

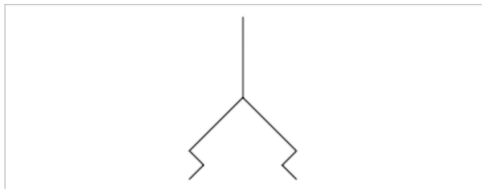
Oval suction gripper, Series FSO

- F = 0.42-1 N

- pluggable



Ambient temperature min./max.	-10 ... 70 °C
Min./max. temporary ambient temperature (30 s)	-30 ... 120 °C
Hardness according to standard	55 ± 5 Shore A
Abrasion value according to DIN 535 16	100-120 mm³
Weight	0,001 kg



Technical data

Part No.	Holding force	Volume	Max. curving on object Rmin	Delivery unit
	*)			
1820455109	0,42 N	0,004 cm³	1 mm	5 piece
1820455110	1 N	0,019 cm³	3 mm	5 piece

*) Theoretical value at 60% vacuum level, without safety factor

Technical information

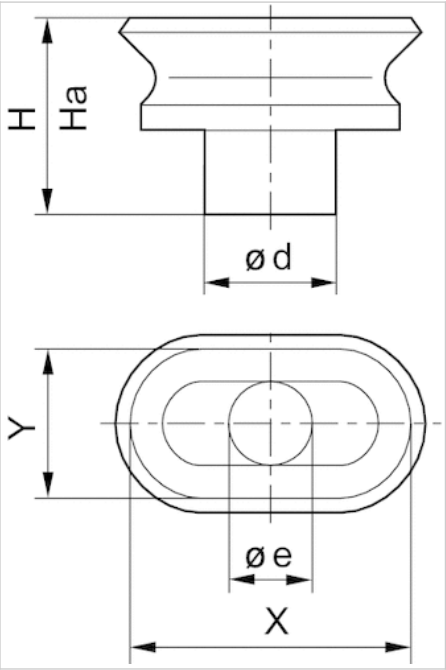
To be used on long, flat, and slightly curved surfaces.

Technical information

Material	
Vacuum	Acrylonitrile butadiene rubber

Dimensions

Dimensions



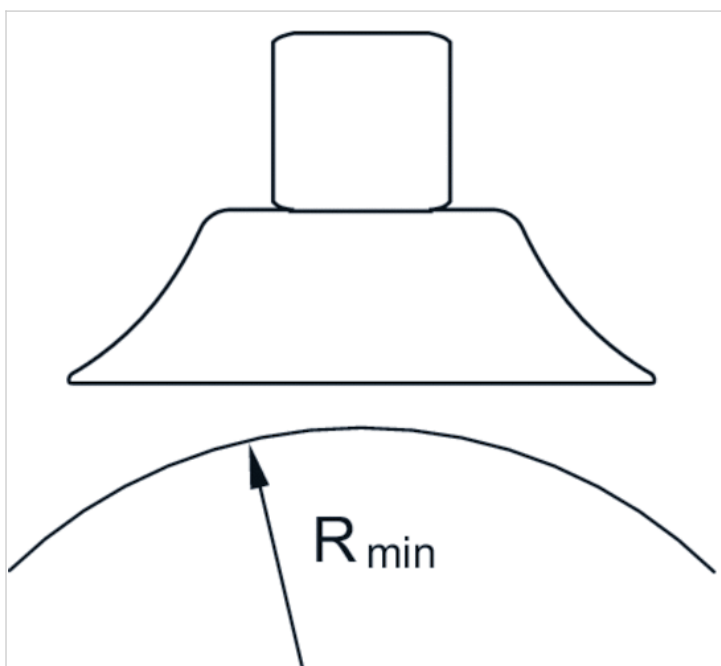
Dimensions

Part No.	X	Y	Ø e	Ø d	Ha*)	H
1820455109	4.2	2.2	1.2	2.2	2.5	3
1820455110	7	3.5	1.5	3.5	3.7	4.5

