

R4000 Series

(Steel)

Check valves



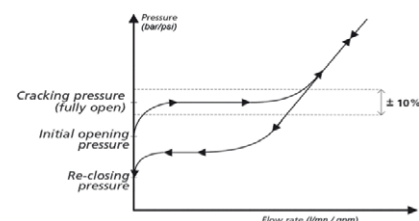
The Danfoss Hansen R4000 Series steel check valves are designed for multipurpose hydraulic applications to either allow flow of fluid in one direction only or limit the line's internal pressure to the cracking pressure. Standard cracking pressures are 0.5 and 1 bar (7.25 and 14.5 psi). Alternatives can be offered upon request.

Product Features

- Standard body material: Zinc-plated steel
- Standard seal material: NBR, FKM, EPDM

Operating Guidelines

The Danfoss R4000 series is designed to handle liquids. Should applications involving gases (but not unstable gases) be considered, the user should certify that sonic frequencies will not exceed 1 Hz (one cycle per second). For further information, please contact Danfoss technical support.



European Pressure Equipment Directive

Check valves with nominal diameters up to and including 25 mm are designed and manufactured under Article 4.3 of the European Pressure Equipment Directive PED 2014/68/EU. Check valves with nominal diameters greater than 25 mm are designed and manufactured with the stipulations of Module A of the European Pressure Equipment Directive PED 2014/68/EU. They should not be used to convey unstable gases. Our series R4000 check valves must not be used as safety devices (as per PED 2014/68/EU).

Physical Characteristics

Body Size	Nominal Flow Diameter	Max. Operating Pressure**				Rated Flow*	
		Non hazardous liquids & gases in Group 2		Hazardous liquids & gases in Group 1		L/min	(gpm)
(in)	(mm)	bar	(psi)	bar	(psi)		
1/8	3.8	700	10,150	700	10,150	4.5	1.19
1/4	5.7	700	10,150	700	10,150	14.2	3.75
3/8	7.6	700	10,150	700	10,150	22	5.81
1/2	10.3	500	7,250	500	7,250	32	8.45
3/4	14.2	500	7,250	500	7,250	72	19
1	16.5	500	7,250	500	7,250	117	30.9
1 1/4	20.5	300	4,350	300	4,350	188	49.66
1 1/2	25.8	300	4,350	38	550	232	61.29
2	34.7	300	4,350	28	405	393	103.81

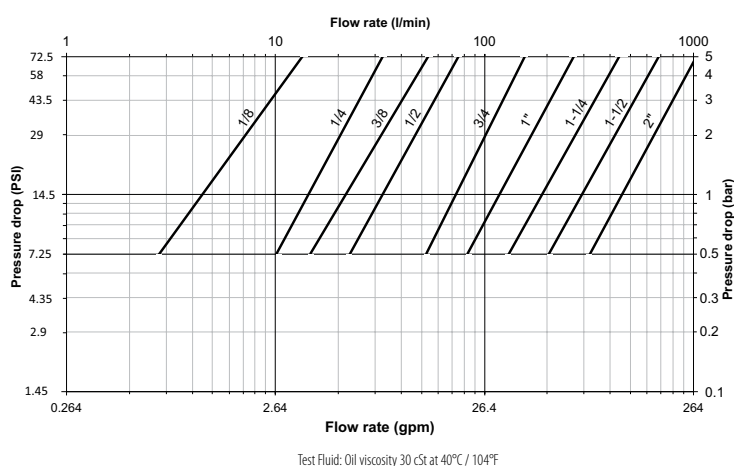
*Indicated values refer to a 1 bar/14.5 psi pressure drop.

**Group 1 = Hazardous media / Group 2 = Other media

Applications & Markets

- All Industries
- Agriculture
- Construction
- Fluid Transfer Lines

Flow Data



Seal Elastomer Data*	
Seal Elastomer	Max. Operation Temperature Range
NBR (Nitrile)	-20°C +100°C / -4°F +212°F
FKM (Fluorocarbon)	-20°C +200°C / -4°F +392°F
EPDM (Ethylene-Propylene)**	-40°C +150°C / -40°F +302°F

*For reference only, based on Danfoss recommended temperatures.

**In accordance with NF L 17-241 or NAS 1613 rev. 5

Contact Danfoss technical support for further information on fluid compatibility.

