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# PRODUCTS

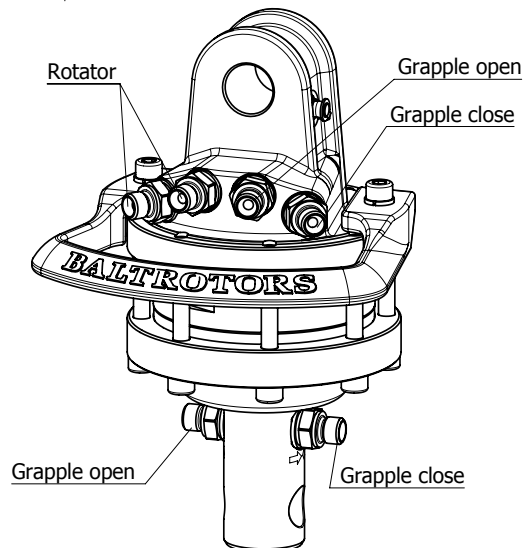
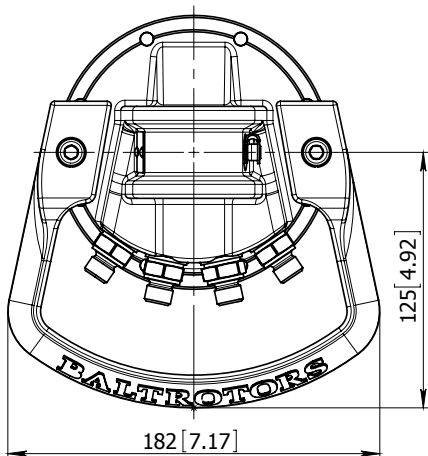
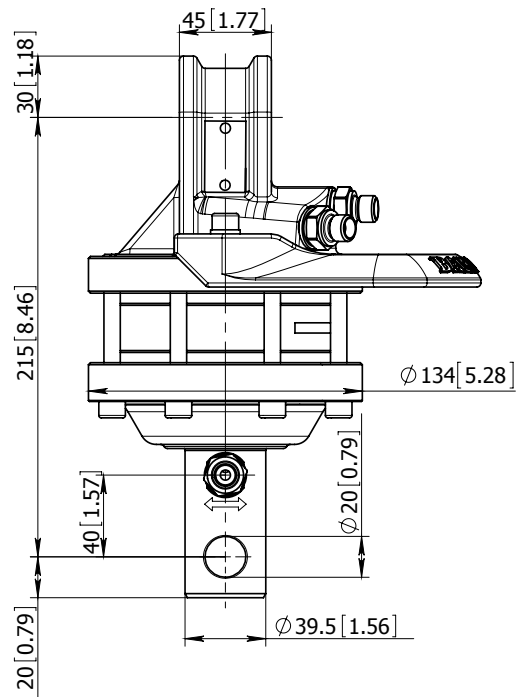
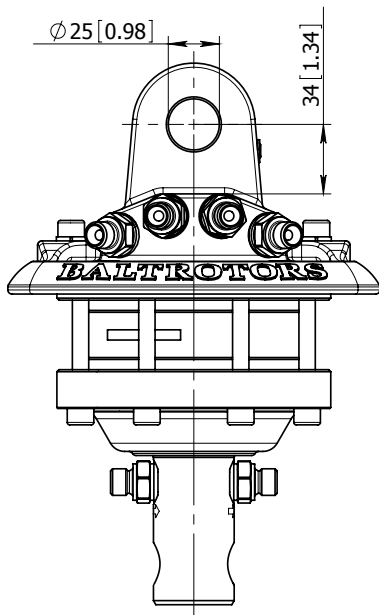


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# ROTATOR GR10



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	10 (2250)
Max axial load dynamic, KN (lbf)	5 (1125)
Torque at 25Mpa (3625psi), Nm (lb ft)	350 (258)
Rec oilflow, l/min (US gallon)	10 (2.6)
Weight, kg (lb)	10 (22)

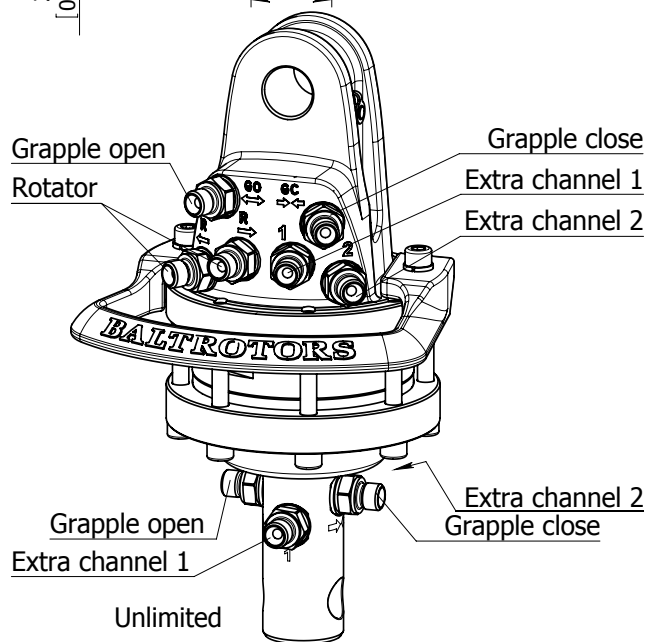
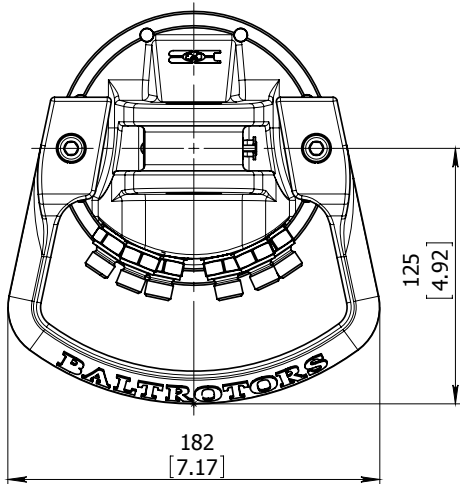
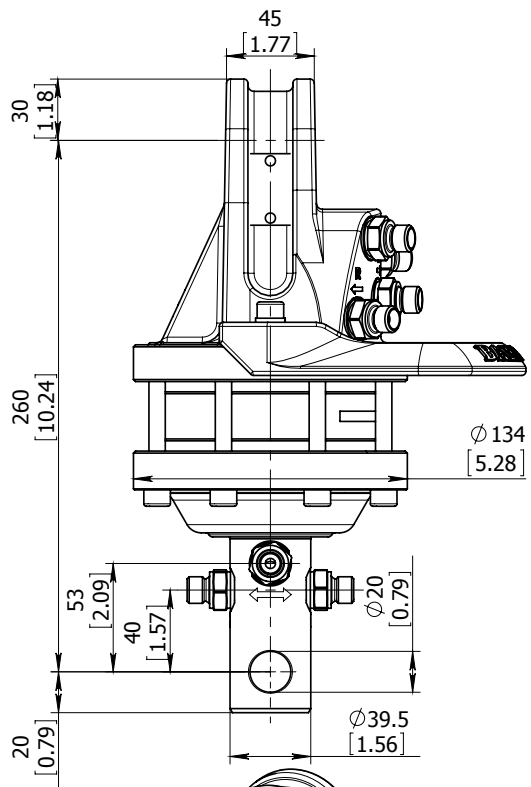
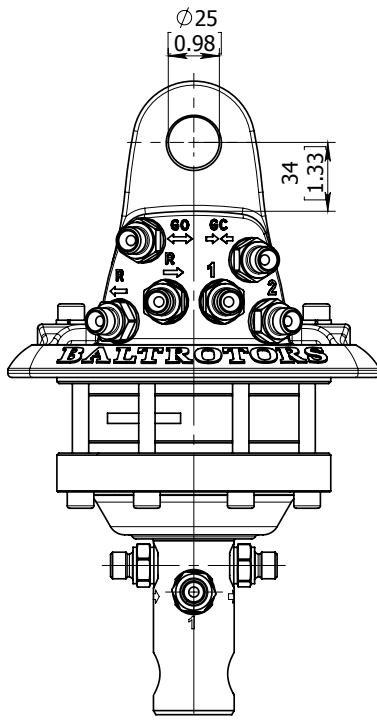
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 1/4
G 1/4
G 1/4

# ROTATOR GR10-02



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	10 (2250)
Max axial load dynamic, KN (lbf)	5 (1125)
Torque at 25Mpa (3625psi), Nm (lb ft)	350 (258)
Rec oilflow, l/min (US gallon)	10 (2.6)
Weight, kg (lb)	12 (26)

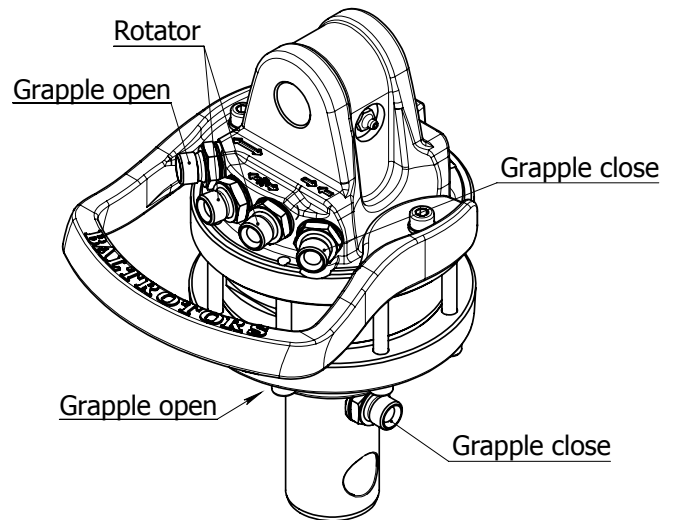
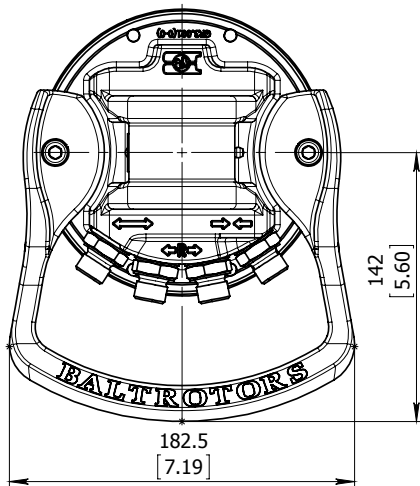
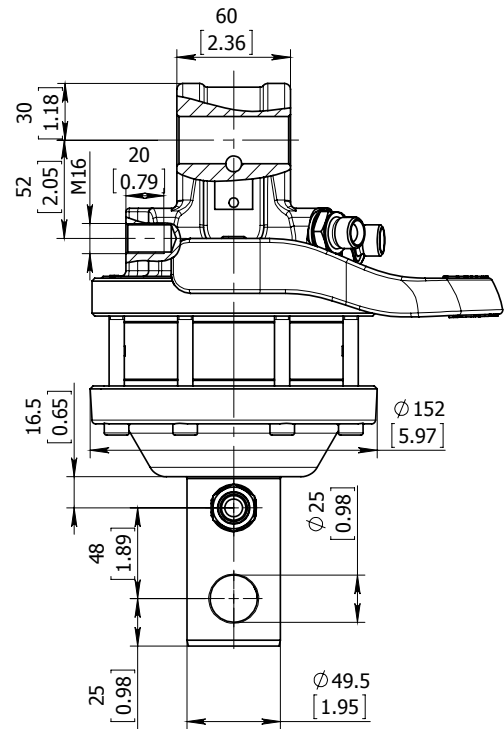
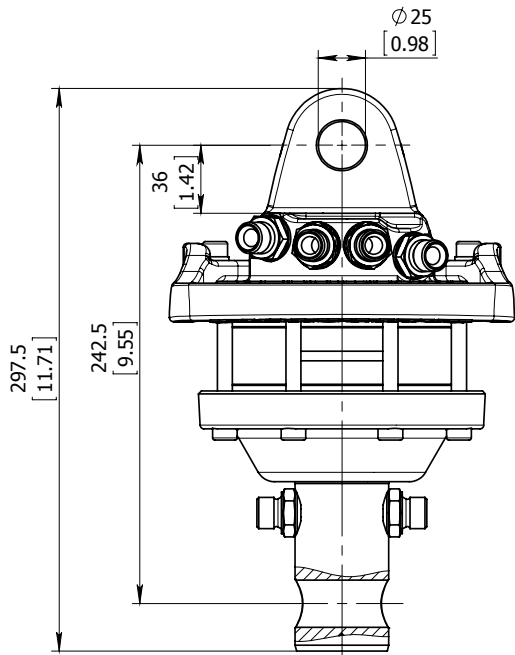
## Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)
Extra oil function	1 2	Max 30 MPa (4350 psi)

## Connection:

G 1/4
G 1/4
G 1/4
G 1/4

# ROTATOR GR3



## Technical data

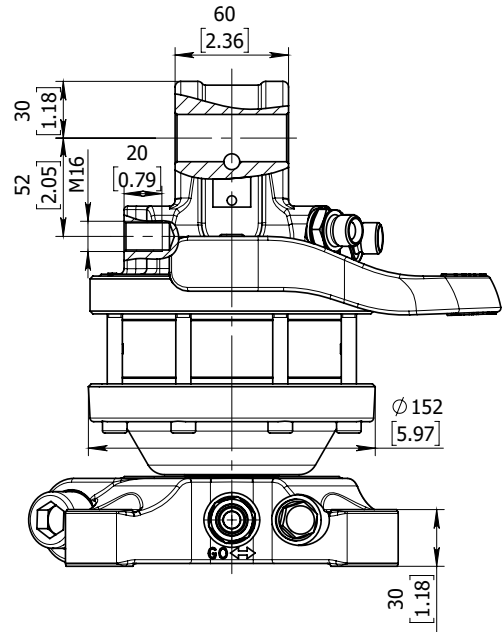
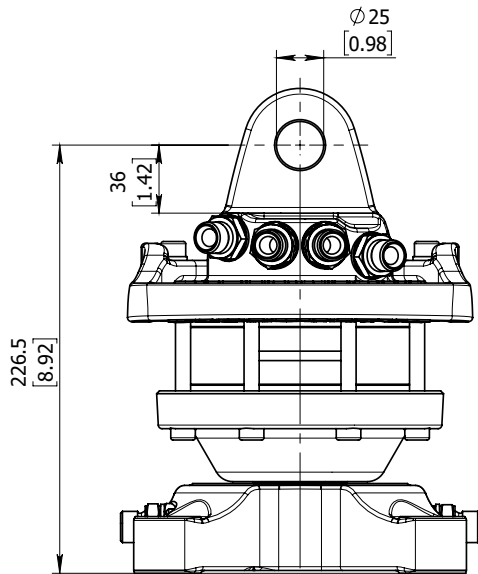
Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	800 (590)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	15 (33)

## Max working pressure:

Rotator	↔R↔	Max 25 MPa (3625 psi)	G 3/8
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)	G 3/8
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 3/8

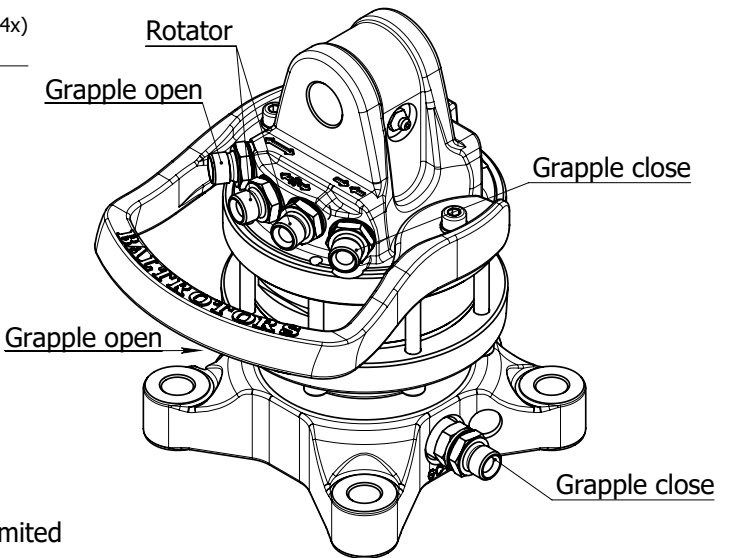
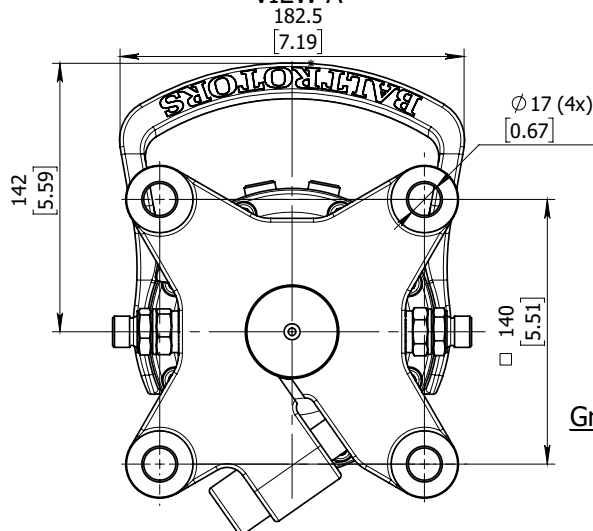
## Connection:

# ROTATOR GR3PF



A

VIEW A



## Technical data

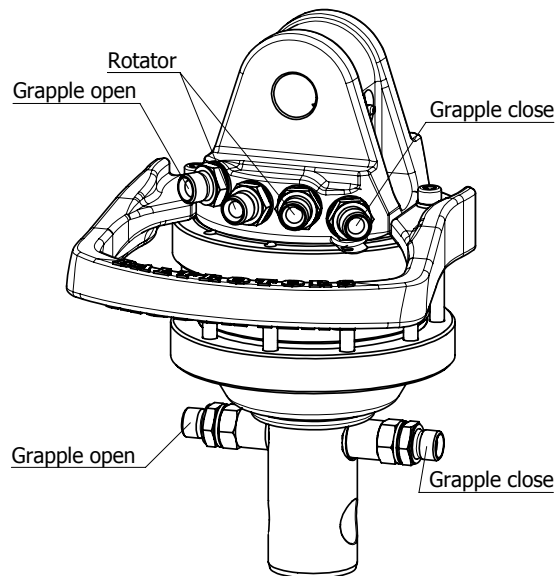
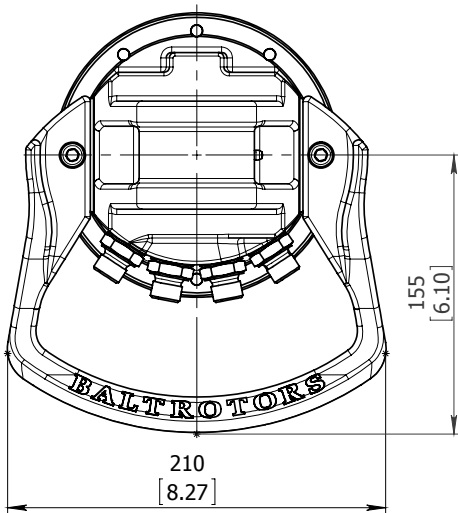
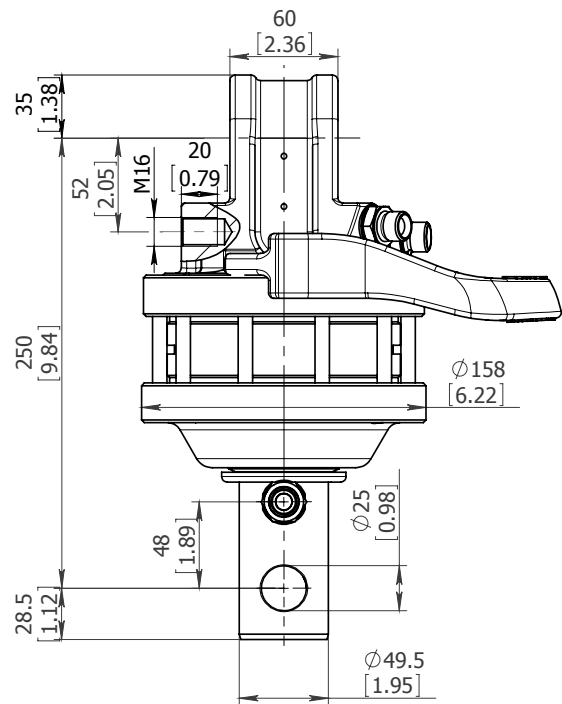
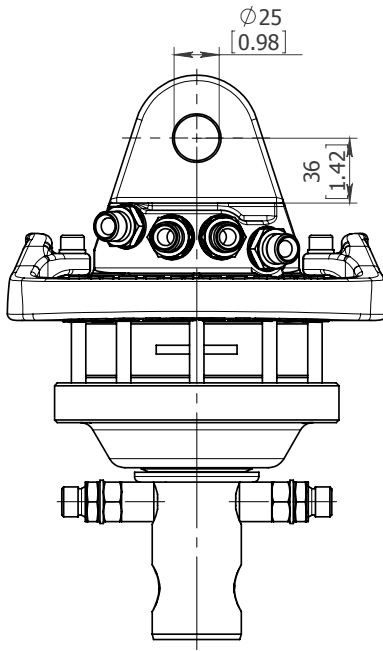
Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	800 (590)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	20 (45)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 3/8
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 3/8
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 3/8

### Connection:

# ROTATOR GR30



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	18 (39)

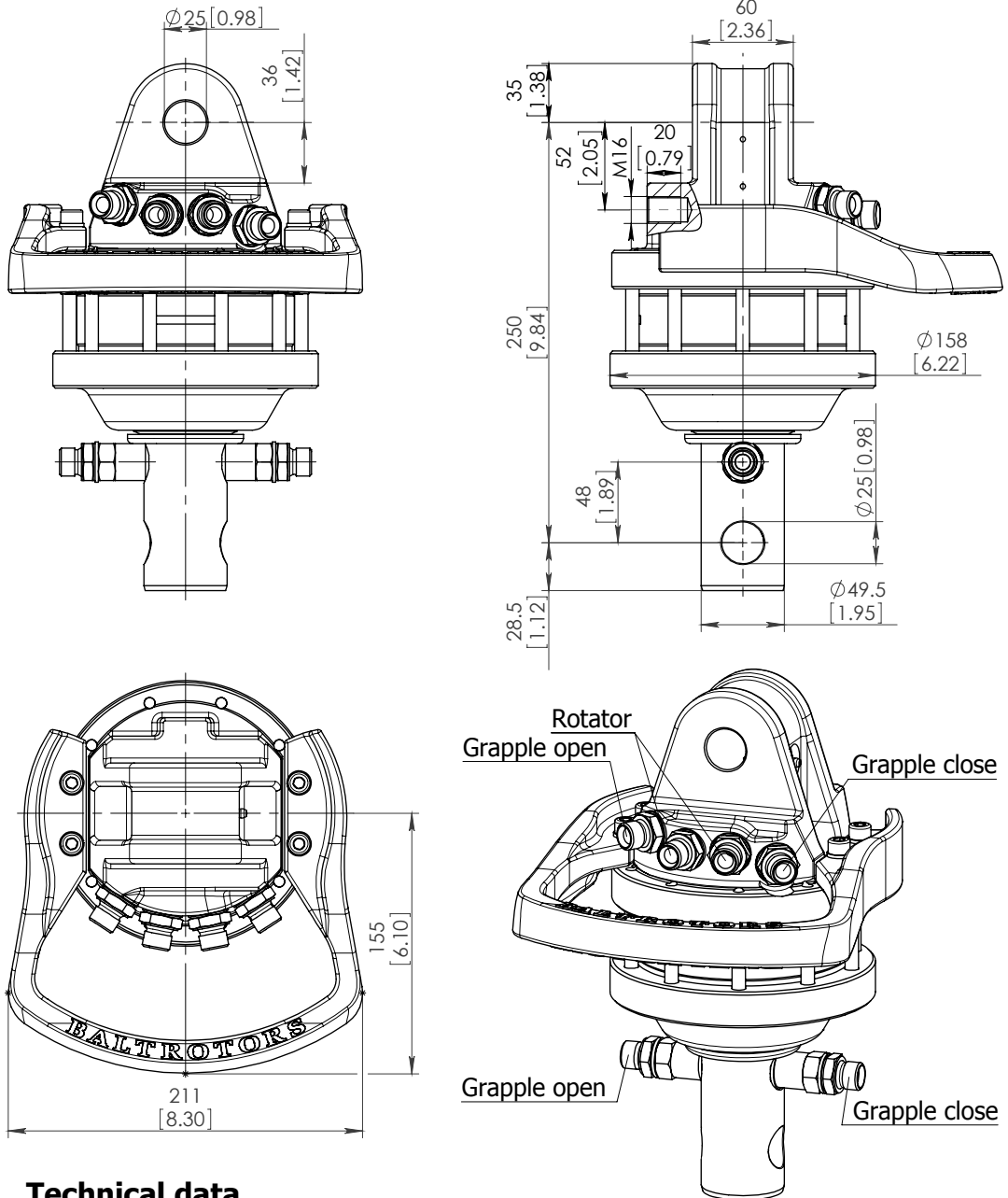
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR30-01



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	19 (41)

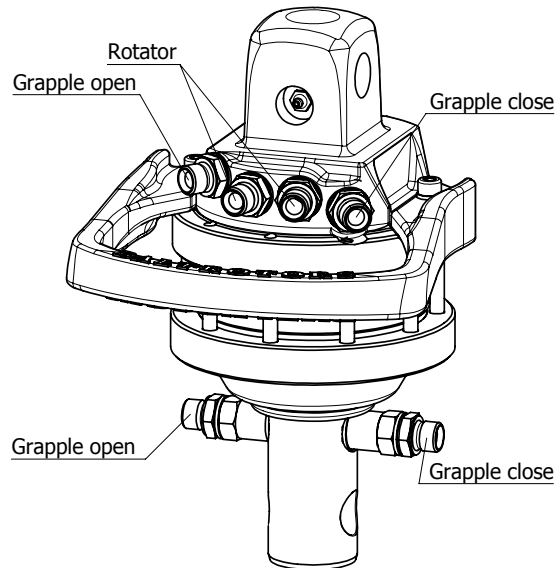
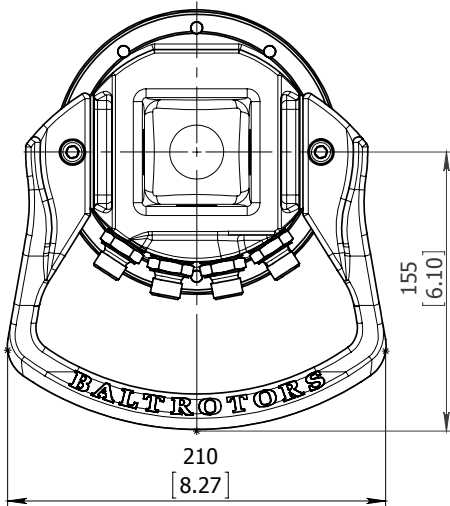
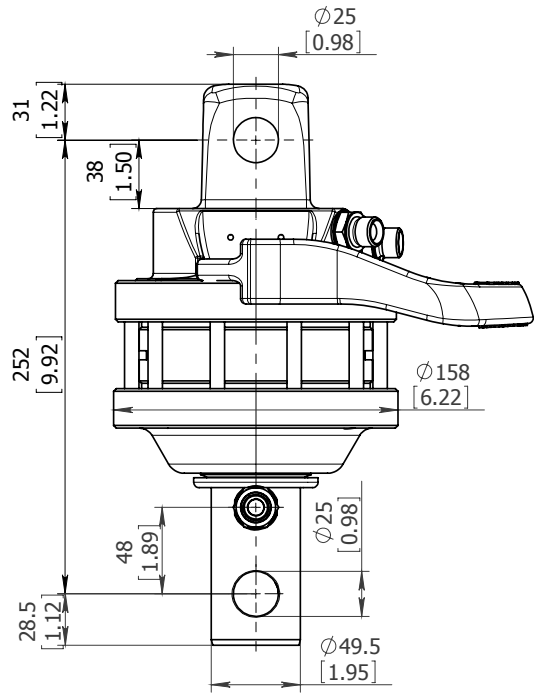
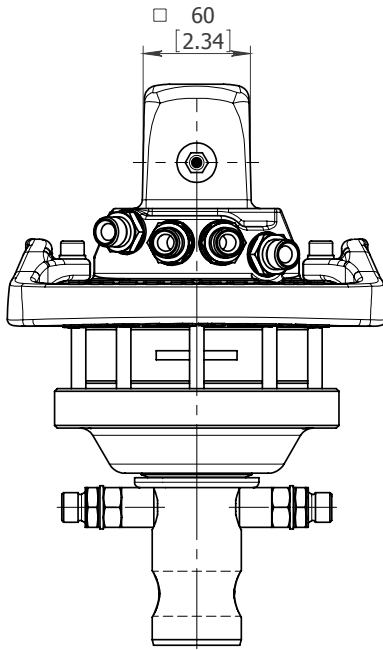
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR30A



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	18 (39)

### Max working pressure:

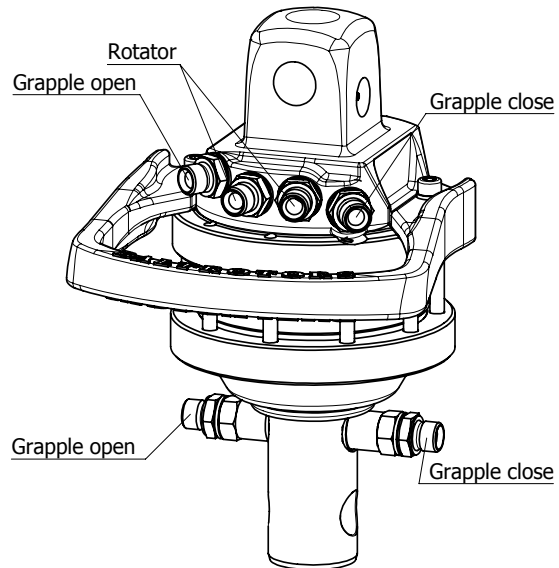
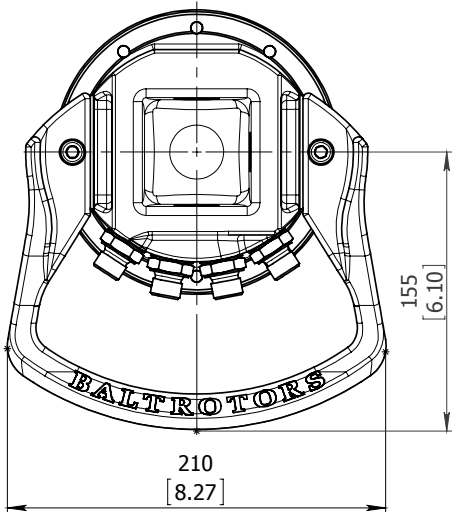
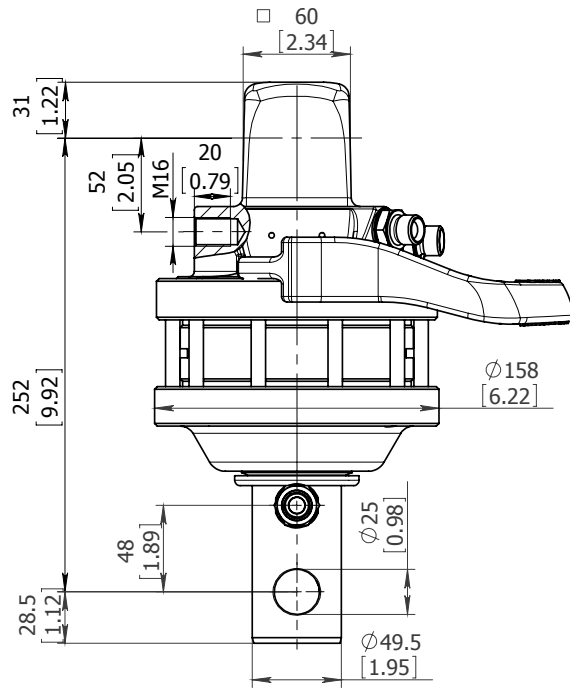
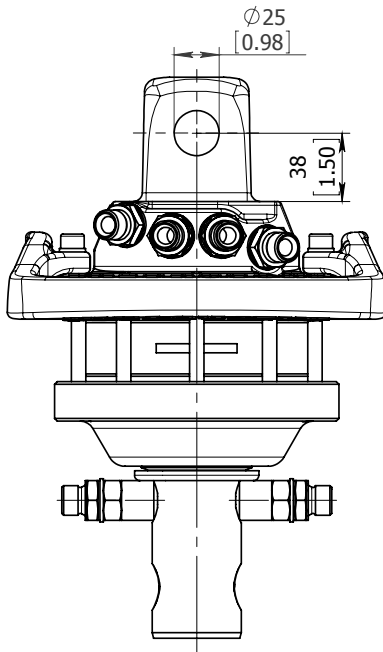
Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8



# ROTATOR GR30Q



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	18 (39)

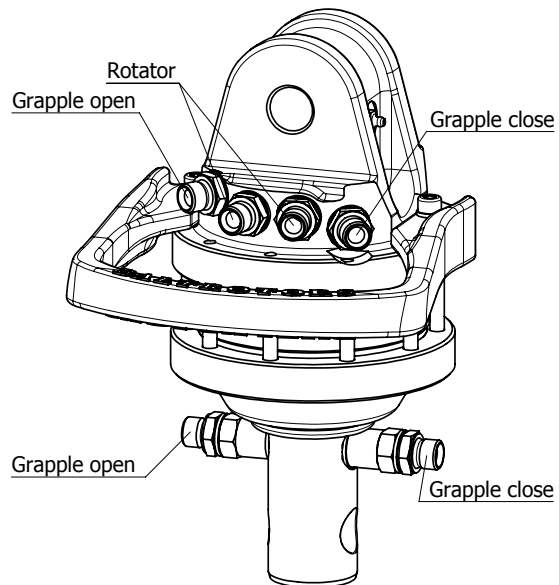
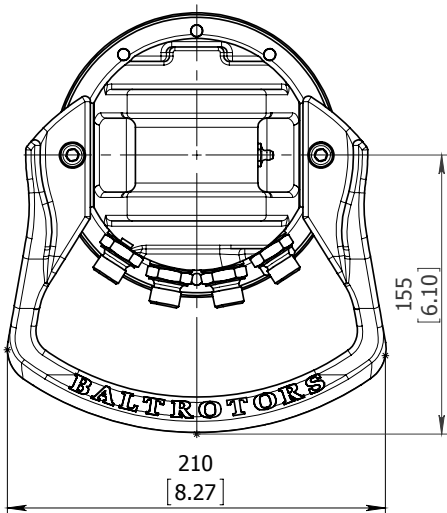
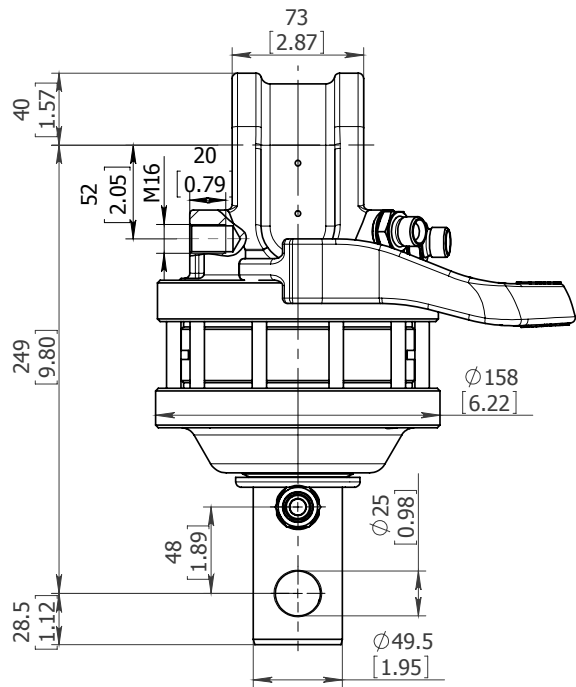
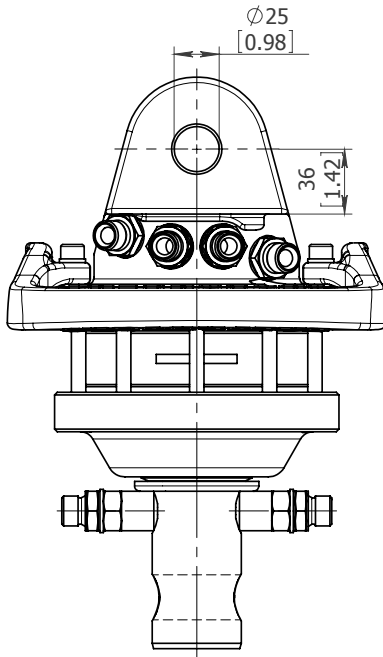
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR30B



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	18 (39)

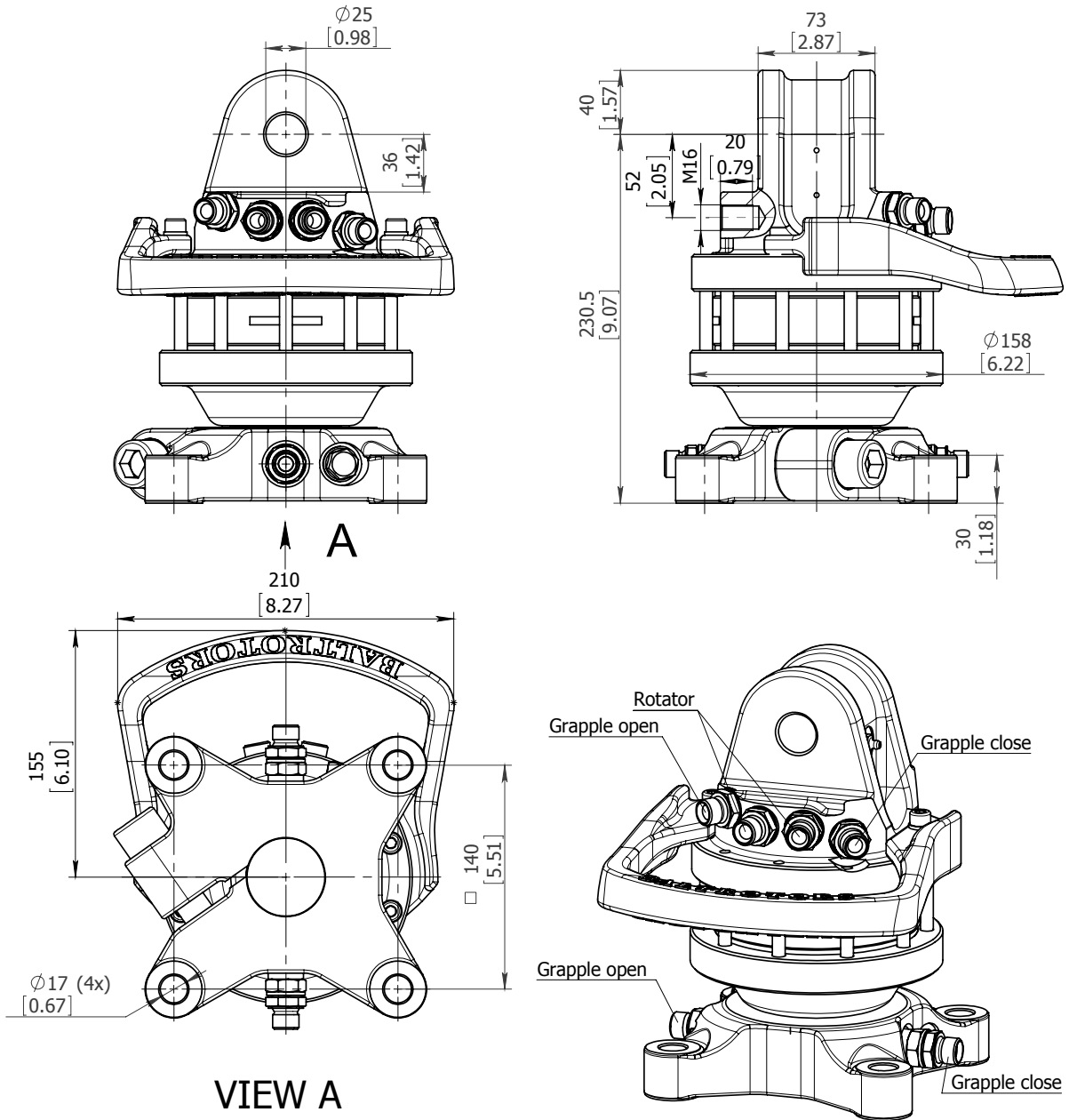
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR30PF



VIEW A

## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	24 (53)

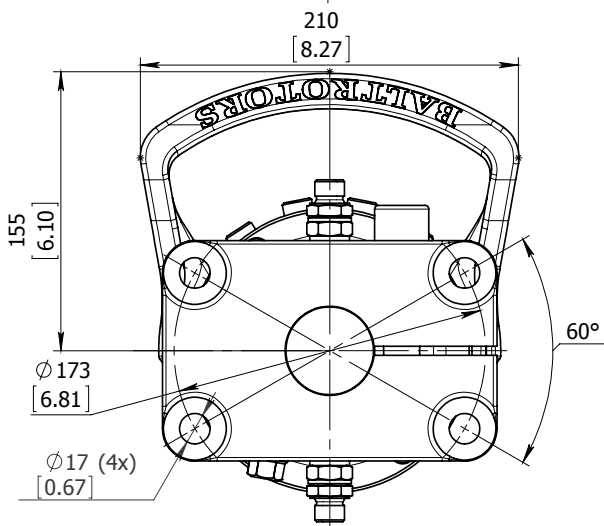
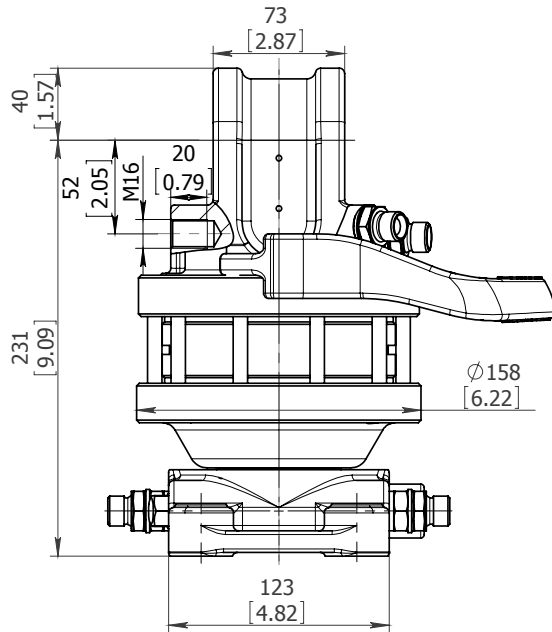
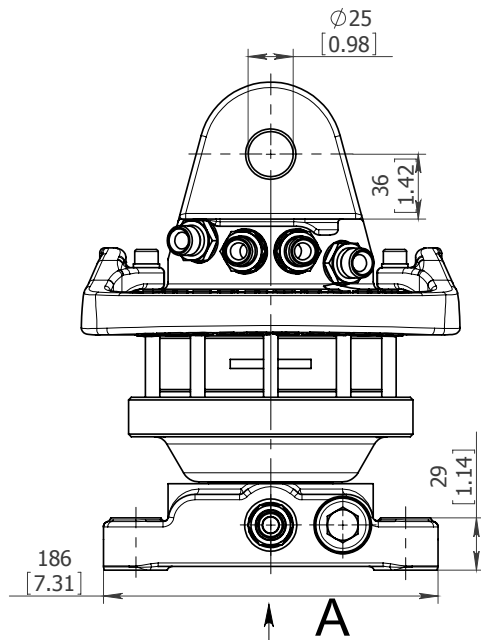
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

