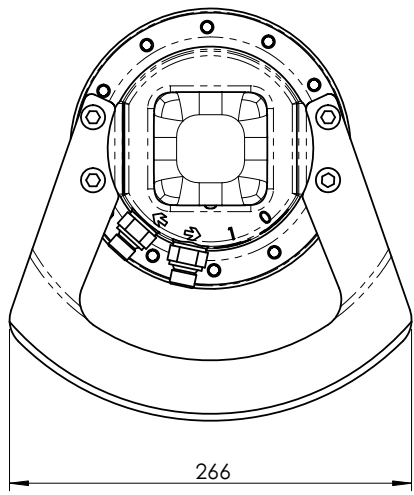
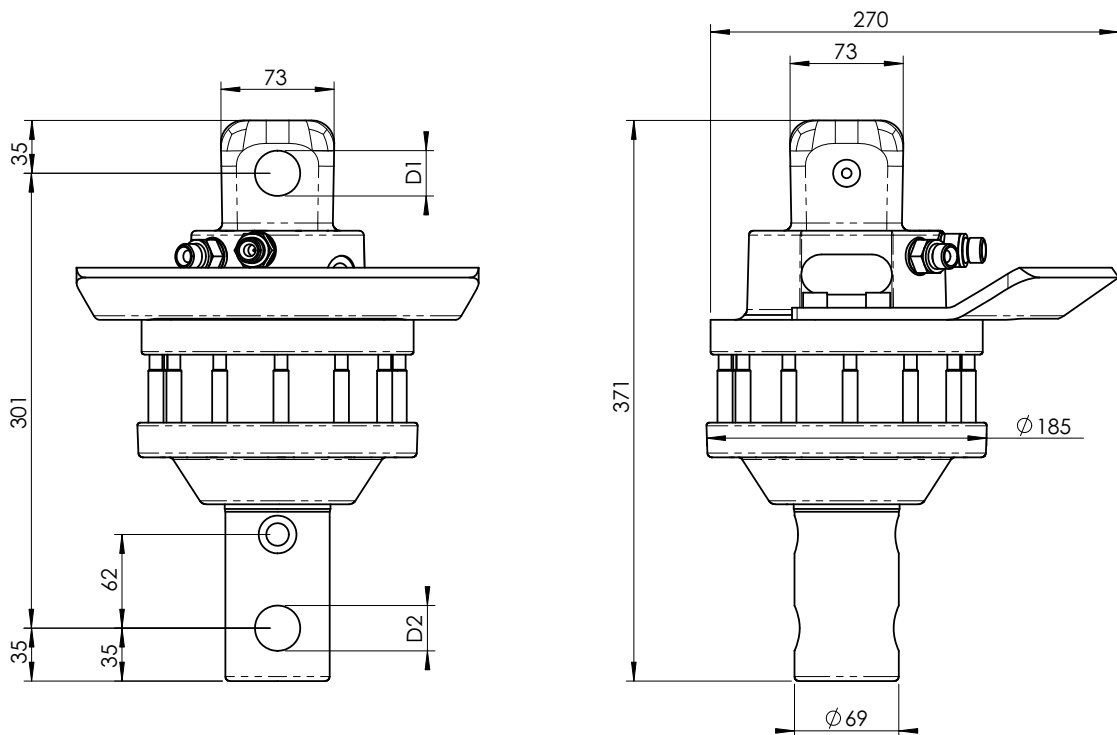