*) Height for vacuum operation

Diagrams

Max. curving on object Rmin



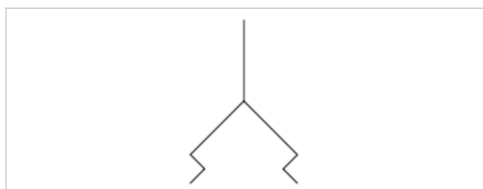
Oval suction gripper, Series FSO

- F = 3.1-112.6 N

- Internal thread



Ambient temperature min./max. -10 ... 70 °C
 Min./max. temporary ambient temperature (30 s) -30 ... 120 °C
 Hardness according to standard 60 ± 5 Shore A
 Abrasion value according to DIN 535 16 100-120 mm³
 Weight See table below



Technical data

Part No.	Compressed air connection	Holding force	Volume	Max. curving on object Rmin	Delivery unit
		*)			
1820415137	M5	3,1 N	0,036 cm³	4 mm	1 piece
1820415138	M5	4,5 N	0,058 cm³	4 mm	1 piece
1820415139	G 1/8	8 N	0,138 cm³	8 mm	1 piece
1820415140	G 1/8	12,2 N	0,28 cm³	8 mm	1 piece
1820415141	G 1/4	28,2 N	0,98 cm³	10 mm	1 piece
1820415142	G 1/4	50,1 N	2,3 cm³	20 mm	1 piece
1820415143	G 1/4	78,3 N	4,7 cm³	30 mm	1 piece
1820415144	G 1/4	112,6 N	8,5 cm³	35 mm	1 piece

Part No.	Weight
1820415137	0,004 kg
1820415138	0,004 kg
1820415139	0,007 kg
1820415140	0,007 kg
1820415141	0,014 kg
1820415142	0,018 kg
1820415143	0,026 kg
1820415144	0,035 kg

*) Theoretical value at 60% vacuum level, without safety factor

Technical information

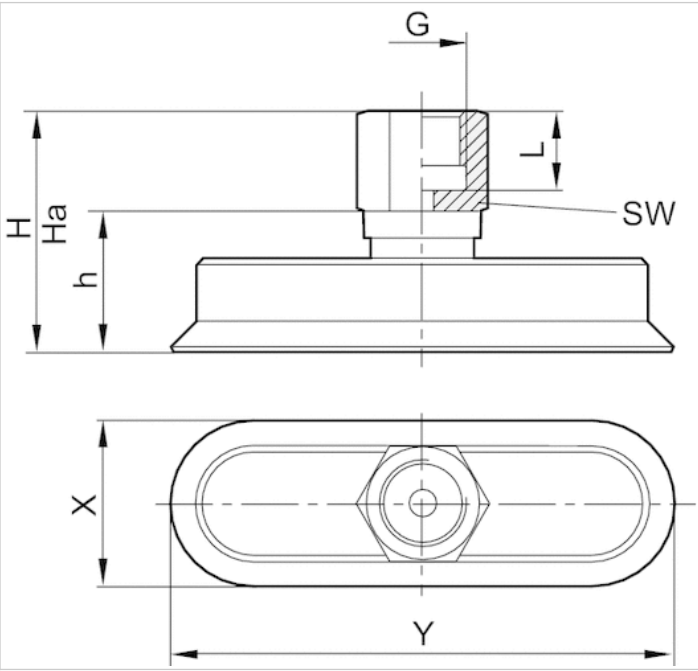
To be used on long, flat, and slightly curved surfaces.