R4000 Series

(Steel)

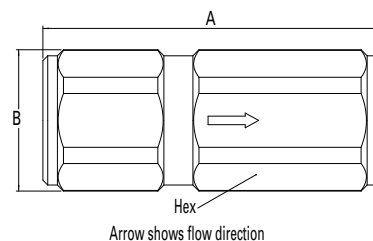


Figure 1

Cracking Pressure 0.5 bar (7.25 psi)

Part Number			Body Size (in)	Nominal Flow Diameter (mm)	Thread Size** (Female)	BSPP	Fig.	Dimensions						Weight	
NBR*	FKM	EPDM						A (in)	B (in)	Hex (in)	A (mm)	B (mm)	Hex (mm)	lbs	grams
RA0400000	RA04000V0	RA04000E0	1/8	3.8	1/8	1	1.46	0.69	0.63	37	17.5	16	0.10	45	
RA0401000	RA04010V0	RA04010E0	1/4	5.7	1/4	1	1.97	0.83	0.75	50	21	19	0.18	80	
RA0402000	RA04020V0	RA04020E0	3/8	7.6	3/8	1	2.36	0.98	0.90	60	25	23	0.29	130	
RA0403000	RA04030V0	RA04030E0	1/2	10.3	1/2	1	2.75	1.15	1.06	70	29.2	27	0.44	200	
RA0404000	RA04040V0	RA04040E0	3/4	14.2	3/4	1	3.38	1.50	1.38	86	38	35	0.93	420	
RA0405000	RA04050V0	RA04050E0	1	16.5	1	1	3.94	1.77	1.61	100	45	41	1.41	640	
--	RA04060V0	RA04060E0	1 1/4	20.5	1 1/4	1	5.12	2.40	2.16	130	61	55	3.46	1570	
--	RA04070V0	RA04070E0	1 1/2	25.8	1 1/2	1	5.31	2.83	2.56	135	72	65	5.16	2340	
--	RA04090V0	RA04090E0	2	34.7	2	1	5.90	3.30	2.95***	150	84	75***	6.57	2980	

*Body size 1 1/4, 1 1/2 and 2 are supplied with FKM seals as a standard.

**Alternative end connections available upon request. depending on size (please contact Danfoss technical support).

***Across flat dimension.

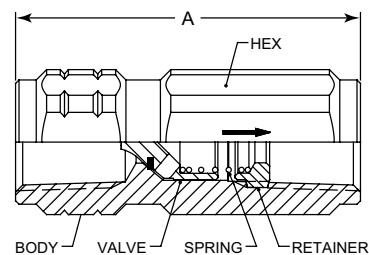


Figure 2

Cracking Pressure 0.5 bar (7.25 psi)

Part Number	Size	Thread NPTF	Fig.	Dimensions A	Hex	Rated Pressure
NBR*	(in)			(in)	(in)	psi
RA0421000	1/4	1/4-18	2	1.97	0.75	10,150
RA0422000	3/8	3/8-18	2	2.36	0.91	10,150
RA0423000	1/2	1/2-14	2	2.76	1.06	7,250
RA0424000	3/4	3/4-14	2	3.39	1.38	7,250
RA0425000	1	1-11 1/2	2	3.94	1.62	7,250
RA0429V0*	2	2-11 1/2	2	5.91	2.95	4,350

*Supplied with FKM seal.

Cracking Pressure 1 bar (14.5 psi)

Part Number			Body Size (in)	Nominal Flow Diameter (mm)	Thread Size** (Female)	BSPP	Fig.	Dimensions						Weight	
NBR*	FKM	EPDM						A (in)	B (in)	Hex (in)	A (mm)	B (mm)	Hex (mm)	lbs	grams
RA040000B	RA04000VB	RA04000EB	1/8	3.8	1/8	1	1.46	0.69	0.63	37	17.5	16	0.10	45	
RA040100B	RA04010VB	RA04010EB	1/4	5.7	1/4	1	1.97	0.83	0.75	50	21	19	0.18	80	
RA040200B	RA04020VB	RA04020EB	3/8	7.6	3/8	1	2.36	0.98	0.90	60	25	23	0.29	130	
RA040300B	RA04030VB	RA04030EB	1/2	10.3	1/2	1	2.75	1.15	1.06	70	29.2	27	0.44	200	
RA040400B	RA04040VB	RA04040EB	3/4	14.2	3/4	1	3.38	1.50	1.38	86	38	35	0.93	420	
RA040500B	RA04050VB	RA04050EB	1	16.5	1	1	3.94	1.77	1.61	100	45	41	1.41	640	
--	RA04060VB	RA04060EB	1 1/4	20.5	1 1/4	1	5.12	2.40	2.16	130	61	55	3.46	1570	
--	RA04070VB	RA04070EB	1 1/2	25.8	1 1/2	1	5.31	2.83	2.56	135	72	65	5.16	2340	
--	RA04090VB	RA04090EB	2	34.7	2	1	5.90	3.30	2.95***	150	84	75***	6.57	2980	