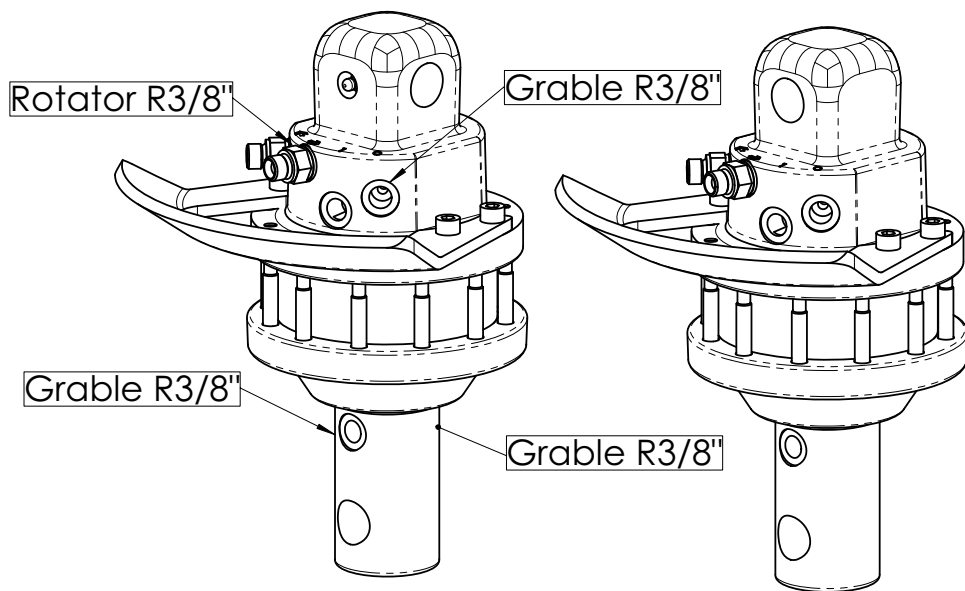
# ROTATORS FR 15 - model A



Direction of drilling

Direction X

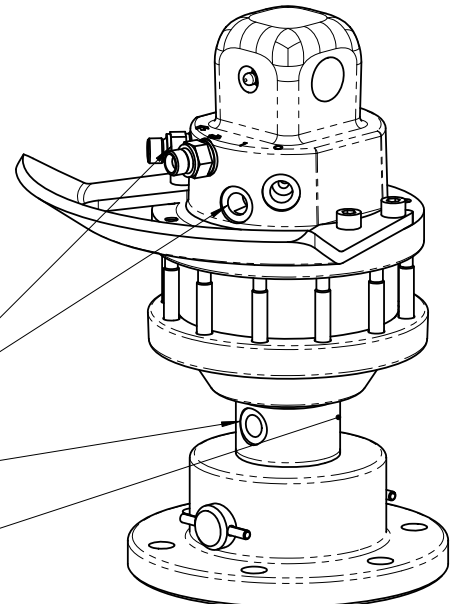
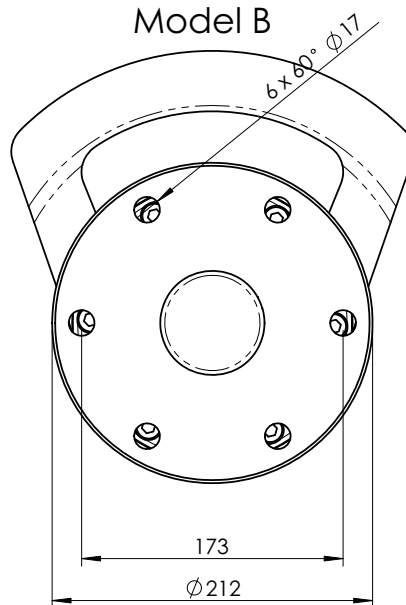
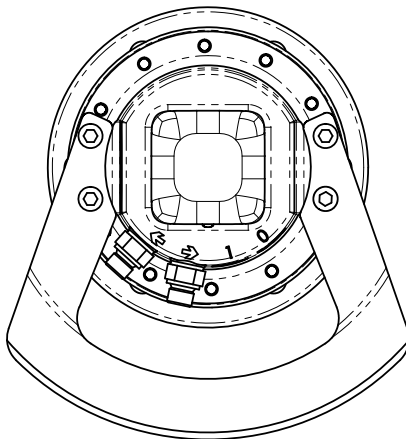
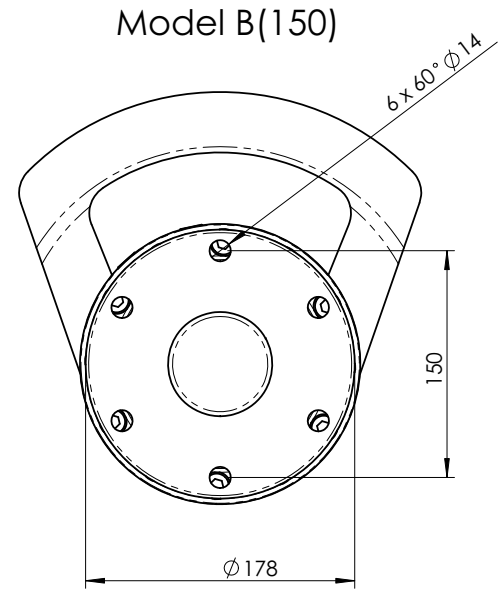
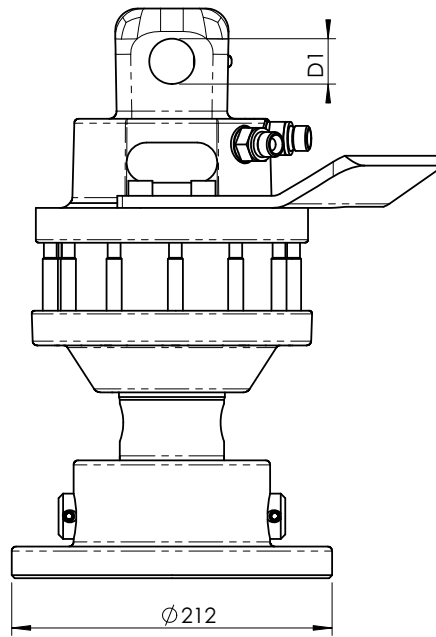