Technical information

Material	
Connector	Aluminum
Vacuum	Acrylonitrile butadiene rubber

Dimensions

Dimensions



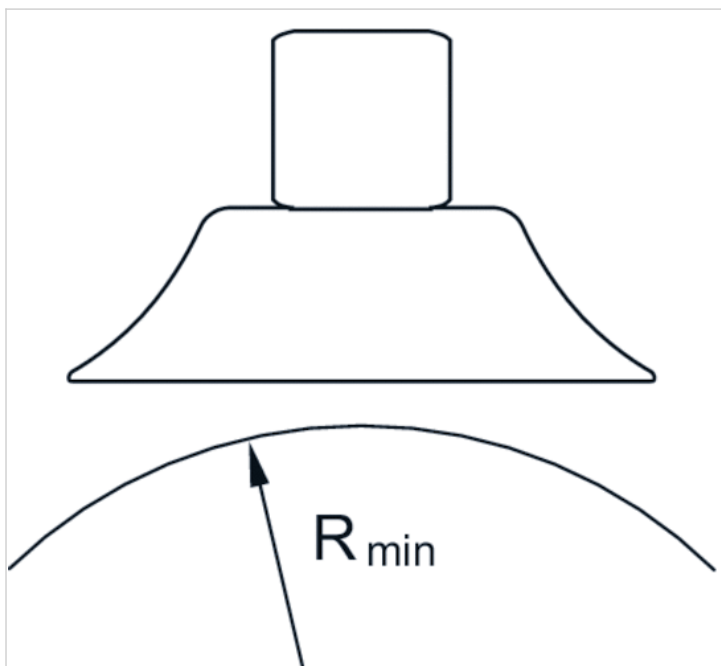
Dimensions

Part No.	X	Y	Ha*)	H	h	L	SW
1820415137	5	15	21.3	22	12	8.5	8
1820415138	6	18	21.2	22	12	8.5	8
1820415139	8	24	24	25	12	9	14
1820415140	10	30	23.5	25	12	9	14
1820415141	15	45	34	36	21	12	17
1820415142	20	60	33.5	36	21	12	17
1820415143	25	75	33.2	36	21	12	17
1820415144	30	90	32.5	36	21	12	17

*) Height for vacuum operation

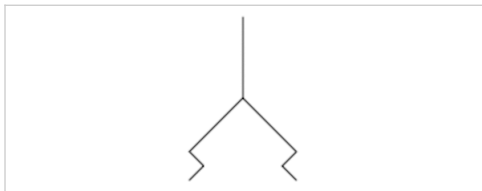
Diagrams

Max. curving on object Rmin



Oval suction gripper, Series F50

- F = 3.1-112.6 N
- Internal thread
- Heat resistant



Ambient temperature min./max. -30 ... 180 °C
 Min./max. temporary ambient temperature (30 s) -50 ... 220 °C
 Hardness according to standard 60 ± 5 Shore A
 Abrasion value according to DIN 535 16 180-200 mm³
 Weight See table below

Technical data

Part No.	Compressed air connection	Holding force	Volume	Max. curving on object Rmin	Delivery unit
		*)			
1820415145	M5	3,1 N	0,036 cm³	4 mm	1 piece
1820415146	M5	4,5 N	0,058 cm³	4 mm	1 piece
1820415147	G 1/8	8 N	0,138 cm³	8 mm	1 piece
1820415148	G 1/8	12,2 N	0,28 cm³	8 mm	1 piece
1820415149	G 1/4	28,2 N	0,98 cm³	10 mm	1 piece
1820415150	G 1/4	50,1 N	2,3 cm³	20 mm	1 piece
1820415151	G 1/4	78,3 N	4,7 cm³	30 mm	1 piece
1820415152	G 1/4	112,6 N	8,5 cm³	35 mm	1 piece

Part No.	Weight
1820415145	0,004 kg
1820415146	0,004 kg
1820415147	0,007 kg
1820415148	0,007 kg
1820415149	0,014 kg
1820415150	0,018 kg
1820415151	0,026 kg
1820415152	0,035 kg

*) Theoretical value at 60% vacuum level, without safety factor

Technical information

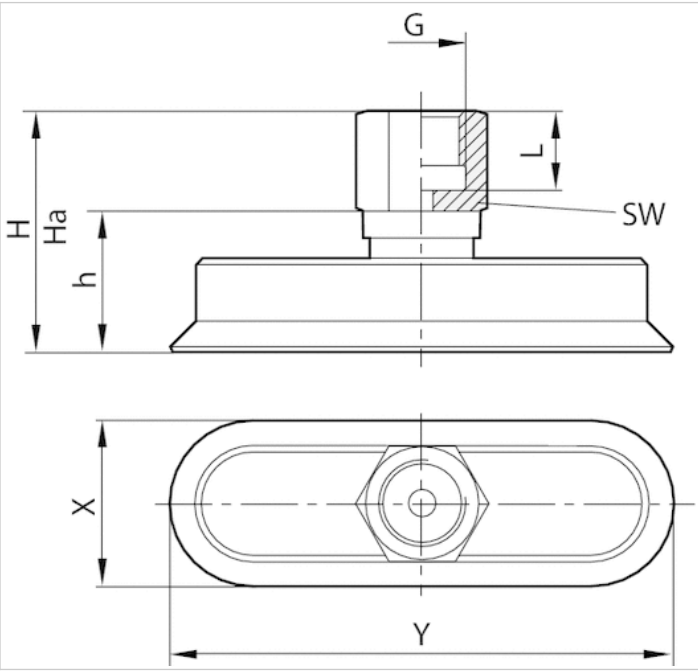
To be used on long, flat, and slightly curved surfaces.