*Body size 1 1/4, 1 1/2 and 2 are supplied with FKM seals as a standard.

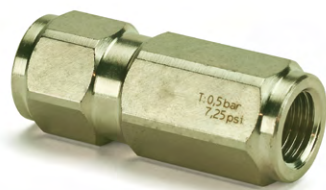
**Alternative end connections available upon request. depending on size (please contact Danfoss technical support).

***Across flat dimension.

R4000 Series

(Brass)

Check valves



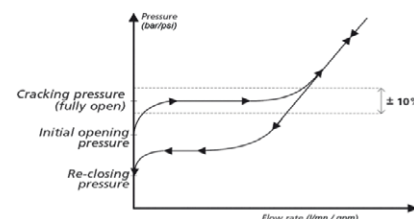
The Danfoss Hansen R4000 Series brass check-valves are designed to either allow flow of fluid in one direction only or limit the line's internal pressure to the cracking pressure. Standard cracking pressures are 0.5 and 1 bar (7.25 and 14.5 psi). Alternatives can be offered upon request. It is designed to handle liquids in all industries and for fluid transfer lines.

Product Features

- Standard body material: Nickel-plated brass
- Standard seal material: NBR, FKM, EPDM

Operating Guidelines

The Danfoss R4000 series is designed to handle liquids. Should applications involving gases (but not unstable gases) be considered, the user should certify that sonic frequencies will not exceed 1 Hz (one cycle per second). For further information, please contact Danfoss technical support.



European Pressure Equipment Directive

All check valves are designed and manufactured under Article 4.3 of the European Pressure Equipment Directive PED 2014/68/EU. Check valves with nominal diameters greater than 25 mm should not be used to convey gases in Group 1 (hazardous). Working pressures for liquids of Group 1 (hazardous) and gases of Group 2 (non-hazardous) are reduced. Please refer to "Physical Characteristics" table. Our series R4000 check valves must not be used as safety devices (as per PED 2014/68/EU).

Physical Characteristics

Body Size (in)	Nominal Flow Diameter (mm)	Max. Operating Pressure**				Rated L/min	Rated (gpm)
		Non hazardous liquids (bar)	(psi)	Hazardous liquids & Non-Hazardous Gases Flow* (bar)	(psi)		
1/8	3.8	400	5,800	400	5,800	4.5	1.19
1/4	5.7	400	5,800	400	5,800	14.2	3.75
3/8	7.6	400	5,800	400	5,800	22	5.81
1/2	10.3	250	3,625	250	3,625	32	8.45
3/4	14.2	250	3,625	250	3,625	72	19
1	16.5	250	3,625	250	3,625	117	30.9
1 1/4	20.5	150	2,175	150	2,175	188	49.66
1 1/2	25.8	150	2,175	75	1,085	232	61.29
2	34.7	100	1,450	25	360	393	103.81

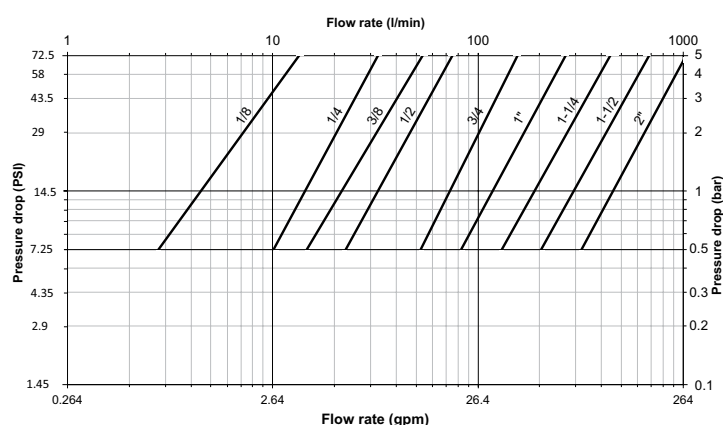
*Indicated values refer to a 1 bar/14.5 psi pressure drop.