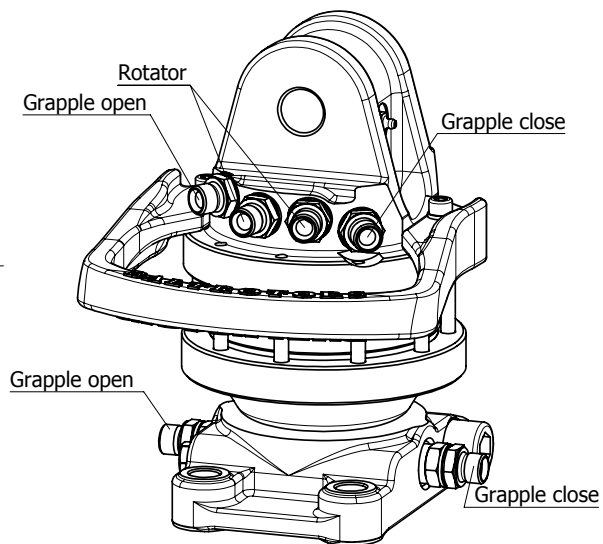
### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR30PFR



VIEW A



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	23 (50)

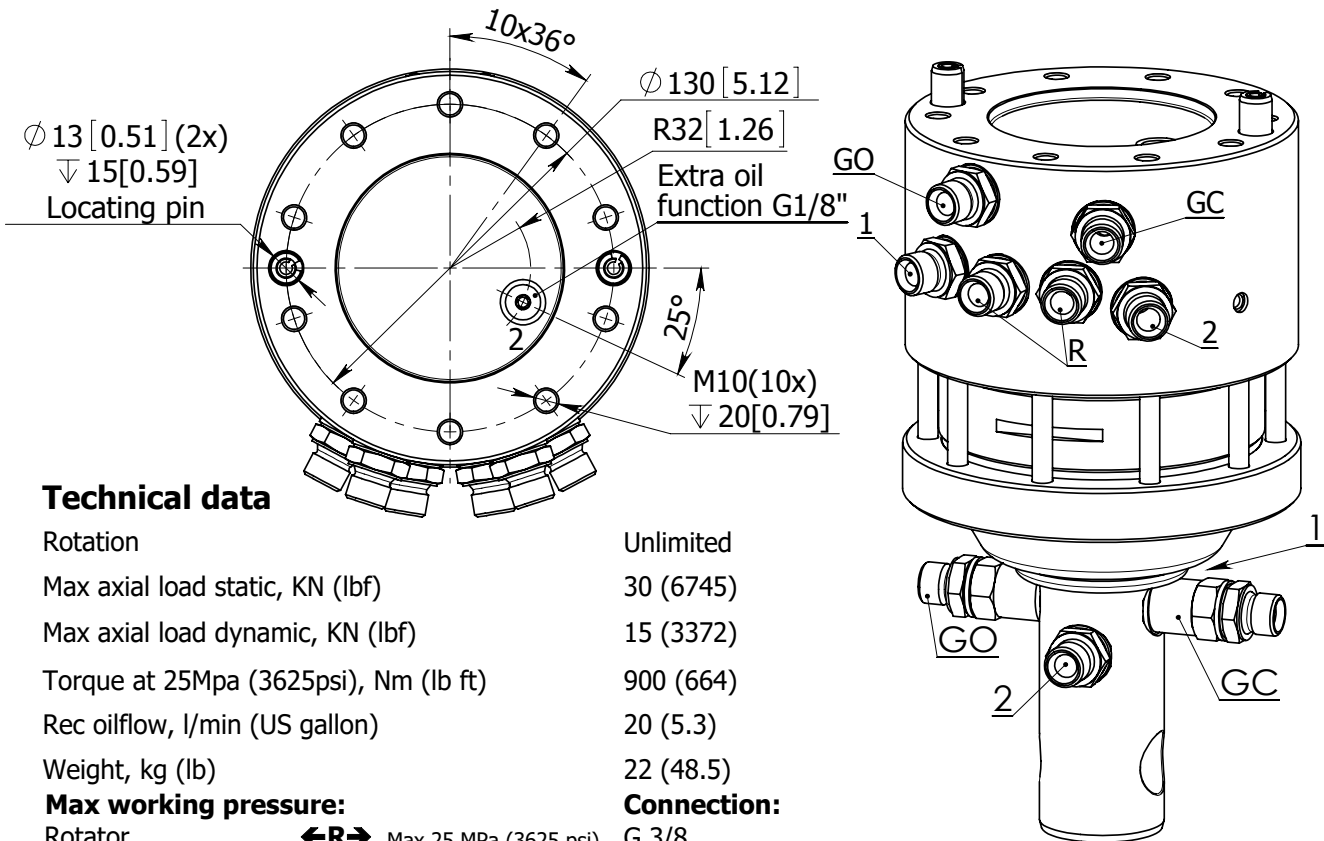
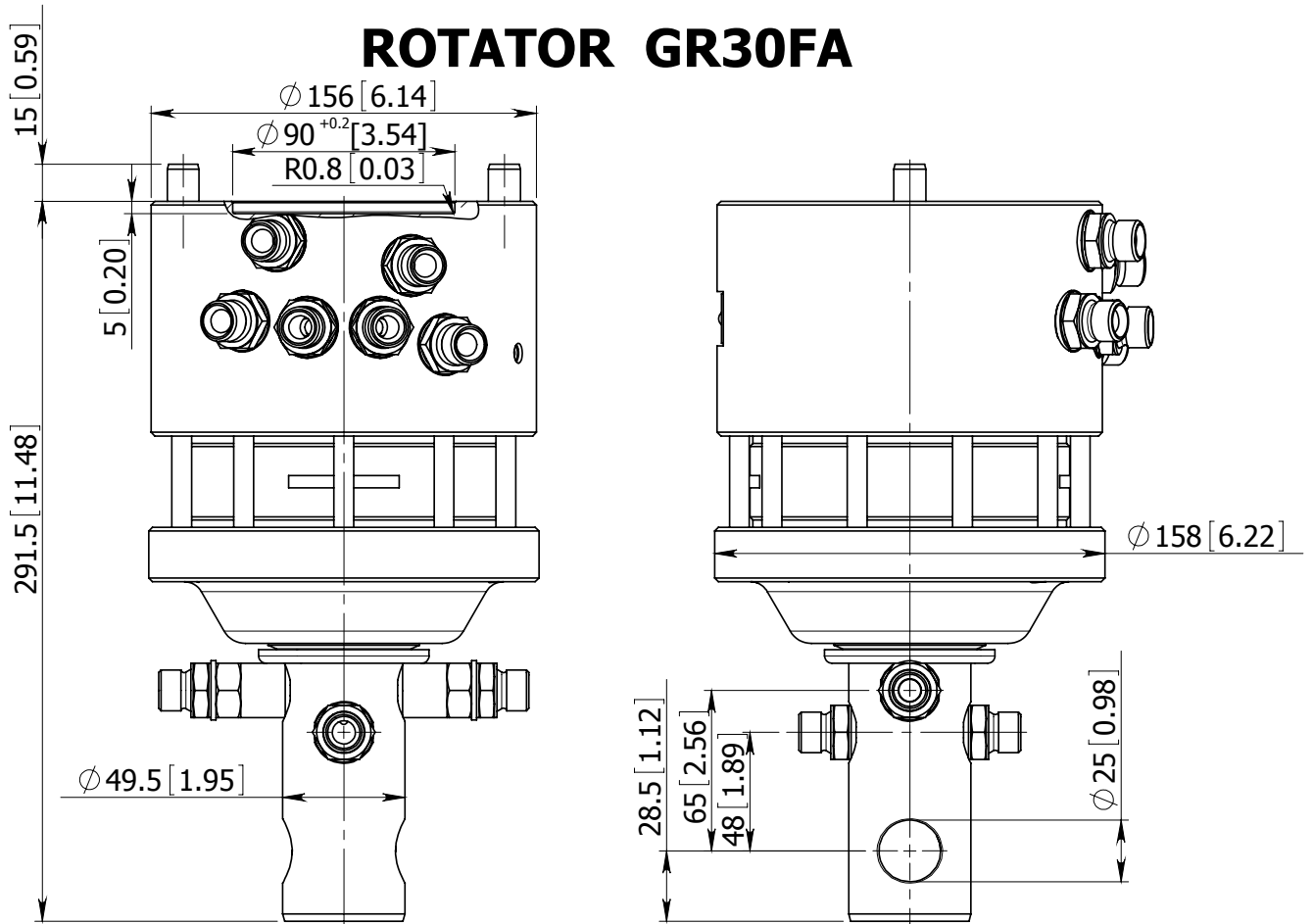
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

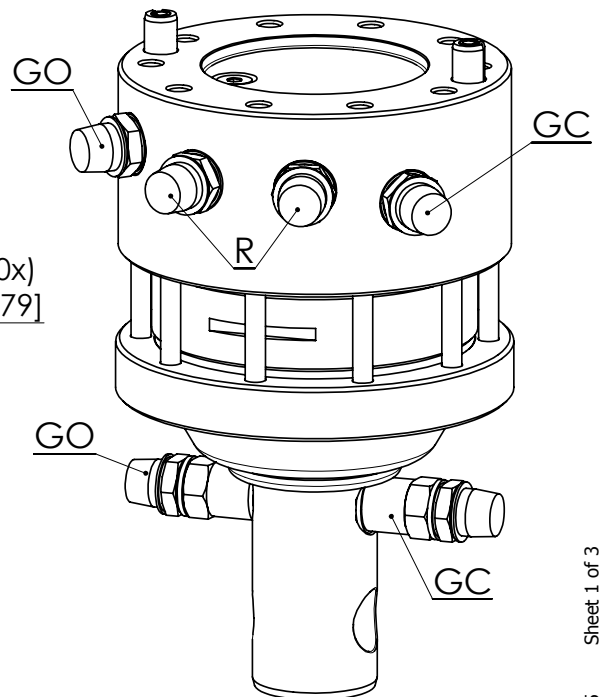
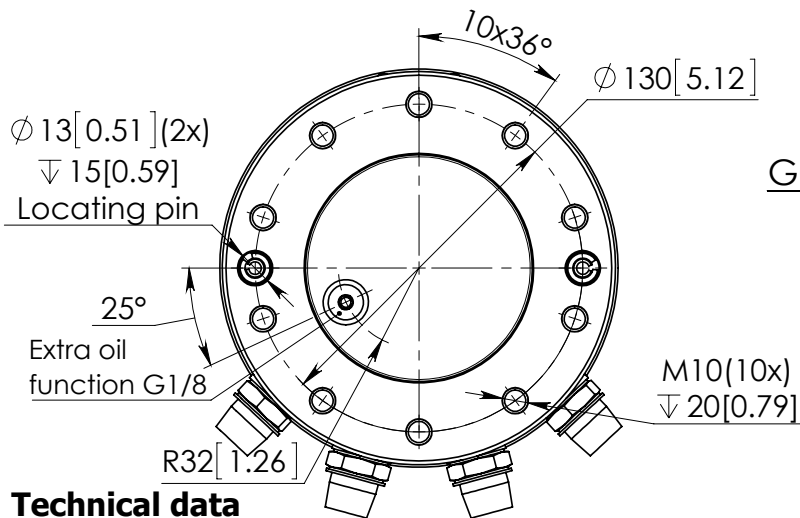
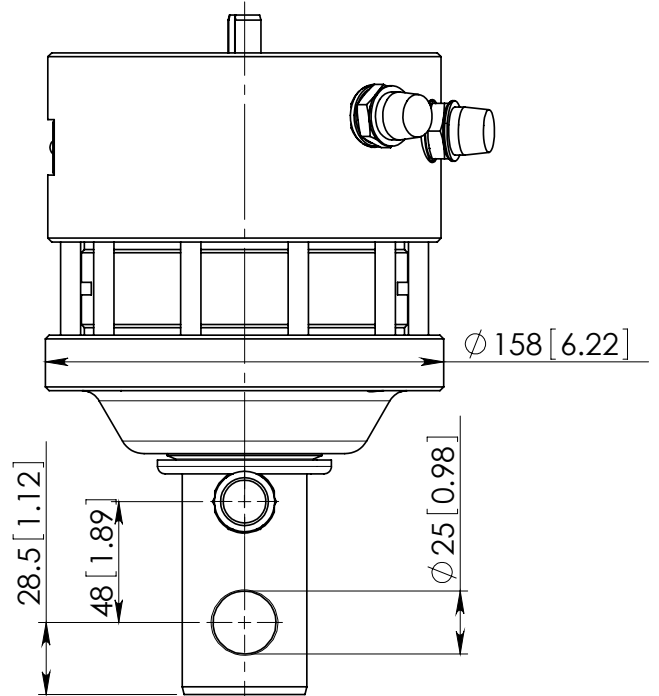
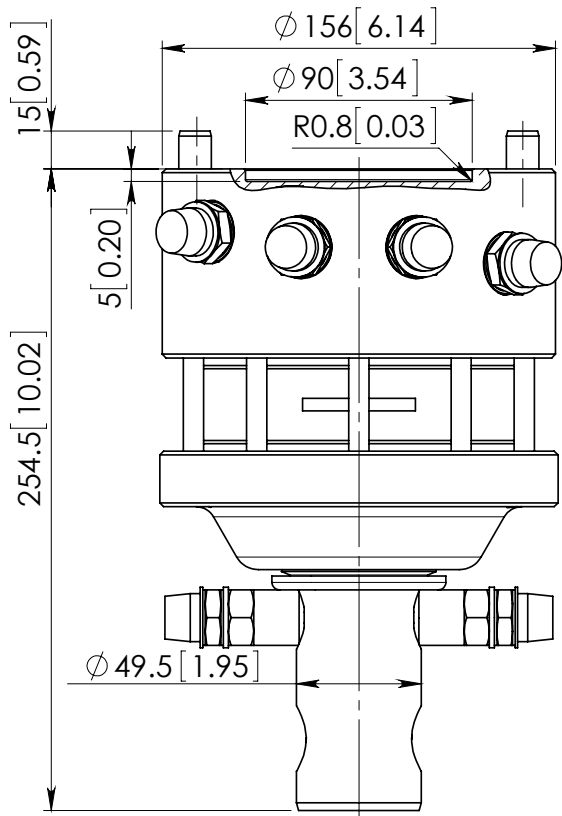
# ROTATOR GR30FA



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25MPa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	22 (48.5)
<b>Max working pressure:</b>	<b>Connection:</b>
Rotator $\leftarrow R \rightarrow$	Max 25 MPa (3625 psi) G 3/8
Grapple / Tool open $\leftarrow G \rightarrow$	Max 20 MPa (2900 psi) G 3/8
Grapple / Tool close $\rightarrow G \leftarrow$	Max 30 MPa (4350 psi) G 3/8
Extra oil function $\boxed{1} \boxed{2}$	Max 30 MPa (4350 psi) G 3/8

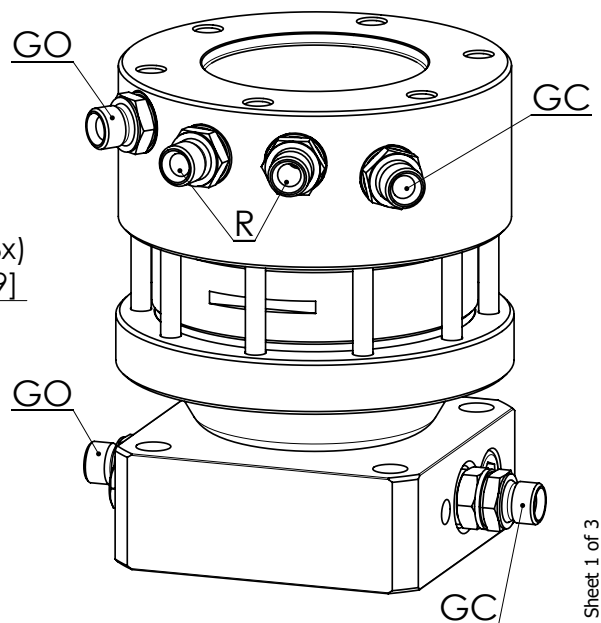
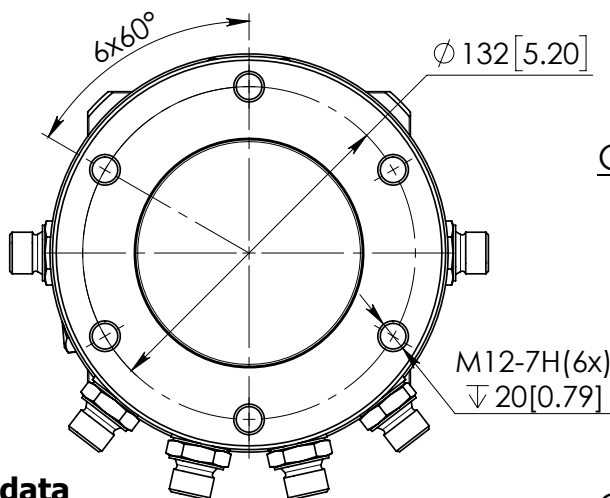
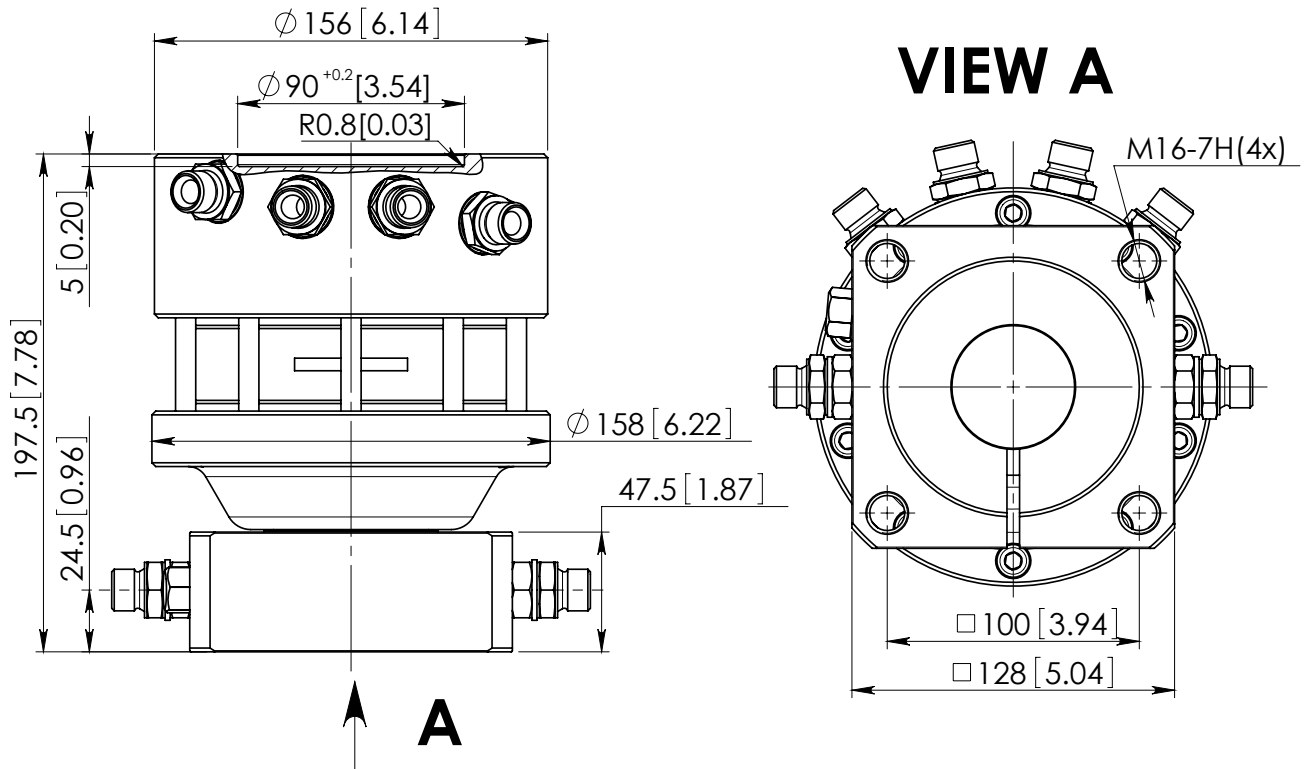
# ROTATOR GR30FA-01



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	19 (41.9)
<b>Max working pressure:</b>	<b>Connection:</b>
Rotator ←R→	Max 25 MPa (3625 psi) G 3/8
Grapple / Tool open ←G→	Max 20 MPa (2900 psi) G 3/8
Grapple / Tool close →G←	Max 30 MPa (4350 psi) G 3/8

# ROTATOR GR30FF



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	30 (6745)
Max axial load dynamic, KN (lbf)	15 (3372)
Torque at 25Mpa (3625psi), Nm (lb ft)	900 (664)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	21 (46)

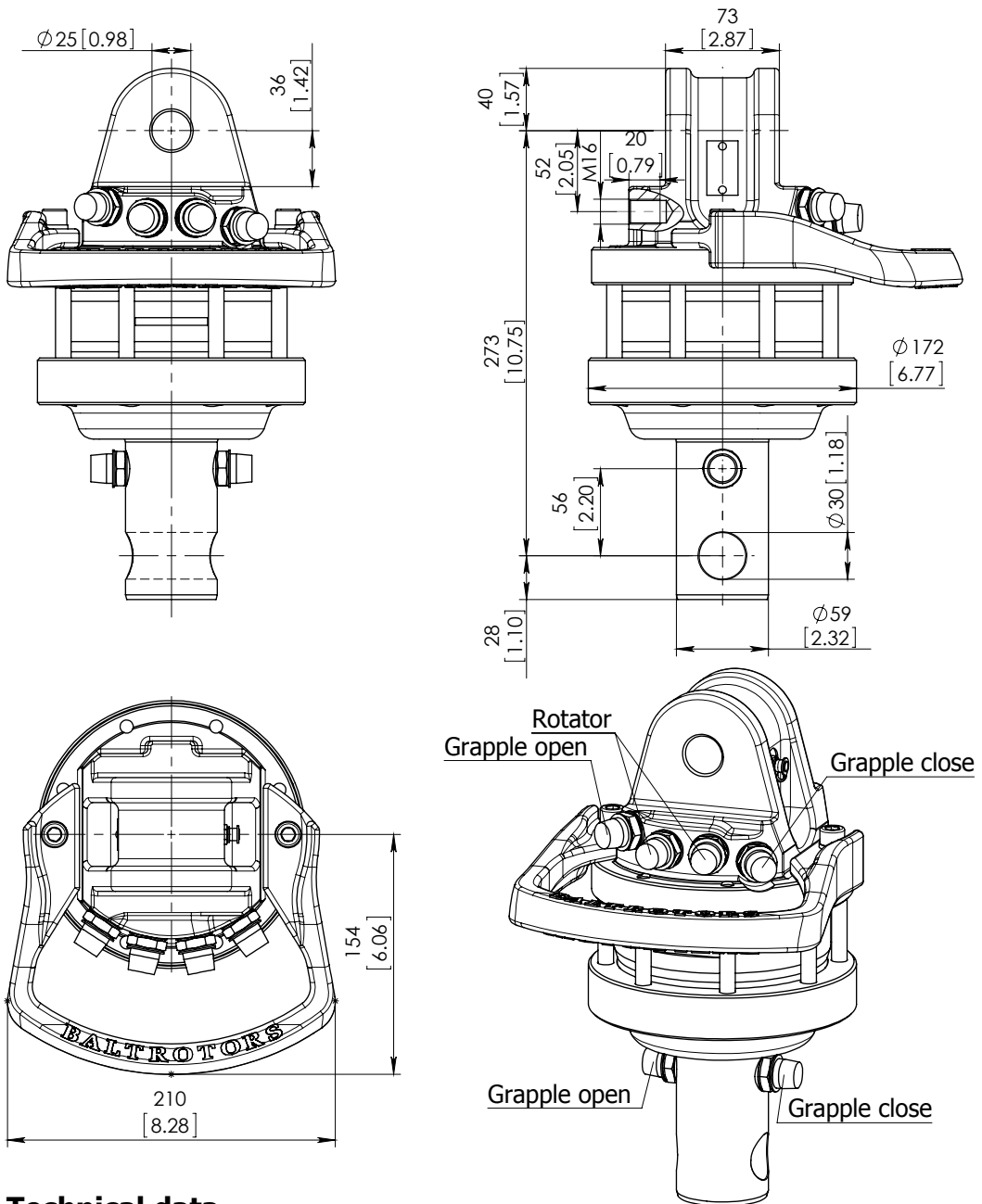
## Max working pressure:

Rotator	$\leftarrow R \rightarrow$ Max 25 MPa (3625 psi)	G 3/8
Grapple / Tool open	$\leftarrow G \rightarrow$ Max 20 MPa (2900 psi)	G 3/8
Grapple / Tool close	$\rightarrow G \leftarrow$ Max 30 MPa (4350 psi)	G 3/8

## Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR46



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	45 (10118)
Max axial load dynamic, kN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1100 (811)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	24 (52)

### Max working pressure:

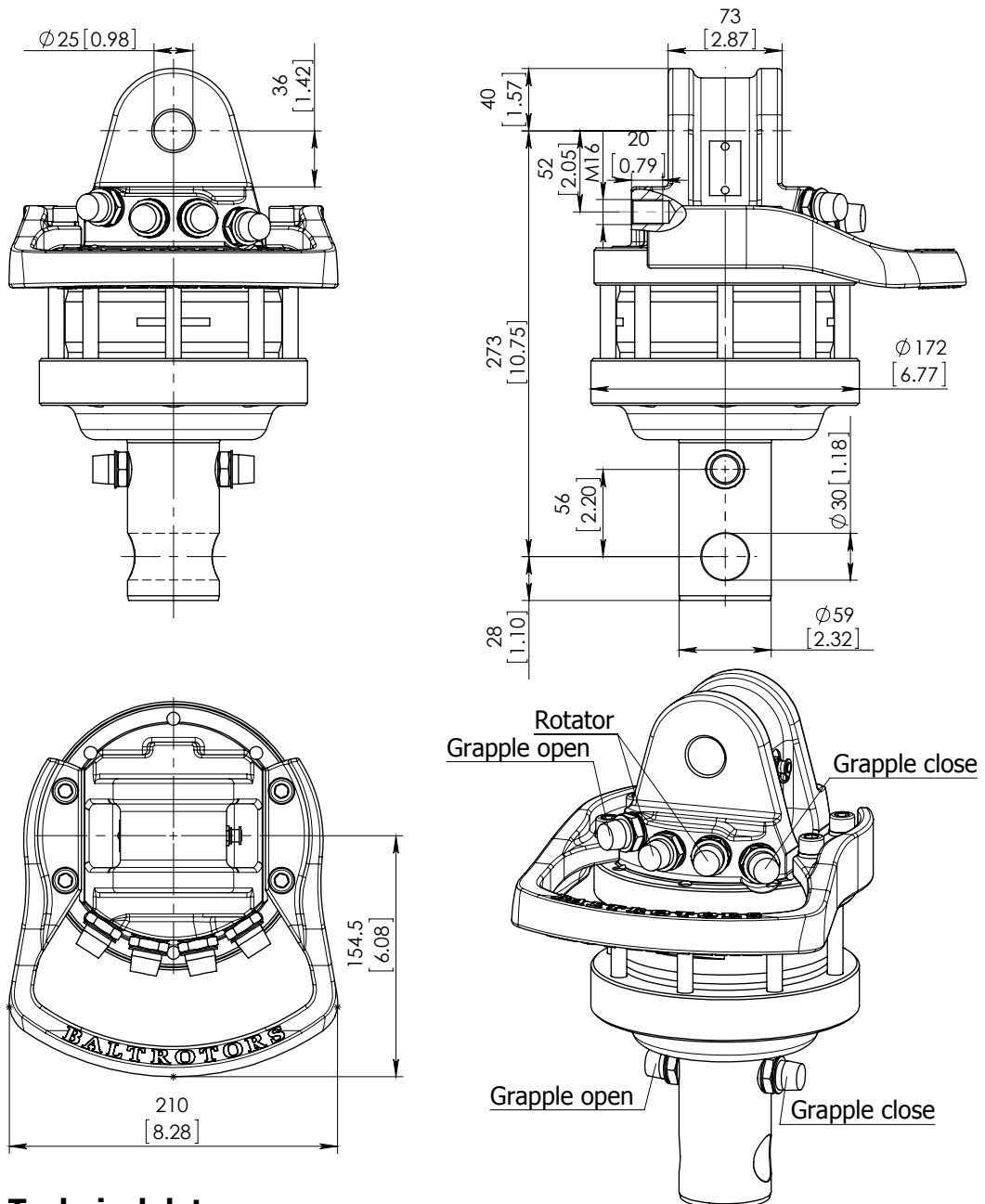
Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8



# ROTATOR GR46-01



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	45 (10118)
Max axial load dynamic, kN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1100 (811)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	25 (55)

### Max working pressure:

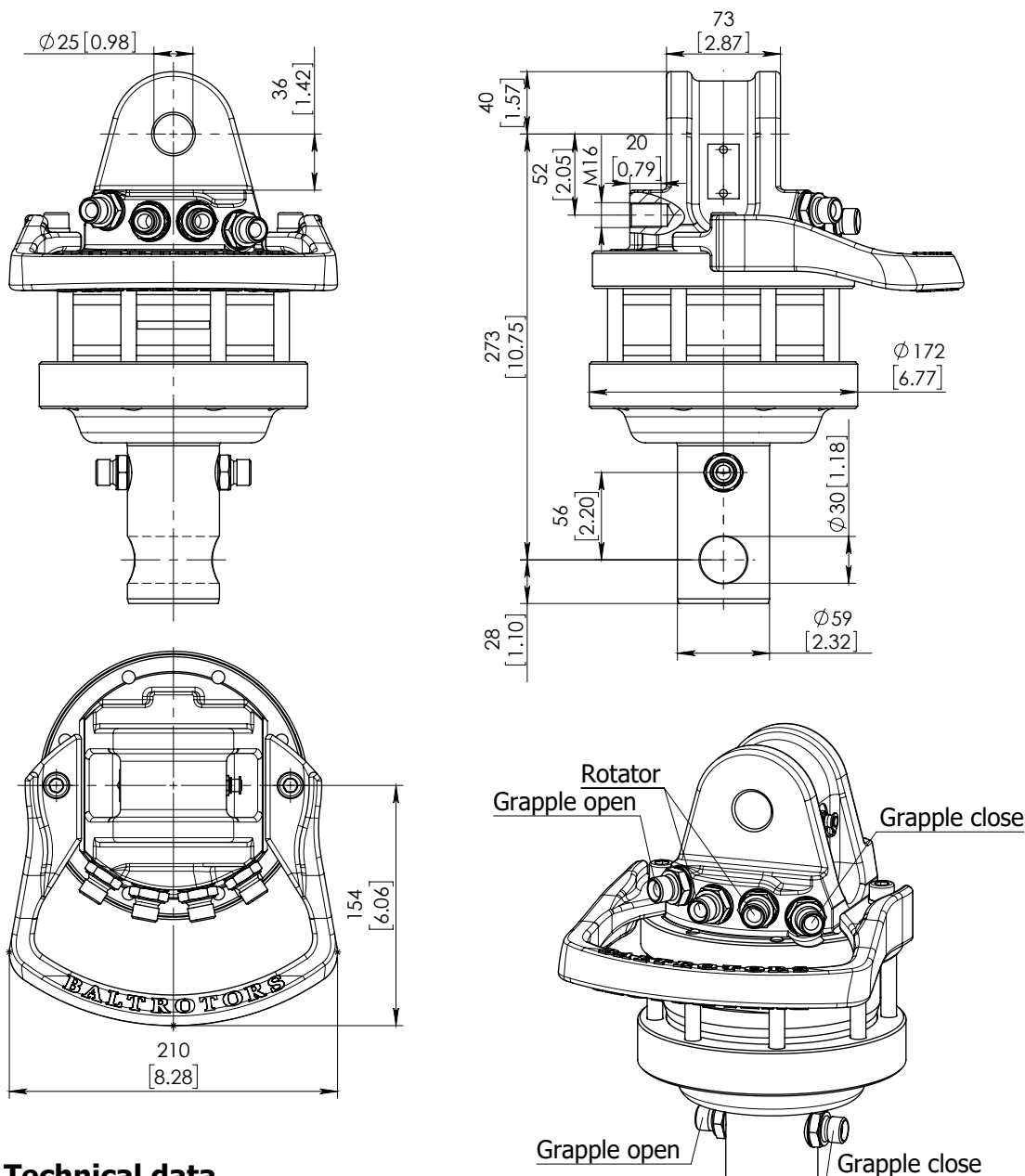
Rotator	↔R↔	Max 25 MPa (3625 psi)
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR46-02

for high oil flow applications



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	45 (10118)
Max axial load dynamic, kN (lbf)	25 (5621)
Torque at 25MPa (3625psi), Nm (lb ft)	1100 (811)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	23 (51)

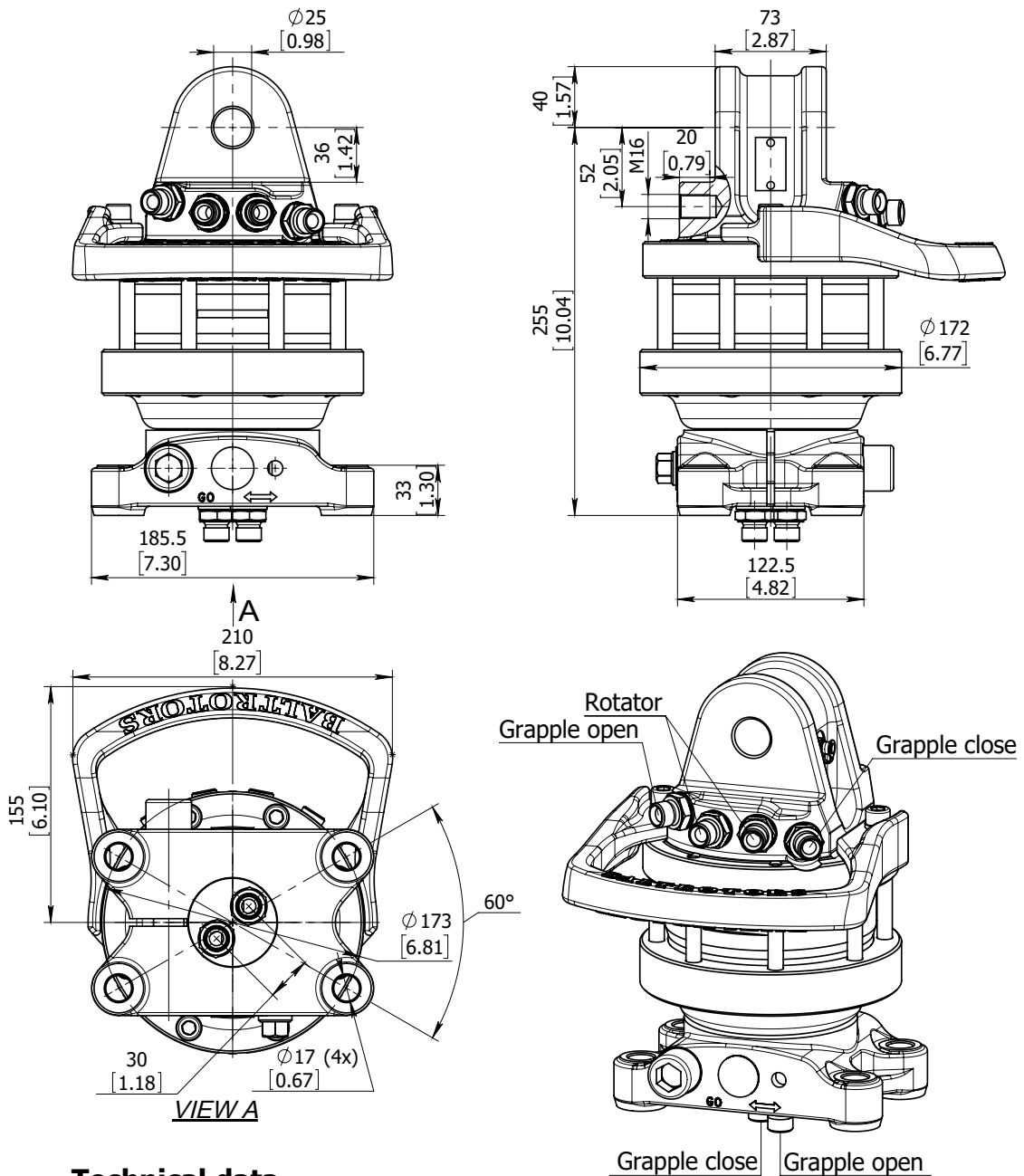
### Max working pressure:

Rotator	↔R↔	Max 25 MPa (3625 psi)
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR463



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	45 (10118)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1100 (811)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	27 (61)

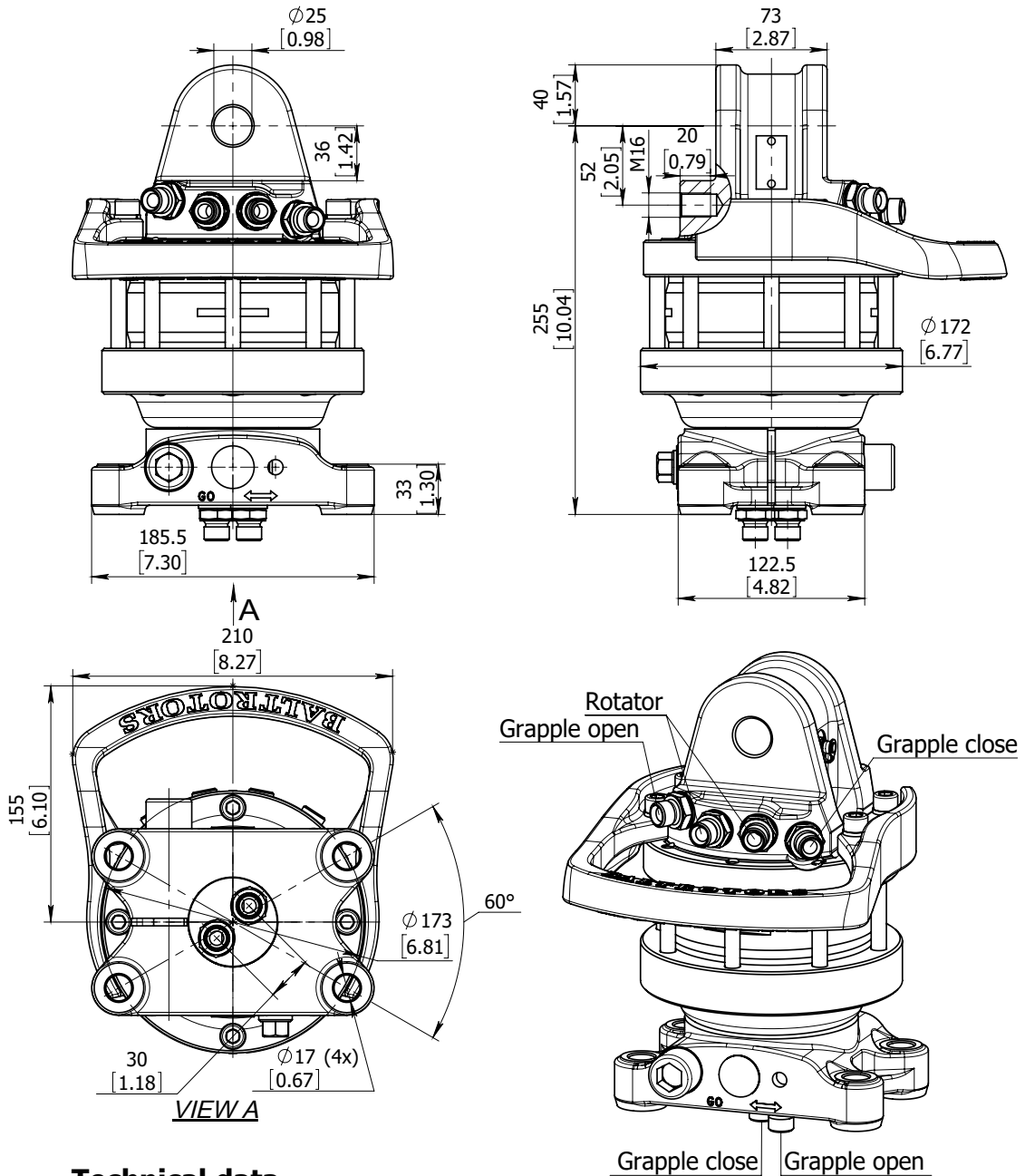
### Max working pressure:

Rotator	<b>←R→</b>	Max 25 MPa (3625 psi)
Grapple / Tool open	<b>←G→</b>	Max 20 MPa (2900 psi)
Grapple / Tool close	<b>→G←</b>	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR463-01



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	45 (10118)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1100 (811)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	28 (62)

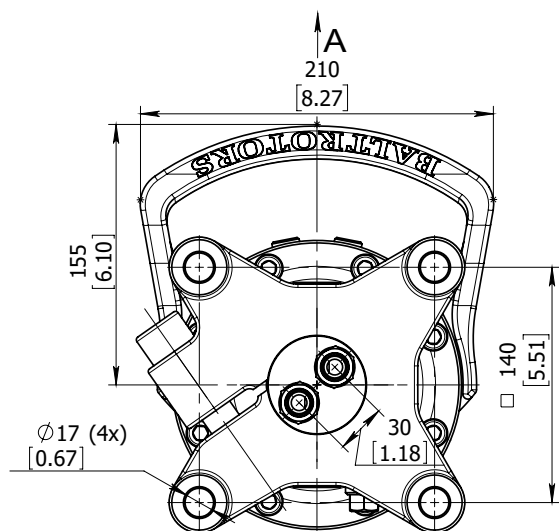
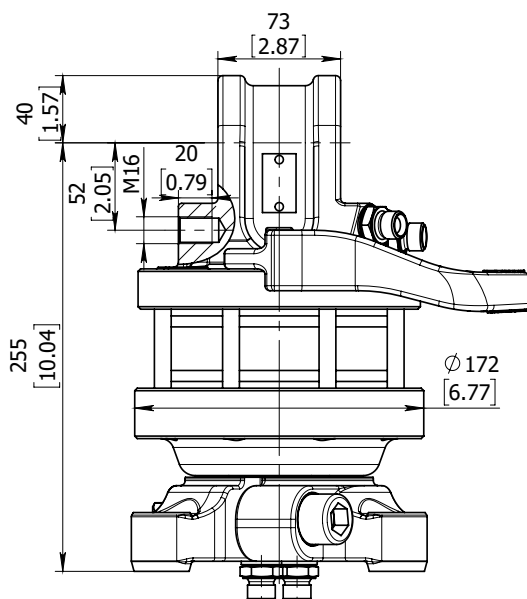
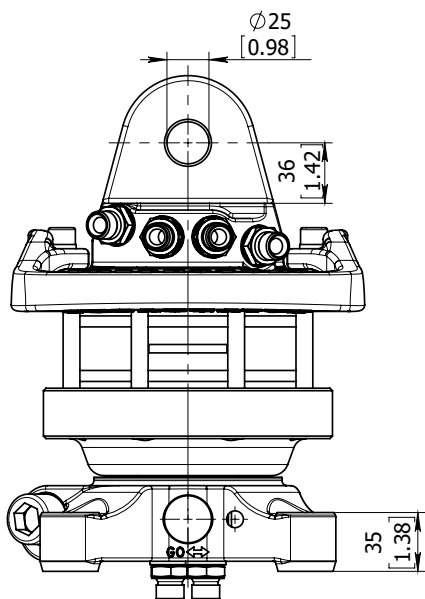
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

