size	DN 15 up to DN 100			
Connection with pipe	<ul style="list-style-type: none"> • Cement socket or spigot • Flange connection acc. to DIN EN 1092-1 - PN 10 (16) 		<ul style="list-style-type: none"> • Welding socket or spigot • Threaded socket 	
Length	DIN EN 558 - 1 series FTF 1 (DIN 3202 - series F 1)			
Actuator	DN 15 - DN 100 24 - 240 V / IP 67			
	2 potential-free limit switches, manual override, Visual position indicator, heater in switch compartment; 12 - 24 V respectively special voltage on request			

*) Special version: CSM, NBR, FKM-F, FEP / Parofluor on request

¹⁾ Working temperatures for sealing materials:

EPDM: -20 up to 90 °C

NBR: -20 up to 100 °C

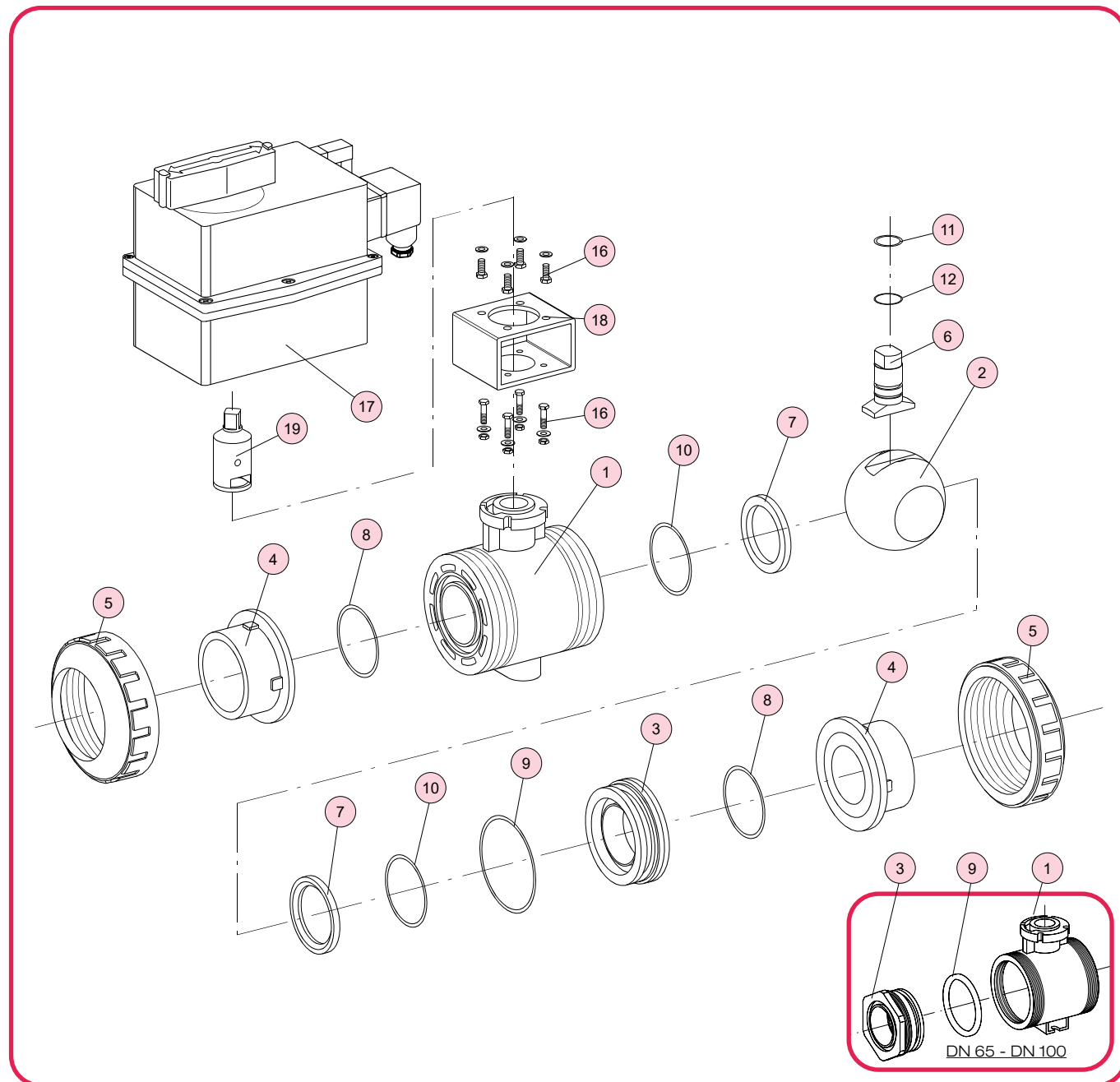
FKM / FKM-F: -8 up to 100 °C

Example for an invitation to tender text:

Ball valve type 21, DN 65, PN 10, PVDF / FKM-F, flange connection acc. to DIN EN 1092-1 - PN 10, integrated mounting, with electric actuator type J4C-S35, 24 - 240 V, IP 67, manual override, 2 potential-free limit switches, heater in switch compartment

Document: FRANK_DB_L4_Kugelhahn Typ 21 elektr._01-2024_EN

Ball valve type 21 with electric actuator



No.	Description	Number	Material
1	Body	1	PVC-U, PVC-C, PP, PVDF
2	Ball ^{*)}	1	PVC-U, PVC-C, PP, PVDF
3	Carrier	1 ¹⁾	PVC-U, PVC-C, PP, PVDF
4	End connector		
	(socket, spigot, flange)	2	PVC-U, PVC-C, PE, PP, PVDF
5	Union nut	2	PVC-U, PVC-C, PP-G, PVDF
6	Stem ^{*)}	1	PVC-U, PVC-C, PP, PVDF
7	Ball seat ^{*)}	2	PTFE
8	O-ring (A) ^{*)}	2	EPDM, FKM ²⁾

^{*)} Wearing parts

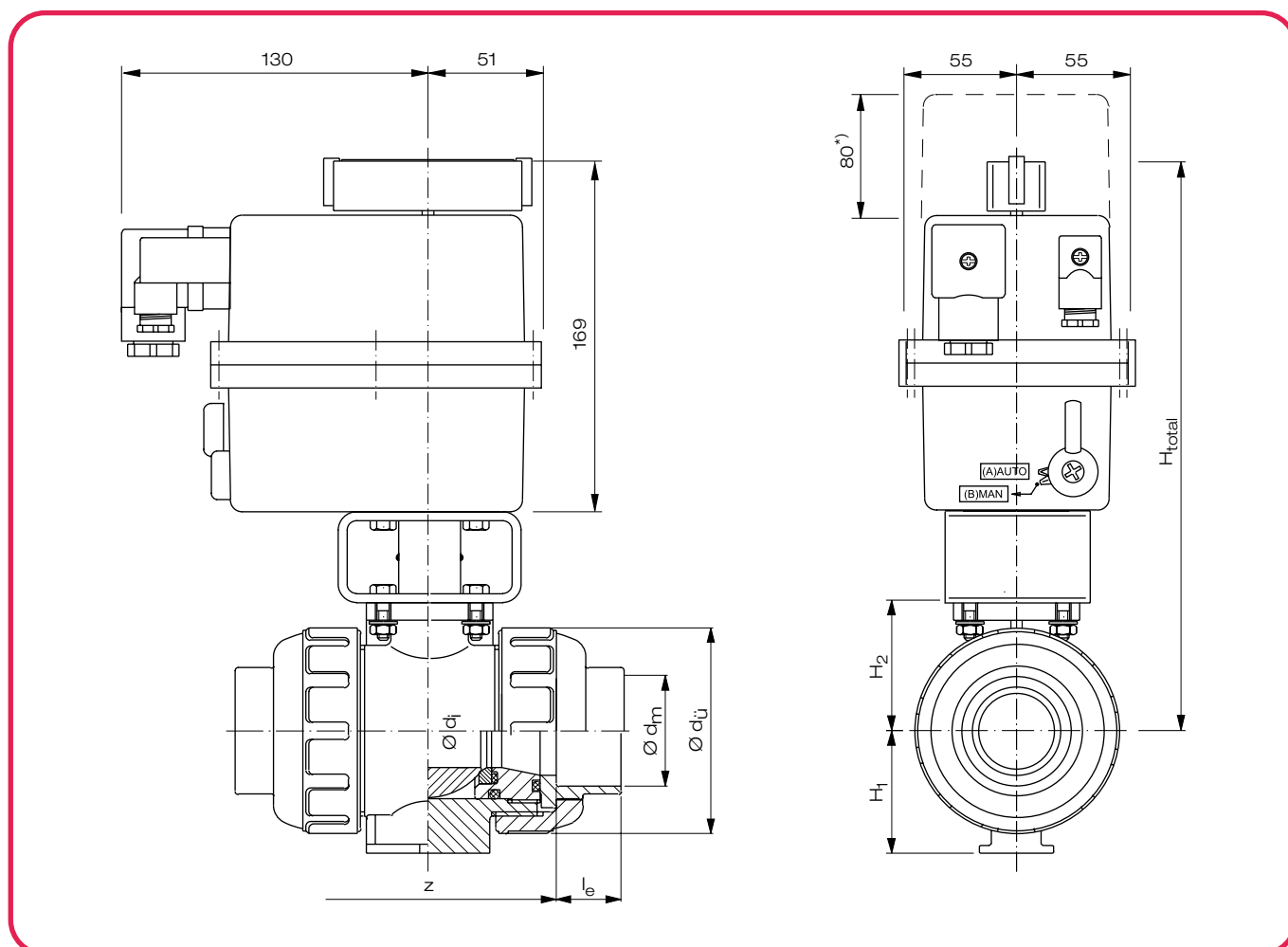
¹⁾ DN 65 up to DN 100: 2 pieces

²⁾ Special version: CSM, NBR, FKM-F, FEP / Parofluor on request

No.	Description	Number	Material
9	O-ring (B) ^{*)}	1 ¹⁾	EPDM, FKM ²⁾
10	O-ring (C) / gasket ^{*,3)}	2	EPDM, FKM ²⁾
11	O-ring (D) ^{*)}	1	EPDM, FKM ²⁾
12	O-ring (E) ^{*)}	1	EPDM, FKM ²⁾
16	Screw, washer / nut	8/4	A2 - 1.4301 (SUS 304)
17	Electric actuator	1	Polyamide
18	Bracket / ISO	1	A2 - 1.4301 (SUS 304)
19	Coupling	1	A2 - 1.4301 (SUS 304)

³⁾ Flat seat for DN 65 and above

Ball valve type 21 with electric actuator



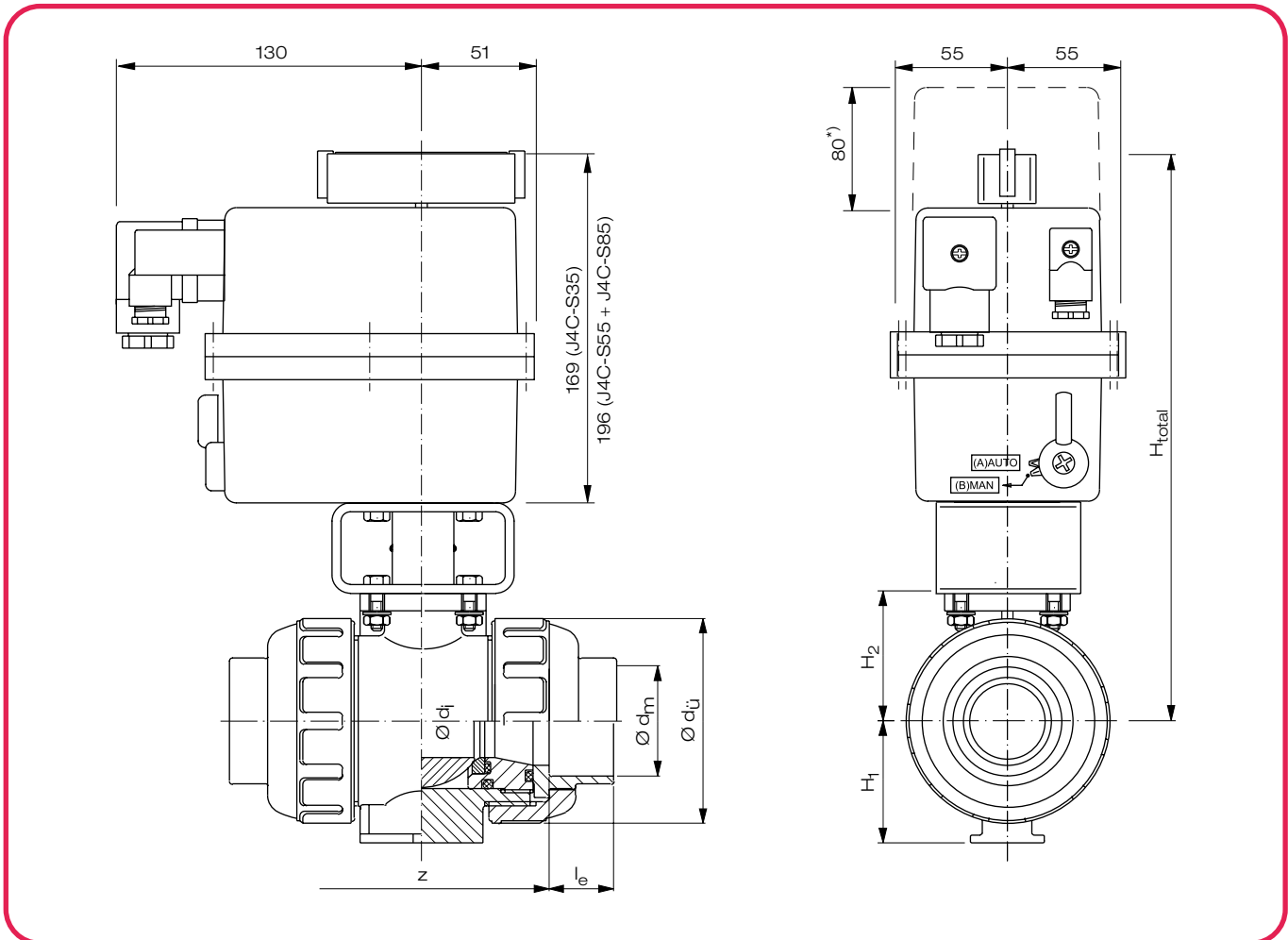
*) necessary space for disassembling the cap of the actuator