**Group 1 = Hazardous media / Group 2 = Other media

Applications & Markets

- All Industries
- Agriculture
- Construction
- Fluid Transfer Lines

Flow Data



Applicable to valves with 0.5 bar (7.25 psi) cracking pressure

Seal Elastomer Data*	
Seal Elastomer	Max. Operation Temperature Range
NBR (Nitrile)	-20°C +100°C / -4°F +212°F
FKM (Fluorocarbon)	-20°C +200°C / -4°F +392°F
EPDM (Ethylene-Propylene)**	-40°C +150°C / -40°F +302°F

*For reference only, based on Danfoss recommended temperatures.

**In accordance with NF L 17-241 or NAS 1613 rev. 5

Contact Danfoss technical support for further information on fluid compatibility.

R4000 Series (Brass)

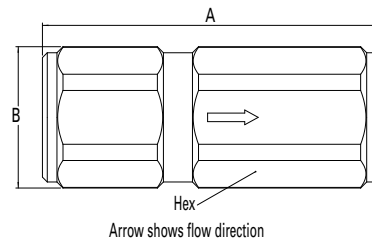


Figure 1

Cracking Pressure 0.5 bar (7.25 psi)

Part Number			Body Size (in)	Nominal Flow Diameter (mm)	Thread Size** (Female) BSP	Fig.	Dimensions						Weight	
NBR*	FKM	EPDM					A (in)	B (in)	Hex (in)	A (mm)	B (mm)	Hex (mm)	lbs	grams
RL0400000	RL04000V0	RL04000E0	1/8	3.8	1/8	1	1.46	0.69	0.63	37	17.5	16	0.11	50
RL0401000	RL04010V0	RL04010E0	1/4	5.7	1/4	1	1.97	0.83	0.75	50	21	19	0.19	85
RL0402000	RL04020V0	RL04020E0	3/8	7.6	3/8	1	2.36	0.98	0.9	60	25	23	0.31	140
RL0403000	RL04030V0	RL04030E0	1/2	10.3	1/2	1	2.75	1.15	1.06	70	29.2	27	0.47	215
RL0404000	RL04040V0	RL04040E0	3/4	14.2	3/4	1	3.38	1.50	1.38	86	38	35	1.01	460
RL0405000	RL04050V0	RL04050E0	1	16.5	1	1	3.94	1.77	1.61	100	45	41	1.52	690
-	RL04060V0	RL04060E0	1 1/4	20.5	1 1/4	1	5.12	2.40	2.16	130	61	55	3.73	1690
-	RL04070V0	RL04070E0	1 1/2	25.8	1 1/2	1	5.31	2.83	2.56	135	72	65	5.71	2590
-	RL04090V0	RL04090E0	2	34.7	2	1	5.90	3.30	2.95***	150	84	75***	7.50	3400

*Body sizes 1/4, 1/2 and 2 are supplied with FKM seals as a standard.

**Alternative end connections available upon request, depending on size (please contact Danfoss technical support).

***Across flat dimension.

Cracking Pressure 1 bar (14.5 psi)

Part Number			Body Size (in)	Nominal Flow Diameter (mm)	Thread Size** (Female) BSP	Fig.	Dimensions						Weight	
NBR*	FKM	EPDM					A (in)	B (in)	Hex (in)	A (mm)	B (mm)	Hex (mm)	lbs	grams
RL040000B	RL04000VB	RL04000EB	1/8	3.8	1/8	1	1.46	0.69	0.63	37	17.5	16	0.11	50
RL040100B	RL04010VB	RL04010EB	1/4	5.7	1/4	1	1.97	0.83	0.75	50	21	19	0.19	85
RL040200B	RL04020VB	RL04020EB	3/8	7.6	3/8	1	2.36	0.98	0.90	60	25	23	0.31	140
RL040300B	RL04030VB	RL04030EB	1/2	10.3	1/2	1	2.75	1.15	1.06	70	29.2	27	0.47	215
RL040400B	RL04040VB	RL04040EB	3/4	14.2	3/4	1	3.38	1.50	1.38	86	38	35	1.01	460
RL040500B	RL04050VB	RL04050EB	1	16.5	1	1	3.94	1.77	1.61	100	45	41	1.52	690
-	RL04060VB	RL04060EB	1 1/4	20.5	1 1/4	1	5.12	2.40	2.16	130	61	55	3.73	1690
-	RL04070VB	RL04070EB	1 1/2	25.8	1 1/2	1	5.31	2.83	2.56	135	72	65	5.71	2590
-	RL04090VB	RL04090EB	2	34.7	2	1	5.90	3.30	2.95***	150	84	75***	7.50	3400

*Body sizes 1/4, 1/2 and 2 are supplied with FKM seals as a standard.