Technical information

Material	
Connector	Aluminum
Vacuum	Fluoromethyl silicone

Dimensions

Dimensions



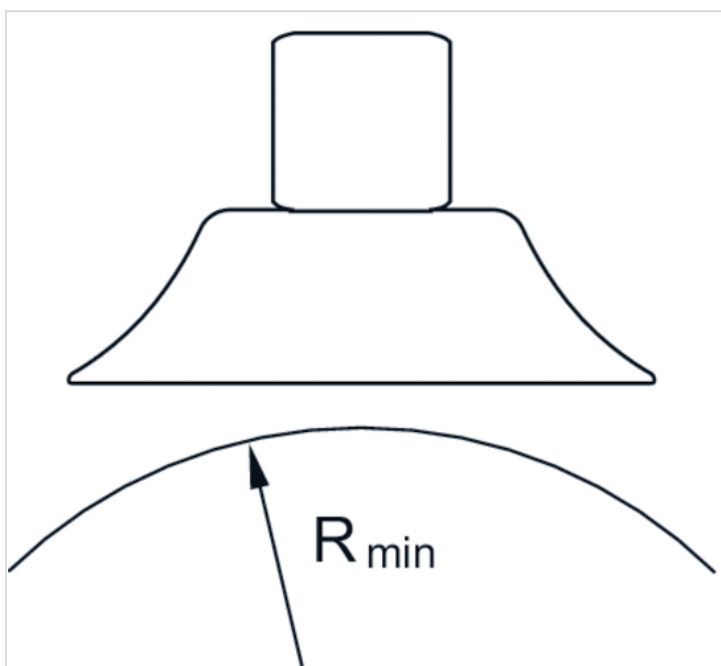
Dimensions

Part No.	G	X	Y	Ha*)	H	h	L	SW
1820415145	M5	5	15	21.3	22	12	8.5	8
1820415146	M5	6	18	21.2	22	12	8.5	8
1820415147	G 1/8	8	24	24	25	12	9	14
1820415148	G 1/8	10	30	23.5	25	12	9	14
1820415149	G 1/4	15	45	34	36	21	12	17
1820415150	G 1/4	20	60	33.5	36	21	12	17
1820415151	G 1/4	25	75	33.2	36	21	12	17
1820415152	G 1/4	30	90	32.5	36	21	12	17

*) Height for vacuum operation

Diagrams

Max. curving on object Rmin



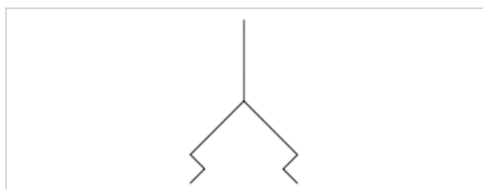
Oval suction gripper, Series FSO

- F = 3.1-112.6 N

- External thread



Ambient temperature min./max. -10 ... 70 °C
 Min./max. temporary ambient temperature (30 s) -30 ... 120 °C
 Hardness according to standard 60 ± 5 Shore A
 Abrasion value according to DIN 535 16 100-120 mm³
 Weight See table below



Technical data

Part No.	Compressed air connection	Holding force	Volume	Max. curving on object Rmin	Delivery unit
		*)			
1820415121	M5	3,1 N	0,036 cm³	4 mm	1 piece
1820415122	M5	4,5 N	0,058 cm³	4 mm	1 piece
1820415123	G 1/8	8 N	0,138 cm³	8 mm	1 piece
1820415124	G 1/8	12,2 N	0,28 cm³	8 mm	1 piece
1820415125	G 1/4	28,2 N	0,98 cm³	10 mm	1 piece
1820415126	G 1/4	50,1 N	2,3 cm³	20 mm	1 piece
1820415127	G 1/4	78,3 N	4,7 cm³	30 mm	1 piece
1820415128	G 1/4	112,6 N	8,5 cm³	35 mm	1 piece

Part No.	Weight
1820415121	0,004 kg
1820415122	0,004 kg
1820415123	0,007 kg
1820415124	0,007 kg
1820415125	0,014 kg
1820415126	0,018 kg
1820415127	0,026 kg
1820415128	0,035 kg