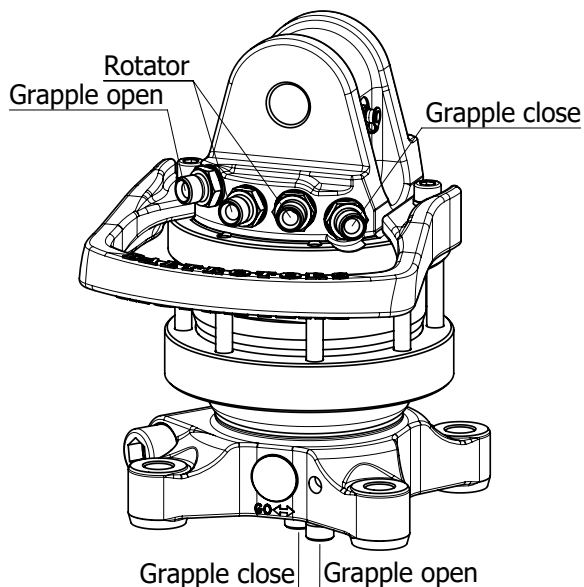
### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR465



VIEW A



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	45 (10118)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1100 (811)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	29 (64)

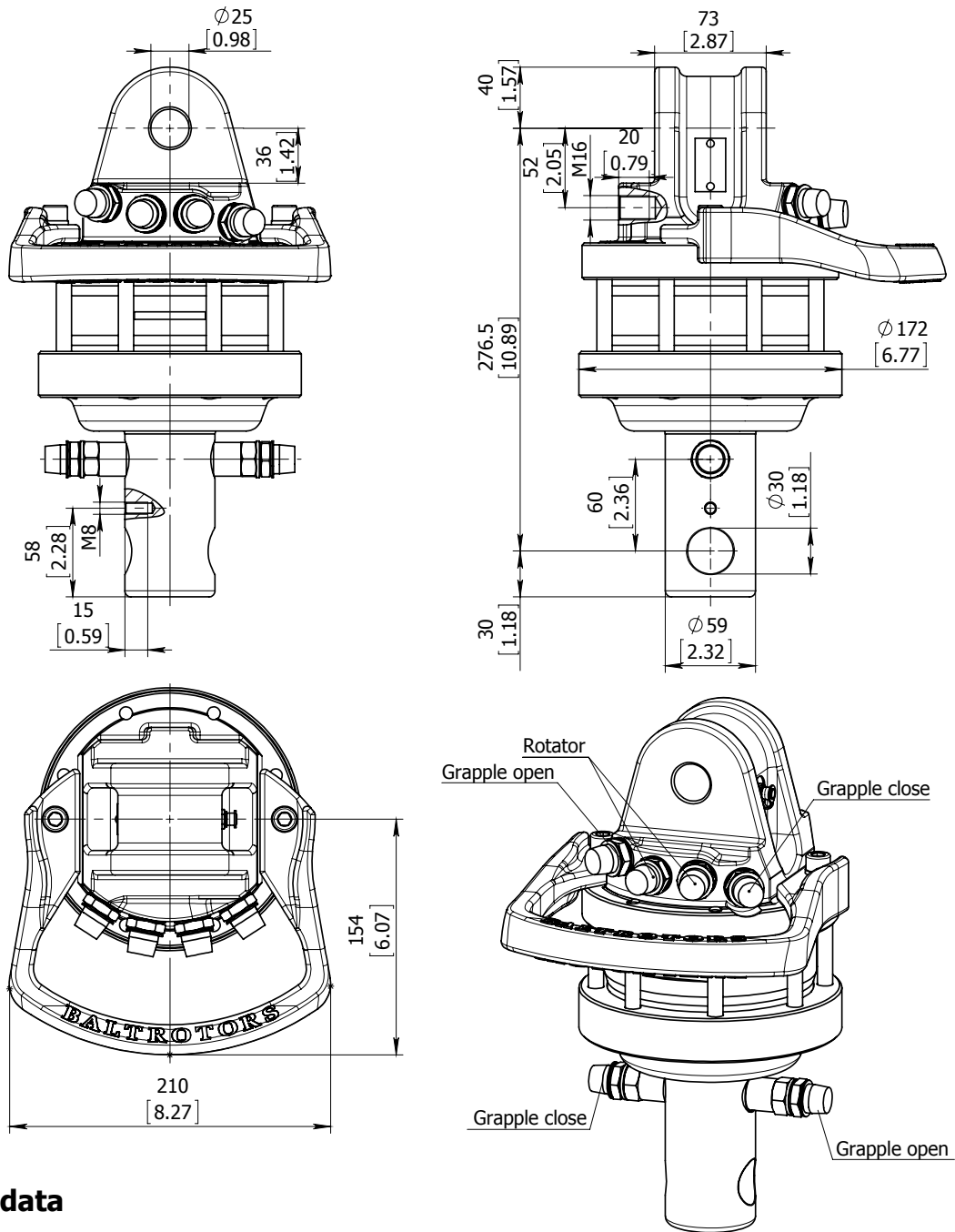
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR A1.0409



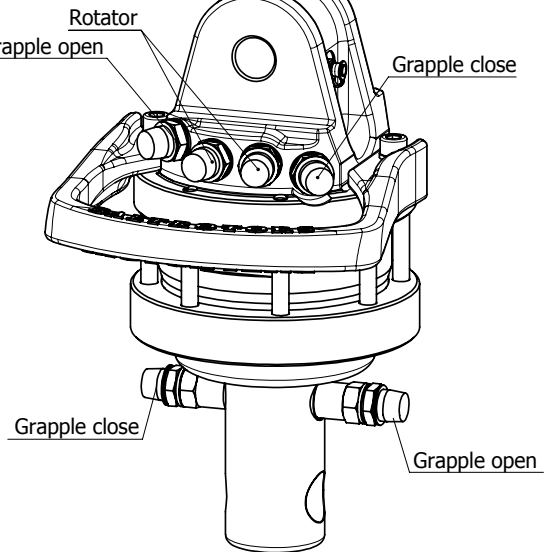
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	45 (10118)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1100 (811)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	24 (53)

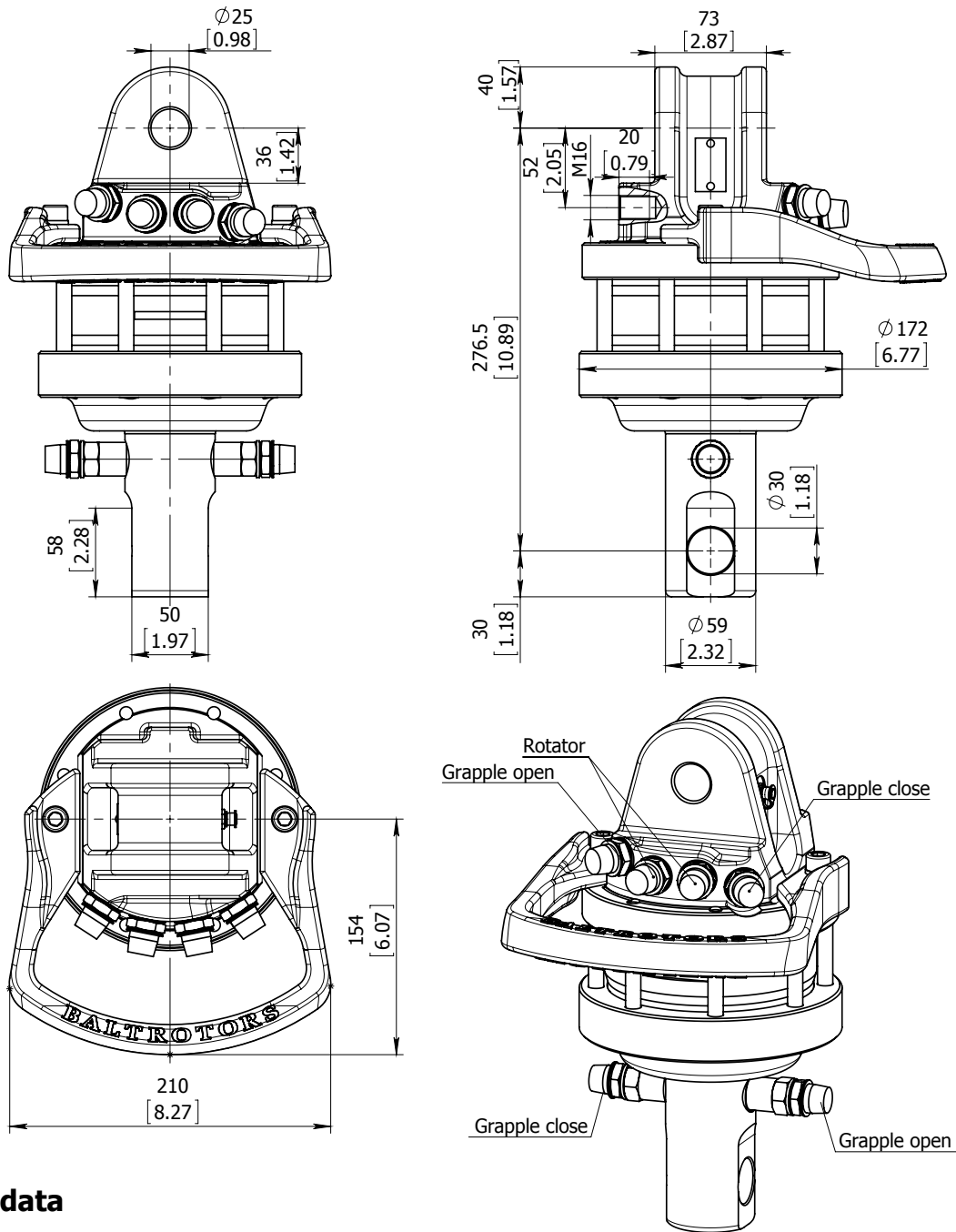
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 3/8
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 3/8
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 3/8

### Connection:



# ROTATOR A1.0410



## Technical data

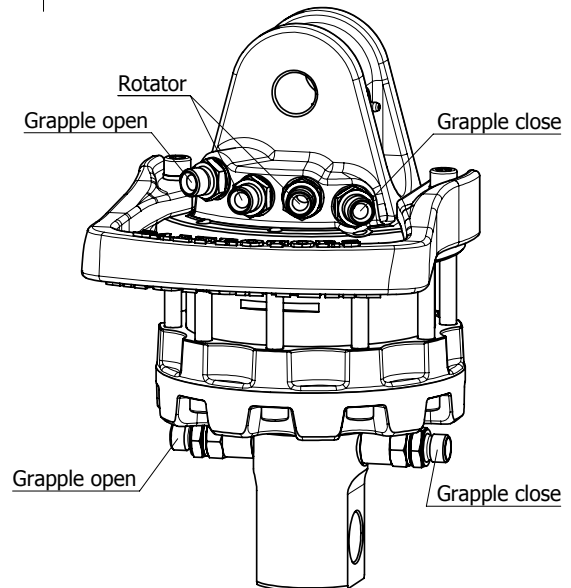
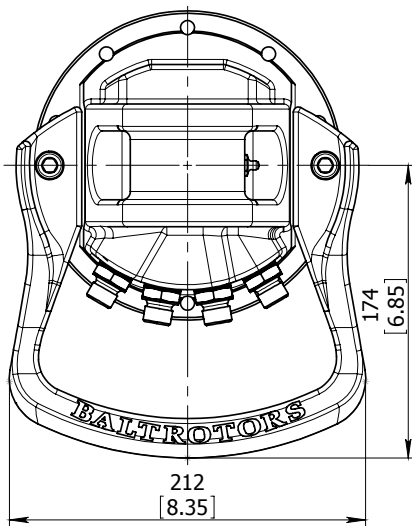
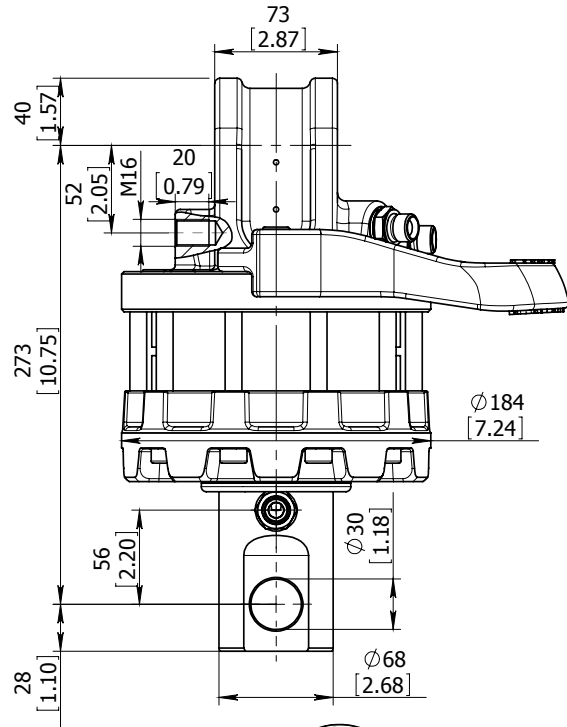
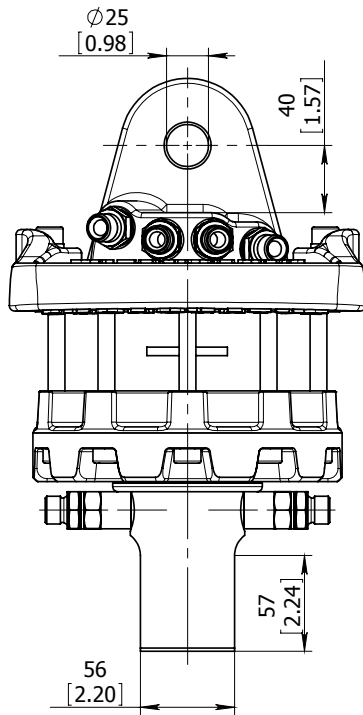
Rotation	Unlimited
Max axial load static, KN (lbf)	45 (10118)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25MPa (3625psi), Nm (lb ft)	1100 (811)
Rec oilflow, l/min (US gallon)	20 (5.3)
Weight, kg (lb)	24 (53)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 3/8
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 3/8
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 3/8

### Connection:

# ROTATOR GR46/68M



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	45 (10118)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1200 (885)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	29 (64)

### Max working pressure:

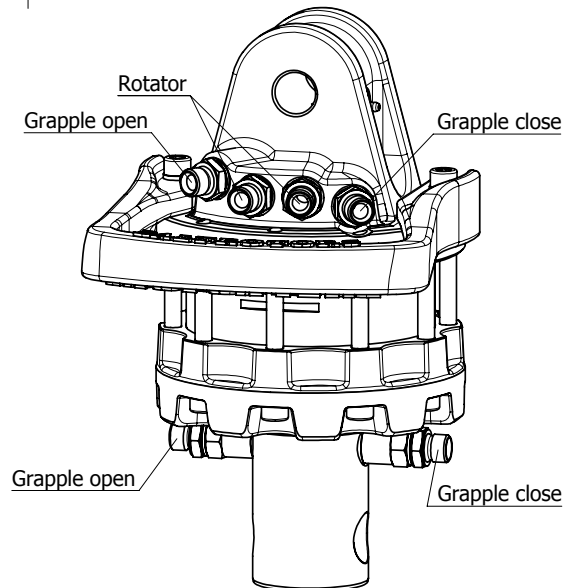
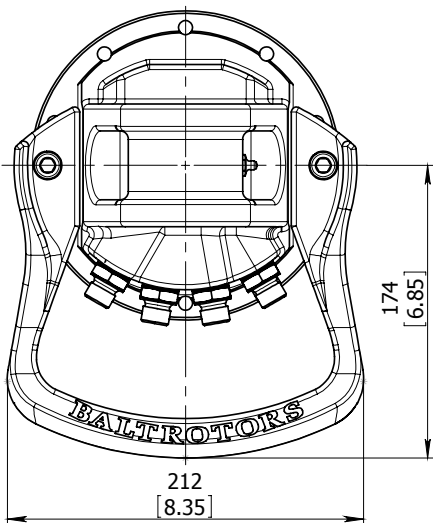
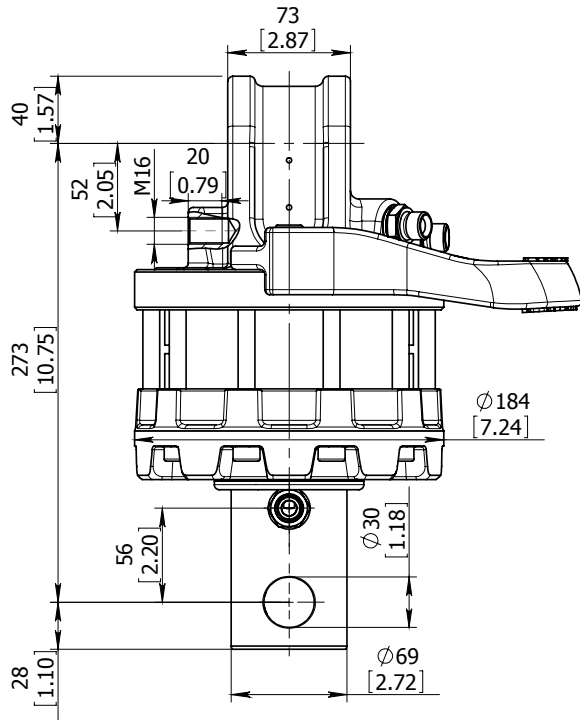
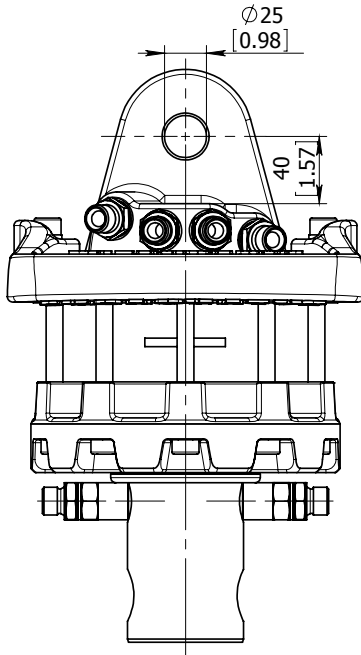
Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8



# ROTATOR GR46/69M



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	45 (10118)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1200 (885)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	29 (64)

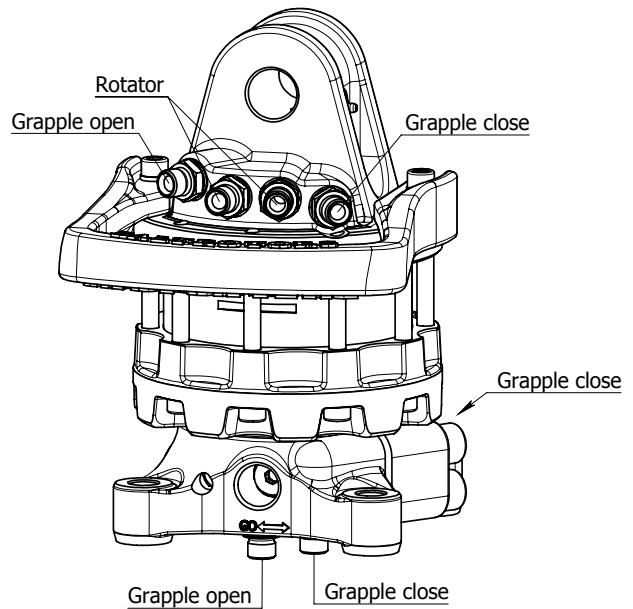
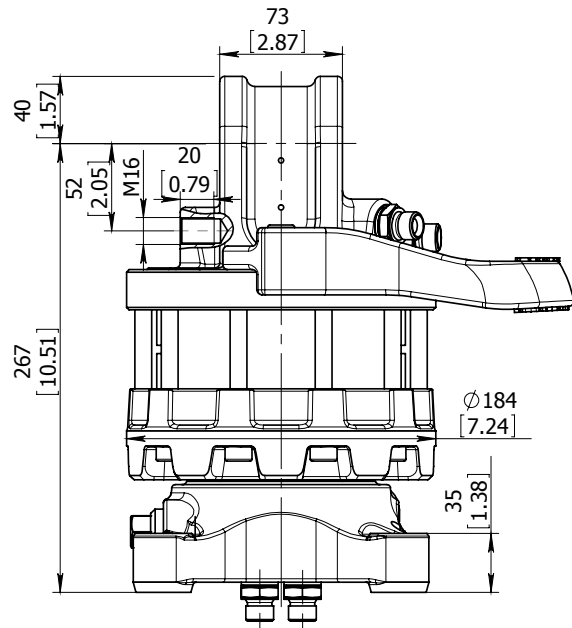
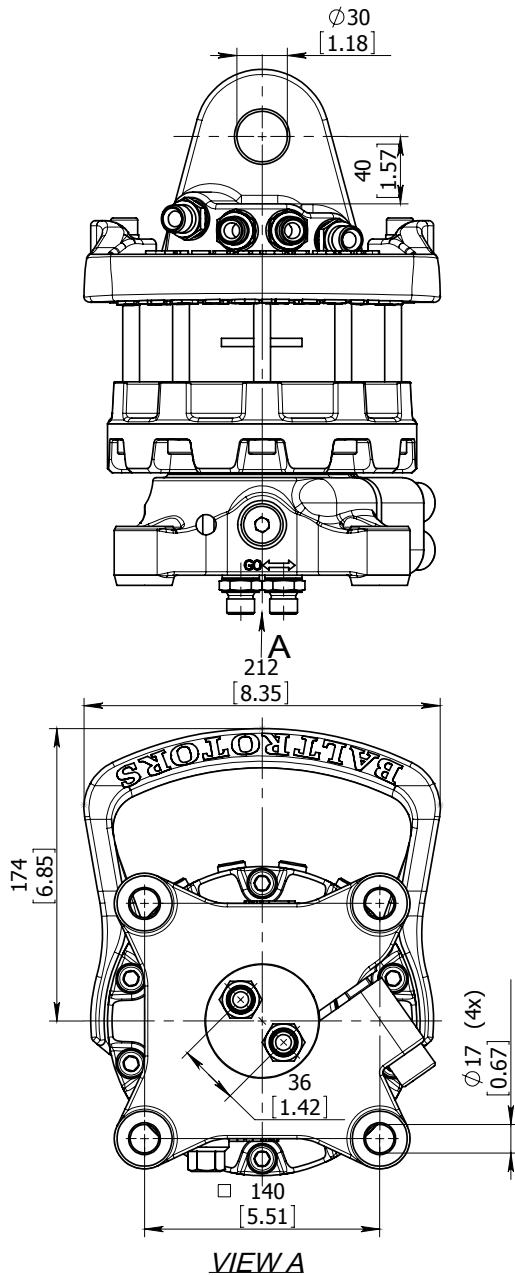
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR465/68M



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	45 (10118)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1200 (885)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	35 (78)

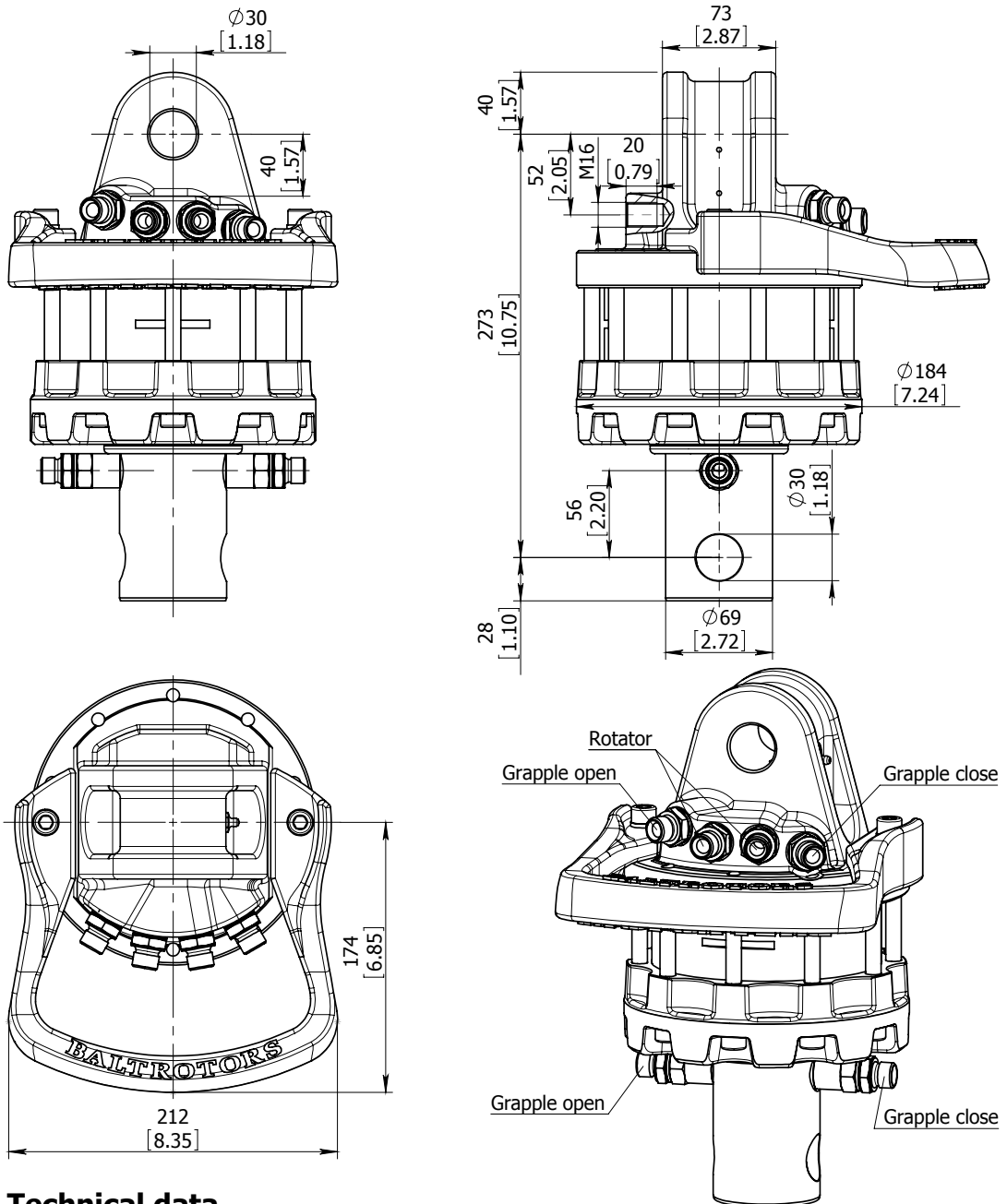
### Max working pressure:

Rotator	$\leftarrow R \rightarrow$	Max 25 MPa (3625 psi)
Grapple / Tool open	$\leftarrow G \rightarrow$	Max 20 MPa (2900 psi)
Grapple / Tool close	$\rightarrow G \leftarrow$	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR55M



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	55 (12367)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1300 (959)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	29 (64)

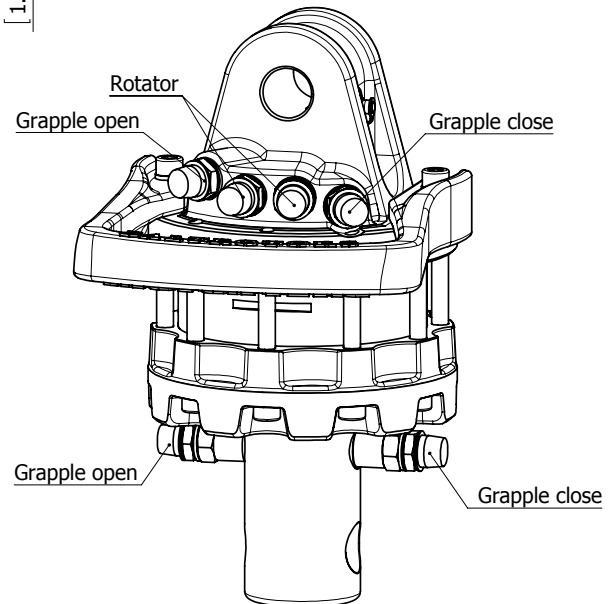
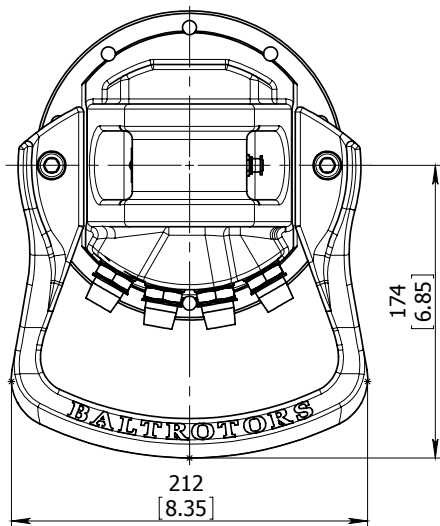
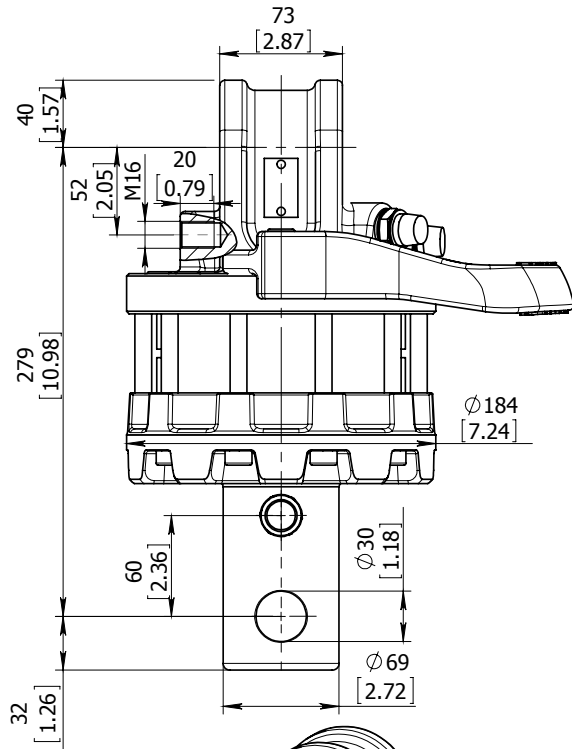
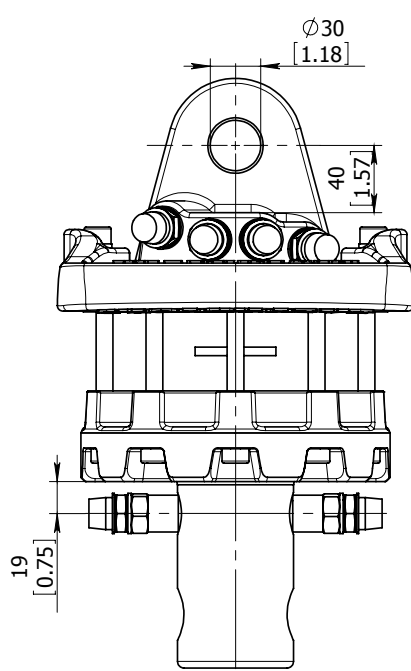
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR A1.0501



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	55 (12367)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1300 (959)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	29 (64)

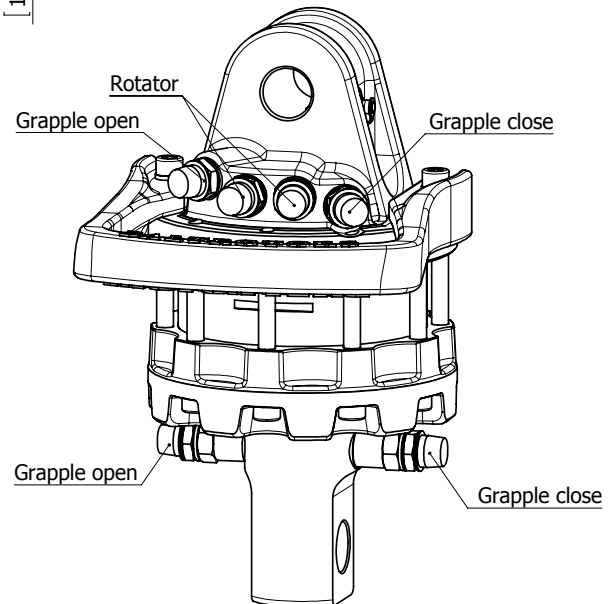
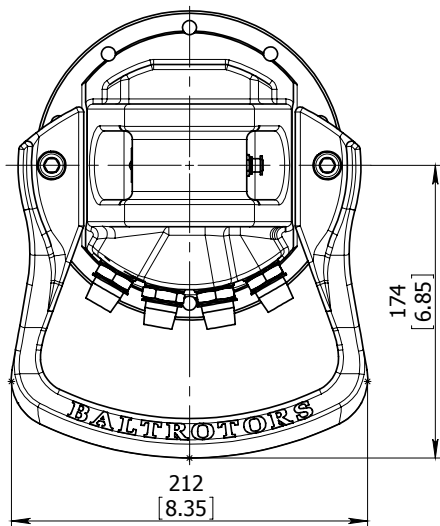
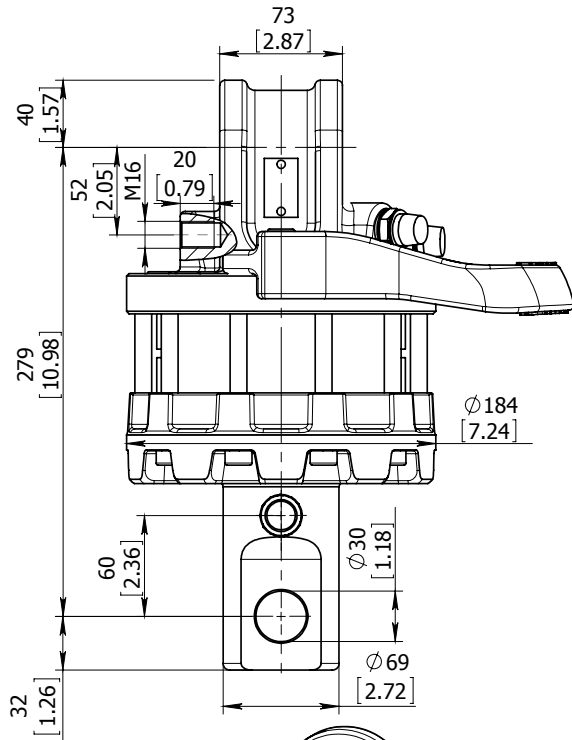
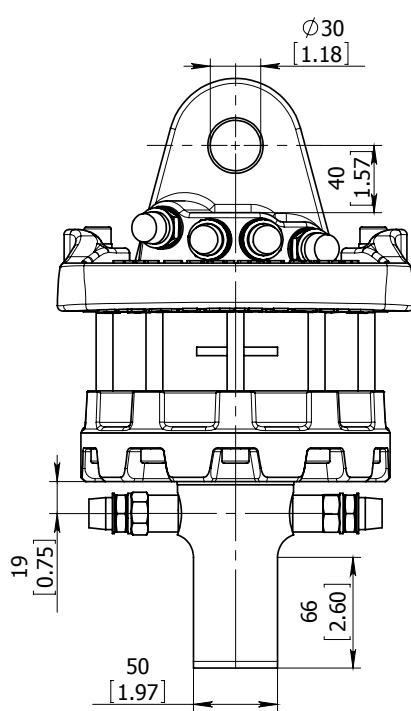
### Max working pressure:

Rotator	↔R↔	Max 25 MPa (3625 psi)
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR A1.0502



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	55 (12367)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1300 (959)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	29 (64)

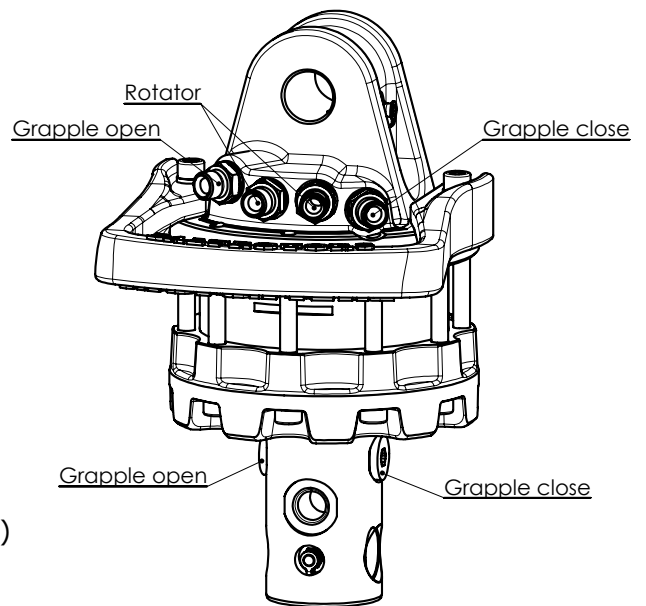
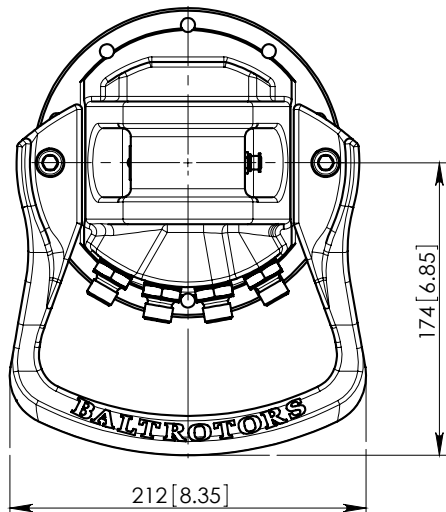
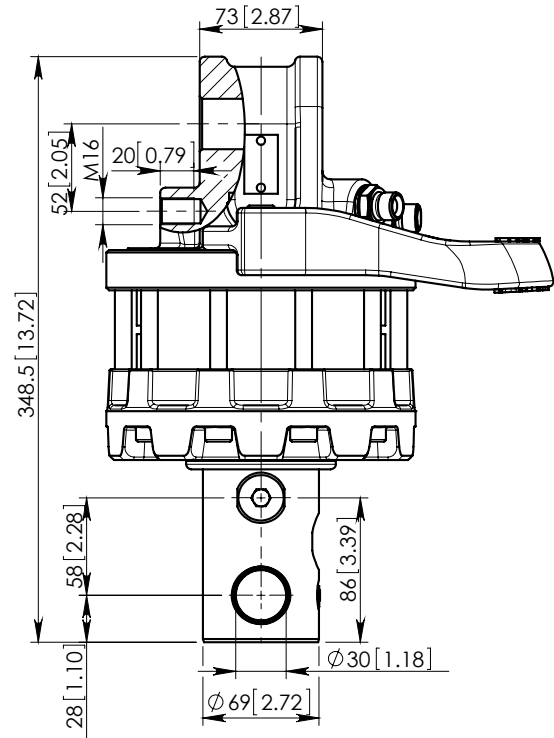
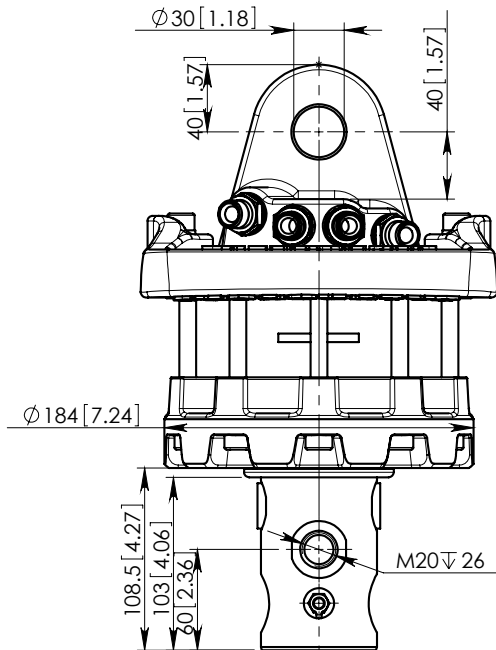
## Max working pressure:

Rotator	↔R↔	Max 25 MPa (3625 psi)
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

## Connection:

G 3/8
G 3/8
G 3/8

# ROTATOR GR55-01



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	55 (12367)
Max axial load dynamic, KN (lbf)	25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1300 (959)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	29 (64)

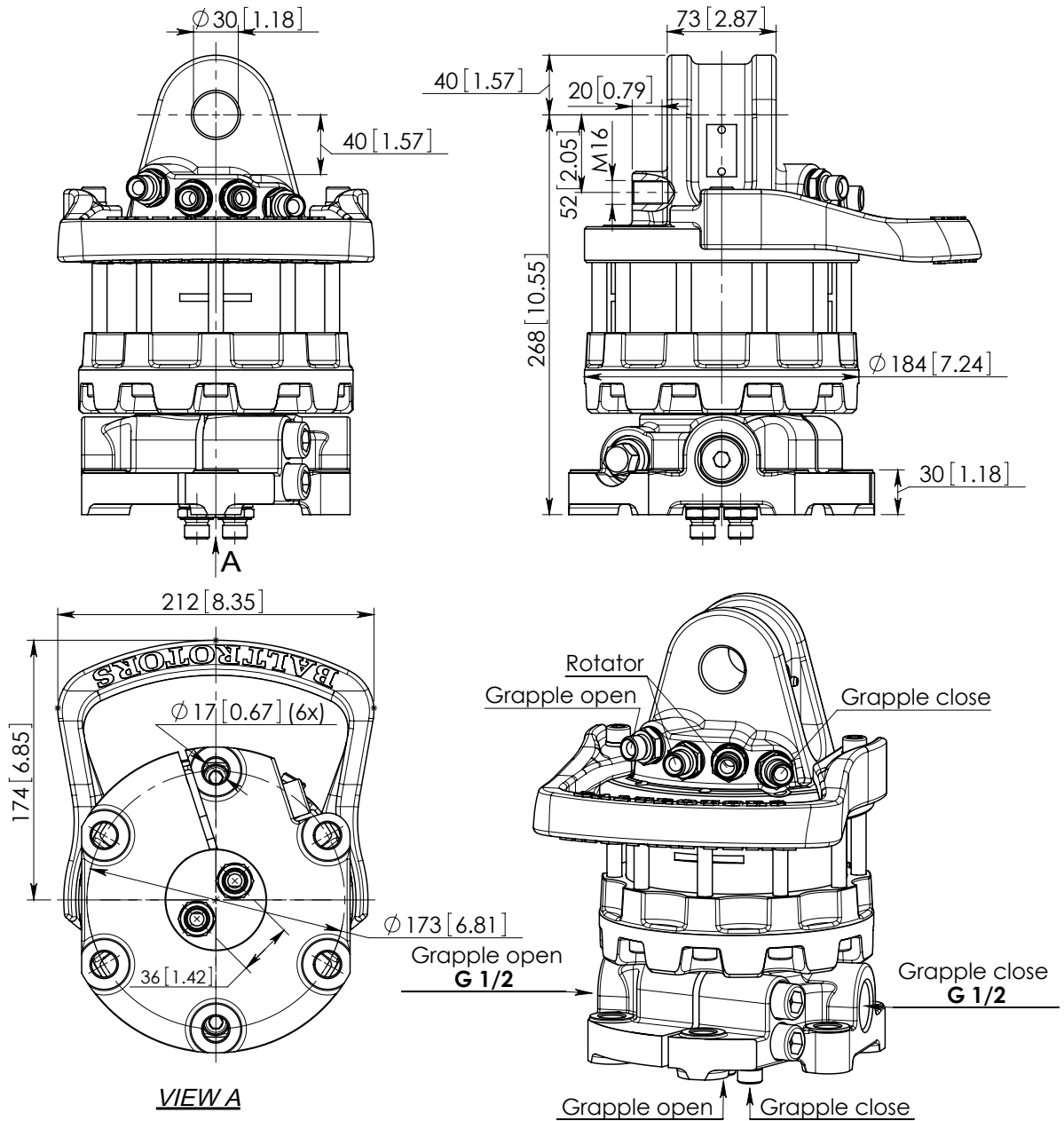
## Max working pressure:

Rotator	<b>←R→</b>	Max 25 MPa (3625 psi)
Grapple / Tool open	<b>←G→</b>	Max 20 MPa (2900 psi)
Grapple / Tool close	<b>→G←</b>	Max 30 MPa (4350 psi)

## Connection:

G 3/8
upper G 3/8 ; lower G 1/2
upper G 3/8 ; lower G 1/2

# ROTATOR GR55MF



VIEW A

## Technical data

Rotation	Unlimited
Max axial load static	55 kN [12367 lbf]
Max axial load dynamic	25 kN [5621 lbf]
Torque at 25 MPa [3625 psi]	1300 Nm [959 lb ft]
Rec oilflow	22 l/min [5.8 gal(US)/min]
Weight	36 kg [79 lb]

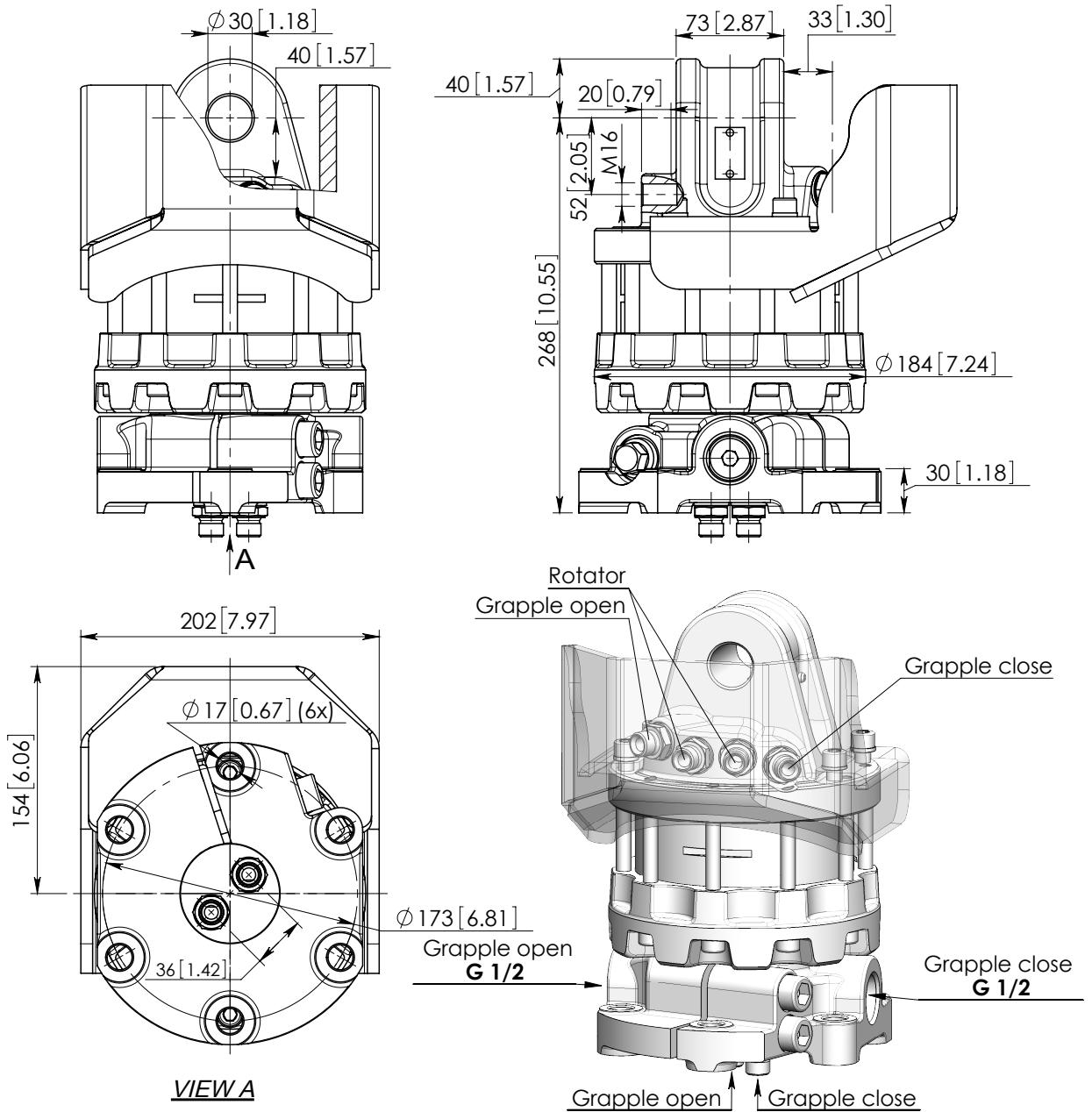
### Max working pressure:

Rotator	←R→	Max 25 MPa [3625 psi]
Grapple / Tool open	←G→	Max 20 MPa [2900 psi]
Grapple / Tool close	→G←	Max 30 MPa [4350 psi]

### Connection:

Rotator	G 3/8
Grapple / Tool open	G 3/8
Grapple / Tool close	G 3/8

# ROTATOR GR55MFX



## Technical data

Rotation	Unlimited
Max axial load static	55 kN [12367 lbf]
Max axial load dynamic	25 kN [5621 lbf]
Torque at 25 MPa [3625 psi]	1300 Nm [959 lb ft]
Rec oilflow	22 l/min [5.8 gal(US)/min]
Weight	36 kg [79 lb]

### Max working pressure:

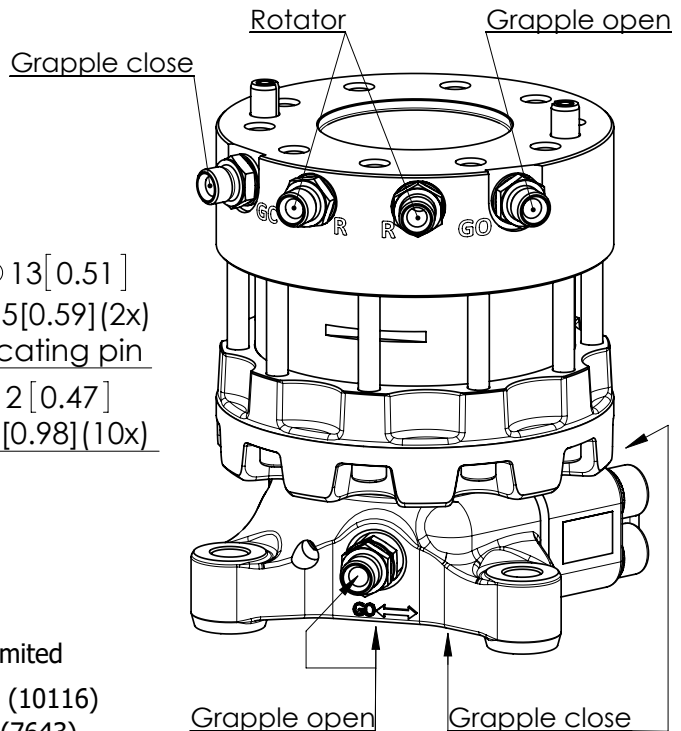
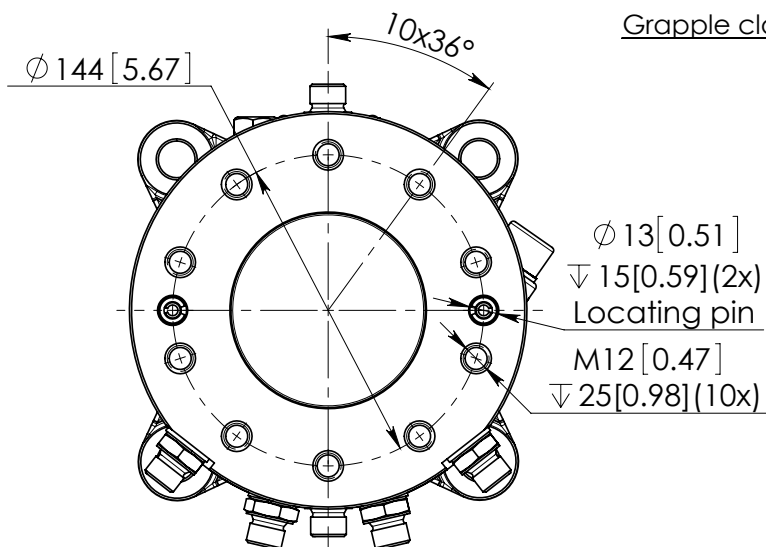
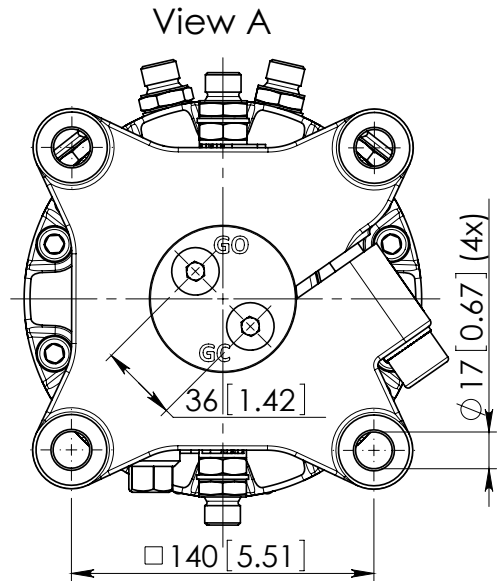
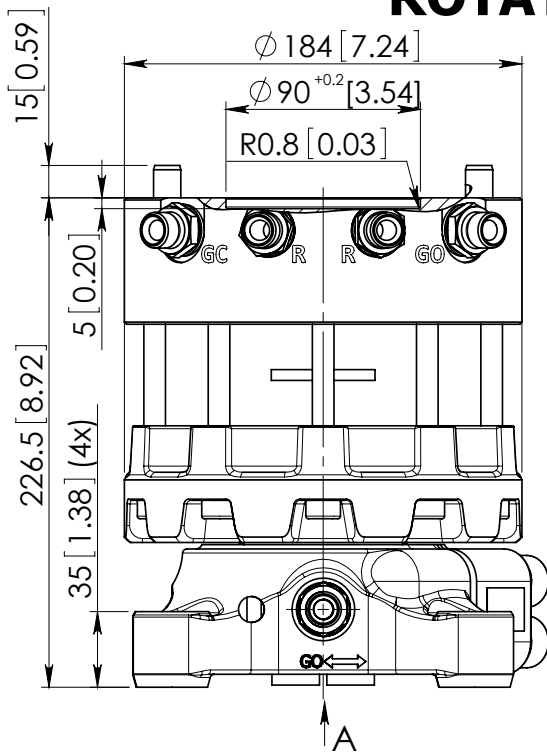
Rotator	←R→	Max 25 MPa [3625 psi]
Grapple / Tool open	←G→	Max 20 MPa [2900 psi]
Grapple / Tool close	→G←	Max 30 MPa [4350 psi]

### Connection:

Rotator	G 3/8
Grapple / Tool open	G 3/8
Grapple / Tool close	G 3/8



# ROTATOR GR55FF



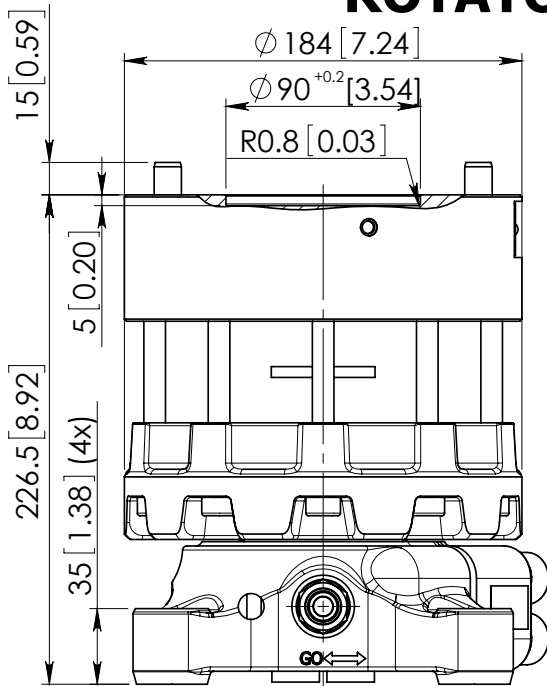
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+45 (10116) -34 (7643)
Max axial load dynamic, KN (lbf)	+25 (5620) -17 (3821)
Torque at 25Mpa (3625psi), Nm (lb ft)	1300 (959)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	35 (78)
<b>Max working pressure:</b>	<b>Connection:</b>
Rotator                    ←R→	Max 25 MPa (3625 psi)    G 3/8
Grapple / Tool open   ←G→	Max 20 MPa (2900 psi)    G 3/8
Grapple / Tool close   →G←	Max 30 MPa (4350 psi)    G 3/8

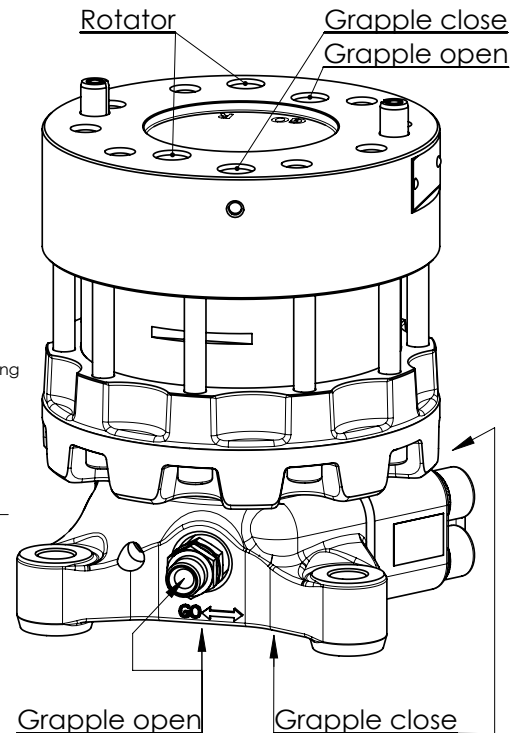
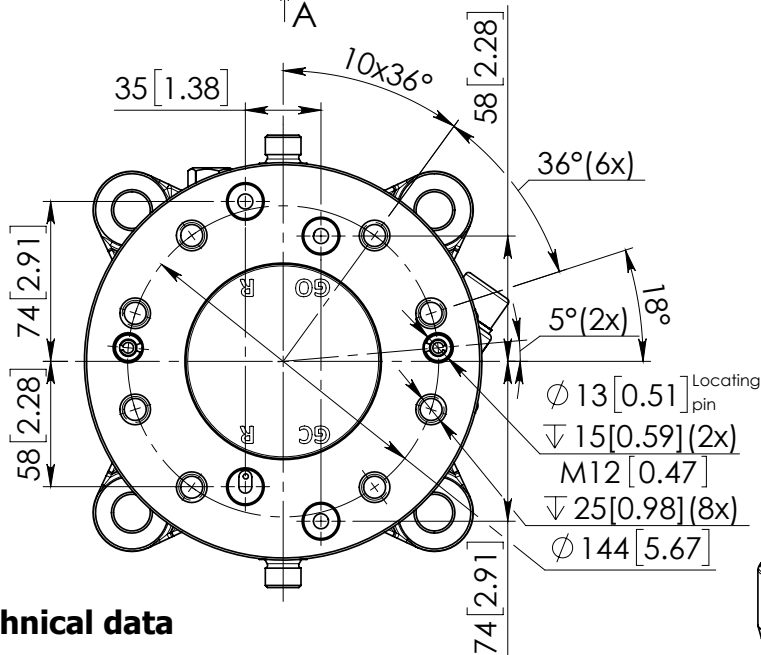
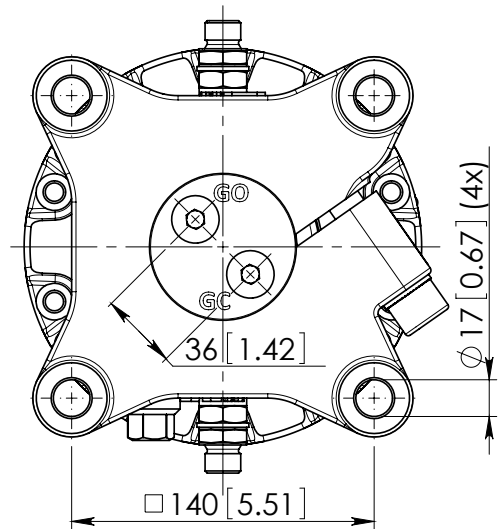
Sheet 1 of 3

13.09.2016

# ROTATOR GR55FF-01



View A



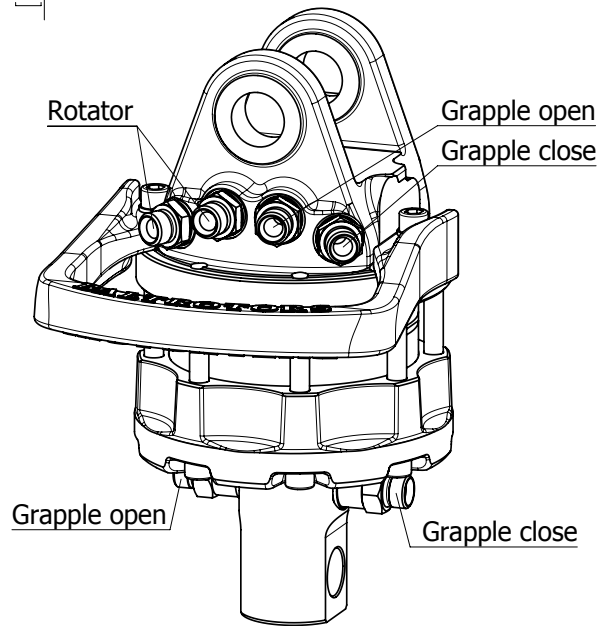
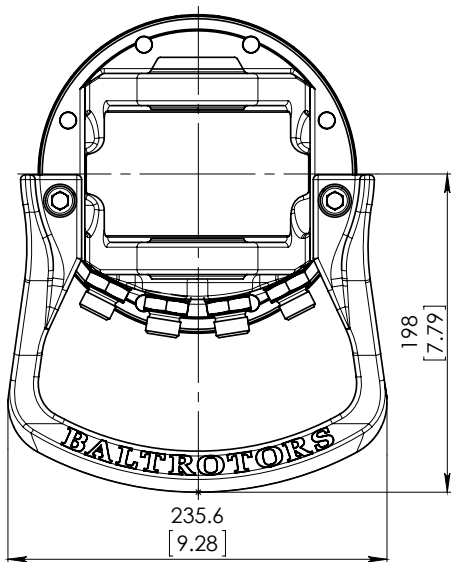
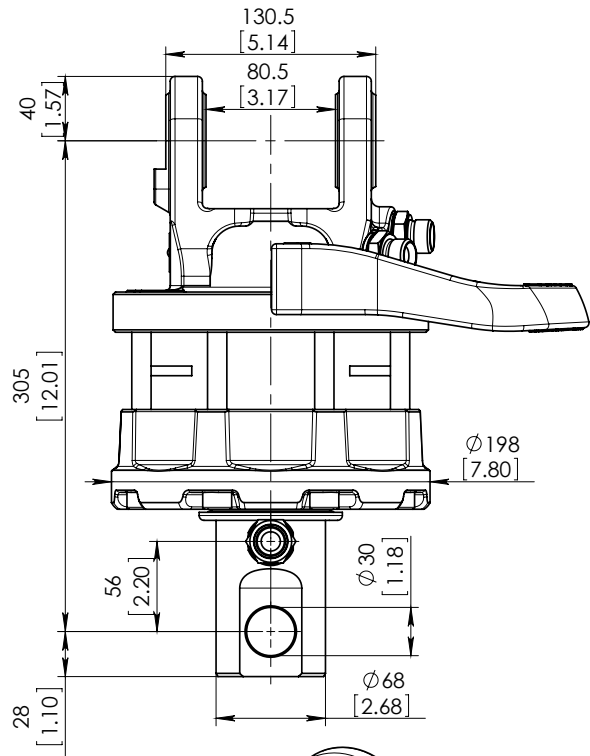
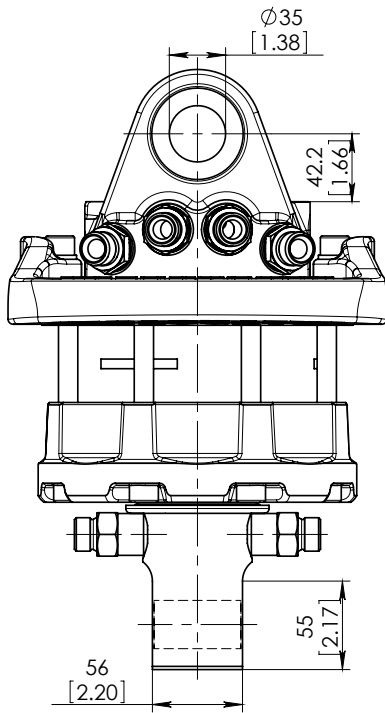
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+45 (10116) -34 (7643)
Max axial load dynamic, KN (lbf)	+25 (5620) -17 (3821)
Torque at 25Mpa (3625psi), Nm (lb ft)	1300 (959)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	35 (78)
<b>Max working pressure:</b>	<b>Connection:</b>
Rotator                    ←R→	Max 25 MPa (3625 psi)    G 3/8
Grapple / Tool open   ←G→	Max 20 MPa (2900 psi)    G 3/8
Grapple / Tool close   →G←	Max 30 MPa (4350 psi)    G 3/8

Sheet 1 of 3

26.09.2016

# ROTATOR GR60



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	60 (13491)
Max axial load dynamic, kN (lbf)	30 (6745)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	37 (82)

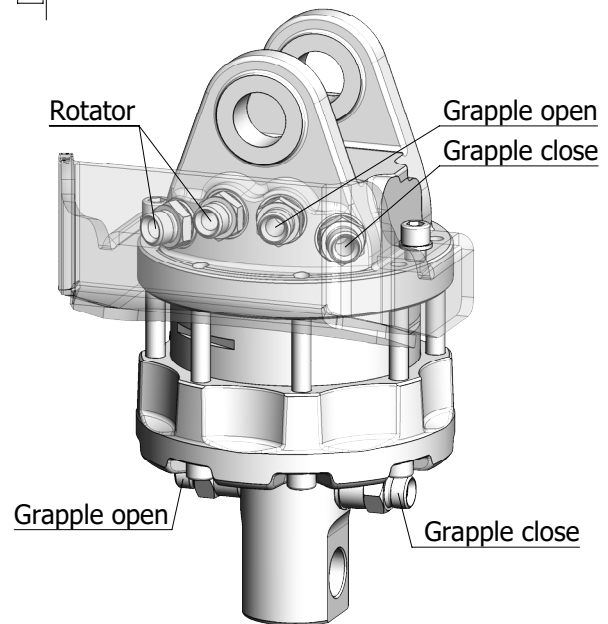
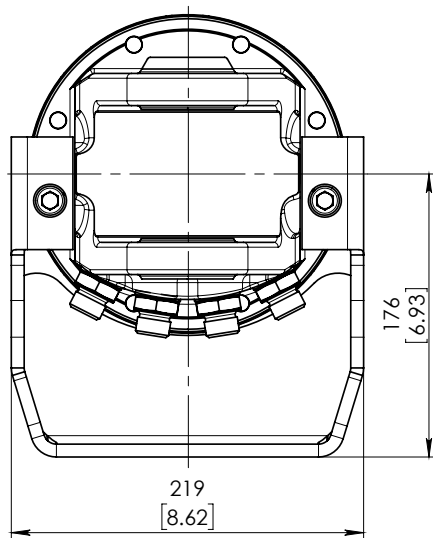
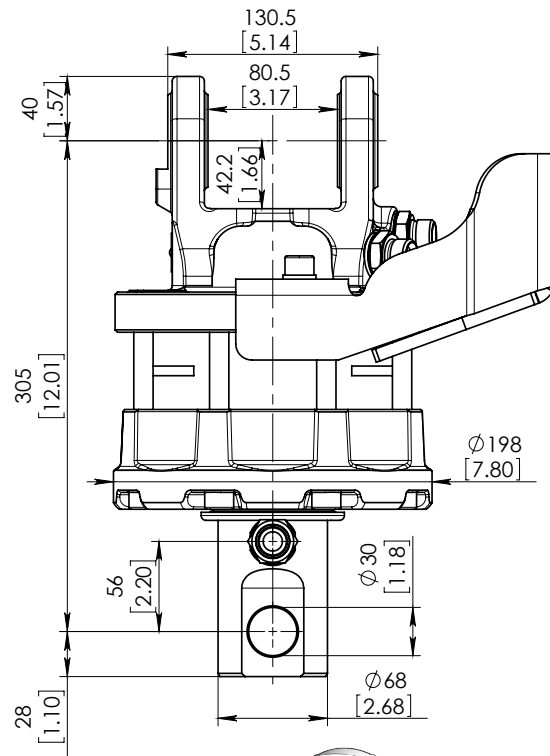
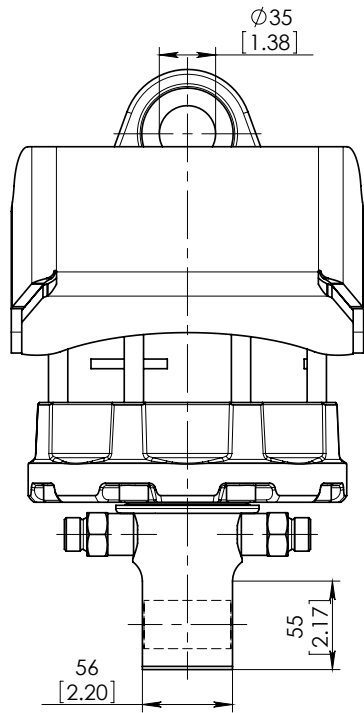
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR60X



## Technical data

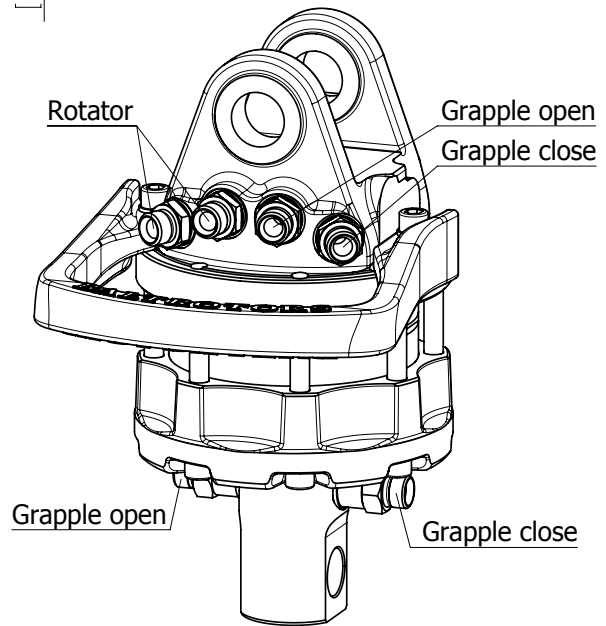
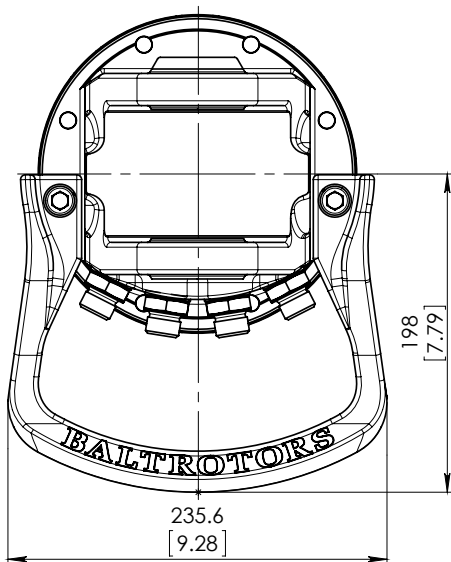
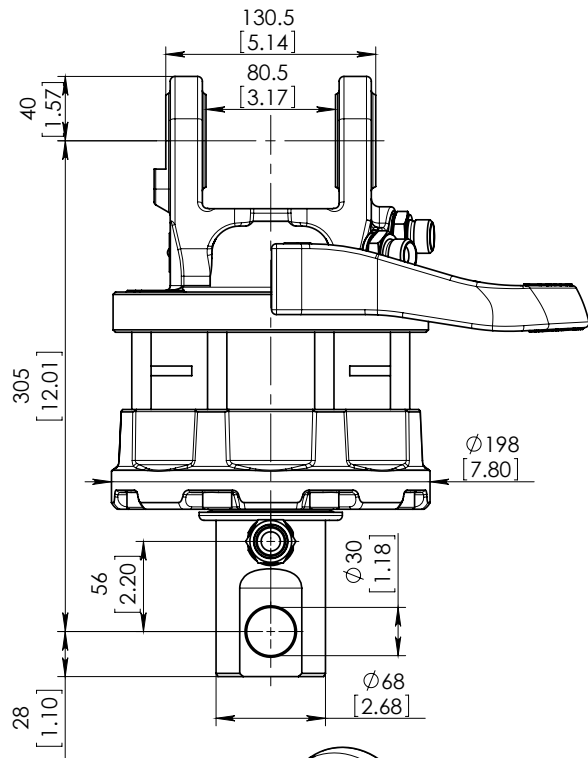
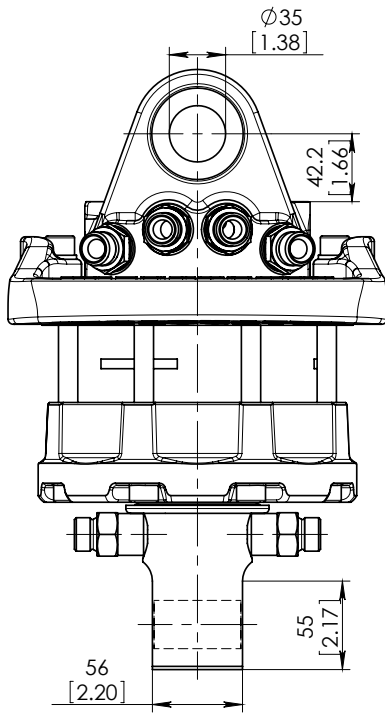
Rotation	Unlimited
Max axial load static, kN (lbf)	60 (13491)
Max axial load dynamic, kN (lbf)	30 (6745)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	39 (86)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

# ROTATOR GR60DB



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, KN (lbf)	+30 (6745) - 25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	38 (84)

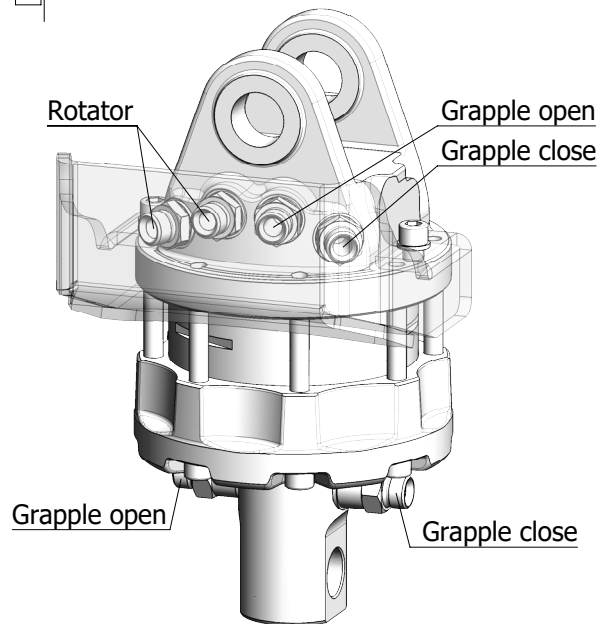
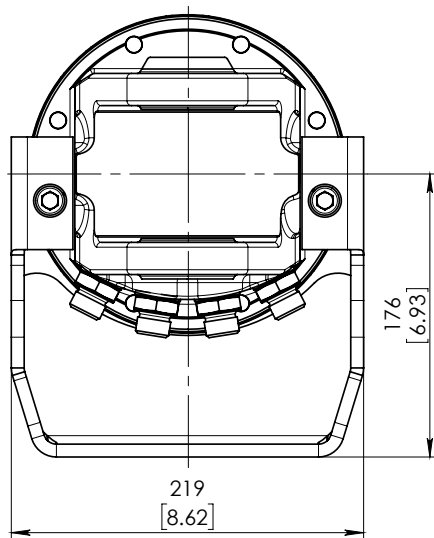
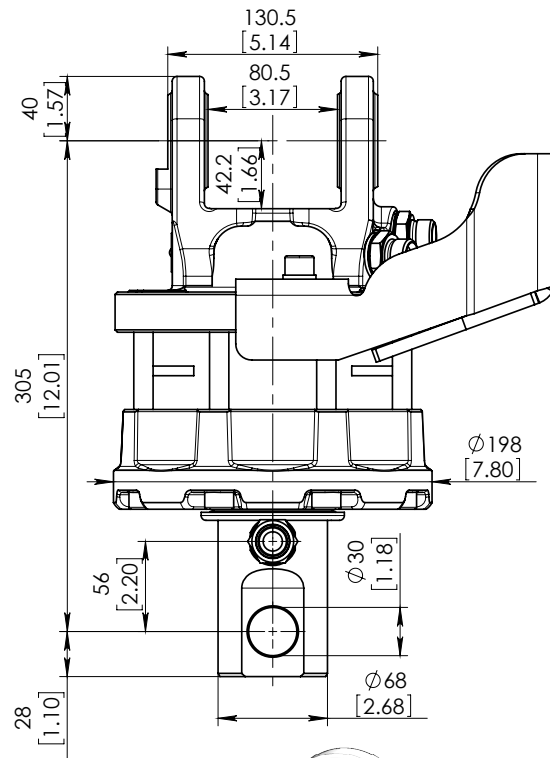
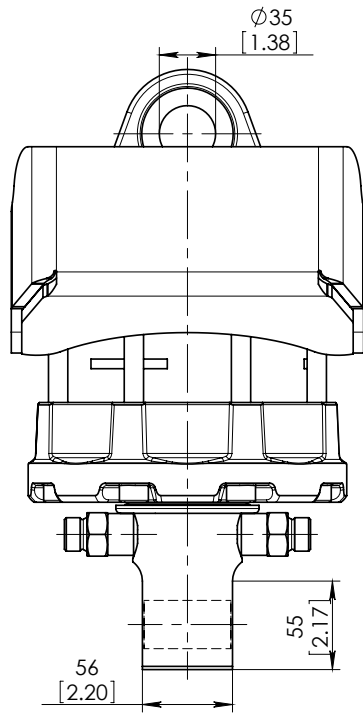
## Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR60DBX



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, KN (lbf)	+30 (6745) - 25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	39 (85)

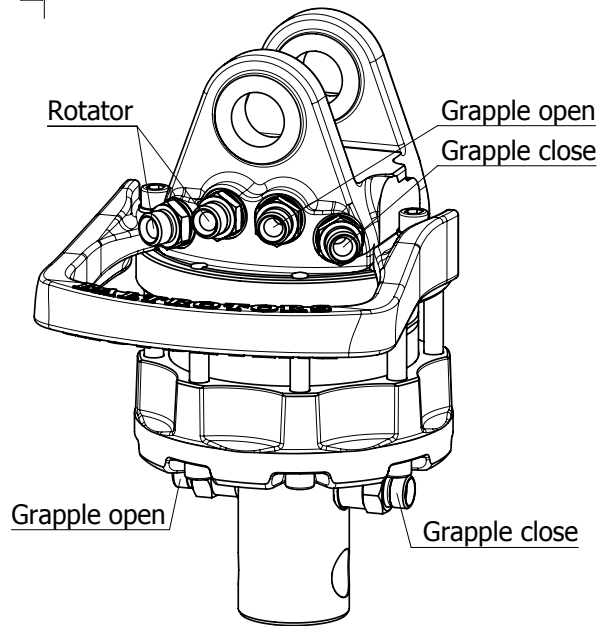
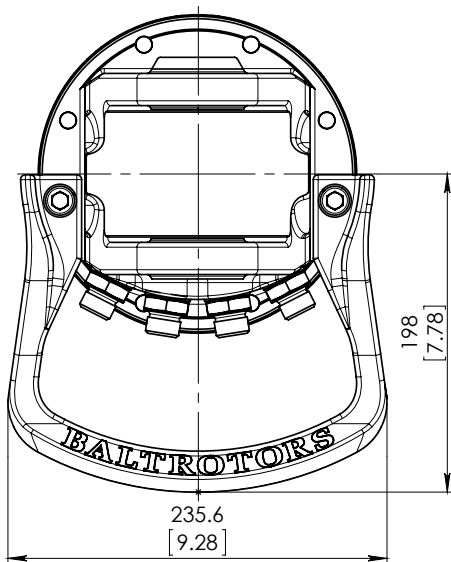
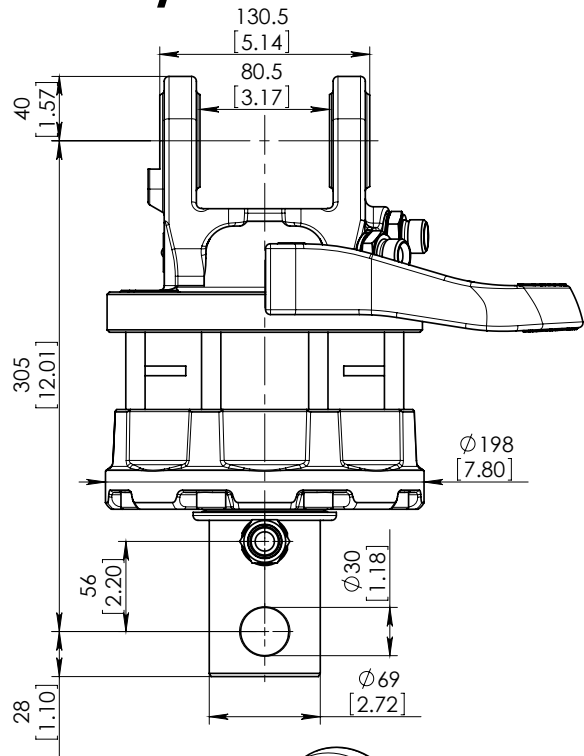
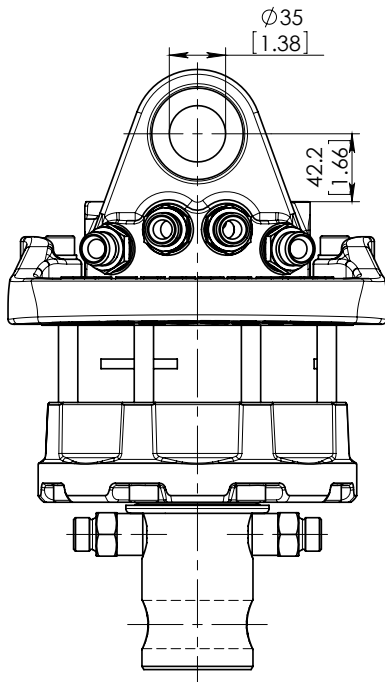
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR60/69



## Technical data

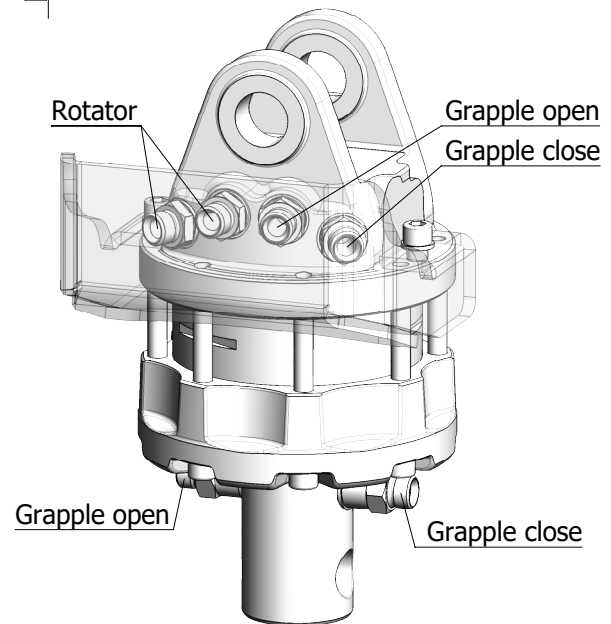
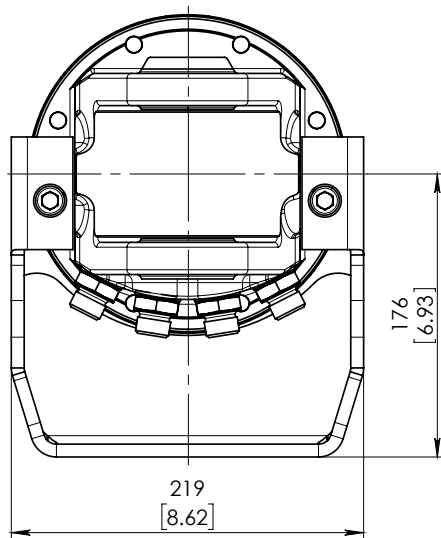
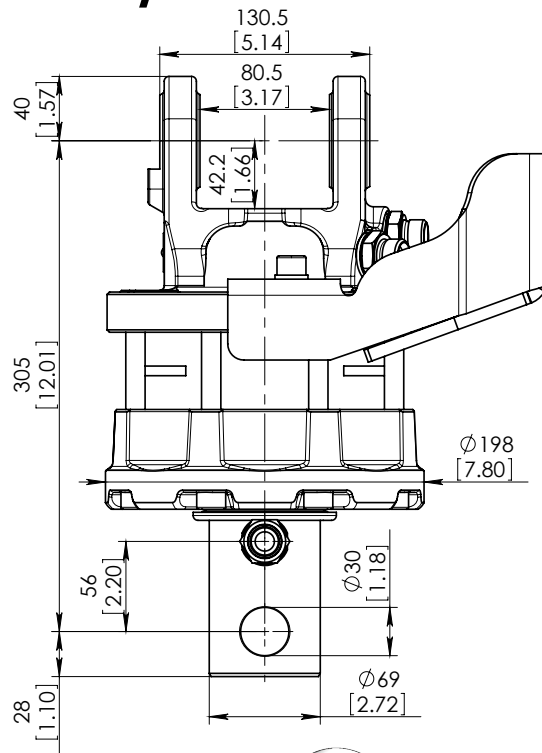
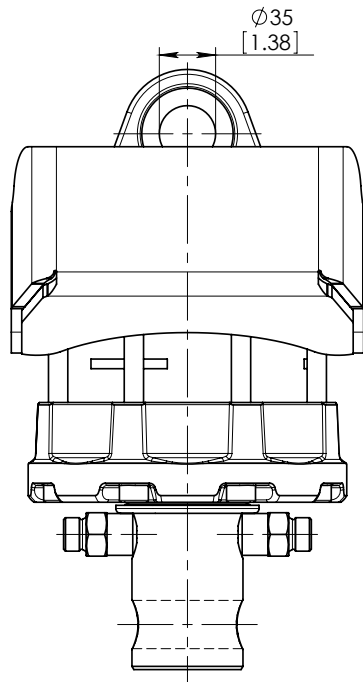
Rotation	Unlimited
Max axial load static, kN (lbf)	60 (13491)
Max axial load dynamic, kN (lbf)	30 (6745)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	38 (83)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