**Alternative end connections available upon request, depending on size (please contact Danfoss technical support).

***Across flat dimension.

R4000 Series (Stainless Steel)

Check valves



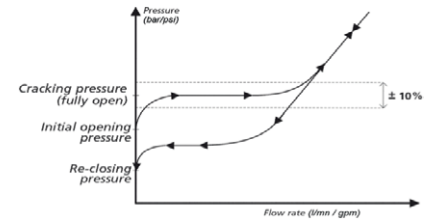
The Danfoss Hansen R4000 Series stainless steel check valves are designed to either allow flow of fluid in one direction only or limit the line's internal pressure to the cracking pressure. Standard cracking pressures are 0.5 and 1 bar (7.25 and 14.5 psi). Alternatives can be offered upon request. It is designed to handle liquids in all industries and for fluid transfer lines. The material used offers excellent corrosion resistance.

Product Features

- Standard body material: AISI 316L Stainless steel
- Standard seal material: FKM, EPDM

Operating Guidelines

The Danfoss R4000 series is designed to handle liquids. Should applications involving gases (but not unstable gases) be considered, the user should certify that sonic frequencies will not exceed 1 Hz (one cycle per second). For further information, please contact Danfoss technical support.



European Pressure Equipment Directive

Check valves with nominal diameters up to and including 25 mm are designed and manufactured under Article 4.3 of the European Pressure Equipment Directive PED 2014/68/EU. Check valves with nominal diameters greater than 25 mm are designed and manufactured in accordance with the stipulations of Module A of the European Pressure Equipment Directive PED 2014/68/EU. They should not be used to convey unstable gases. Our series R4000 check valves must not be used as safety devices (as per PED 2014/68/EU).

Physical Characteristics

Max. Operating Pressure**							
Body Size	Nominal Flow Diameter	Non hazardous liquids & gases Group 2		Hazardous liquids & gases Group 1		Rated Flow*	
		(bar)	(psi)	(bar)	(psi)	L/min	(gpm)
1/8	3.8	400	5,800	400	5,800	4.5	1.19
1/4	5.7	400	5,800	400	5,800	14.2	3.75
3/8	7.6	400	5,800	400	5,800	22	5.81
1/2	10.3	250	3,625	250	3,625	32	8.45
3/4	14.2	250	3,625	250	3,625	72	19.00
1	16.5	250	3,625	250	3,625	117	30.90
1 1/4	20.5	150	2,175	150	2,175	188	49.66
1 1/2	25.8	150	2,175	38	550	232	61.29
2	34.7	100	1,450	28	405	393	103.81

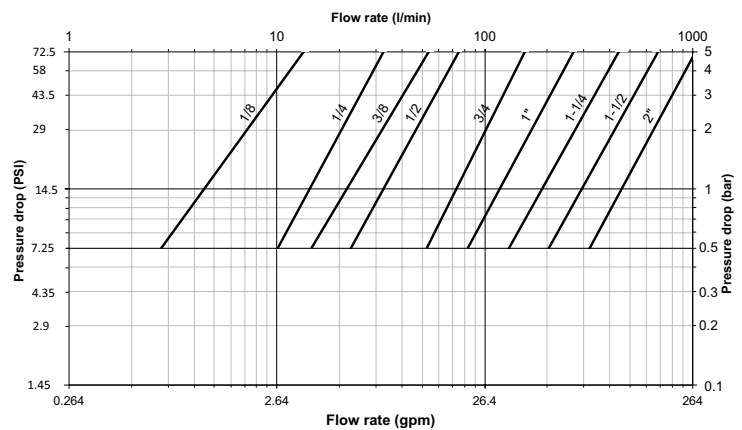
*Indicated values refer to a 1 bar / 14.5 psi pressure drop.