*) Theoretical value at 60% vacuum level, without safety factor

Technical information

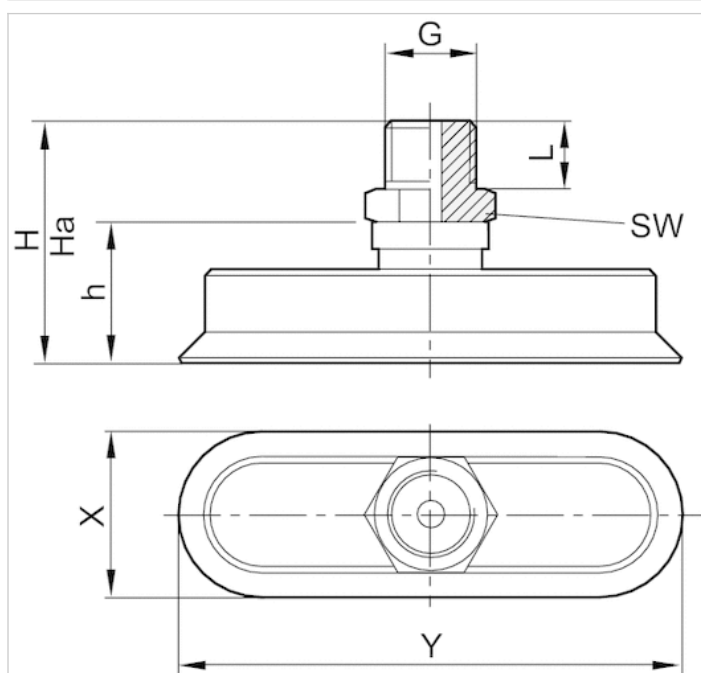
To be used on long, flat, and slightly curved surfaces.

Technical information

Material	
Connector	Aluminum
Vacuum	Acrylonitrile butadiene rubber

Dimensions

Dimensions



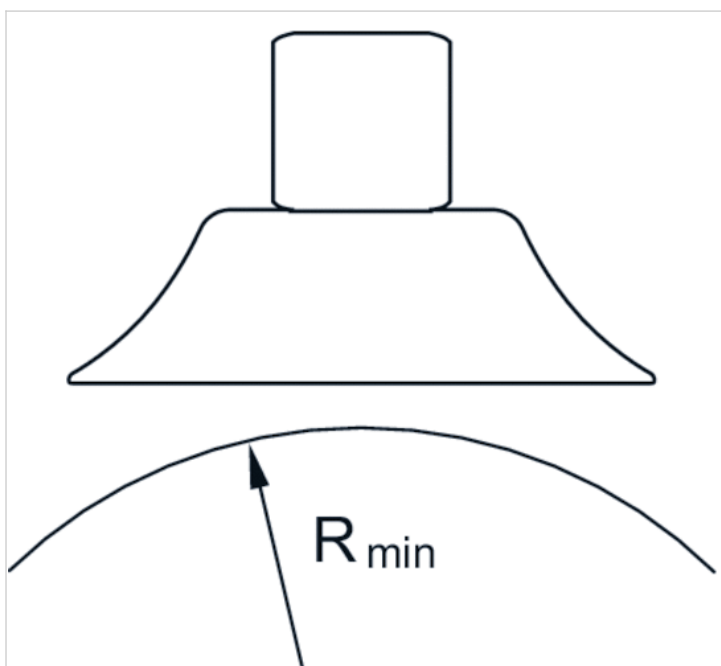
Dimensions

Part No.	G	X	Y	Ha*)	H	h	L	SW
1820415121	M5	5	15	21.3	22	12	5	8
1820415122	M5	6	18	21.2	22	12	5	8
1820415123	G 1/8	8	24	24	25	12	8	14
1820415124	G 1/8	10	30	23.5	25	12	8	14
1820415125	G 1/4	15	45	34	36	21	10	17
1820415126	G 1/4	20	60	33.5	36	21	10	17
1820415127	G 1/4	25	75	33.2	36	21	10	17
1820415128	G 1/4	30	90	32.5	36	21	10	17