Dimensions in mm										Actuator			Weight in kg / pc.				
DN	d_i	d_u	Cement socket			Welding socket			H_1	H_2	H_{total}	Type	t_s [sec]	Cement socket		Welding socket	
			d_m	z	l_e	d_m	z	l_e						PVC-U	PVC-C	PP	PVDF
15	15	48	20	70	16	19,5	70	14,5	29	30	248	J4C S20 ^{*)}	9 ^{**)}	1,70	1,70	1,65	1,75
20	20	60	25	82	19	24,5	79	16	35	36,5	255	J4C S20 ^{*)}	9 ^{**)}	1,80	1,85	1,70	1,85
25	25	70	32	87	22	31,5	87	18,1	39	43,5	262	J4C S20 ^{*)}	9 ^{**)}	1,95	1,95	1,80	2,00
32	31	82	40	98	26	39,45	98	20,5	47	52,5	271	J4C S20 ^{*)}	9 ^{**)}	2,35	2,40	2,10	2,50
40	40	100	50	101	31	49,5	102	23,5	55	61	281	J4C S20 ^{*)}	9 ^{**)}	2,72	2,79	2,37	2,94
50	51	126	63	121	38	62,5	125	27,4	66	72,5	291	J4C S20 ^{*)}	9 ^{**)}	3,41	3,54	2,81	3,79

*) 24-240 V AC/DC **) +/- 10%

Other connections see L4-19
Actuation features and wiring diagram see L11-7-9

Ball valve type 21 with electric actuator



^{*)} necessary space for disassembling the cap of the actuator

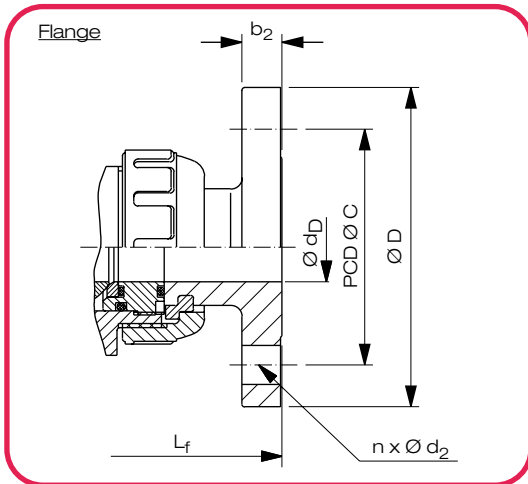
Dimensions in mm											Actuator		Weight in kg / pc.				
DN	d_i	$d_{\ddot{u}}$	Cement socket			Welding socket			H_1	H_2	H_{total}	Type	t_s [sec]	Cement socket		Welding socket	
			d_m	z	l_e	d_m	z	l_e						PVC-U	PVC-C	PP	PVDF
65	58	133	75	145	44	74,3	145	31	72	85	390	J4C-S35	9 ^{*)}	4,96	5,89	4,15	5,44
80	68,5	152	90	180	51	89,2	180	35,5	85	94	426	J4C-S55	13 ^{*)}	7,91	7,36	5,66	7,68
100	90	210	110	227	61	109,1	227	41,5	110	126	478	J4C-S85	29 ^{*)}	14,85	16,00	10,49	17,25