**Group 1 = Hazardous media / Group 2 = Other media

Applications & Markets

- All Industries
- Agriculture
- Construction
- Fluid Transfer Lines

Flow Data



Seal Elastomer Data*

Seal Elastomer	Max. Operation Temperature Range
FKM (Fluorocarbon)*	-20°C +200°C / -4°F +392°F
EPDM (Ethylene-Propylene)**	-40°C +150°C / -40°F +302°F

*For reference only, based on Danfoss recommended temperatures.

**In accordance with NF L 17-241 or NAS 1613 rev. 5

Contact Danfoss technical support for further information on fluid compatibility.

R4000 Series

(Stainless Steel)

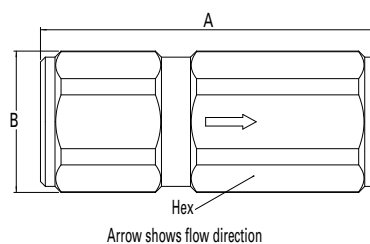


Figure 1

Cracking Pressure 0.5 bar (7 psi)

Part Number	FKM	EPDM	Body Size (in)	Nominal Flow Diameter (mm)	Thread Size* (Female)	BSP	Fig.	Dimensions			Weight		
								A (in)	B (in)	Hex (in)	A (mm)	B (mm)	Hex (mm)
RZ04000V0	RZ04000E0	1/8	3.8	1/8	1	1.46	0.69	0.63	37	17.5	16	0.10	45
RZ04010V0	RZ04010E0	1/4	5.7	1/4	1	1.97	0.83	0.75	50	21	19	0.18	80
RZ04020V0	RZ04020E0	3/8	7.6	3/8	1	2.36	0.98	0.90	60	25	23	0.29	130
RZ04030V0	RZ04030E0	1/2	10.3	1/2	1	2.75	1.15	1.06	70	29.2	27	0.44	200
RZ04040V0	RZ04040E0	3/4	14.2	3/4	1	3.38	1.50	1.38	86	38	35	0.93	420
RZ04050V0	RZ04050E0	1	16.5	1	1	3.94	1.77	1.61	100	45	41	1.41	640
RZ04060V0	RZ04060E0	1 1/4	20.5	1 1/4	1	5.12	2.40	2.16	130	61	55	3.46	1570
RZ04070V0	RZ04070E0	1 1/2	25.8	1 1/2	1	5.31	2.83	2.56	135	72	65	5.16	2340
RZ04090V0	RZ04090E0	2	34.7	2	1	5.90	3.30	2.95**	150	84	75**	6.57	2980

*Alternative end connections available upon request, depending on size (please contact Danfoss technical support).

**Across flat dimension.

Cracking Pressure 1 bar (14.5 psi)

Part Number	FKM	EPDM	Body Size (in)	Nominal Flow Diameter (mm)	Thread Size* (Female)	BSP	Fig.	Dimensions			Weight		
								A (in)	B (in)	Hex (in)	A (mm)	B (mm)	Hex (mm)
RZ04000VB	RZ04000EB	1/8	3.8	1/8	1	1.46	0.69	0.63	37	17.5	16	0.10	45
RZ04010VB	RZ04010EB	1/4	5.7	1/4	1	1.97	0.83	0.75	50	21	19	0.18	80
RZ04020VB	RZ04020EB	3/8	7.6	3/8	1	2.36	0.98	0.90	60	25	23	0.29	130
RZ04030VB	RZ04030EB	1/2	10.3	1/2	1	2.75	1.15	1.06	70	29.2	27	0.44	200
RZ04040VB	RZ04040EB	3/4	14.2	3/4	1	3.38	1.50	1.38	86	38	35	0.93	420
RZ04050VB	RZ04050EB	1	16.5	1	1	3.94	1.77	1.61	100	45	41	1.41	640
RZ04060VB	RZ04060EB	1 1/4	20.5	1 1/4	1	5.12	2.40	2.16	130	61	55	3.46	1570
RZ04070VB	RZ04070EB	1 1/2	25.8	1 1/2	1	5.31	2.83	2.56	135	72	65	5.16	2340
RZ04090VB	RZ04090EB	2	34.7	2	1	5.90	3.30	2.95**	150	84	75**	6.57	2980

*Alternative end connections available upon request depending on size (please contact Danfoss technical support).

**Across flat dimension.