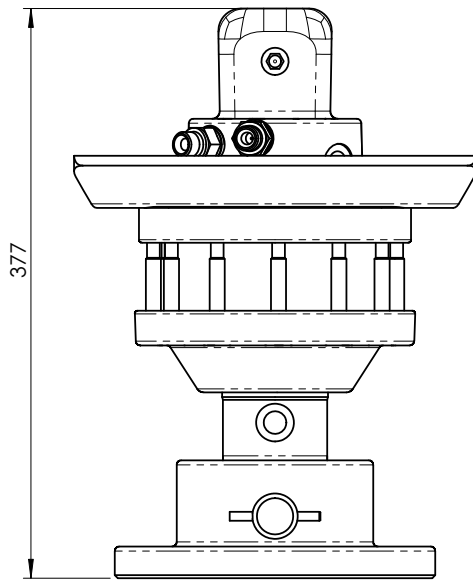
Direction W



FR15 model A	
Rotation angle	unlimited
Max. working pressure	200 bar
Displacement	464 cm <sup>3</sup>
Torque (200bar)	1150 Nm
Max. axial force	82 kN
Safe working load	5500 kg
Weight	27 kg

Basic models				
Item	Name	Direction	D1	D2
11520	FR 15-X30A30	X	30	30
11522	FR 15-W30A30	W	30	30