^{*)} +/- 10%

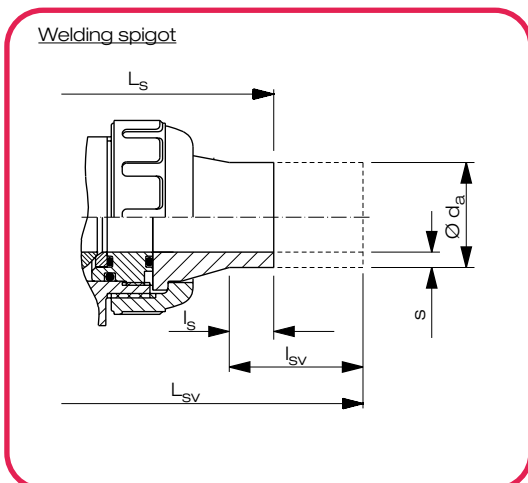
Other connections see L4-19

Actuation features and wiring diagram see L11-3-5

Ball valve type 21 externally controlled, other connections



Dimensions in mm							Additional weight in kg / pc.			
DN	K	D	d _D	b ₂	n x d ₂	L _f	PVC-U	PVC-C	PP	PVDF
15	65	95	15	12	4 x 14	130	0,2	0,2	0,2	0,3
20	75	105	20	14	4 x 14	150	0,3	0,4	0,2	0,4
25	85	115	25	14	4 x 14	160	0,4	0,4	0,2	0,5
32	100	140	31	16	4 x 18	180	0,6	0,6	0,4	0,8
40	110	150	40	16	4 x 18	200	0,7	0,8	0,5	0,8
50	125	165	51	16	4 x 18	230	0,8	0,9	0,5	1,1
65	145	185	58	18	8 x 18	290	0,9	0,9	0,6	1,2
80	160	200	68,5	21	8 x 18	310	0,8	0,9	0,7	1,3
100	180	220	90	18	8 x 18	350	0,6	0,7	0,6	1,3

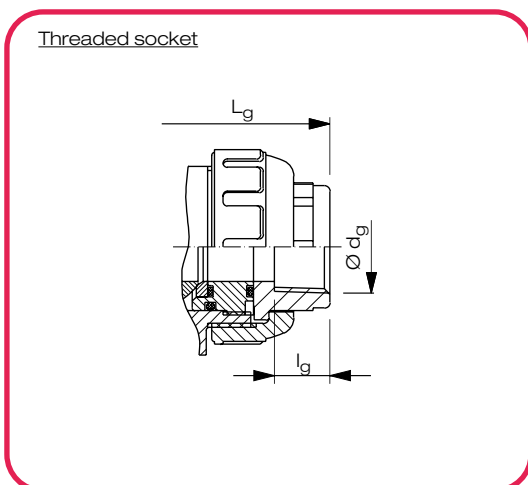


Dimensions in mm							
DN	da	s ³⁾ SDR 17	s ³⁾ SDR 11	l _{sv} ²⁾	l _s ¹⁾	L _{sv} ²⁾	L _s ¹⁾
15	20	-	1,9	64	30	239	167
20	25	-	2,3	61	25	244	168
25	32	-	2,9	61	25	253	175
32	40	-	3,7	67	24	289	185
40	50	3,0	4,6	69	22	295	199
50	63	3,8	5,8	78	20	360	212
65	75	4,5	6,8	89	18	384	232
80	90	5,4	8,2	101	40	451	325
100	110	6,6	10,0	115	38	516	352

1) Weld spigot (PE 100, PP-R, PVDF)

2) long weld spigots (PE 100, PP-R) for electric welding

3) PVDF-weld spigot SDR 33 / SDR 21 with differing wall thickness



Dimensions in mm			
DN	d _g	l _g	L _g
15	Rp 1/2"	14	96
20	Rp 3/4"	16	120
25	Rp 1"	19	134
32	Rp 1 1/4"	20	150
40	Rp 1 1/2"	25	168
50	Rp 2"	28	196
65	-	-	-
80	-	-	-
100	-	-	-