*) Height for vacuum operation

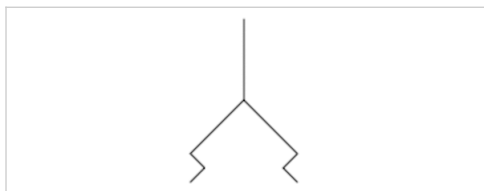
Diagrams

Max. curving on object Rmin



Oval suction gripper, Series F50

- F = 3.1-112.6 N
- External thread
- Heat resistant



Ambient temperature min./max.	-30 ... 180 °C
Min./max. temporary ambient temperature (30 s)	-50 ... 220 °C
Hardness according to standard	60 ± 5 Shore A
Abrasion value according to DIN 535 16	180-200 mm³
Weight	See table below

Technical data

Part No.	Compressed air connection	Holding force	Volume	Max. curving on object Rmin	Delivery unit
		*)			
1820415129	M5	3,1 N	0,036 cm³	4 mm	1 piece
1820415130	M5	4,5 N	0,058 cm³	4 mm	1 piece
1820415131	G 1/8	8 N	0,138 cm³	8 mm	1 piece
1820415132	G 1/8	12,2 N	0,28 cm³	8 mm	1 piece
1820415133	G 1/4	28,2 N	0,98 cm³	10 mm	1 piece
1820415134	G 1/4	50,1 N	2,3 cm³	20 mm	1 piece
1820415135	G 1/4	78,3 N	4,7 cm³	30 mm	1 piece
1820415136	G 1/4	112,6 N	8,5 cm³	35 mm	1 piece

Part No.	Weight
1820415129	0,004 kg
1820415130	0,004 kg
1820415131	0,007 kg
1820415132	0,007 kg
1820415133	0,014 kg
1820415134	0,018 kg
1820415135	0,026 kg
1820415136	0,035 kg

*) Theoretical value at 60% vacuum level, without safety factor

Technical information

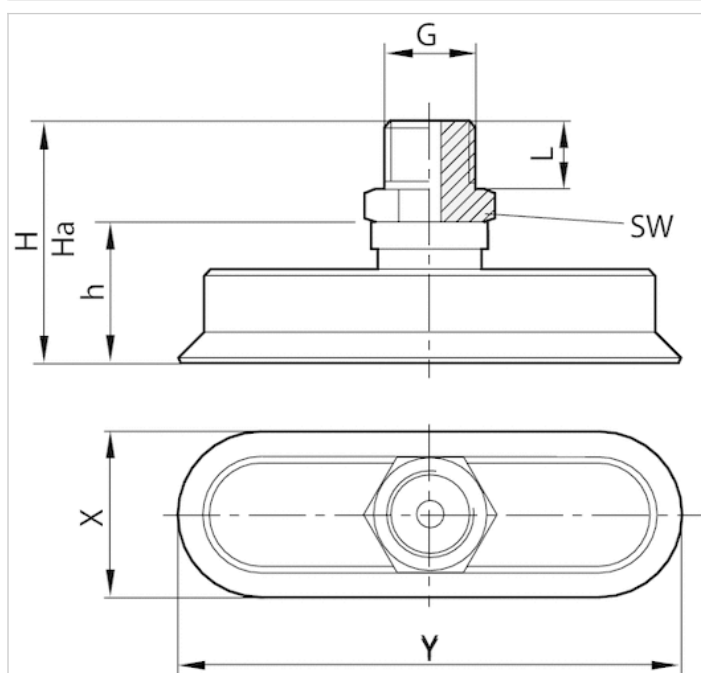
To be used on long, flat, and slightly curved surfaces.

Technical information

Material	
Connector	Aluminum
Vacuum	Fluoromethyl silicone

Dimensions

Dimensions



Dimensions

Part No.	G	X	Y	Ha*)	H	h	L	SW
1820415129	M5	5	15	21.3	22	12	5	8
1820415130	M5	6	18	21.2	22	12	5	8
1820415131	G 1/8	8	24	24	25	12	8	14
1820415132	G 1/8	10	30	23.5	25	12	8	14
1820415133	G 1/4	15	45	34	36	21	10	17
1820415134	G 1/4	20	60	33.5	36	21	10	17
1820415135	G 1/4	25	75	33.2	36	21	10	17
1820415136	G 1/4	30	90	32.5	36	21	10	17

*) Height for vacuum operation

Diagrams

Max. curving on object Rmin