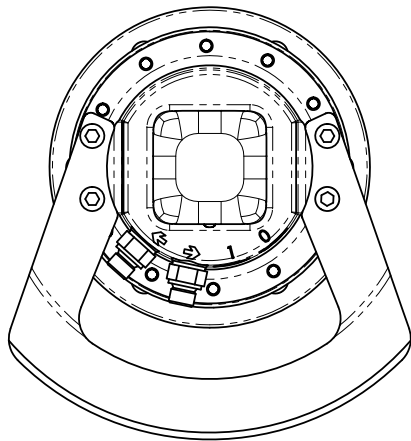
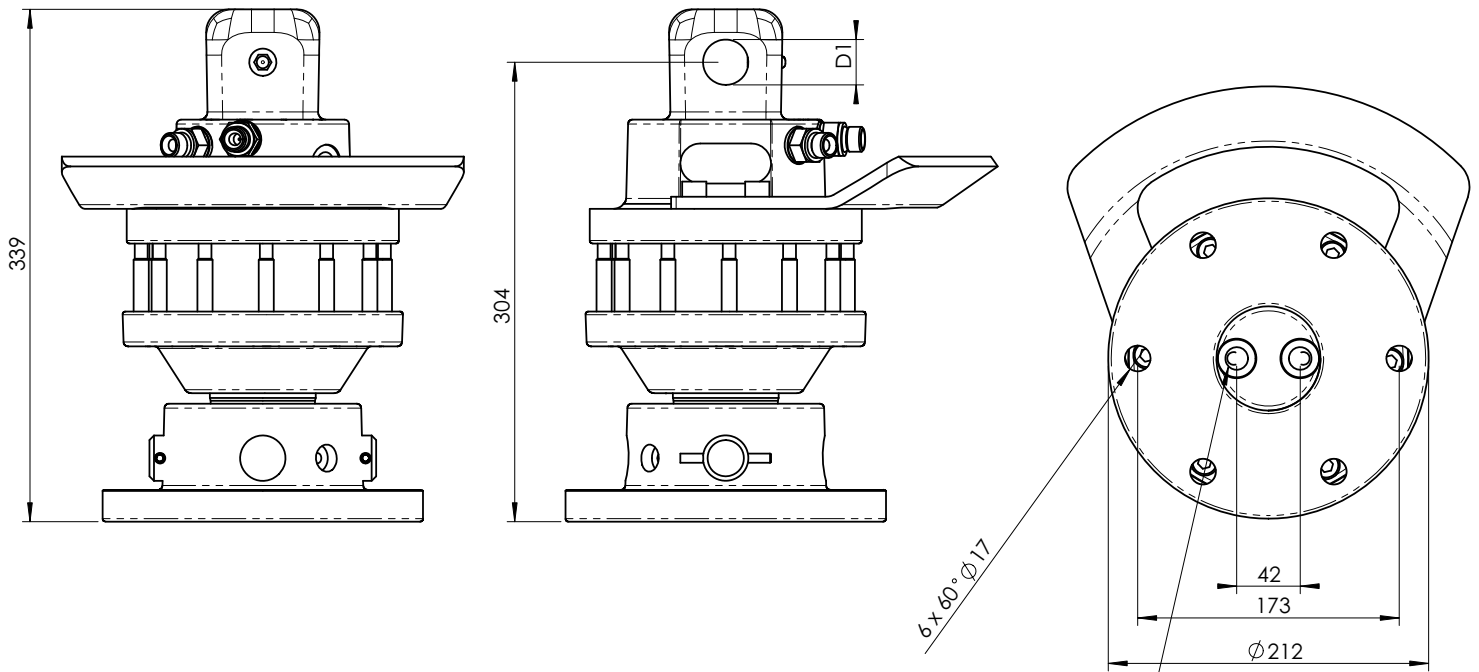
# ROTATORS FR 15 - model B



FR15 model B	
Rotation angle	unlimited
Max. working pressure	200 bar
Displacement	464 cm <sup>3</sup>
Torque (200bar)	1150 Nm
Max. axial force	82 kN
Safe working load	5500 kg
Weight	37 kg

Basic models				
Item	Name	Direction	D1	Flange
11521	FR 15-X30B30	X	30	173
11523	FR 15-X30B30	X	30	173
11524	FR 15-X30(B150)30	X	30	150
11525	FR 15-W30(B150)30	W	30	150