# ROTATOR GR60/69X



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	60 (13491)
Max axial load dynamic, kN (lbf)	30 (6745)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	39 (85)

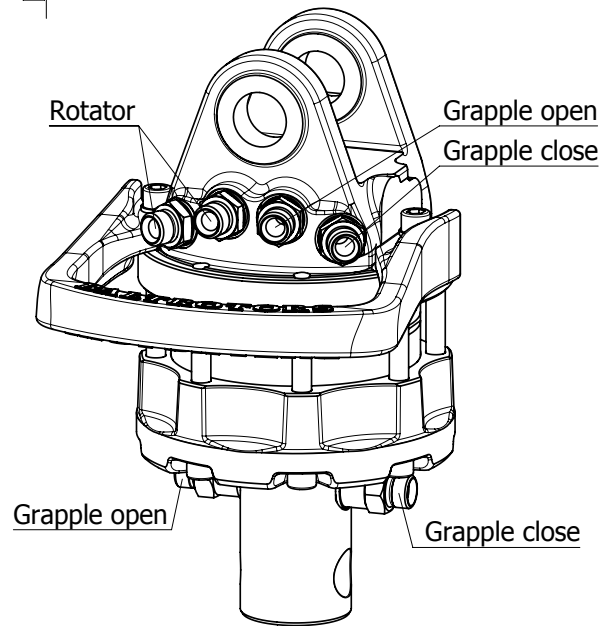
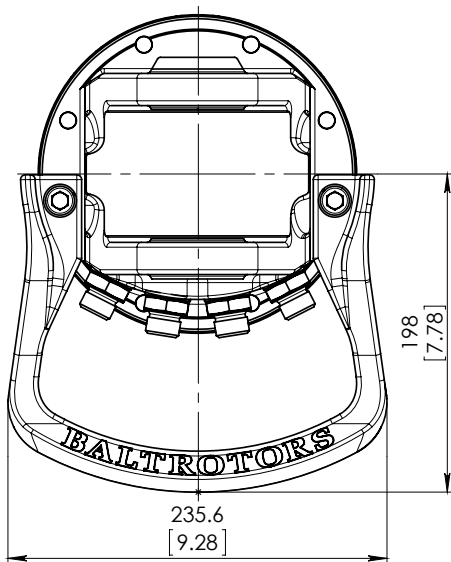
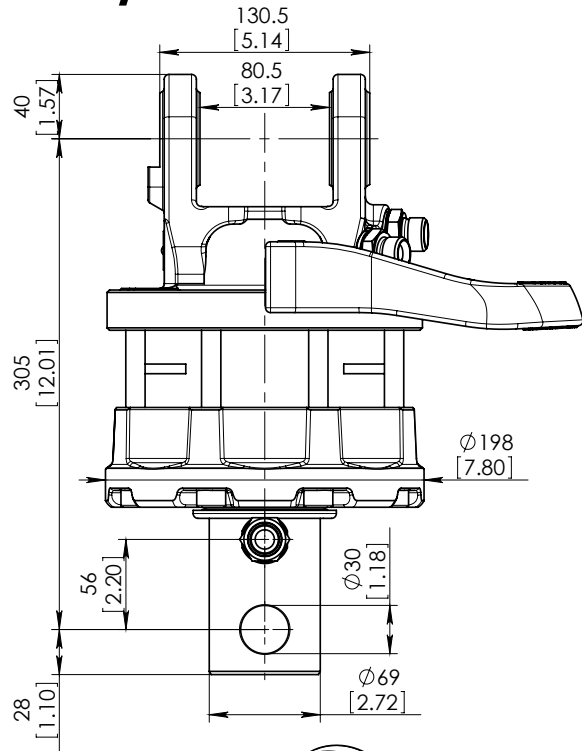
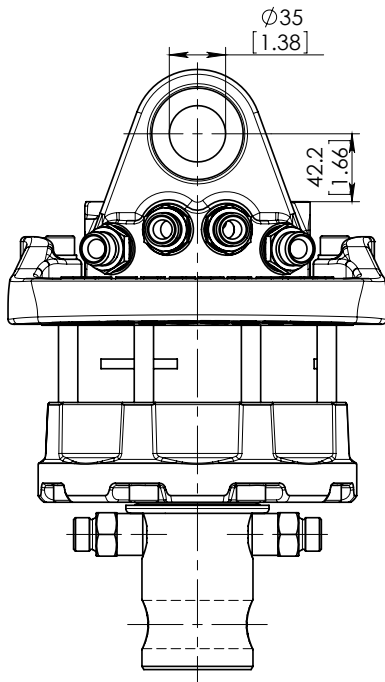
### Max working pressure:

Rotator	<b>←R→</b>	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	<b>←G→</b>	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	<b>→G←</b>	Max 30 MPa (4350 psi)	G 1/2

### Connection:



# ROTATOR GR60/69DB



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, KN (lbf)	+30 (6745) - 25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	38 (83)

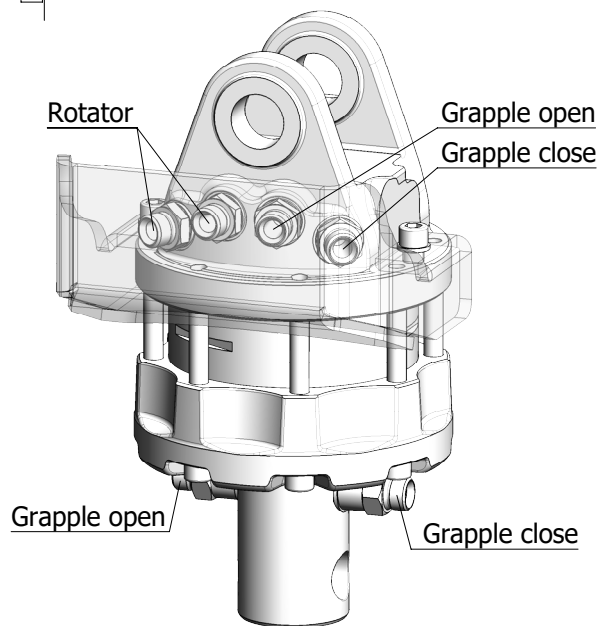
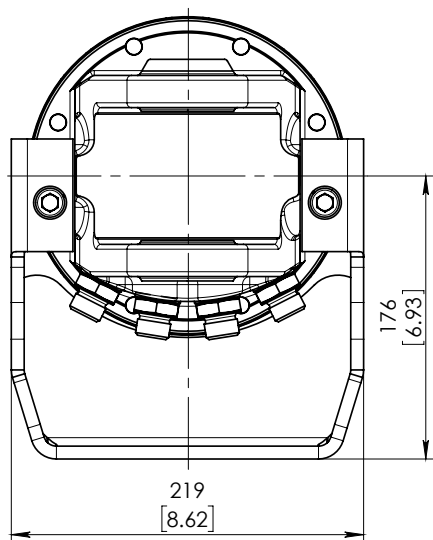
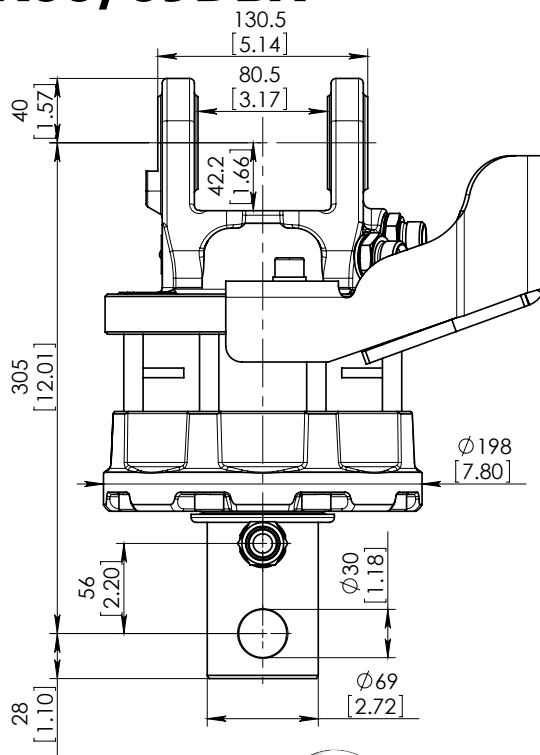
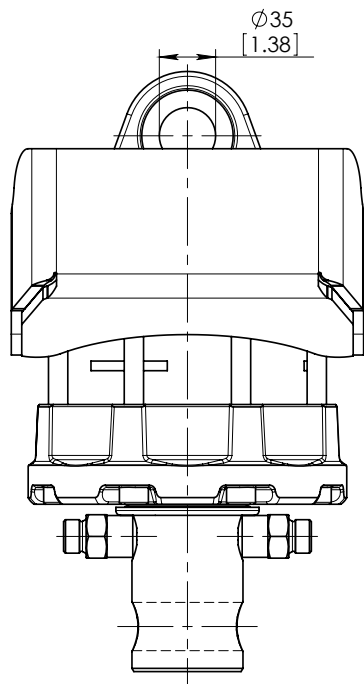
## Max working pressure:

Rotator	↔R↔	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR60/69DBX



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, KN (lbf)	+30 (6745) - 25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	39 (85)

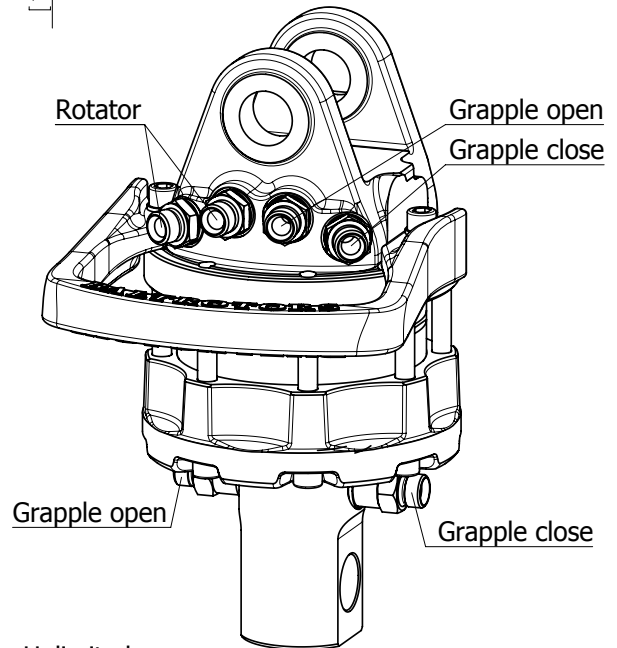
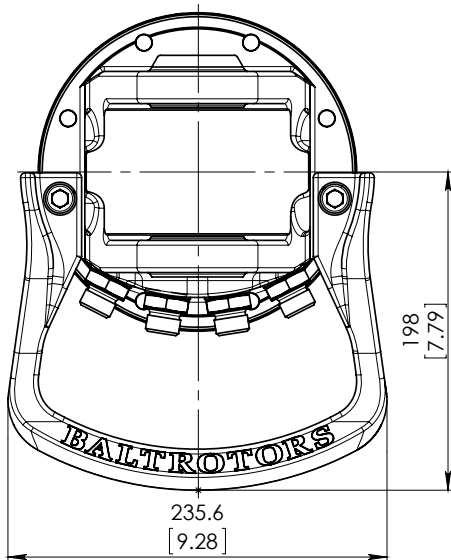
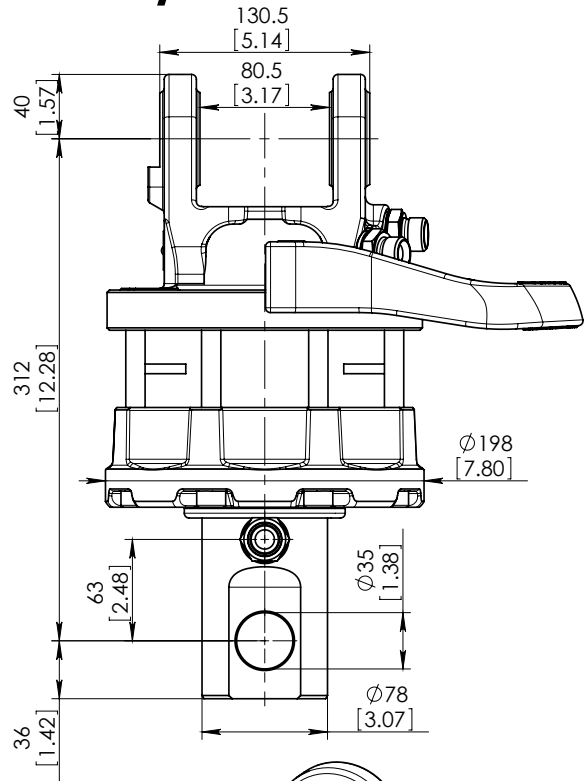
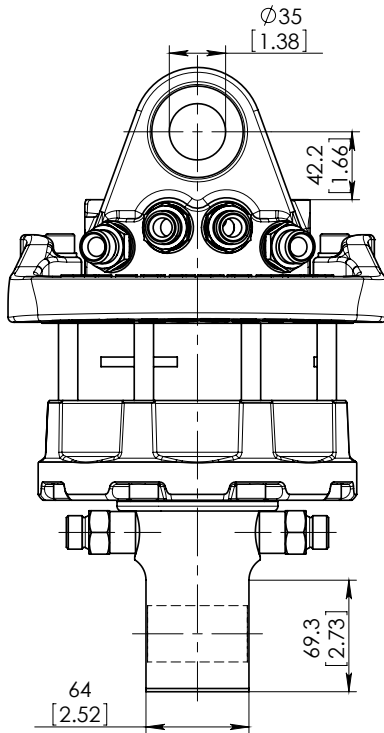
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

24.01.2017. Sheet 1 of 3

# ROTATOR GR60/78



## Technical data

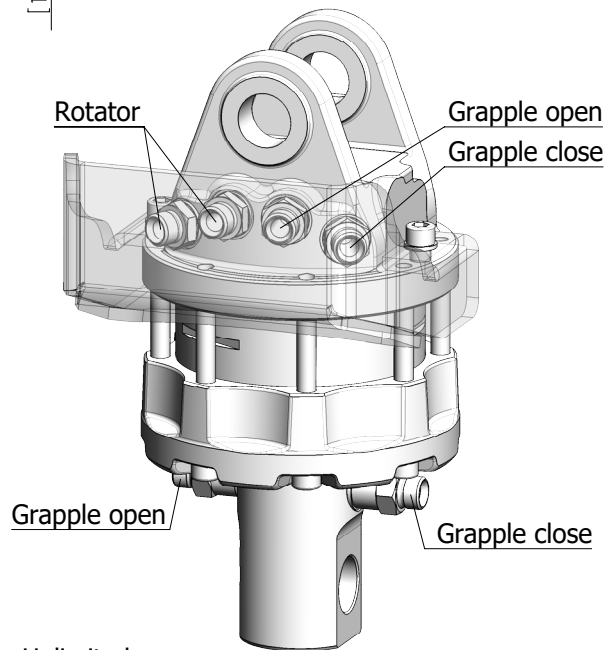
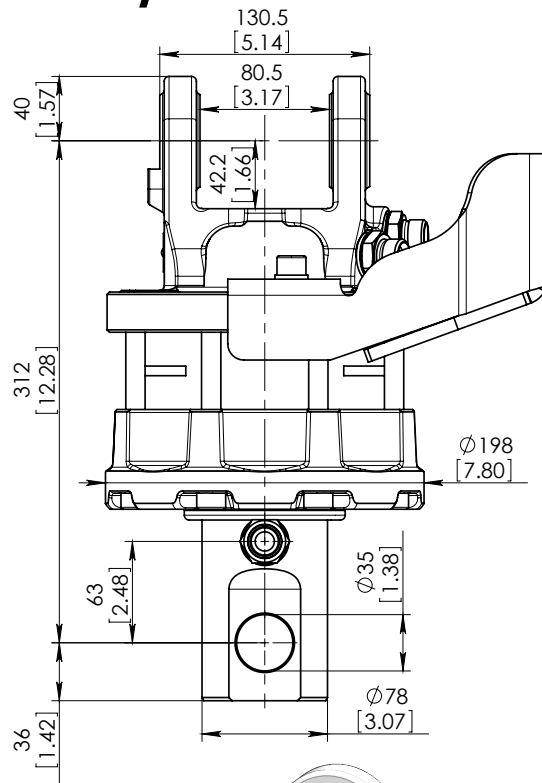
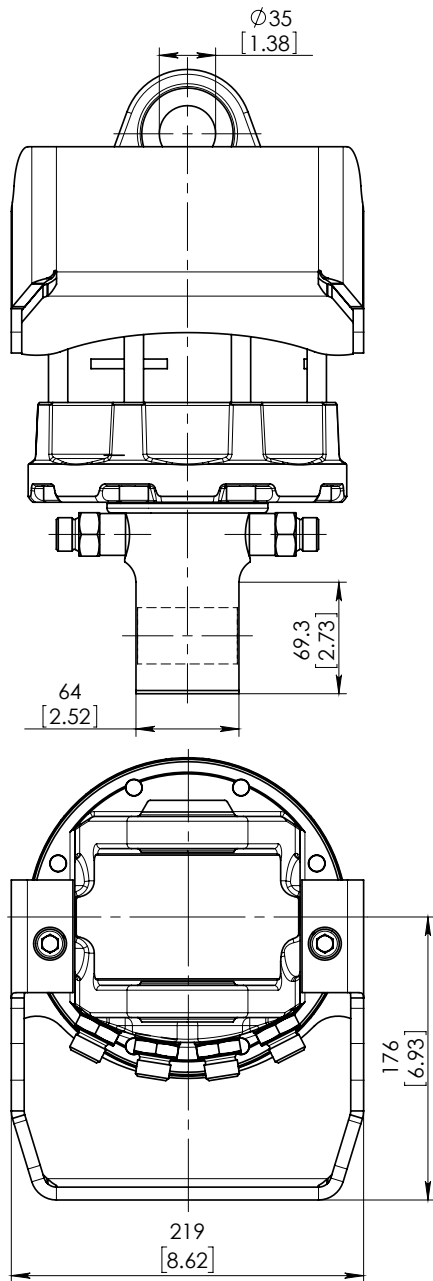
Rotation	Unlimited
Max axial load static, kN (lbf)	60 (13491)
Max axial load dynamic, kN (lbf)	30 (6745)
Torque at 25MPa (3625psi), Nm (lb ft)	1600 (1180)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	38 (84)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

# ROTATOR GR60/78X



## Technical data

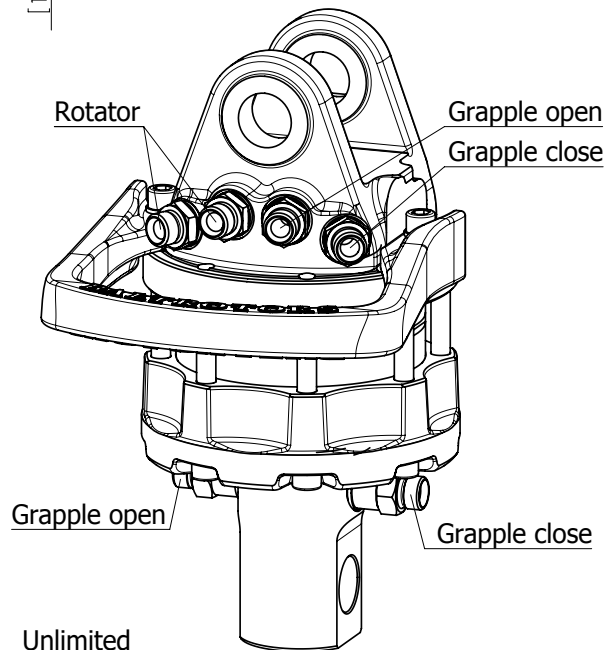
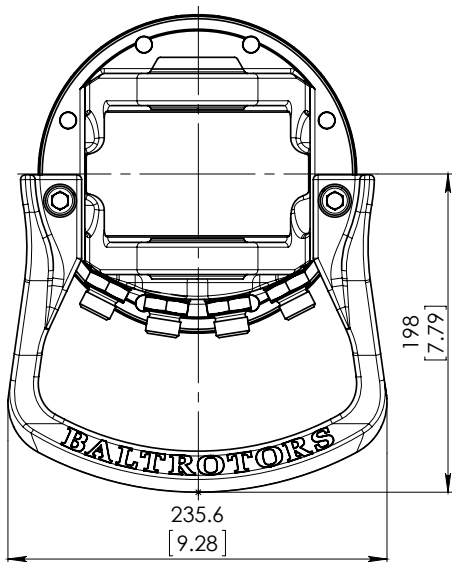
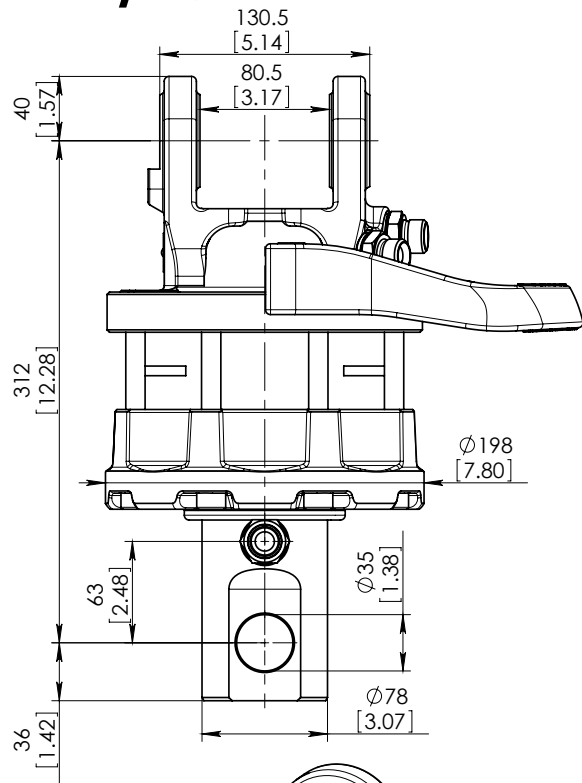
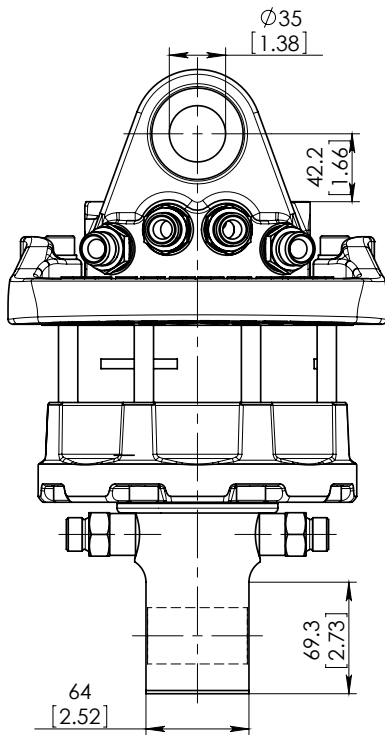
Rotation	Unlimited
Max axial load static, kN (lbf)	60 (13491)
Max axial load dynamic, kN (lbf)	30 (6745)
Torque at 25MPa (3625psi), Nm (lb ft)	1600 (1180)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	39 (86)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

# ROTATOR GR60/78DB



## Technical data

Rotation

Max axial load static, KN (lbf)

Max axial load dynamic, KN (lbf)

Torque at 25Mpa (3625psi), Nm (lb ft)

Rec oilflow, l/min (US gallon)

Weight, kg (lb)

Unlimited

+60 (13491)

- 50 (11242)

+30 (6745)

- 25 (5621)

1600 (1180)

25 (6.6)

38 (84)

## Max working pressure:

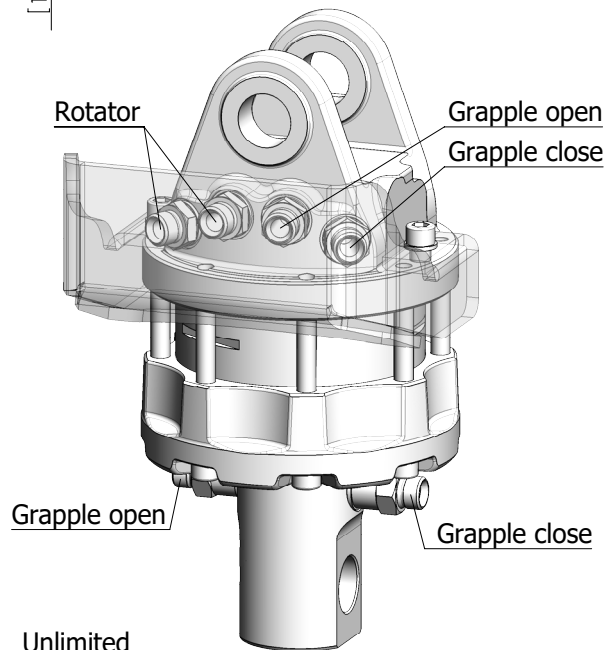
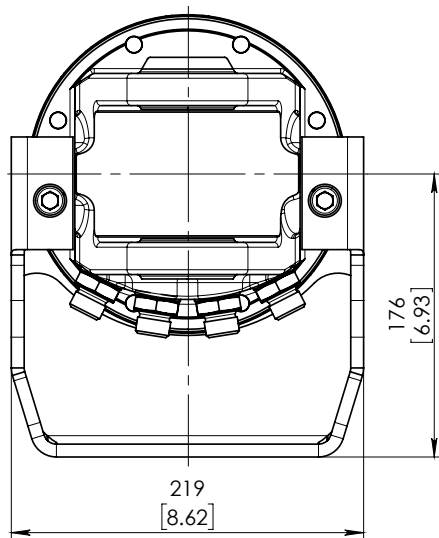
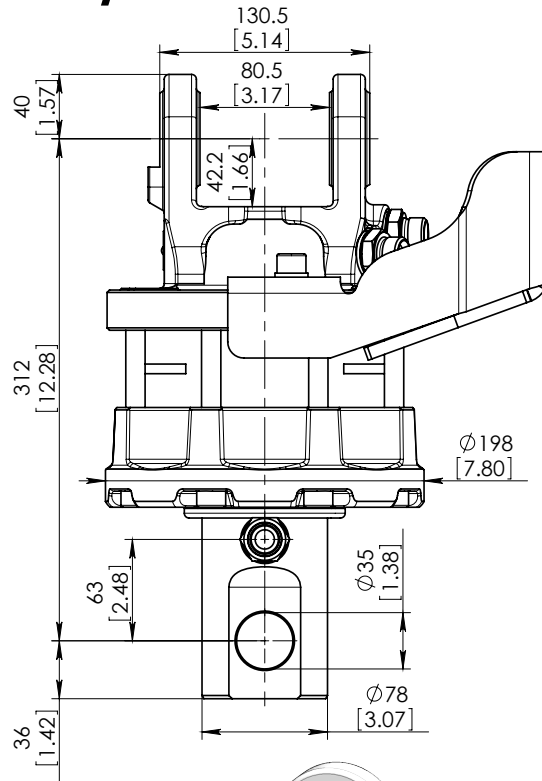
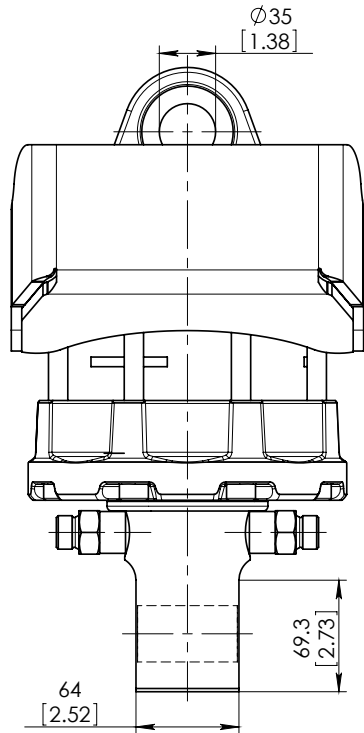
Rotator **←R→** Max 25 MPa (3625 psi) G 1/2

Grapple / Tool open **←G→** Max 20 MPa (2900 psi) G 1/2

Grapple / Tool close **→G←** Max 30 MPa (4350 psi) G 1/2

## Connection:

# ROTATOR GR60/78DBX



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, KN (lbf)	+30 (6745) - 25 (5621)
Torque at 25Mpa (3625psi), Nm (lb ft)	1600 (1180)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	39 (86)

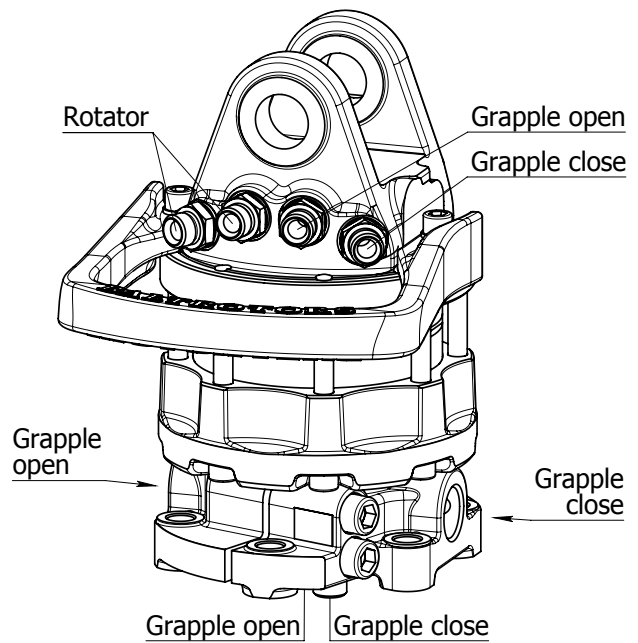
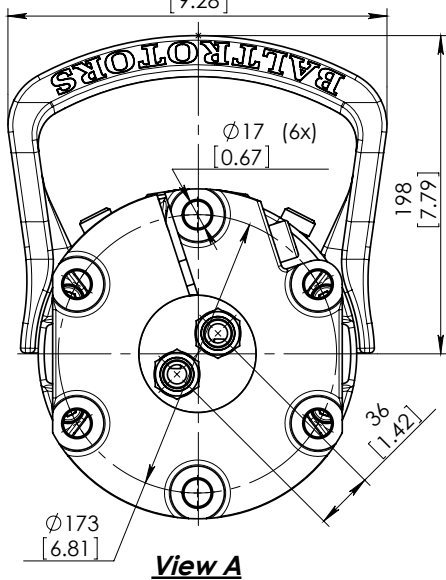
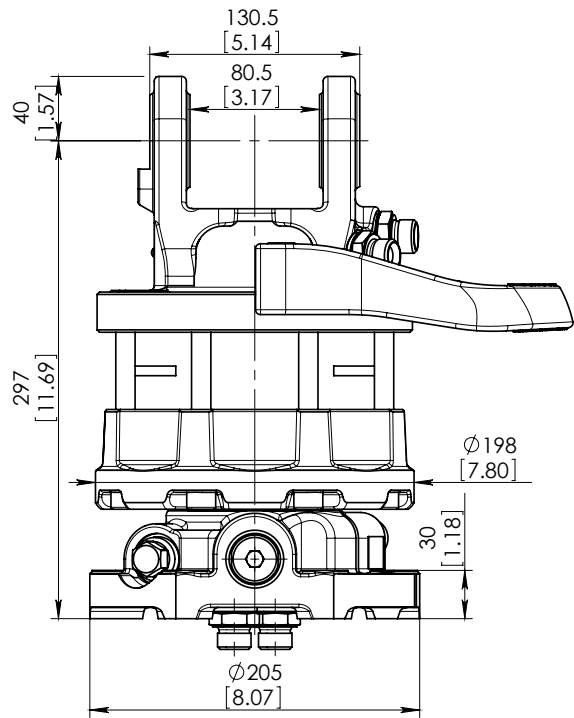
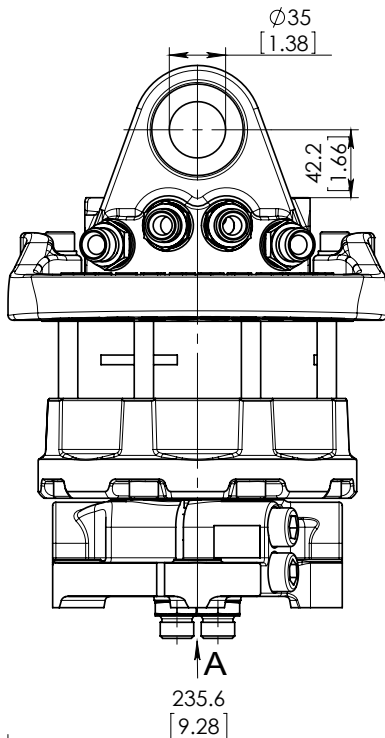
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR603



## Technical data

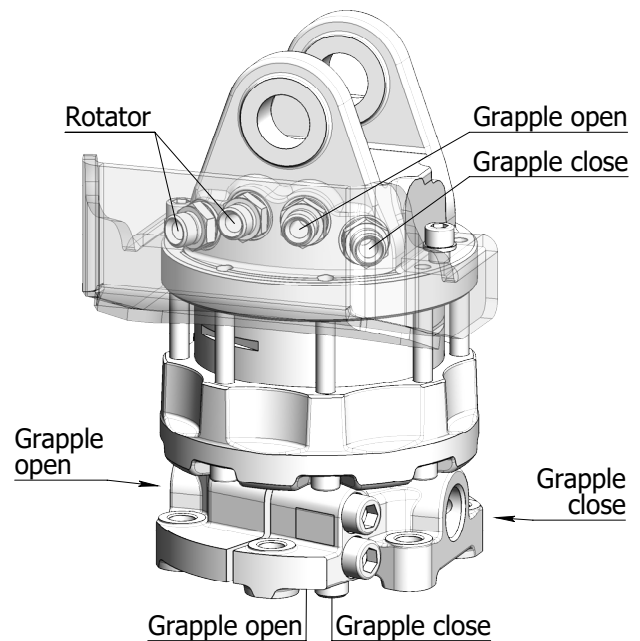
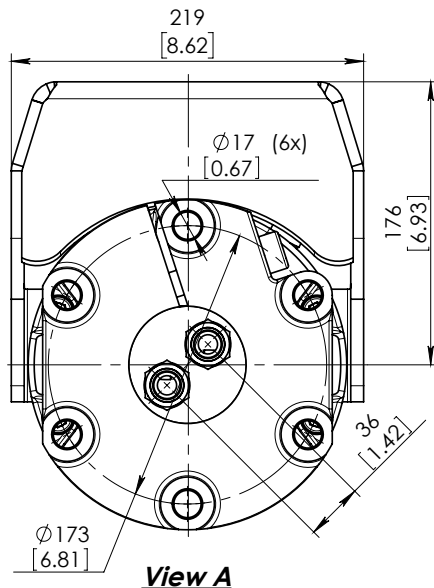
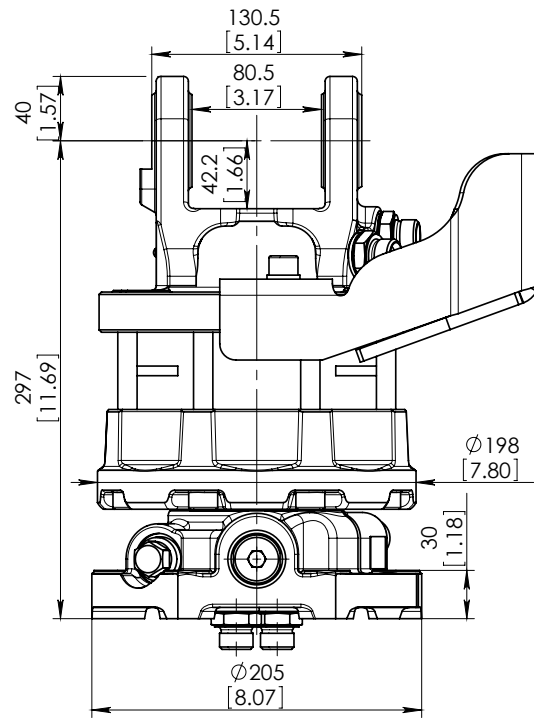
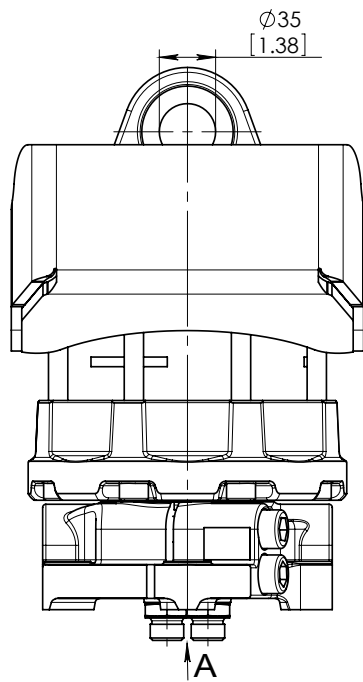
Rotation	Unlimited
Max axial load static, kN (lbf)	60 (13491)
Max axial load dynamic, kN (lbf)	30 (6745)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	45 (99)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

# ROTATOR GR603X



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	60 (13491)
Max axial load dynamic, kN (lbf)	30 (6745)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	46 (100)

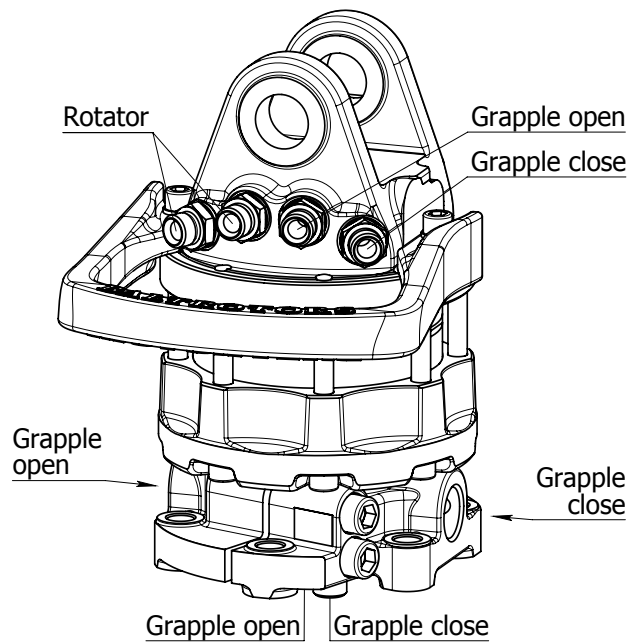
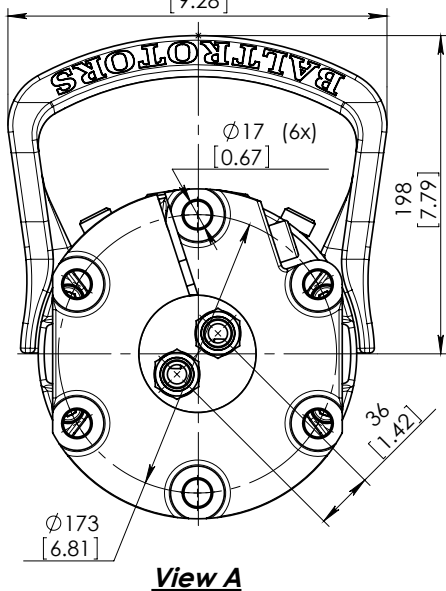
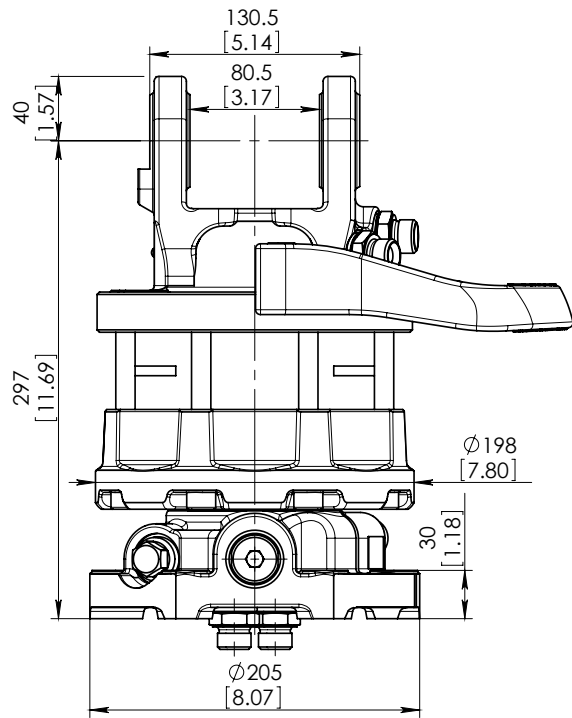
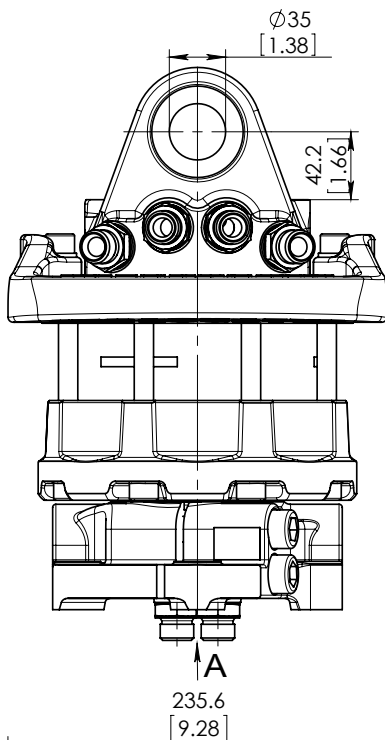
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:



# ROTATOR GR603DB



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, kN (lbf)	+30 (6745) - 25 (5621)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	45 (99)