# ROTATORS FR 15 - model F

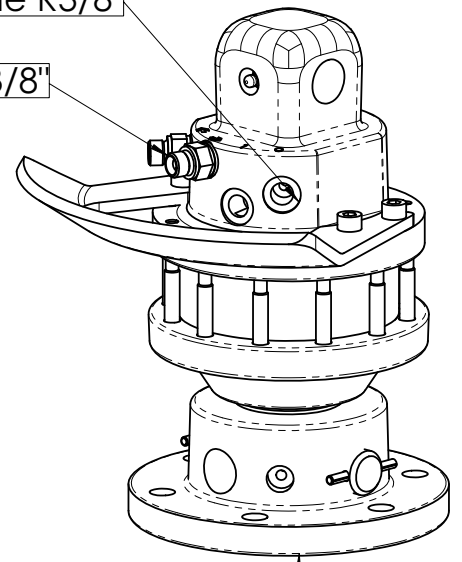


Grable R3/8"

Grable R3/8"

Rotator R3/8"

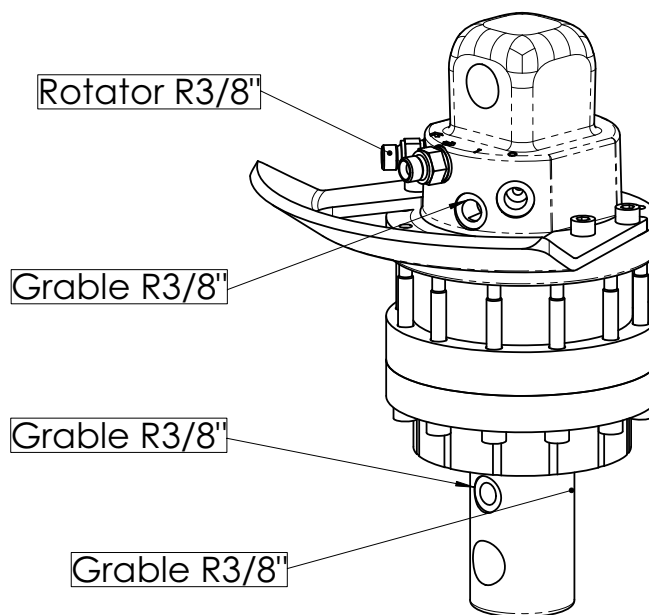
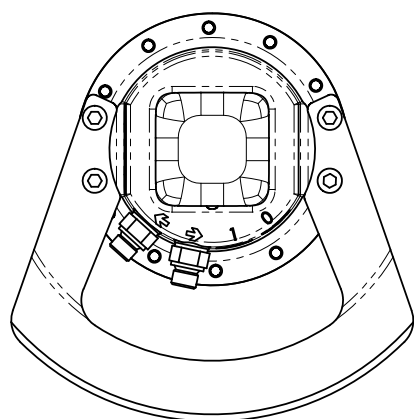
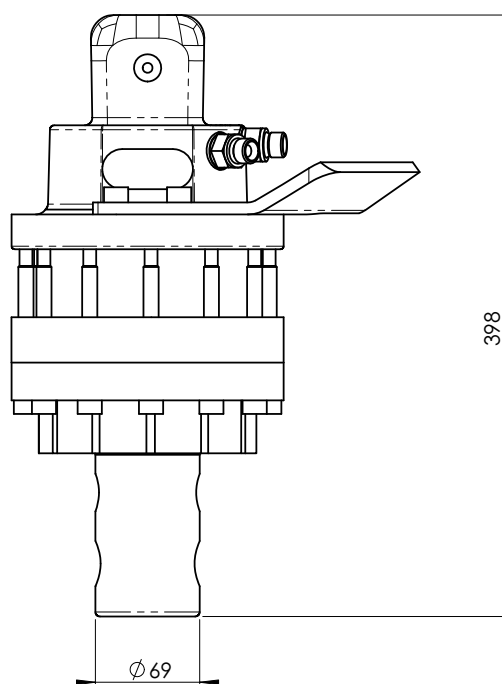
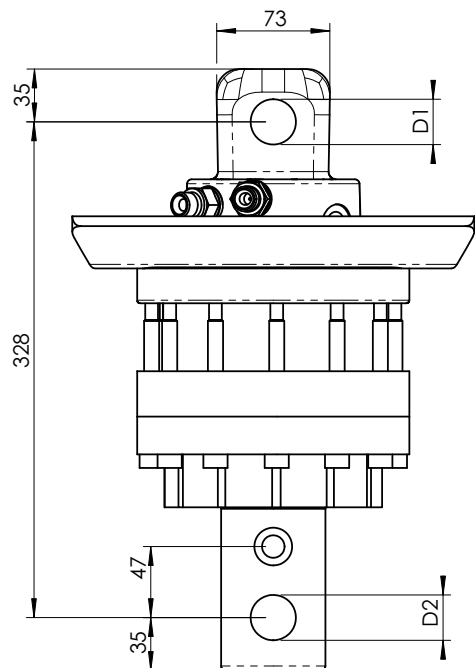
Grable R3/8"