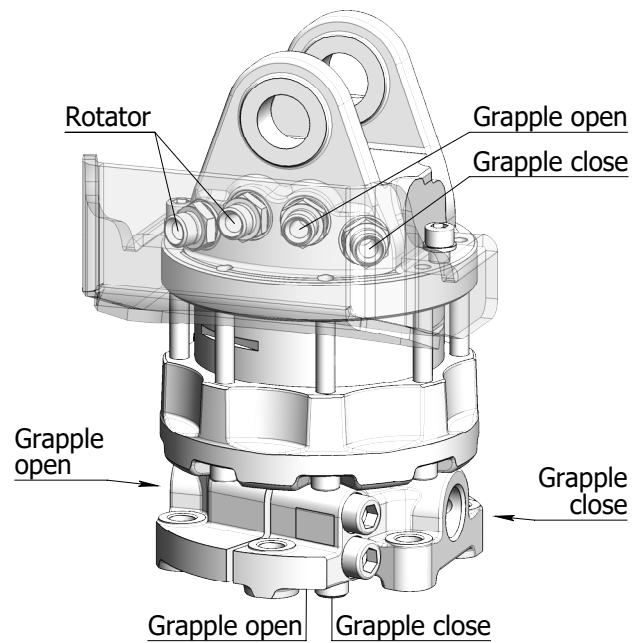
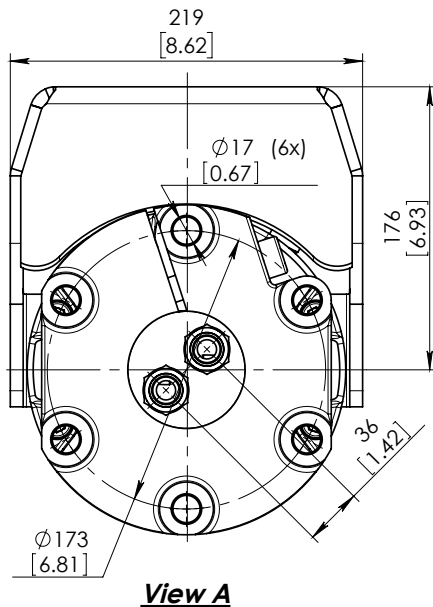
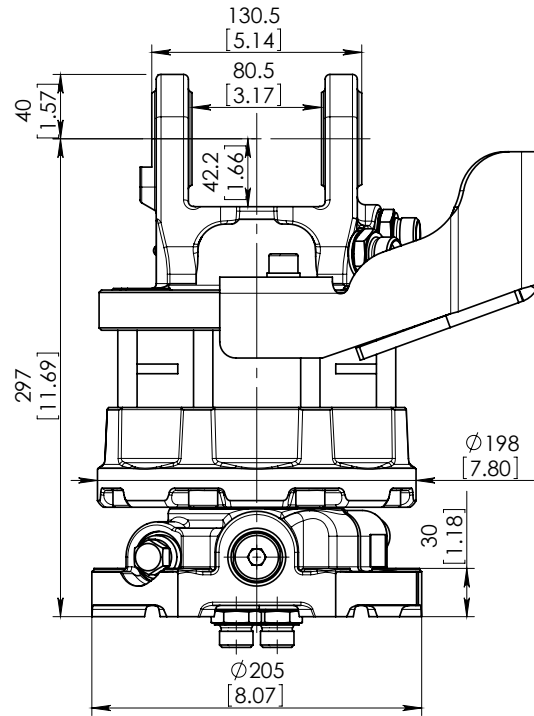
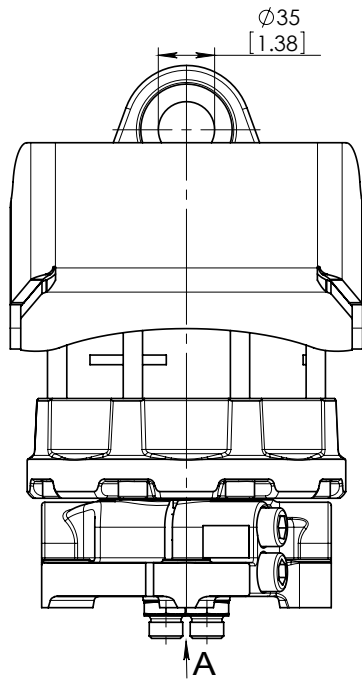
## Max working pressure:

Rotator	↔R↔	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR603DBX



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, kN (lbf)	+30 (6745) - 25 (5621)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	46 (100)

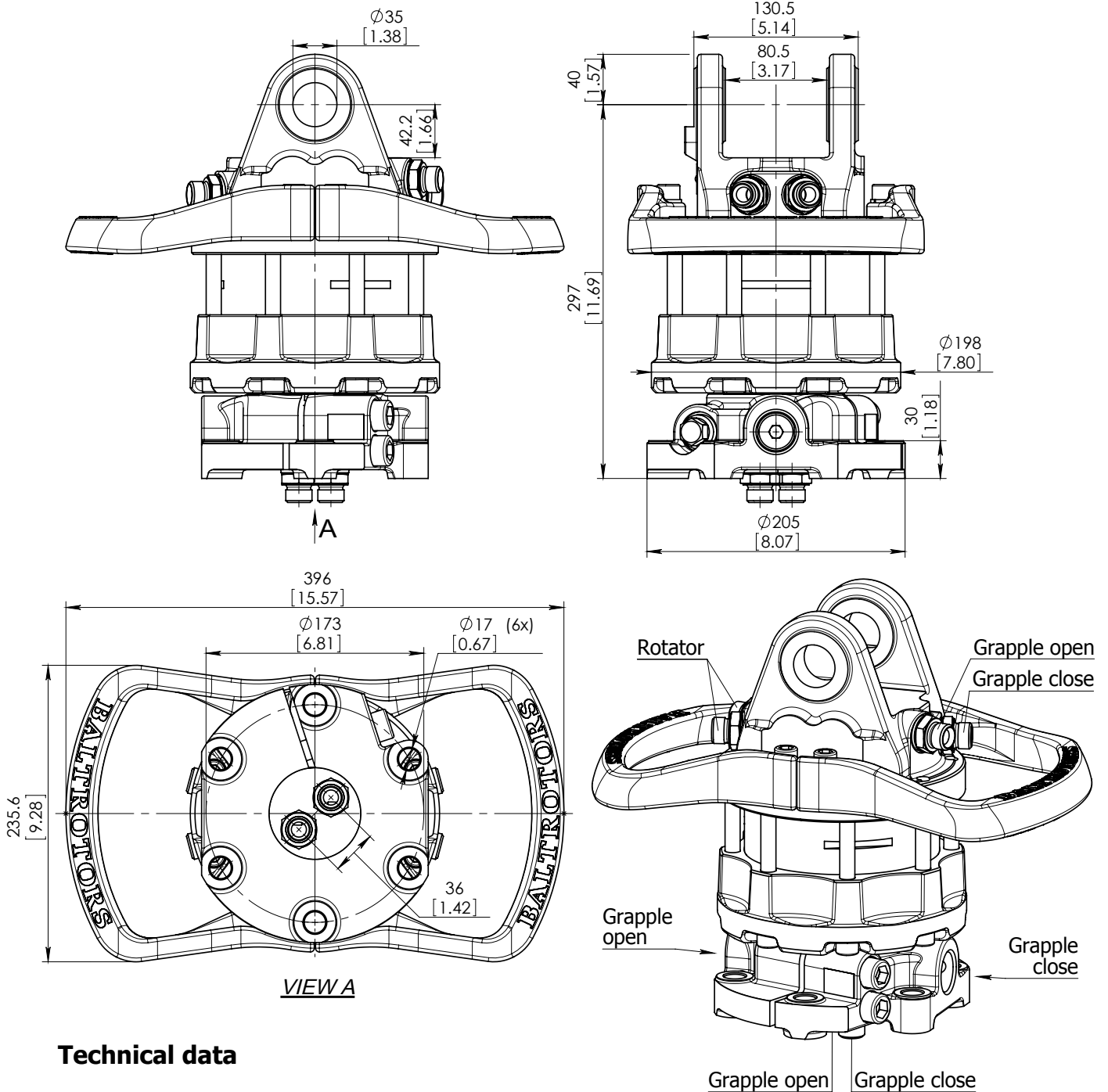
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR603-2



## Technical data

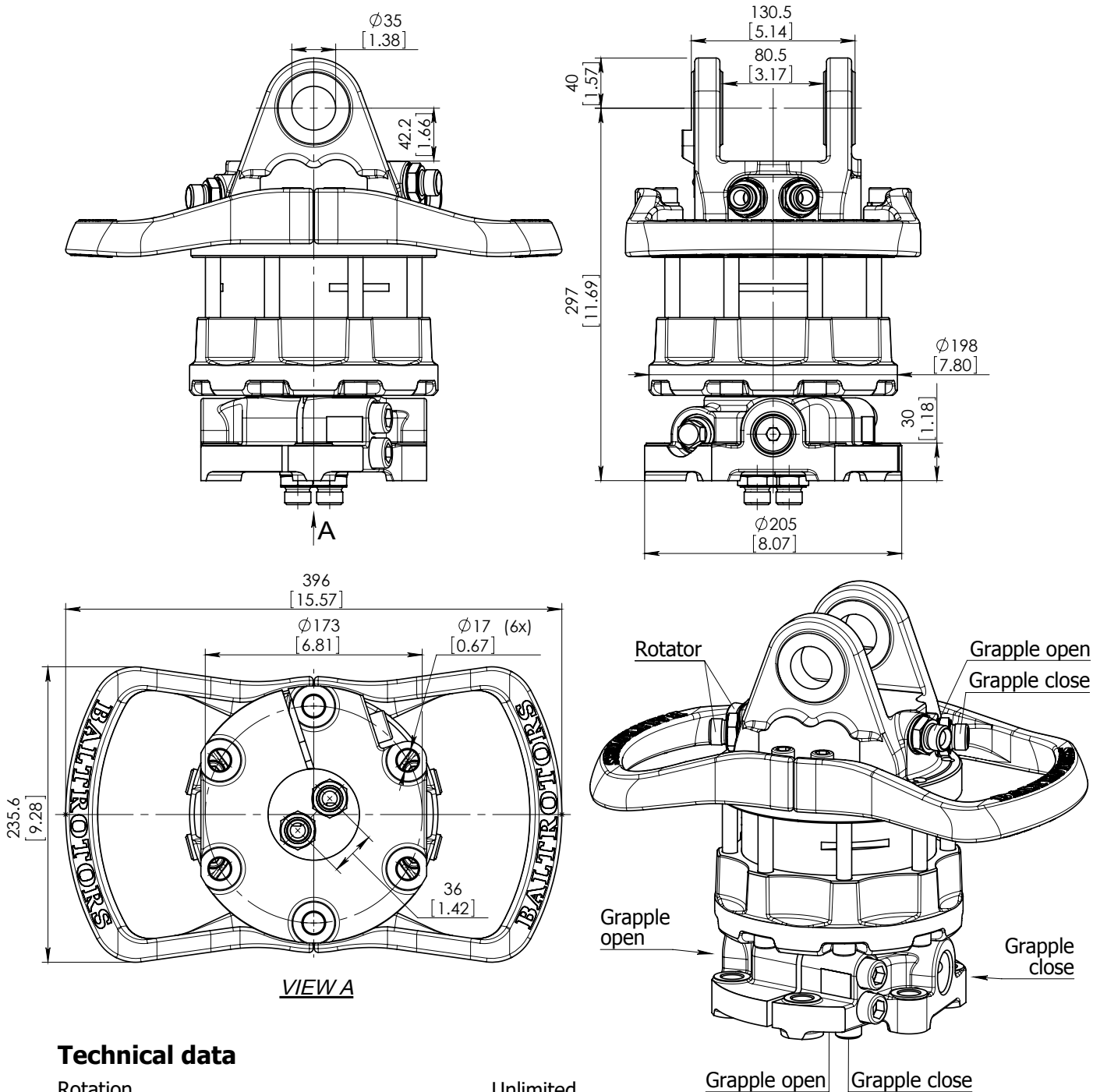
Rotation	Unlimited
Max axial load static, kN (lbf)	60 (13491)
Max axial load dynamic, kN (lbf)	30 (6745)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	47 (104)

## Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:

# ROTATOR GR603-2DB



## Technical data

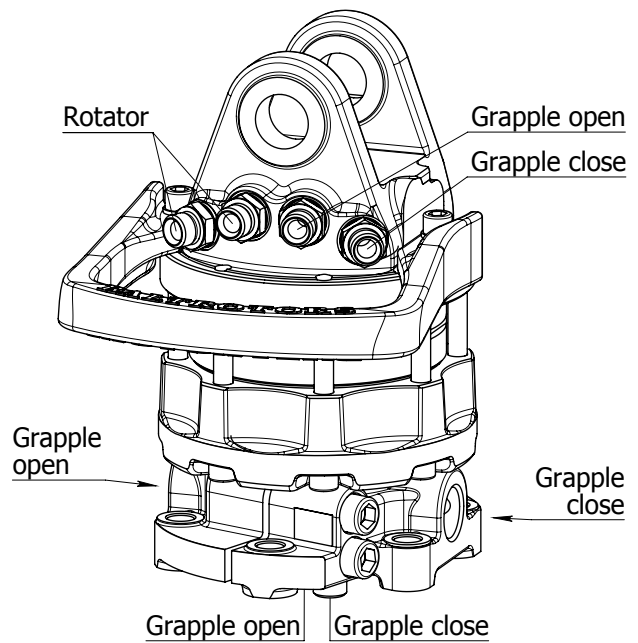
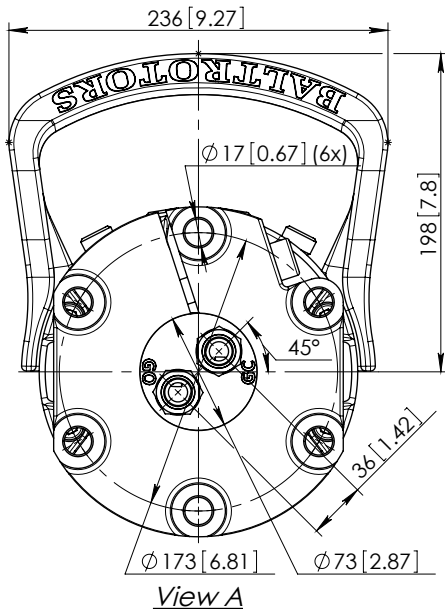
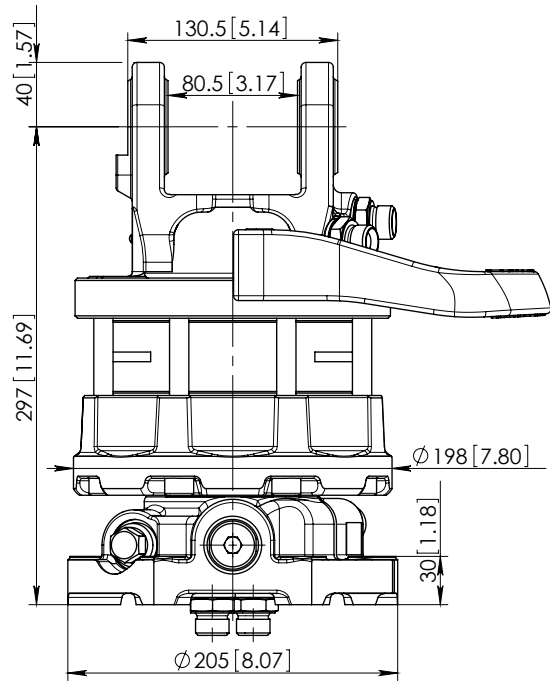
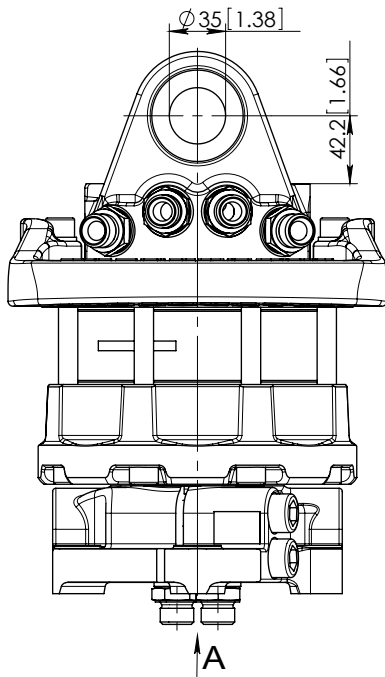
Rotation	Unlimited
Max axial load static, kN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, kN (lbf)	+30 (6745) - 25 (5621)
Torque at 25MPa (3625psi), Nm (lb ft)	1800 (1328)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	47 (104)

## Max working pressure:

Rotator	<b>←R→</b>	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	<b>←G→</b>	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	<b>→G←</b>	Max 30 MPa (4350 psi)	G 1/2

## Connection:

# ROTATOR GR623



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, kN (lbf)	+30 (6745) - 25 (5621)
Torque at 25MPa (3625psi), Nm (lb ft)	2400 (1770)
Rec oilflow, l/min (US gallon)	28 (7.4)
Weight, kg (lb)	45 (99)

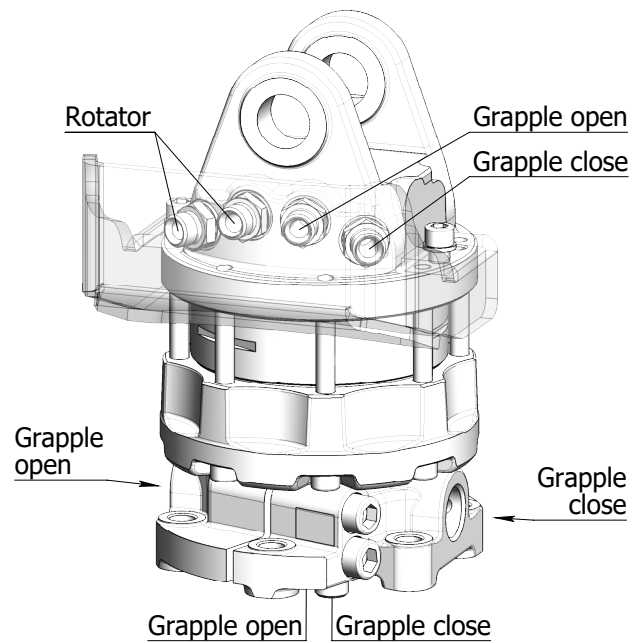
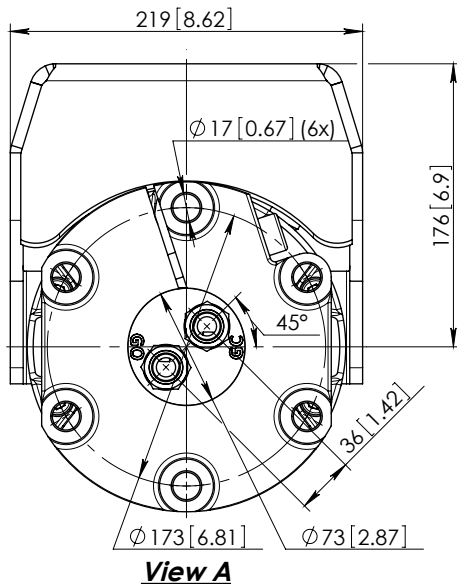
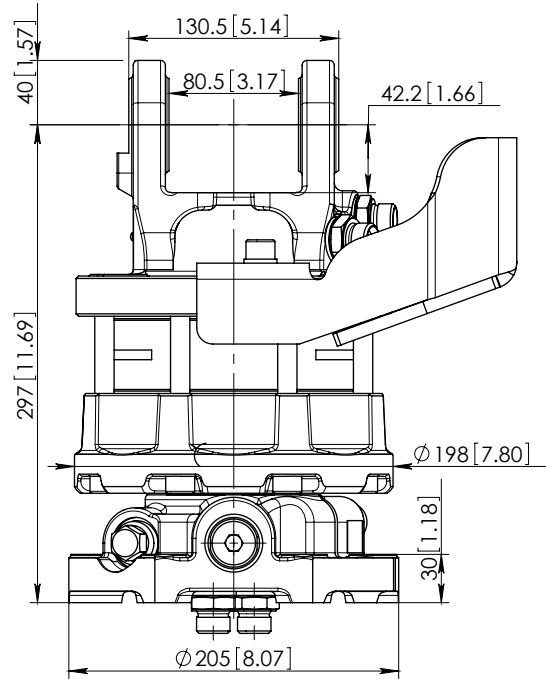
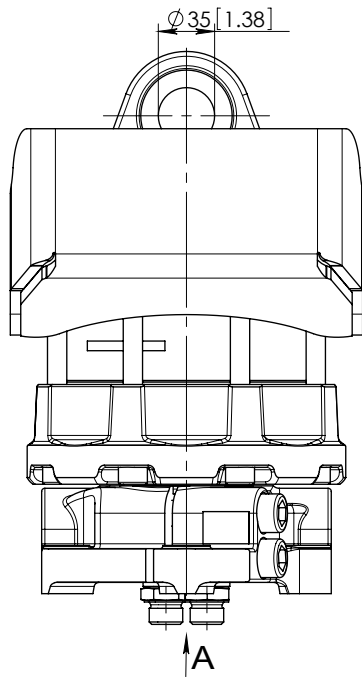
## Max working pressure:

Rotator	↔R↔	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:

Rotator	↔R↔	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

# ROTATOR GR623X



## Technical data

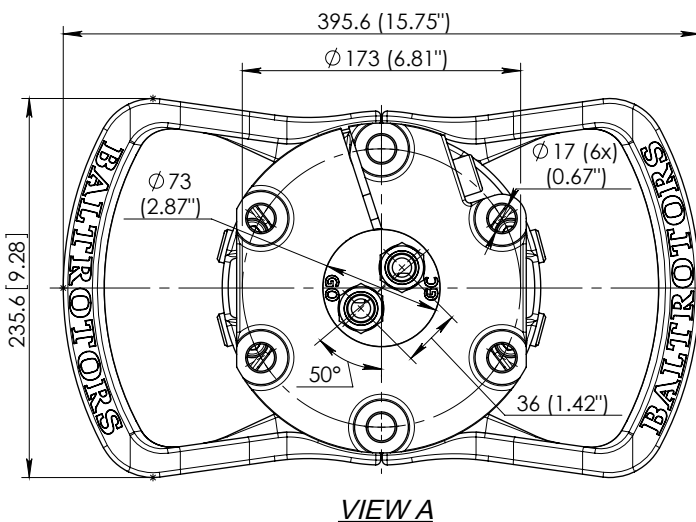
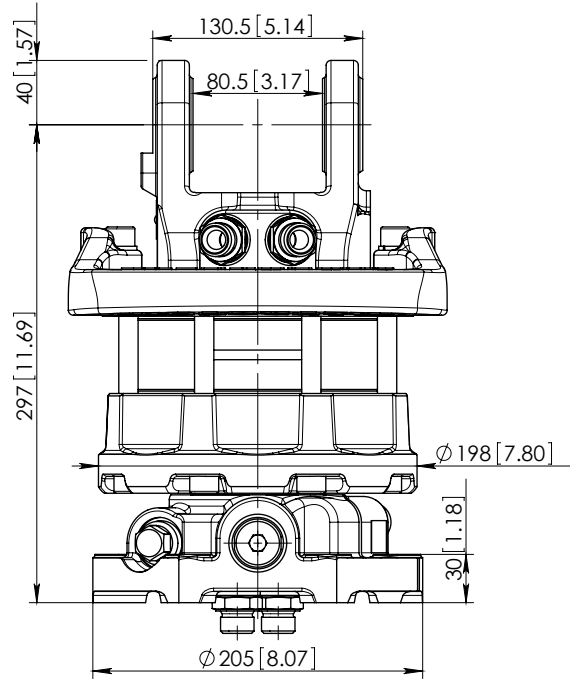
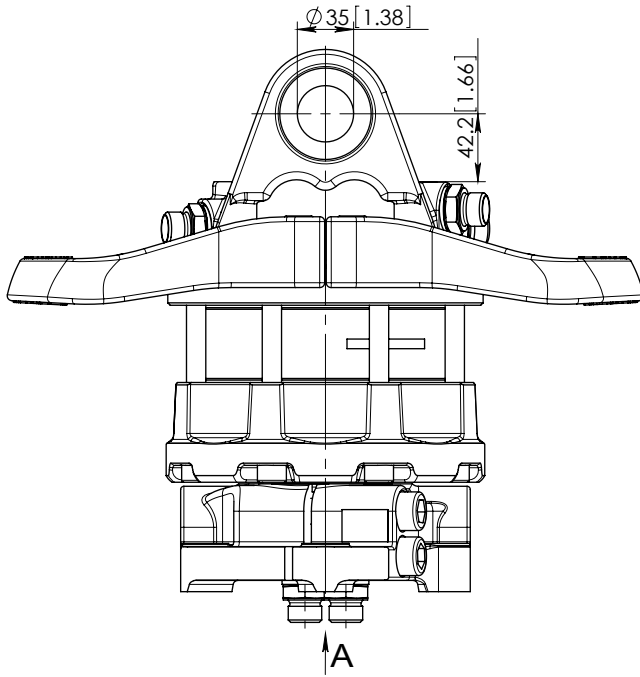
Rotation	Unlimited
Max axial load static, kN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, kN (lbf)	+30 (6745) - 25 (5621)
Torque at 25MPa (3625psi), Nm (lb ft)	2400 (1770)
Rec oilflow, l/min (US gallon)	28 (7.4)
Weight, kg (lb)	46 (101)

### Max working pressure:

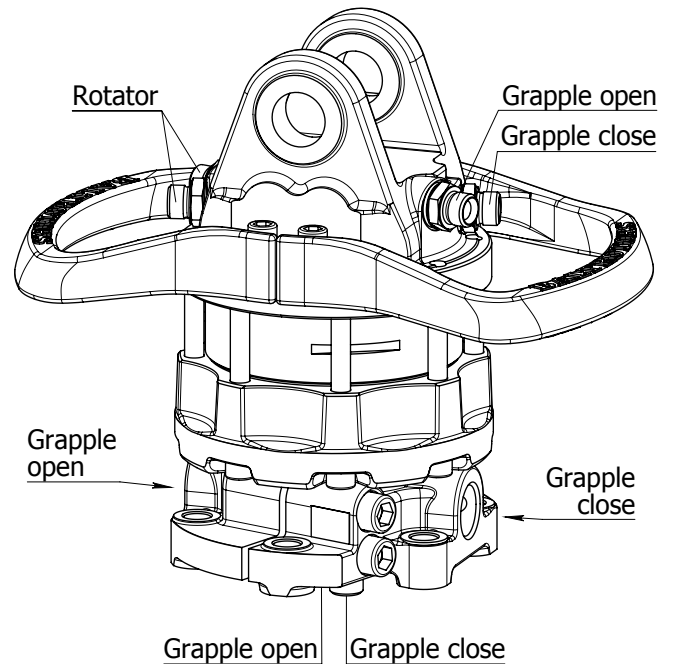
Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

### Connection:

# ROTATOR GR623-2



**VIEW A**



## Technical data

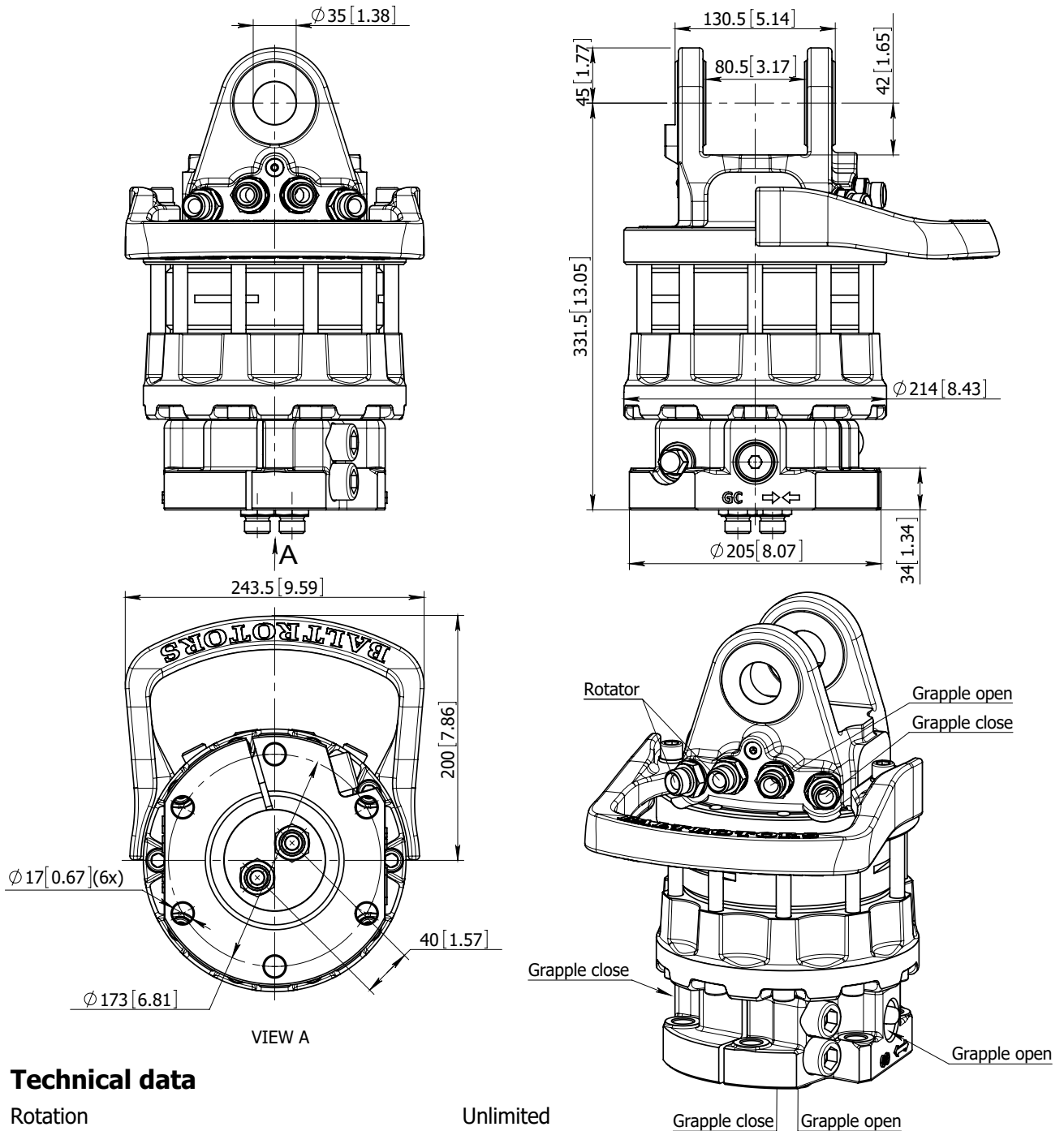
Rotation	Unlimited
Max axial load static, kN (lbf)	+60 (13491) - 50 (11242)
Max axial load dynamic, kN (lbf)	+30 (6745) - 25 (5621)
Torque at 25MPa (3625psi), Nm (lb ft)	2400 (1770)
Rec oilflow, l/min (US gallon)	28 (7.4)
Weight, kg (lb)	47 (105)

## Max working pressure:

Rotator	<b>←R→</b> Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	<b>←G→</b> Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	<b>→G←</b> Max 30 MPa (4350 psi)	G 1/2

## Connection:

# ROTATOR GR104DB



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+100 (22485) - 80 (17985)
Max axial load dynamic, KN (lbf)	+50 (11242) - 40 (8992)
Torque at 25Mpa (3625psi), Nm (lb ft)	2500 (1844)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	58 (128)

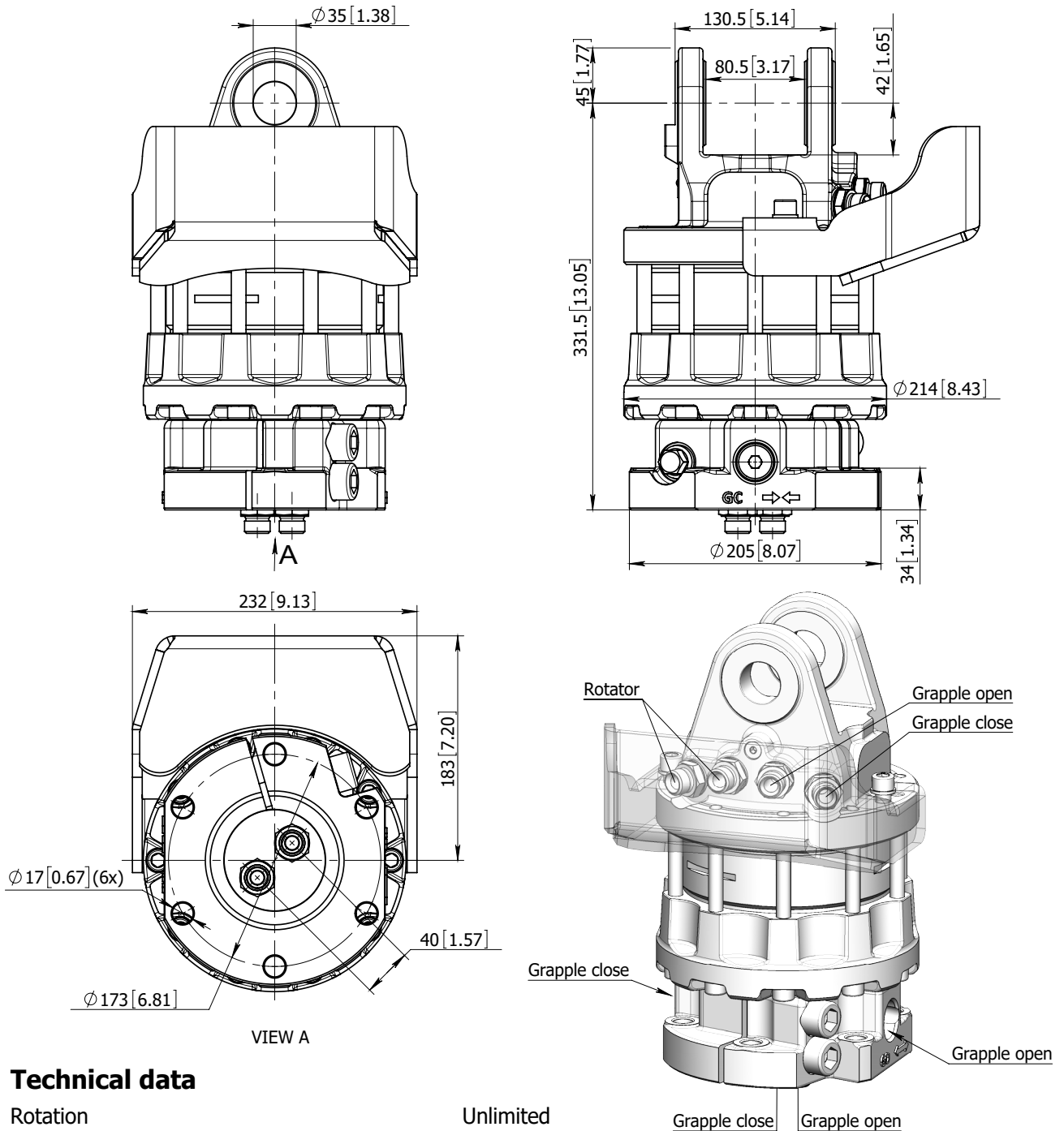
## Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:



# ROTATOR GR104DBX



## Technical data

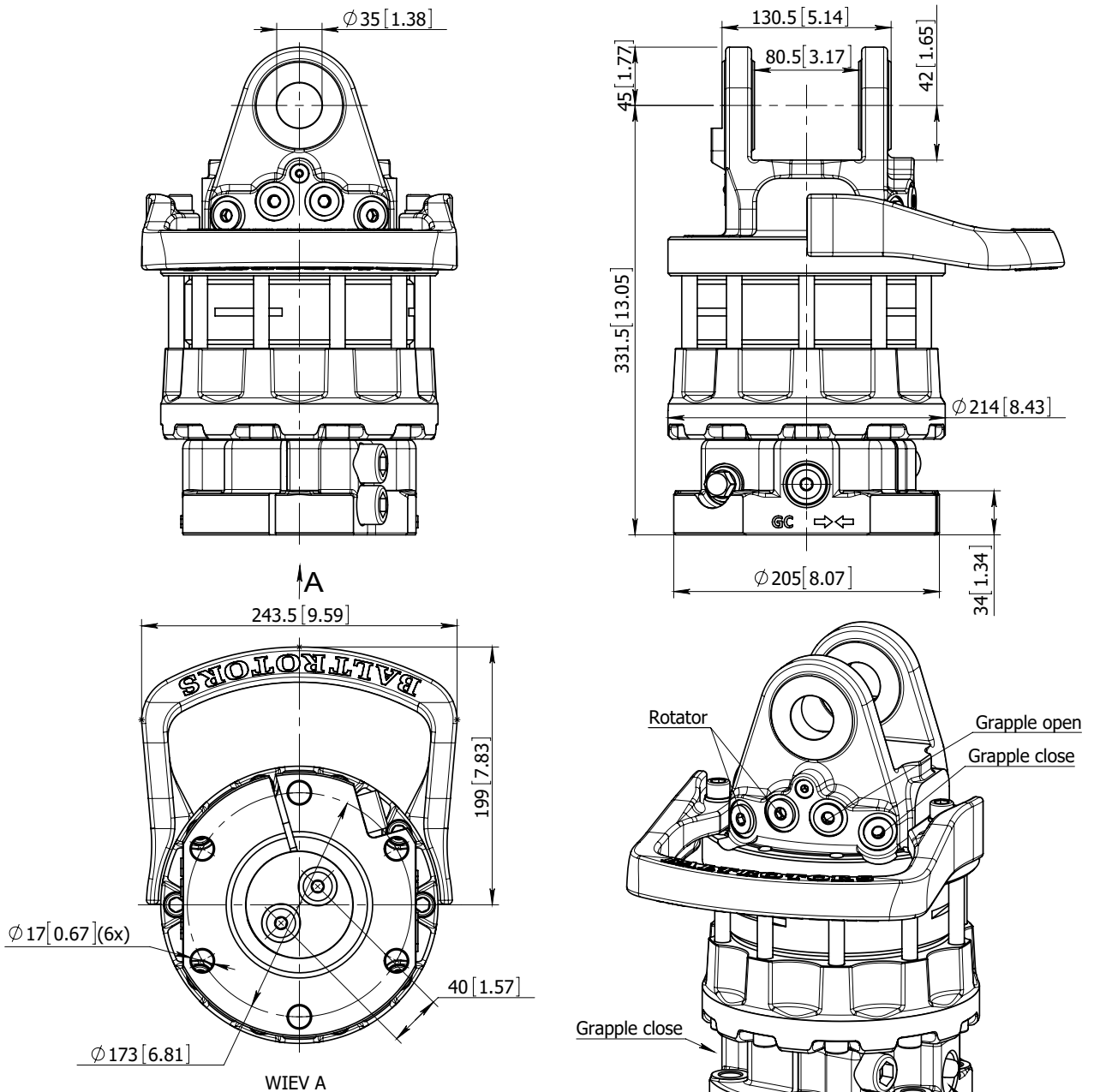
Rotation	Unlimited
Max axial load static, KN (lbf)	+100 (22485) - 80 (17985)
Max axial load dynamic, KN (lbf)	+50 (11242) - 40 (8992)
Torque at 25Mpa (3625psi), Nm (lb ft)	2500 (1844)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	59 (130)

## Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:

# ROTATOR GR104DBC



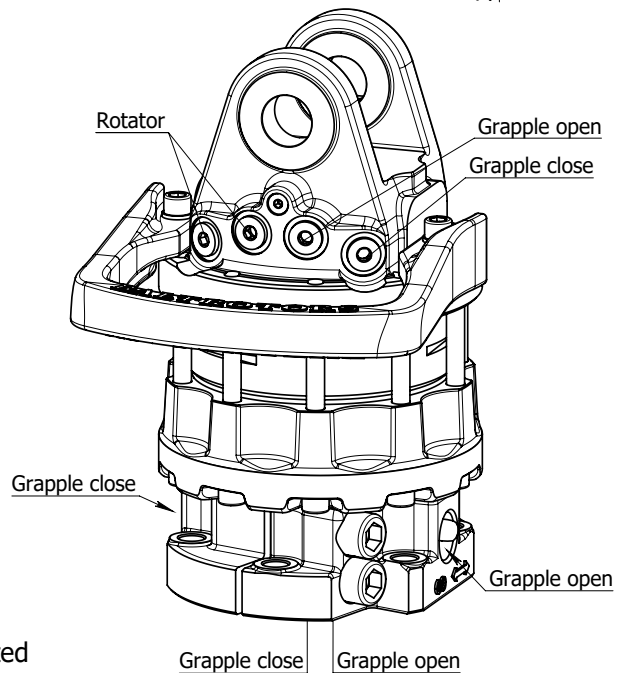
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+100 (22485) - 80 (17985)
Max axial load dynamic, KN (lbf)	+50 (11242) - 40 (8992)
Torque at 25Mpa (3625psi), Nm (lb ft)	2500 (1844)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	58 (128)

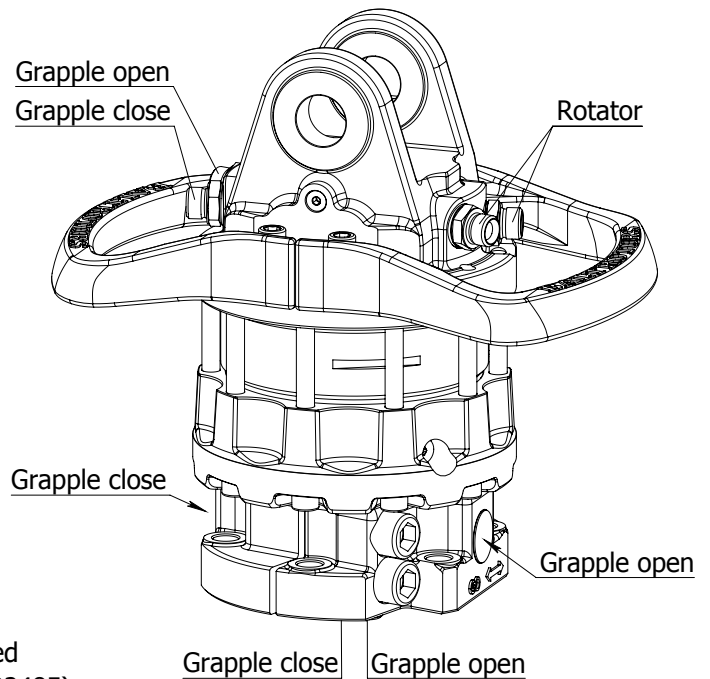
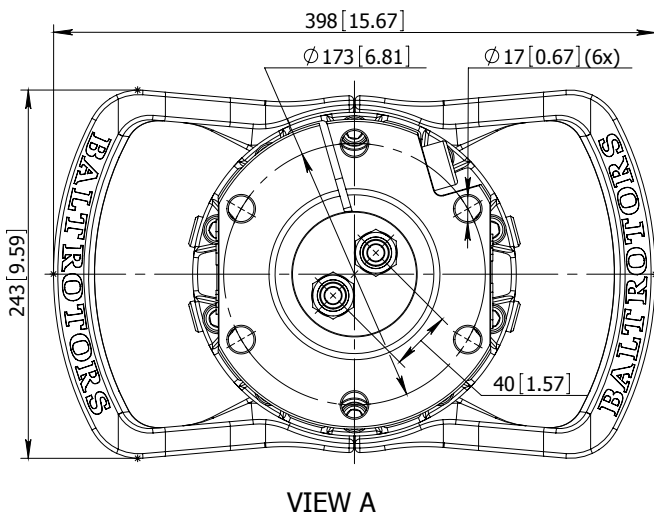
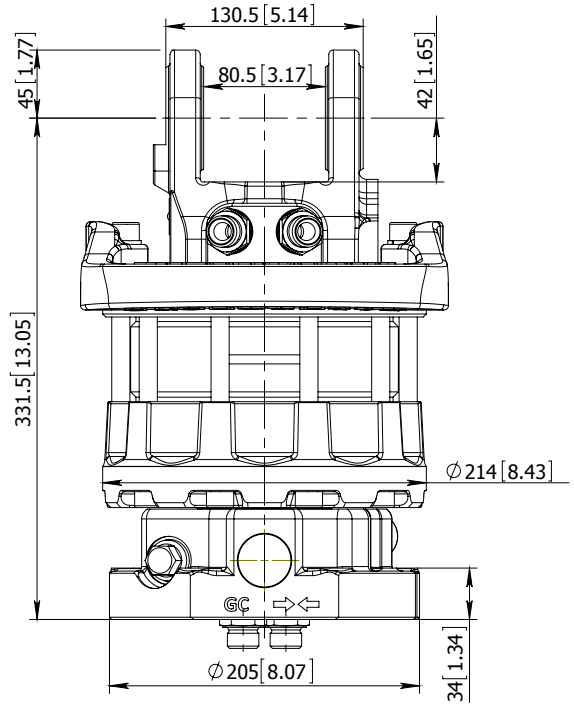
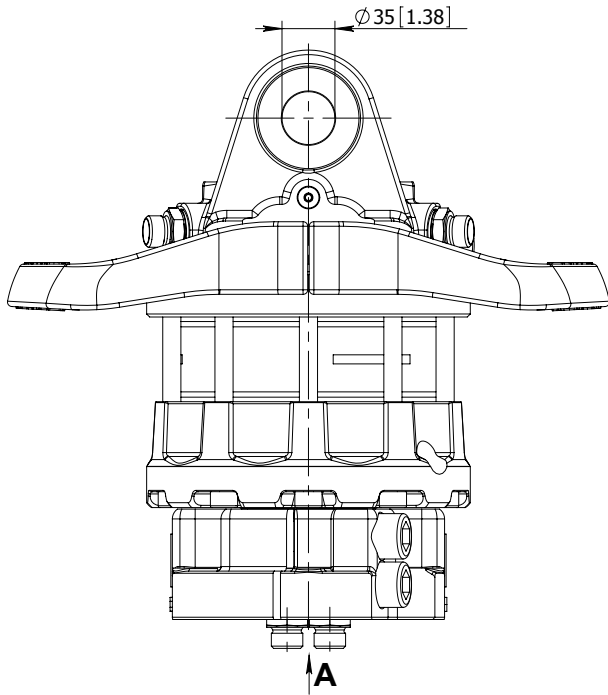
### Max working pressure:

Rotator	↔R↔	Max 25 MPa (3625 psi)	3/4-16 UNF 2B (SAE 8)
Grapple / Tool open	↔G↔	Max 30 MPa (4350 psi)	3/4-16 UNF 2B (SAE 8)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	3/4-16 UNF 2B (SAE 8)

### Connection:



# ROTATOR GR105DB



## Technical data

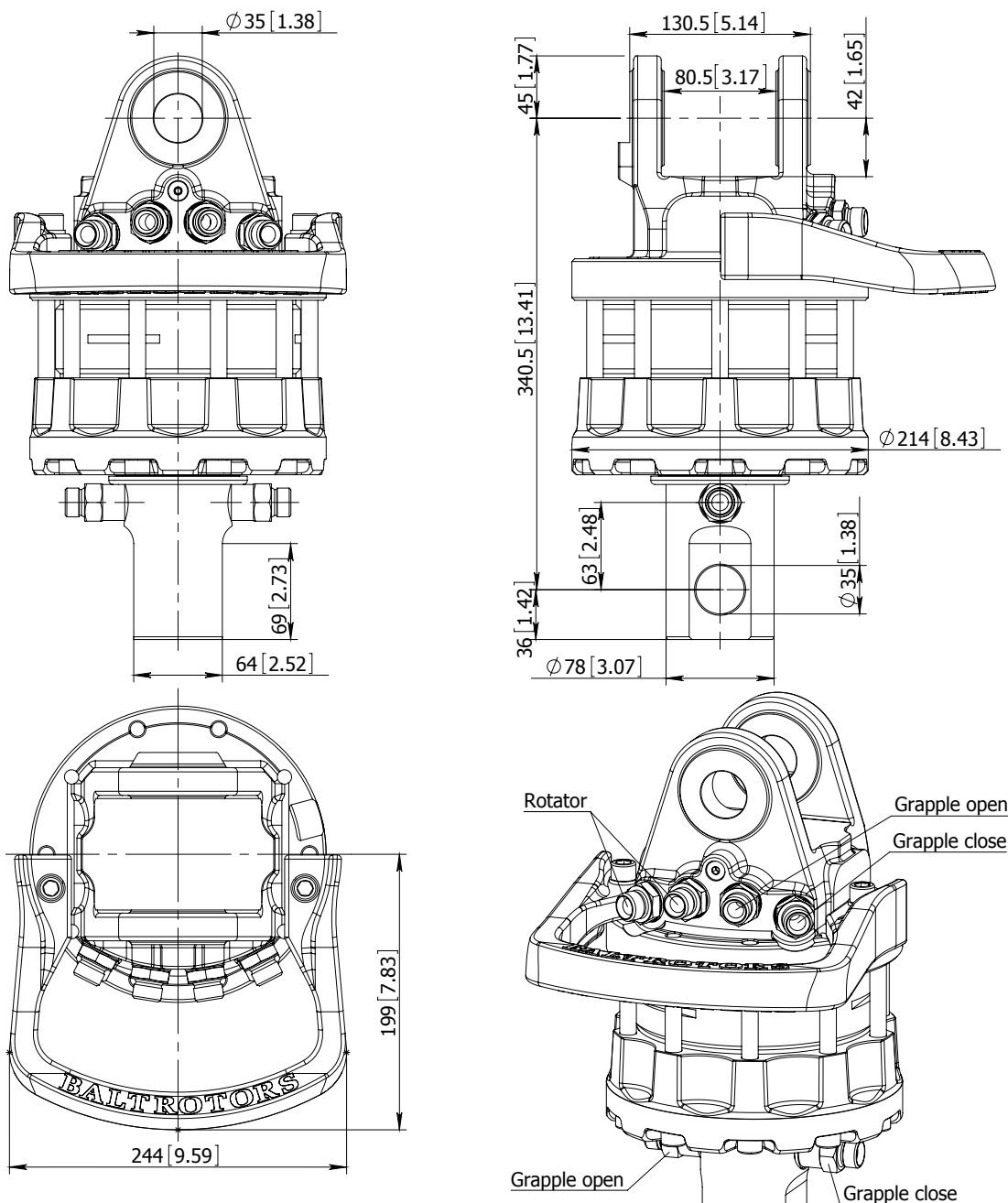
Rotation	Unlimited
Max axial load static, KN (lbf)	+100 (22485) - 80 (17985)
Max axial load dynamic, KN (lbf)	+50 (11242) - 40 (8992)
Torque at 25Mpa (3625psi), Nm (lb ft)	2500 (1844)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	62 (137)

## Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:

# ROTATOR GR110-1DB



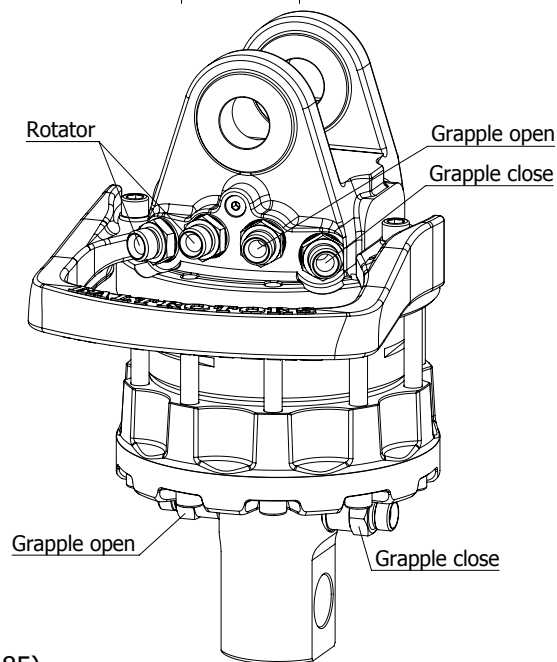
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+100 (22485)
	- 80 (17985)
Max axial load dynamic, KN (lbf)	+50 (11242)
	- 40 (8992)
Torque at 25Mpa (3625psi), Nm (lb ft)	2500 (1844)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	50 (111)

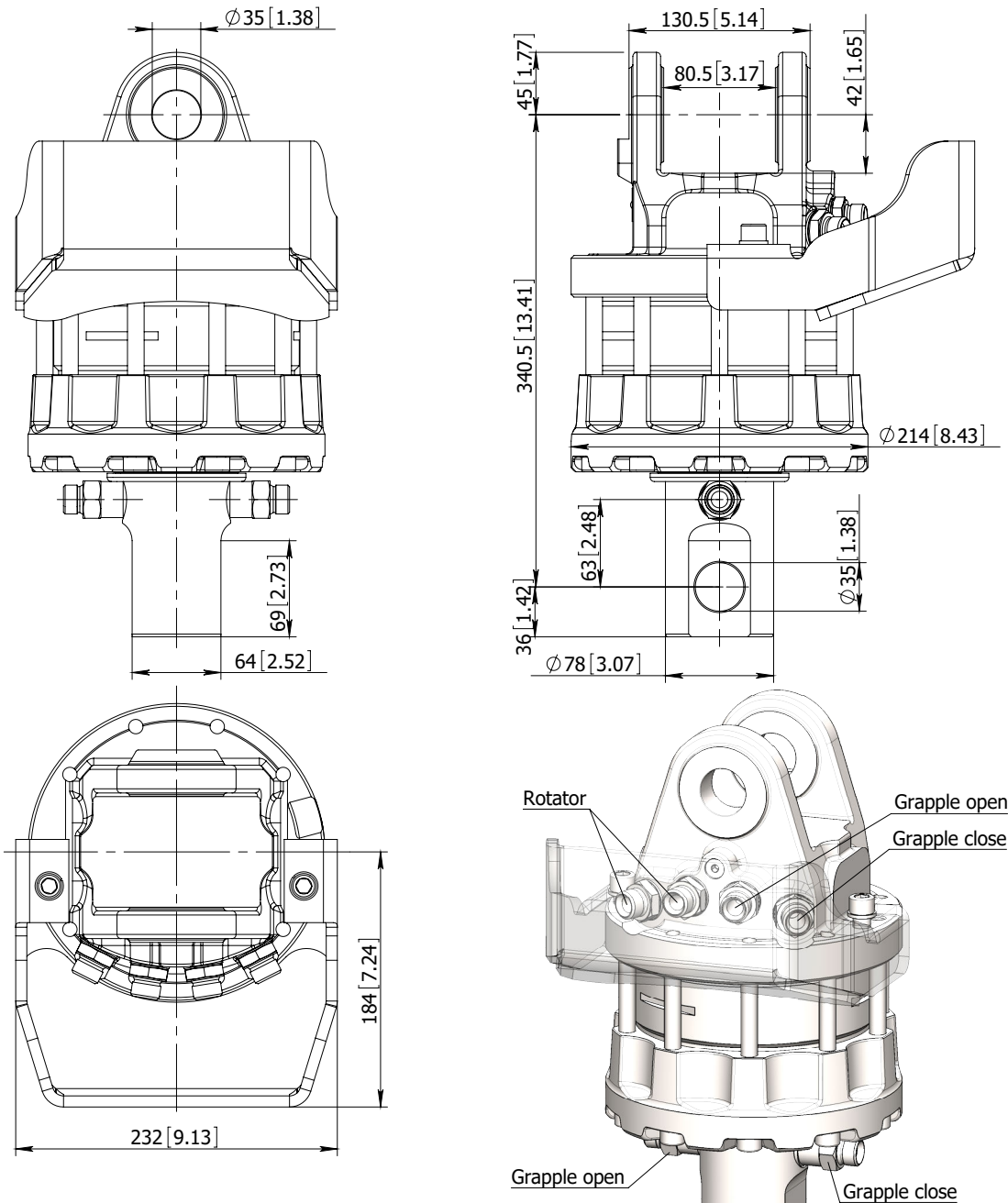
## Max working pressure:

Rotator	↔R↔	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:



# ROTATOR GR110-1DBX



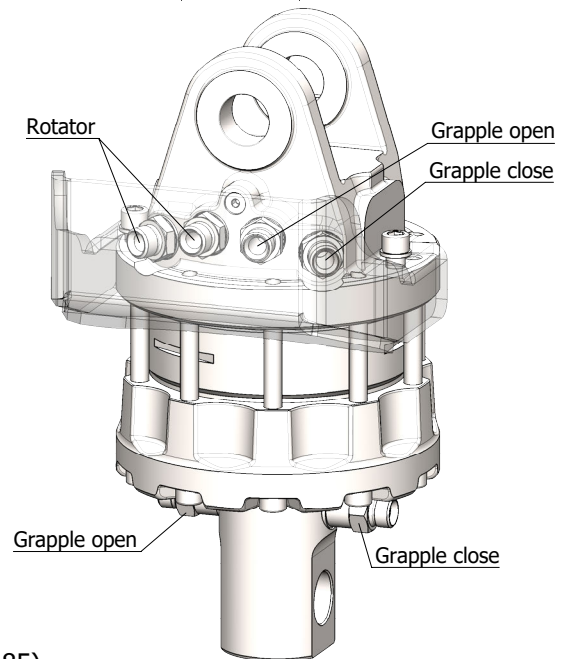
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+100 (22485) - 80 (17985)
Max axial load dynamic, KN (lbf)	+50 (11242) - 40 (8992)
Torque at 25Mpa (3625psi), Nm (lb ft)	2500 (1844)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	50 (111)

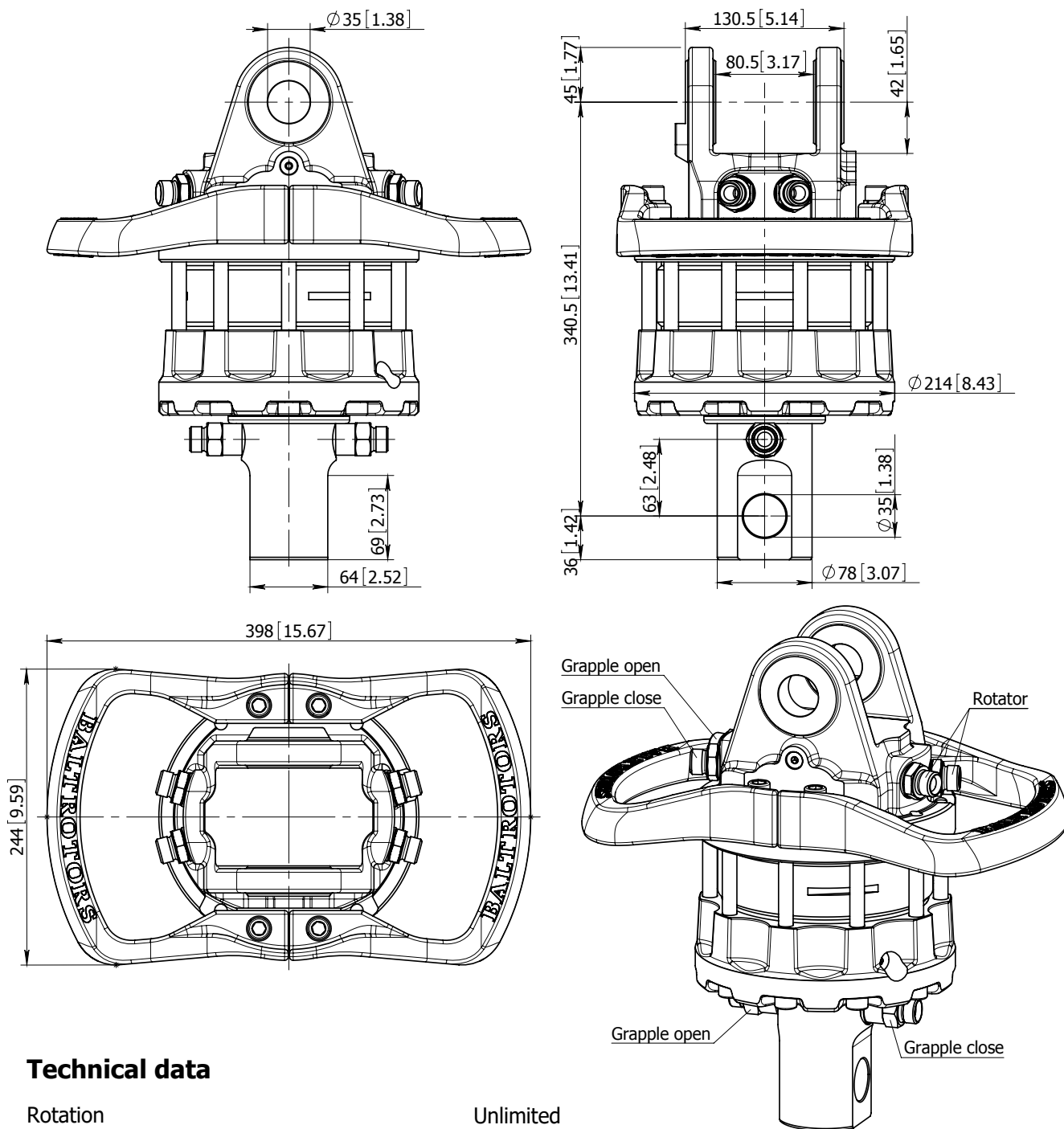
## Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:



# ROTATOR GR110-2DB



## Technical data

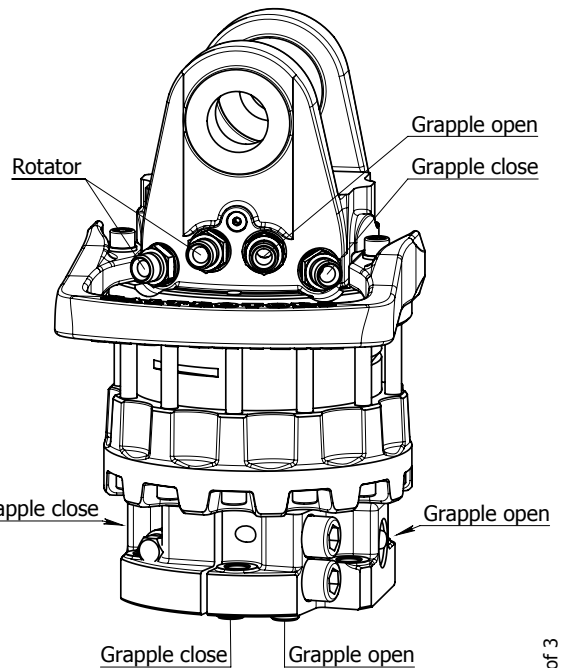
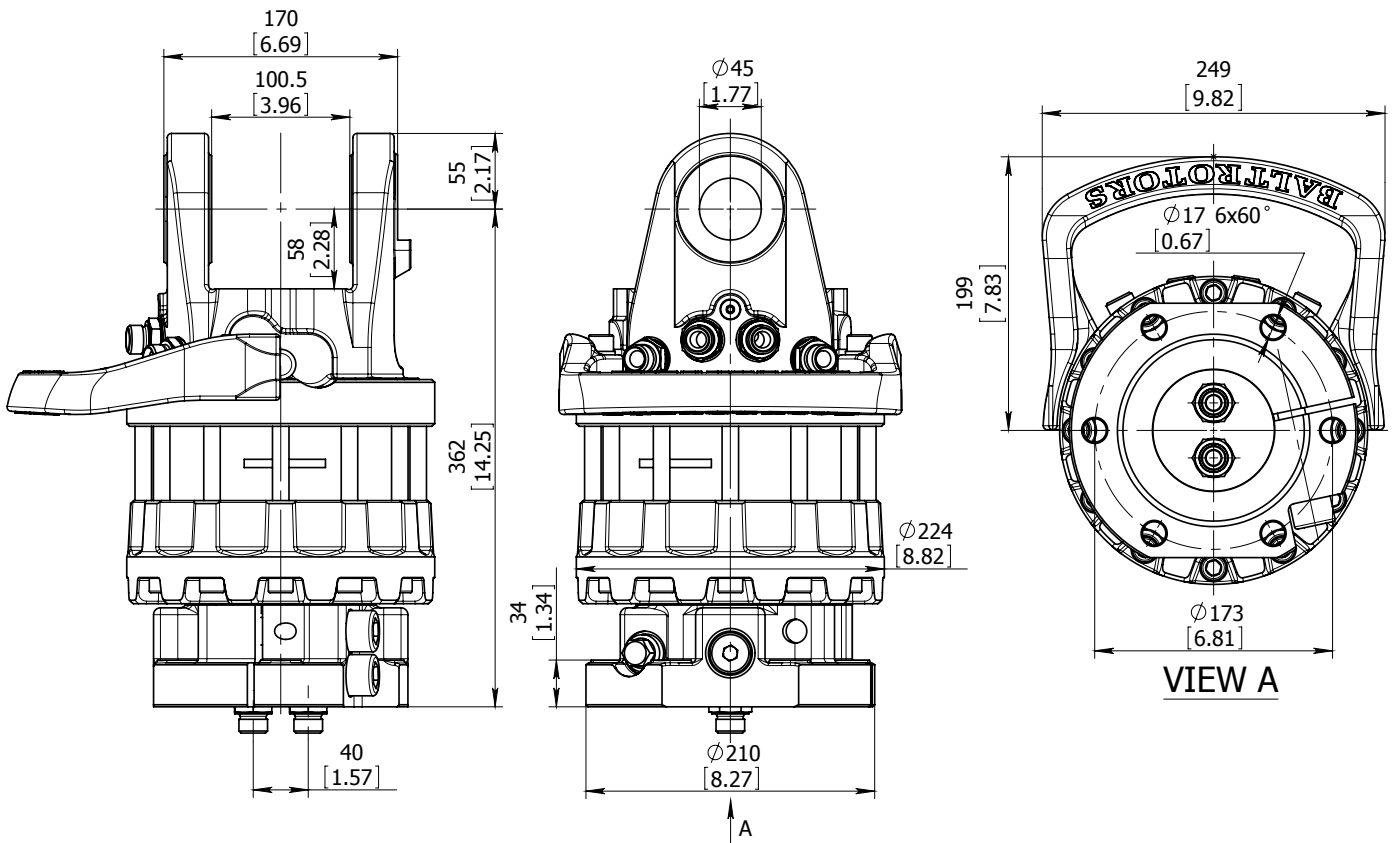
Rotation	Unlimited
Max axial load static, KN (lbf)	+100 (22485)
Max axial load dynamic, KN (lbf)	-80 (17985)
Torque at 25Mpa (3625psi), Nm (lb ft)	+50 (11242)
Rec oilflow, l/min (US gallon)	-40 (8992)
Weight, kg (lb)	2500 (1844)
	25 (6.6)
	54 (120)

## Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

## Connection:

# ROTATOR GR12S



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+120 (26982) - 90 (20236)
Max axial load dynamic, KN (lbf)	+60 (13491) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	2900 (2139)
Rec oilflow, l/min (US gallon)	35 (9.25)
Weight, kg (lb)	70 (154)

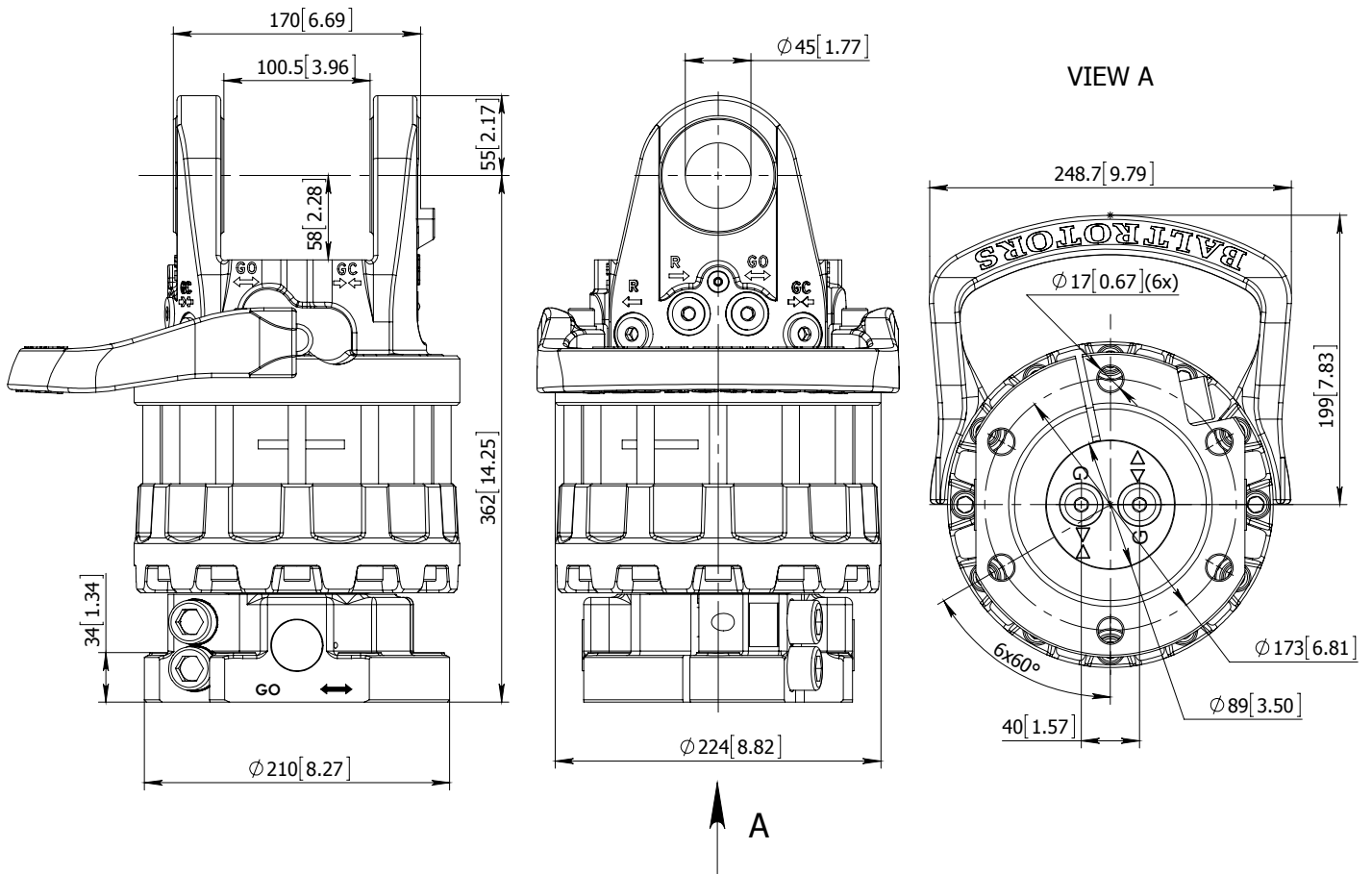
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR12SC



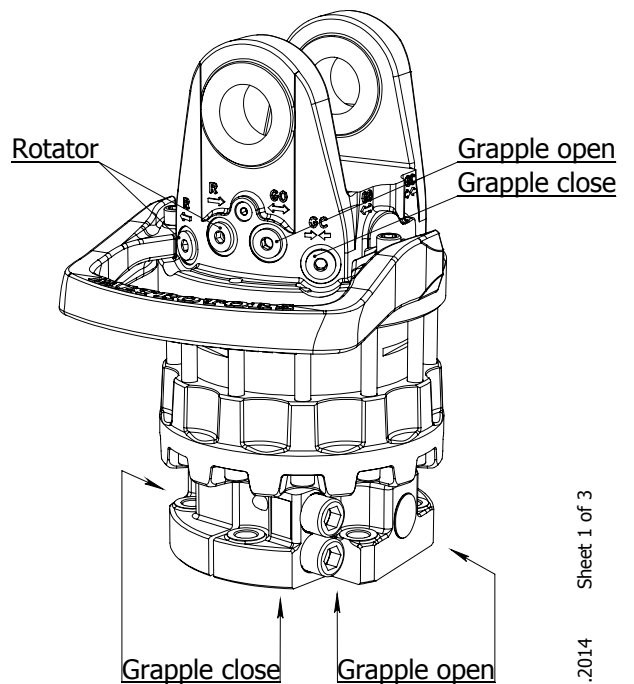
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+120 (26982) - 90 (20236)
Max axial load dynamic, KN (lbf)	+60 (13491) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	2900 (2139)
Rec oilflow, l/min (US gallon)	35 (9.25)
Weight, kg (lb)	69 (152)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	3/4-16 UNF 2B
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)	3/4-16 UNF 2B
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	3/4-16 UNF 2B

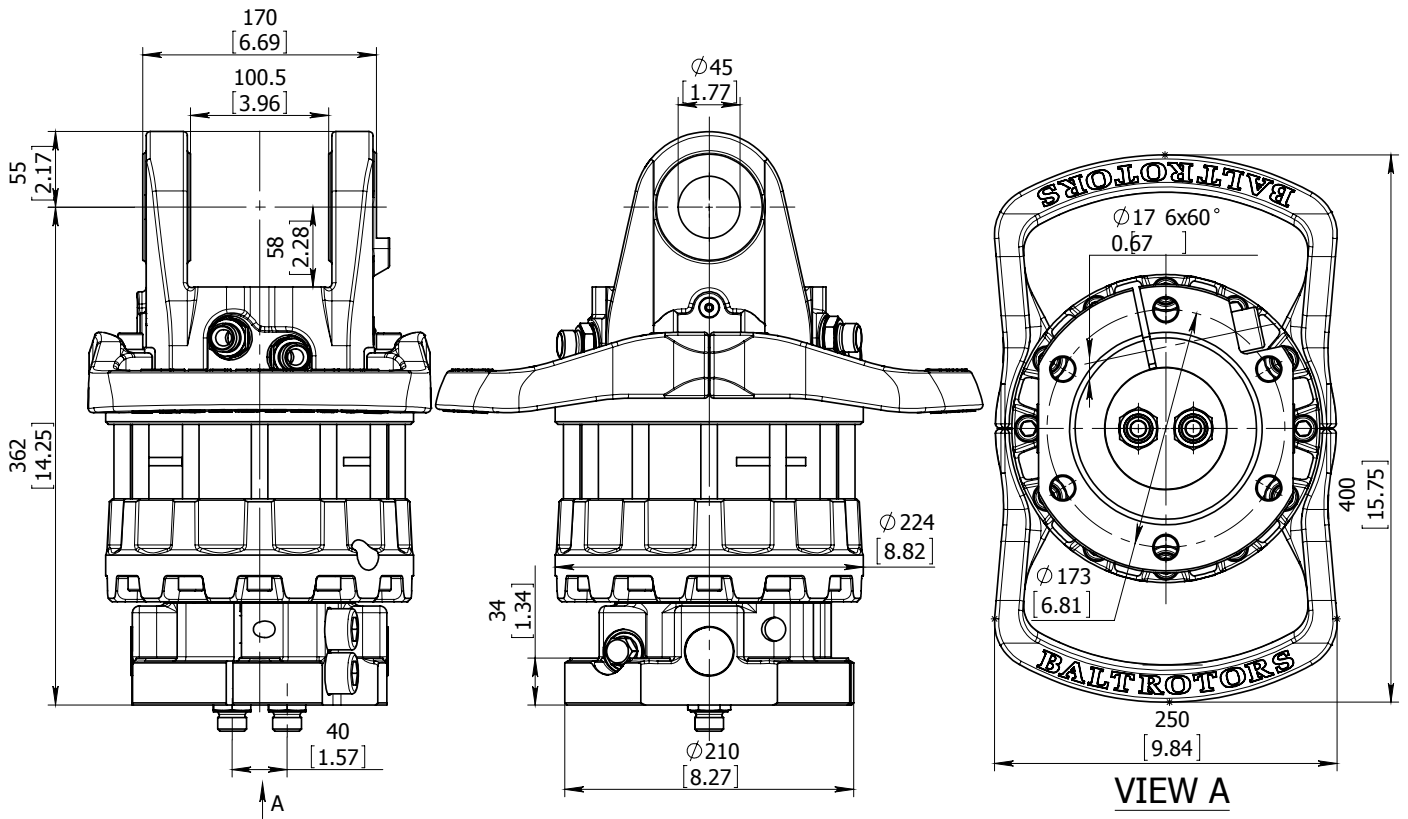
### Connection:



25.03.2014 Sheet 1 of 3



# ROTATOR GR12S-2



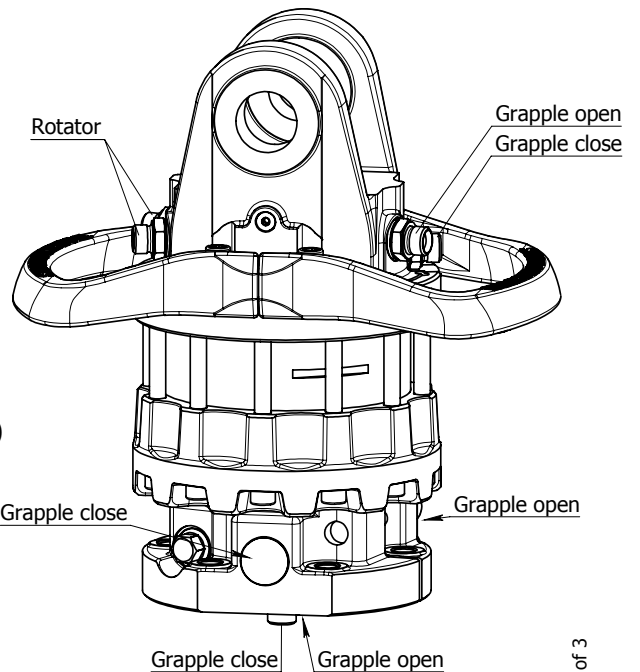
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+120 (26982) - 90 (20236)
Max axial load dynamic, KN (lbf)	+60 (13491) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	2900 (2139)
Rec oilflow, l/min (US gallon)	35 (9.25)
Weight, kg (lb)	73 (160)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

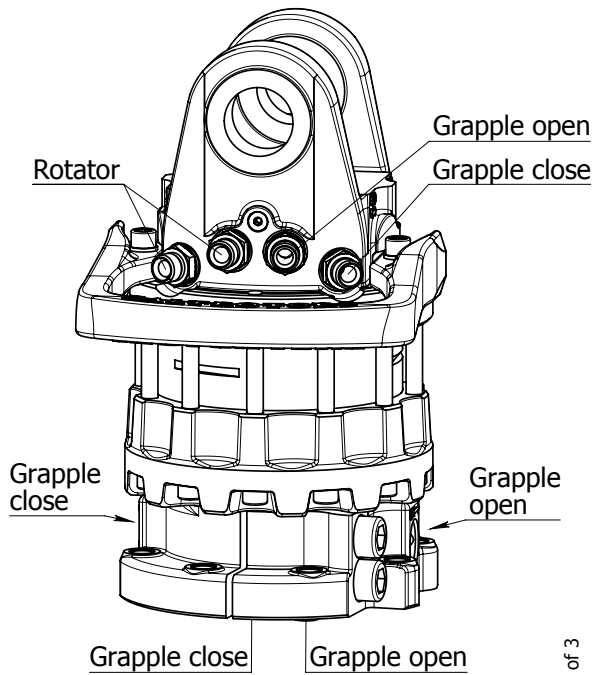
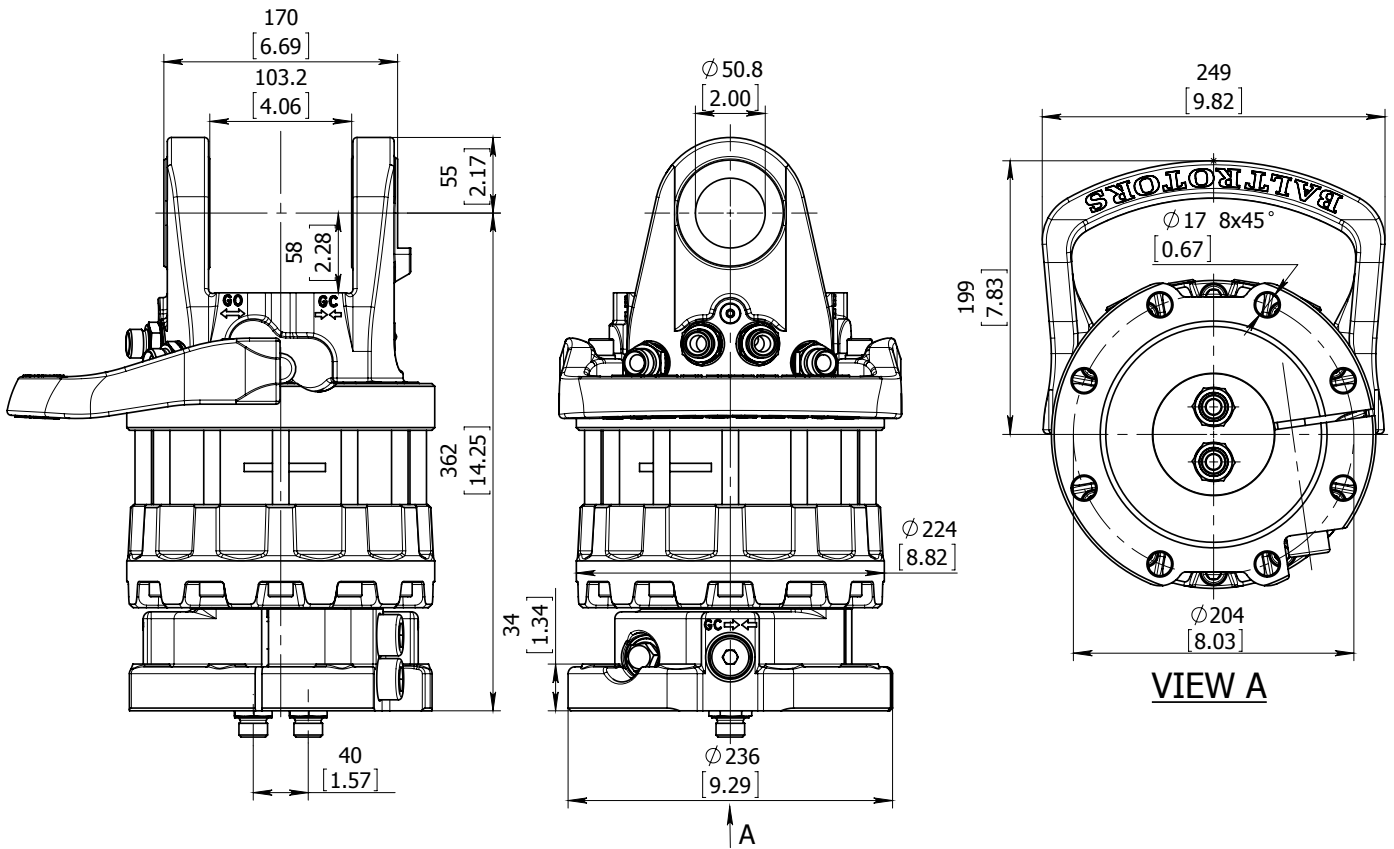
### Connection:



Sheet 1 of 3

24.03.2014

# ROTATOR GR12A8



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+120 (26982) - 90 (20236)
Max axial load dynamic, KN (lbf)	+60 (13491) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	2900 (2139)
Rec oilflow, l/min (US gallon)	35 (9.25)
Weight, kg (lb)	73 (161)

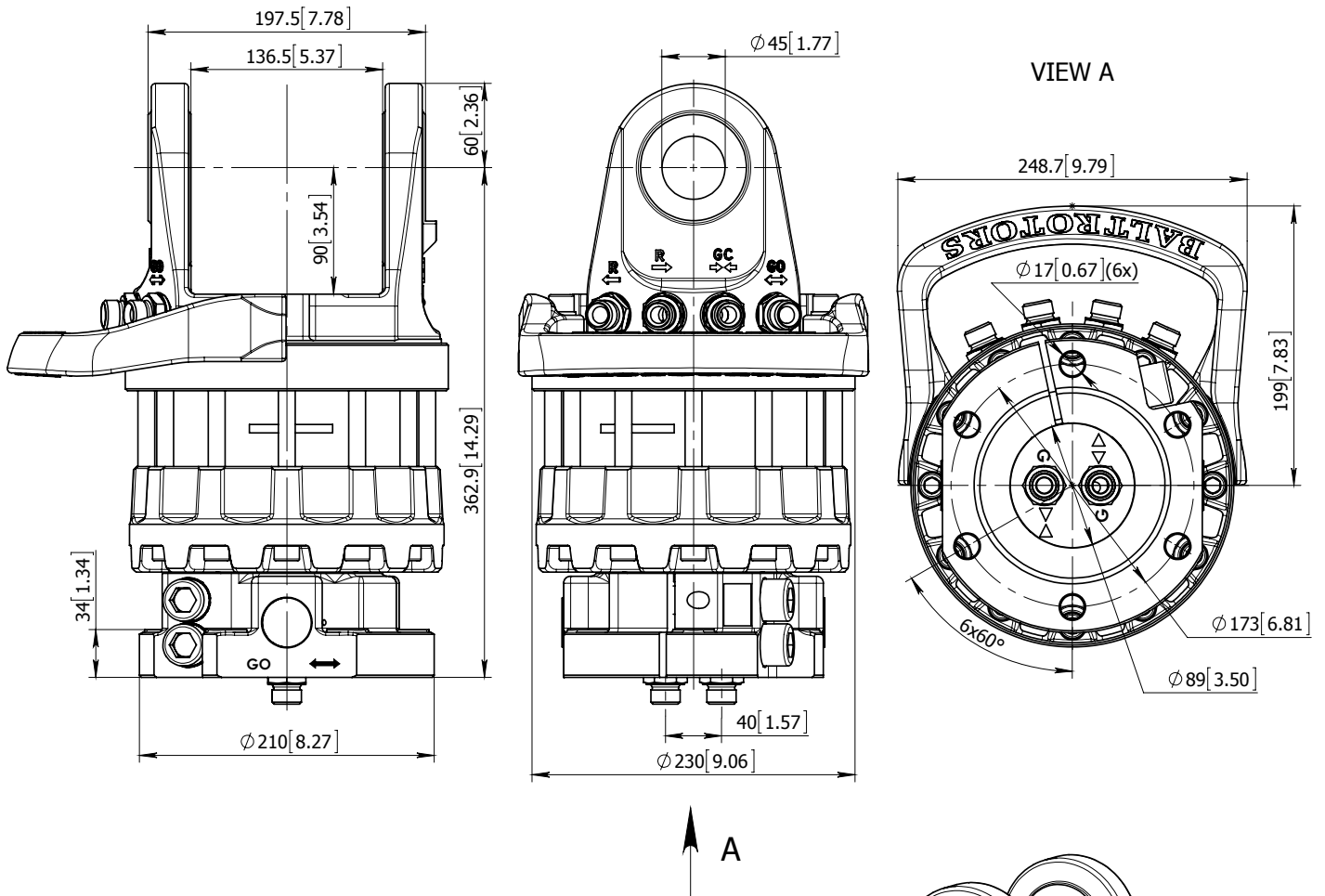
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR12H



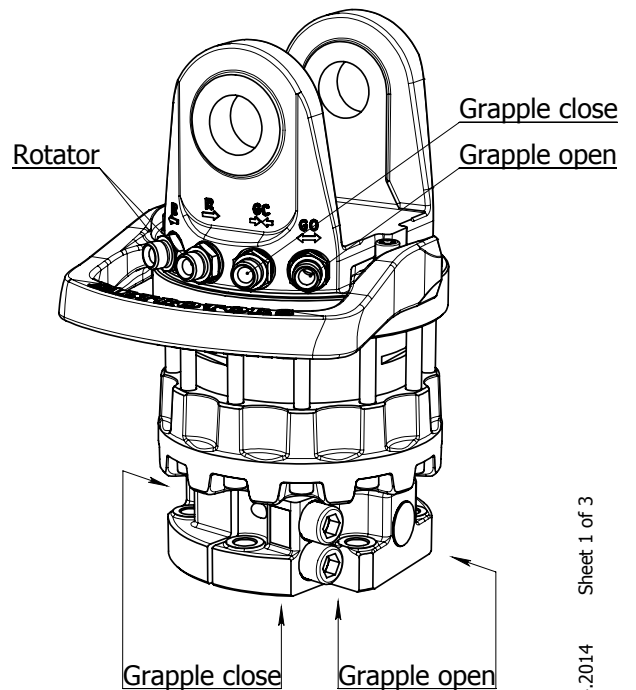
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+120 (26982) - 90 (20236)
Max axial load dynamic, KN (lbf)	+60 (13491) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	2900 (2139)
Rec oilflow, l/min (US gallon)	35 (9.25)
Weight, kg (lb)	69 (152)