FR15 model F	
Rotation angle	unlimited
Max. working pressure	200 bar
Displacement	464 cm <sup>3</sup>
Torque (200bar)	1150 Nm
Max. axial force	82 kN
Safe working load	5500 kg
Weight	34 kg

Basic models				
Item	Name	Direction	D1	Flange
11512	FR 15-X30(F173)	X	30	173
11513	FR 15-W30(F140x140)	W	30	140
11514	FR 15-W30(F173)	W	30	173
11517	FR 15-X30(F140x140)	X	30	140

# ROTATORS FR 15 - model BR

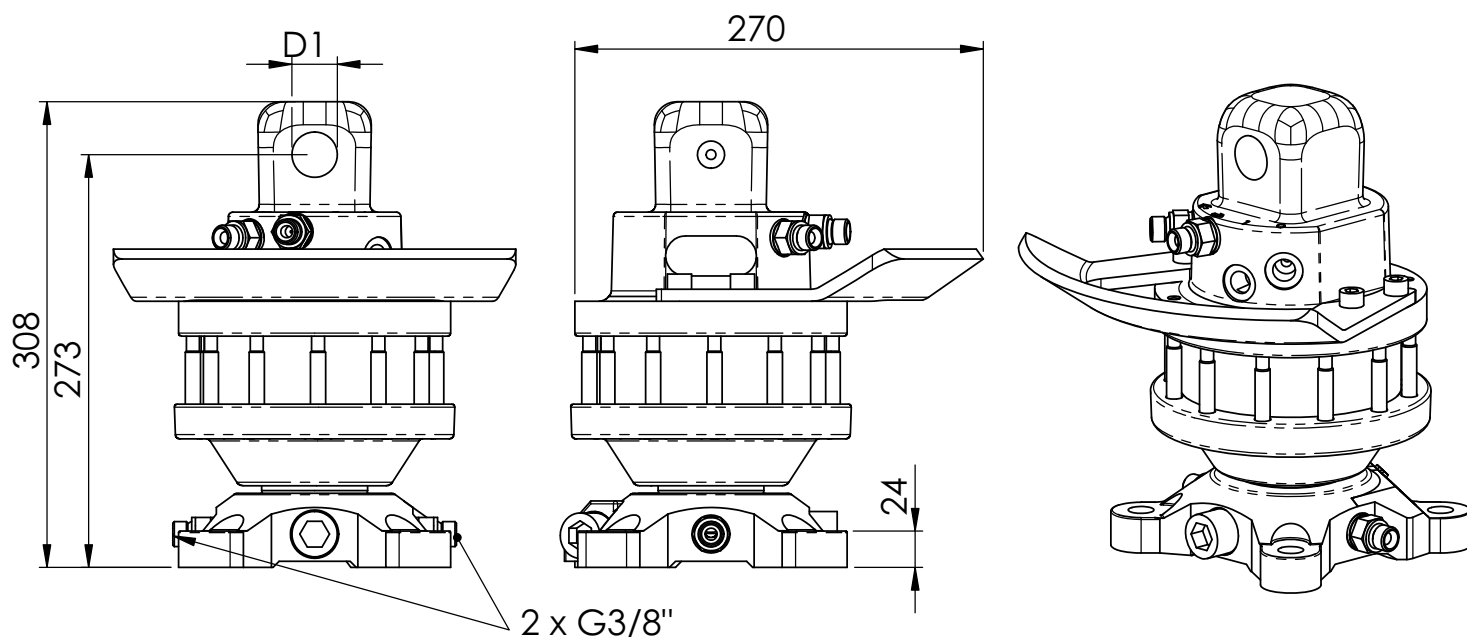


FR 15 model BR  
Rotator FR 15 with holding brake

FR15 model BR	
Rotation angle	unlimited
Max. working pressure	200 bar
Displacement	464 cm <sup>3</sup>
Torque (200bar)	1150 Nm
Max. axial force	82 kN
Safe working load	5500 kg
Weight	45 kg
Holding brake (opening)	540 Nm
Holding brake (braking)	450 Nm

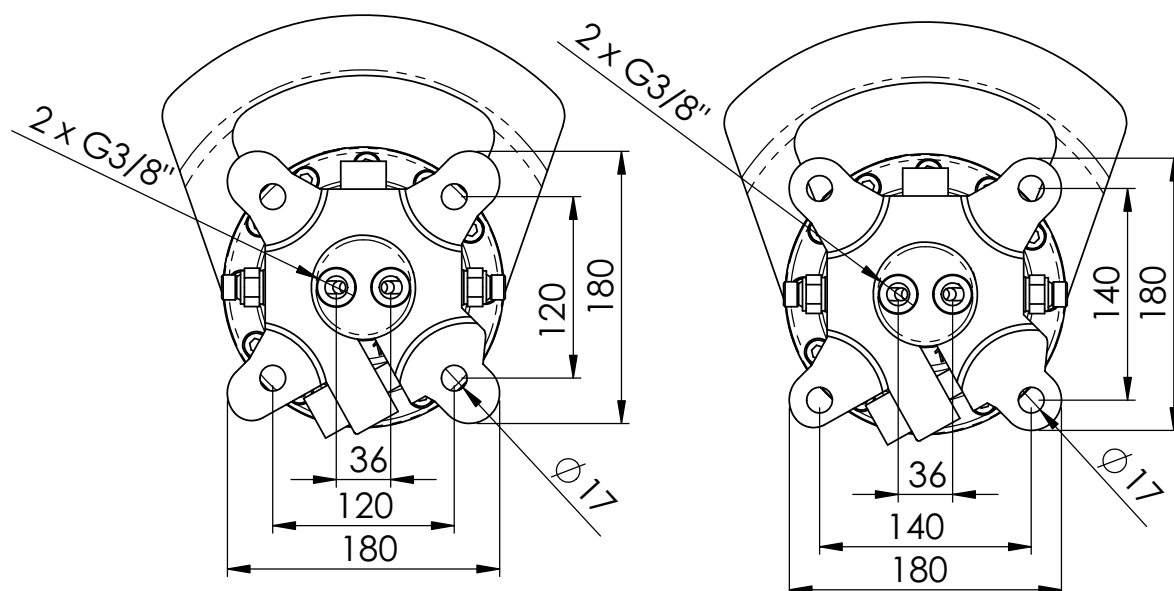
Basic models				
Item	Name	Direction	D1	D2
11530	FR 15(BR)-X30A30	X	30	30
11532	FR 15(BR)-W30A30	W	30	30

# ROTATORS FR 15 FA



FR 15 FA120x120

FR 15 FA140x140



FR15 model FA	
Rotation angle	unlimited
Max. working pressure	200 bar
Displacement	464 cm <sup>3</sup>
Torque (200bar)	1150 Nm
Max. axial force	82 kN
Safe working load	5500 kg
Weight	30 kg

Basic models				
Item	Name	Direction	D1	FLANGE
11560	FR 15-X30FA120X120	X	30	120x120
11561	FR 15-X30FA140X140	X	30	140x140
11562	FR 15-W30FA120X120	W	30	120x120
11563	FR 15-W30FA140X140	W	30	140x140