### Max working pressure:

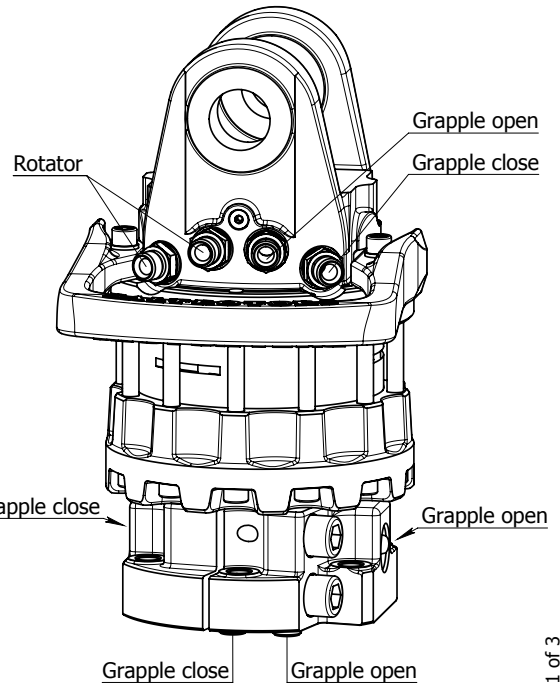
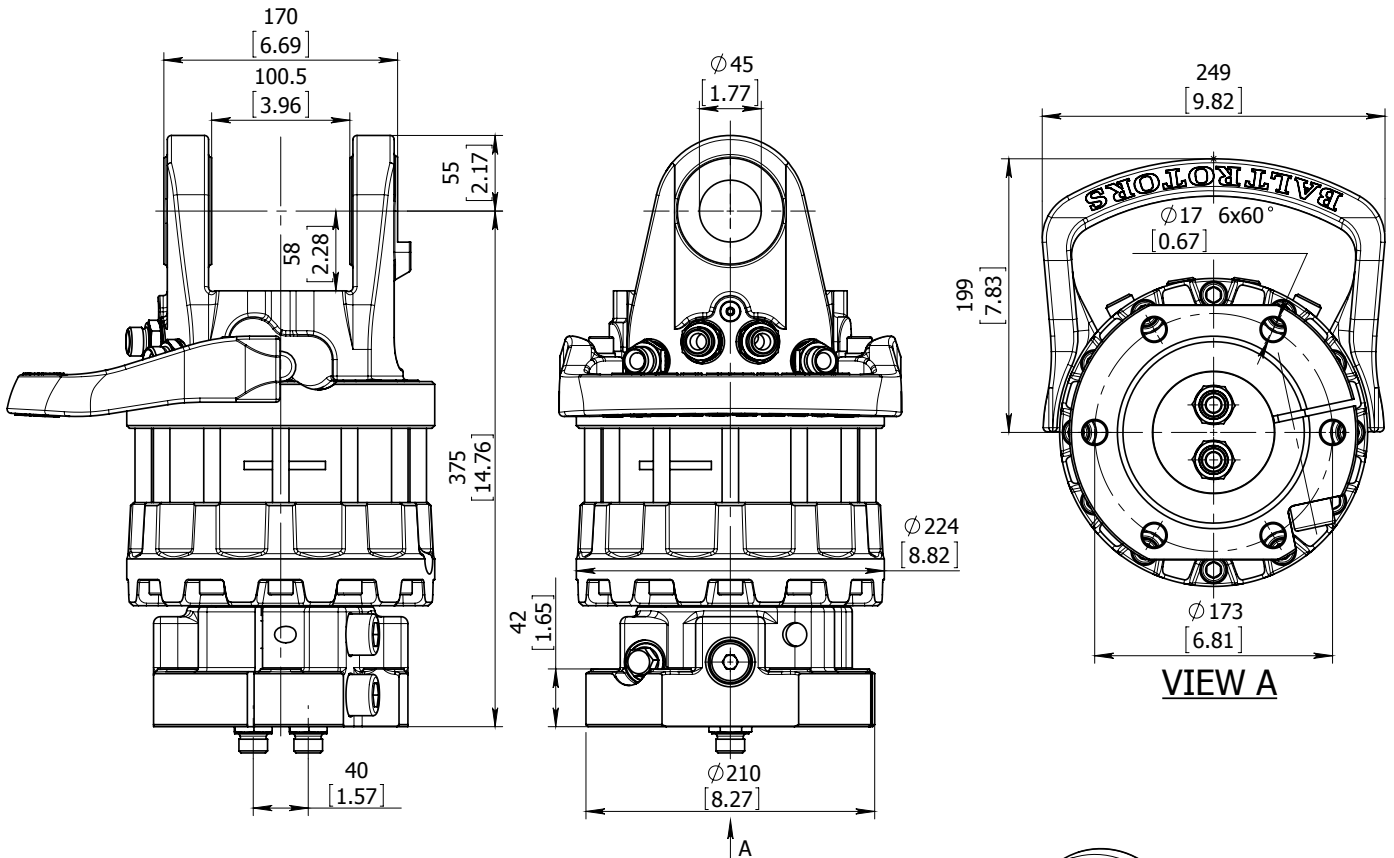
Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool close	→G←	Max 25 MPa (3625 psi)	G 1/2

### Connection:



15.04.2014 Sheet 1 of 3

# ROTATOR GR16S



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+160 (35976) - 90 (20236)
Max axial load dynamic, KN (lbf)	+80 (17988) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	3400 (2500)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	71 (157)

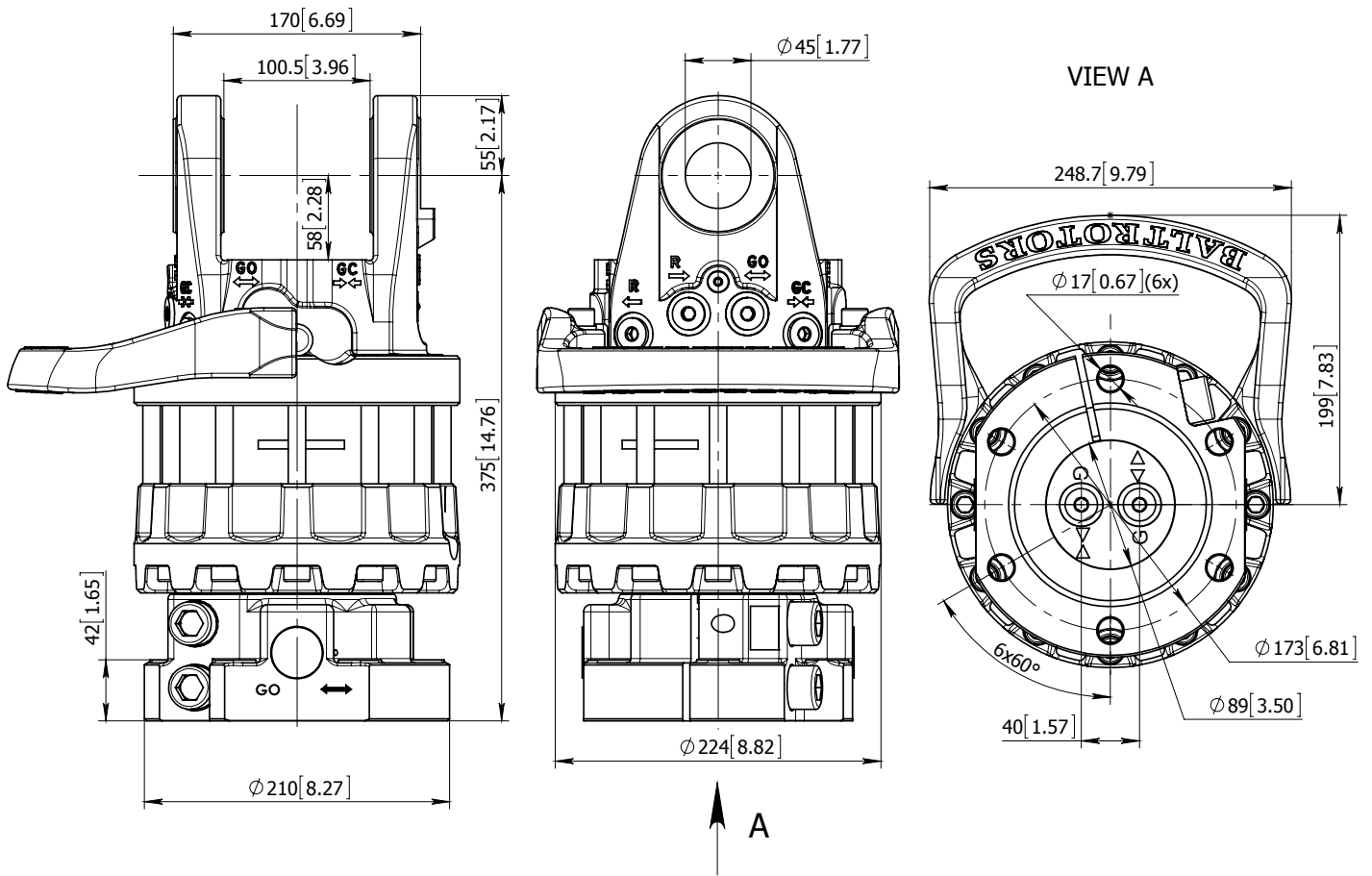
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR16SC



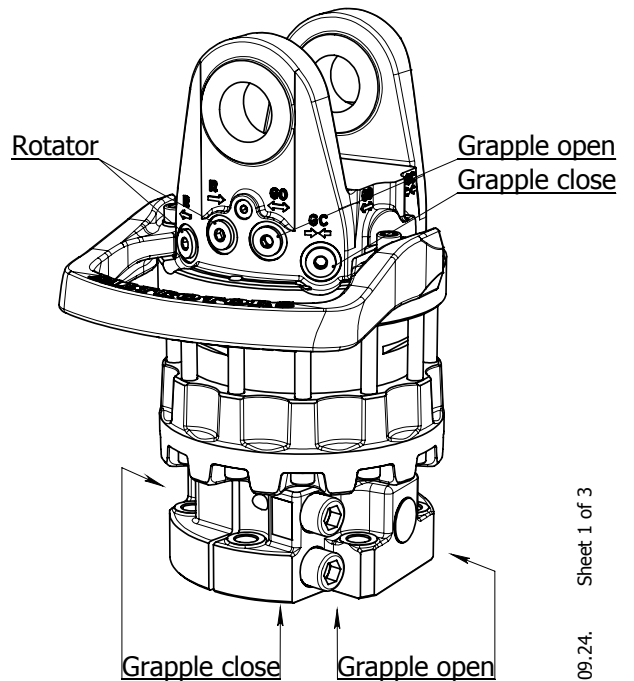
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+160 (35976) - 90 (20236)
Max axial load dynamic, KN (lbf)	+80 (17988) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	3400 (2500)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	72.5 (160)

### Max working pressure:

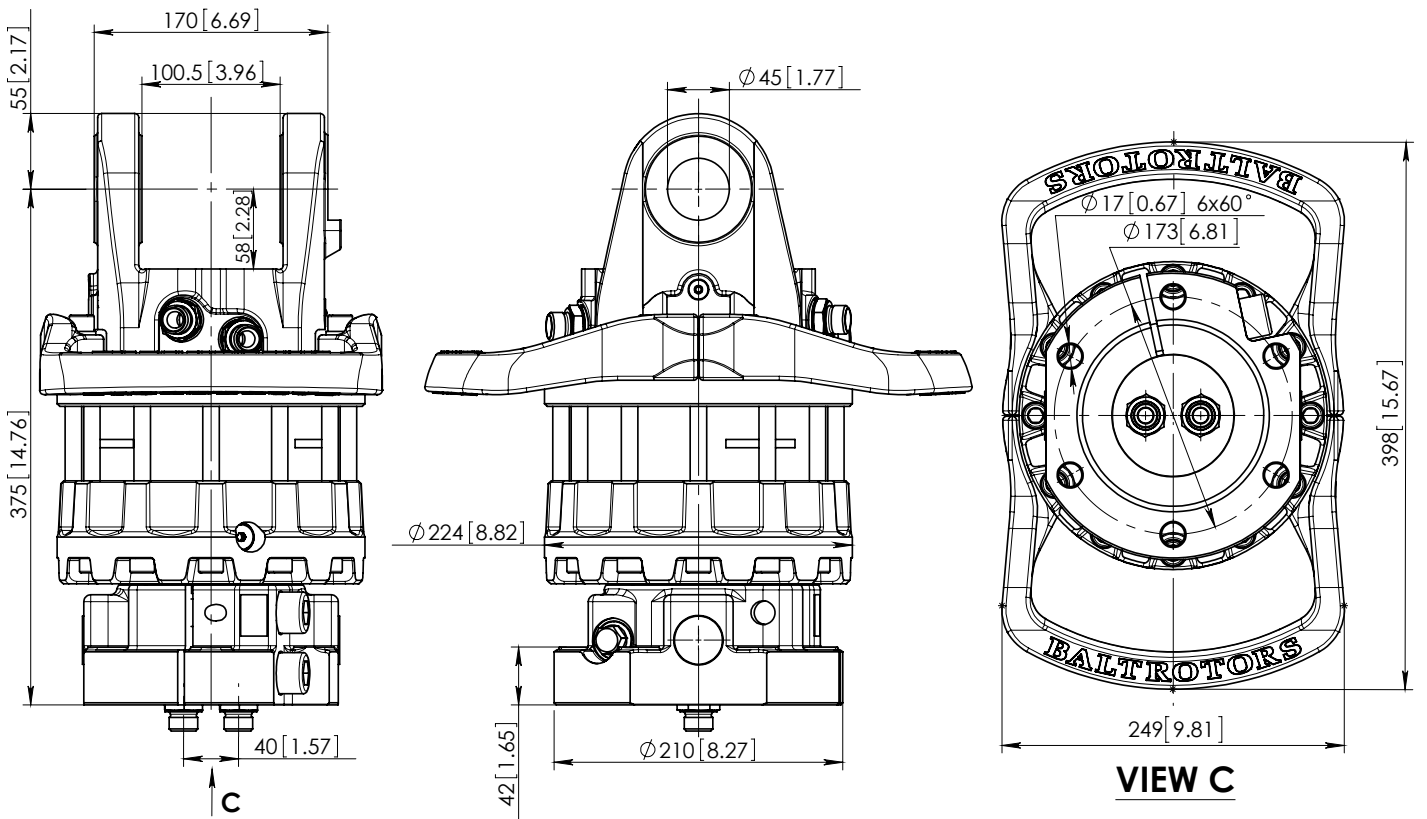
Rotator	←R→ Max 25 MPa (3625 psi)	3/4-16 UNF 2B
Grapple / Tool open	←G→ Max 30 MPa (4350 psi)	3/4-16 UNF 2B
Grapple / Tool close	→G← Max 30 MPa (4350 psi)	3/4-16 UNF 2B

### Connection:



2013.09.24. Sheet 1 of 3

# ROTATOR GR16S-2



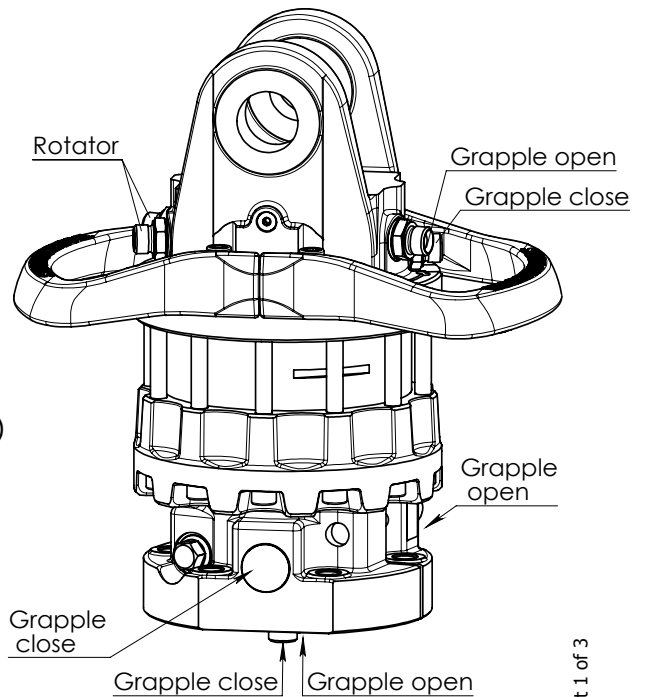
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+160 (35976) - 90 (20236)
Max axial load dynamic, KN (lbf)	+80 (17988) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	3400 (2500)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	75 (166)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2

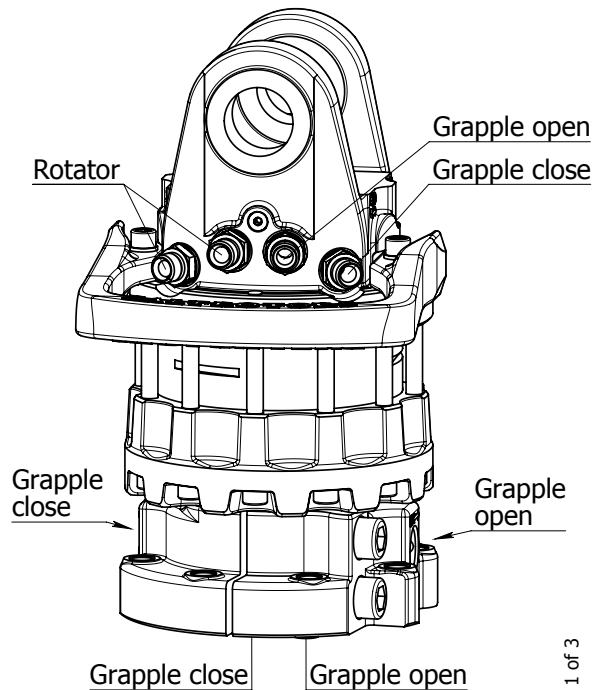
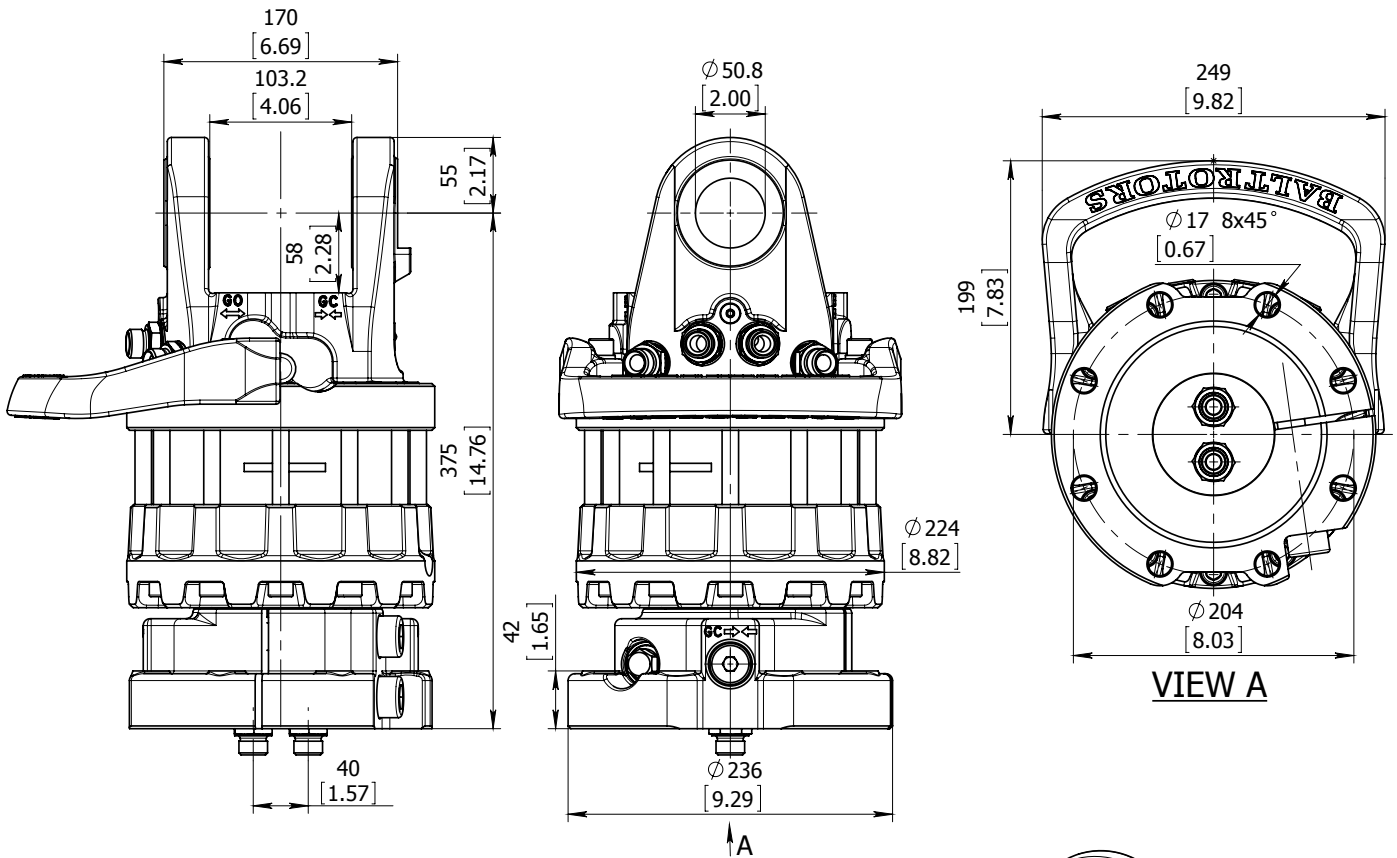
### Connection:



Sheet 1 of 3

20.03.2014

# ROTATOR GR16A8



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+160 (35976) - 90 (20236)
Max axial load dynamic, KN (lbf)	+80 (17988) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	3400 (2500)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	75 (166)

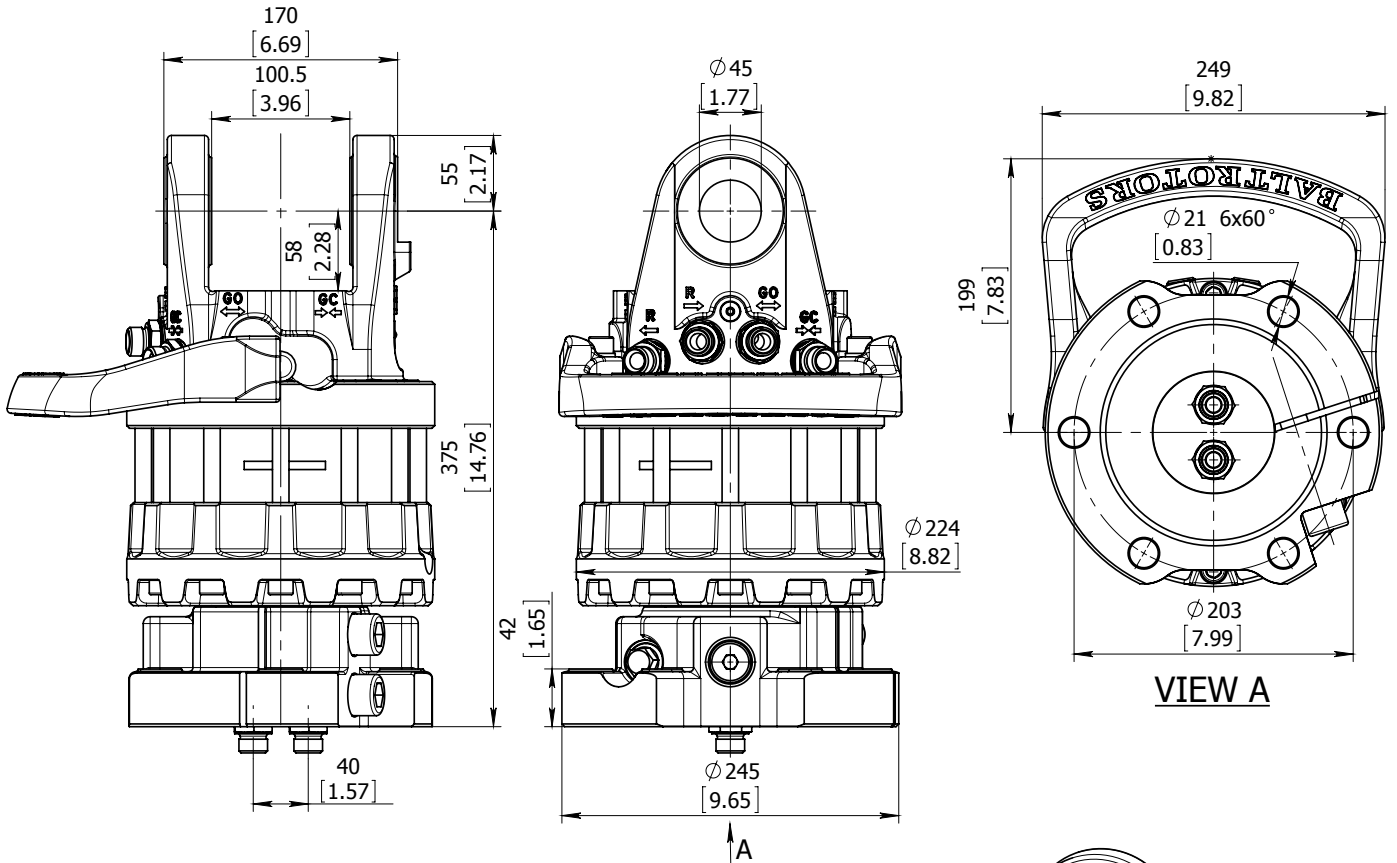
### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

### Connection:

G 1/2
G 1/2
G 1/2

# ROTATOR GR16S203



## Technical data

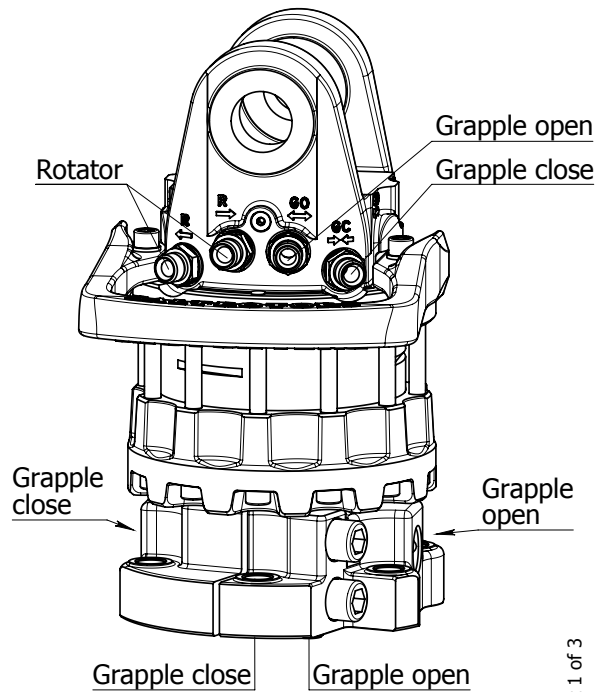
Rotation	Unlimited
Max axial load static, KN (lbf)	+160 (35976) - 90 (20236)
Max axial load dynamic, KN (lbf)	+80 (17988) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	3400 (2500)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	76 (168)

### Max working pressure:

Rotator	←R→	Max 25 MPa (3625 psi)
Grapple / Tool open	←G→	Max 30 MPa (4350 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)

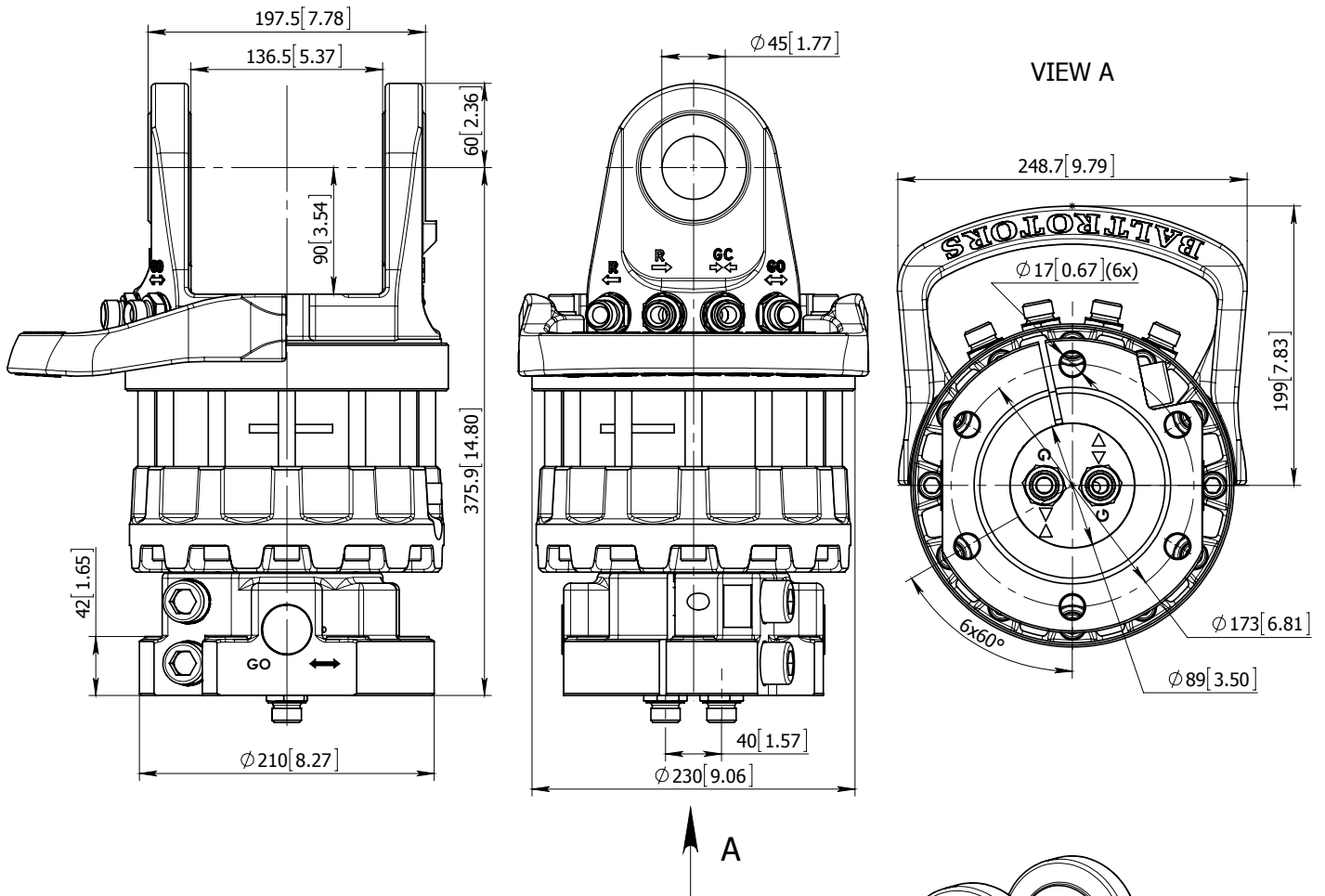
### Connection:

G 1/2
G 1/2
G 1/2





# ROTATOR GR16H



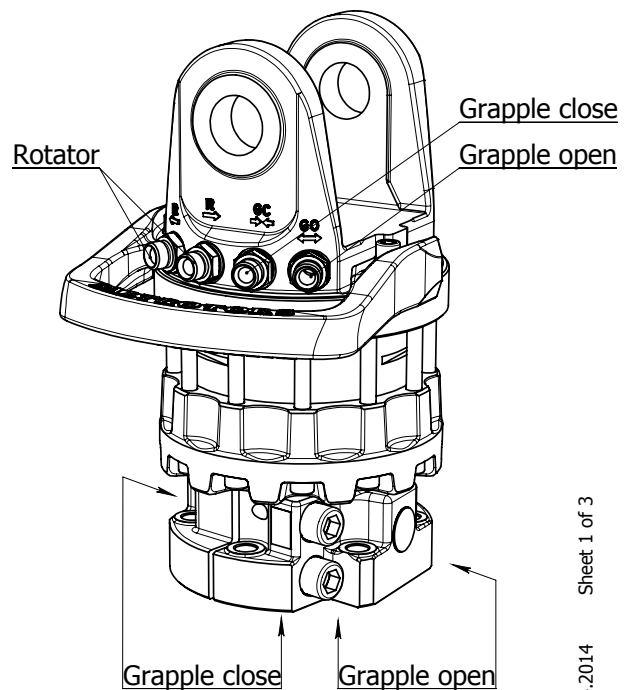
## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+160 (35976) - 90 (20236)
Max axial load dynamic, KN (lbf)	+80 (17988) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	3400 (2500)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	71 (157)

### Max working pressure:

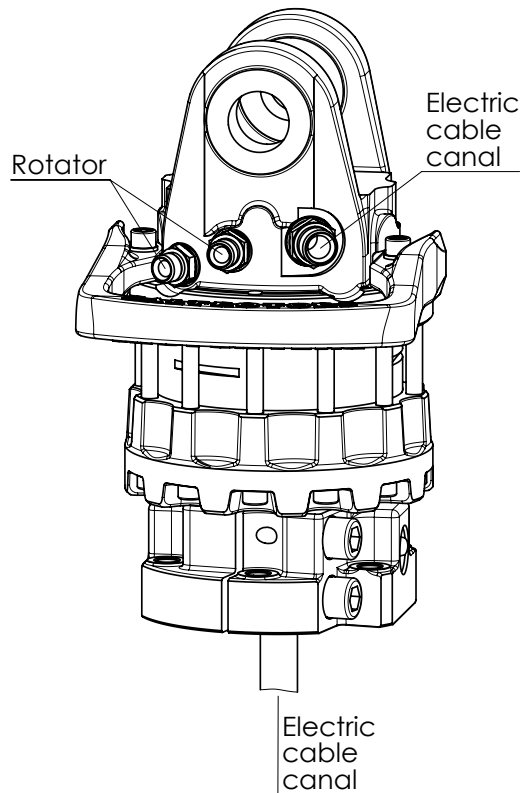
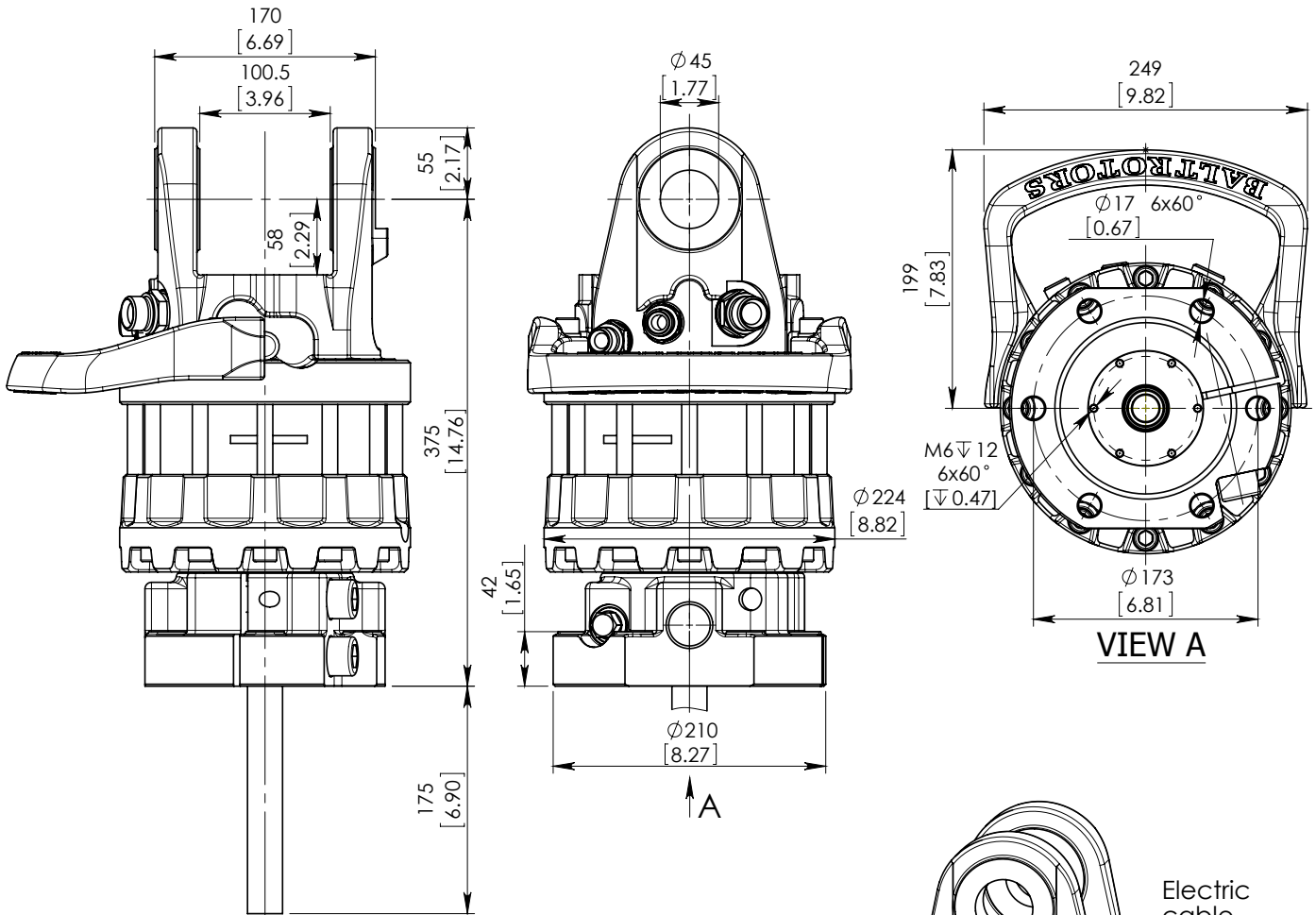
Rotator	↔R↔	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	↔G↔	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool close	→G←	Max 25 MPa (3625 psi)	G 1/2

### Connection:



23.04.2014 Sheet 1 of 3

# ROTATOR GR16E



## Technical data

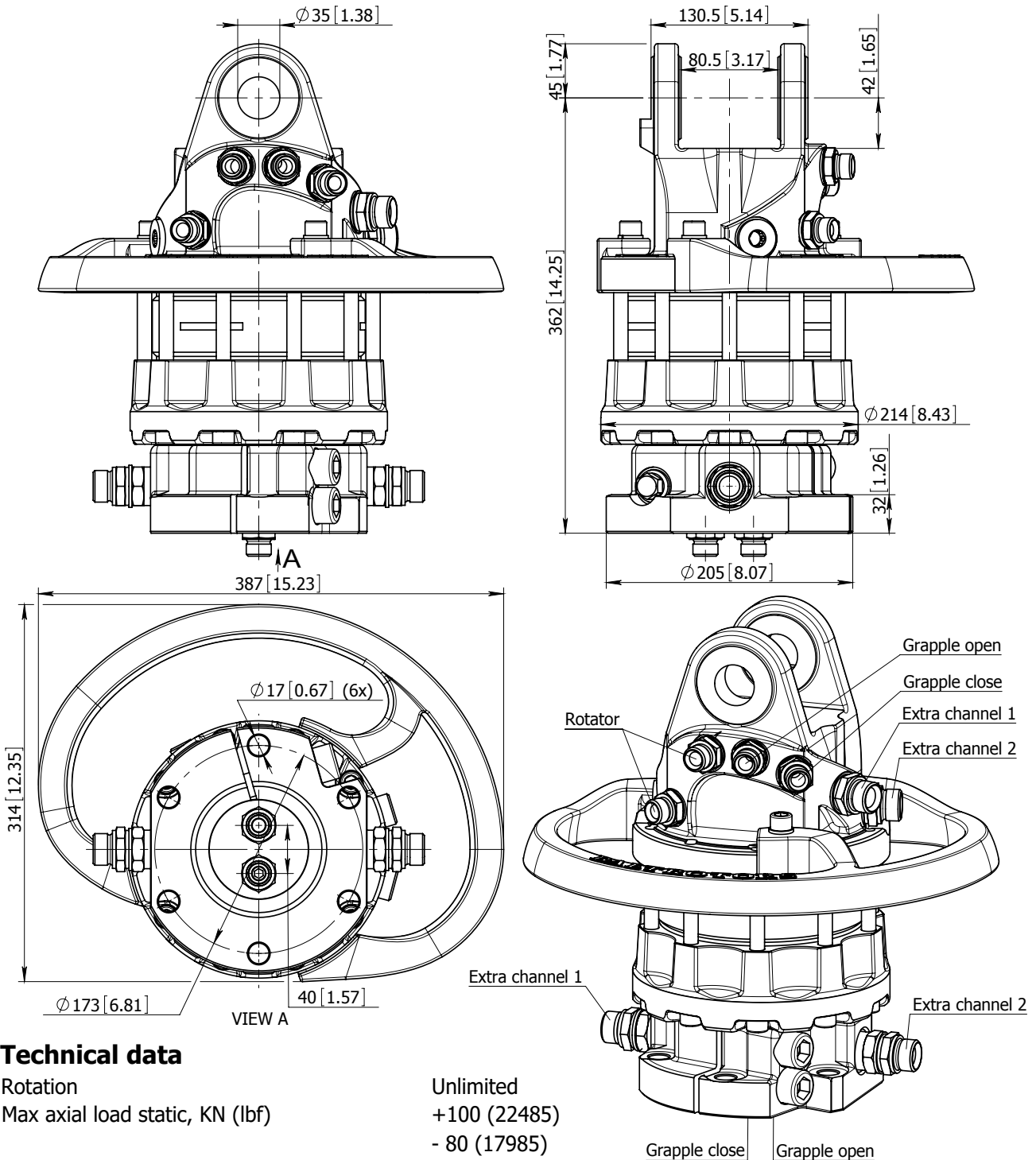
Rotation	Unlimited
Max axial load static, KN (lbf)	+160 (35976) - 90 (20236)
Max axial load dynamic, KN (lbf)	+80 (17988) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	3400 (2500)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	70 (154)

### Max working pressure:

Rotator	↔ Max 25 MPa (3625 psi)	G 1/2
Electric cable canal	Canal size $\varnothing$ 22	G 3/4

### Connection:

# ROTATOR GRS10



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+100 (22485) - 80 (17985)
Max axial load dynamic, KN (lbf)	+50 (11242) - 40 (8992)
Torque at 25Mpa (3625psi), Nm (lb ft)	2500 (1844)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	64 (142)

## Max working pressure:

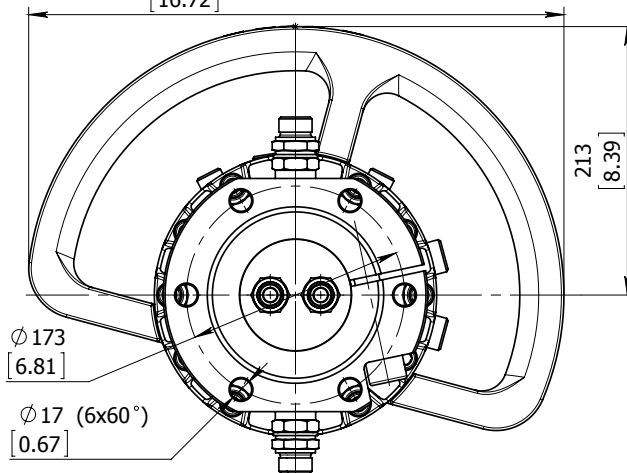
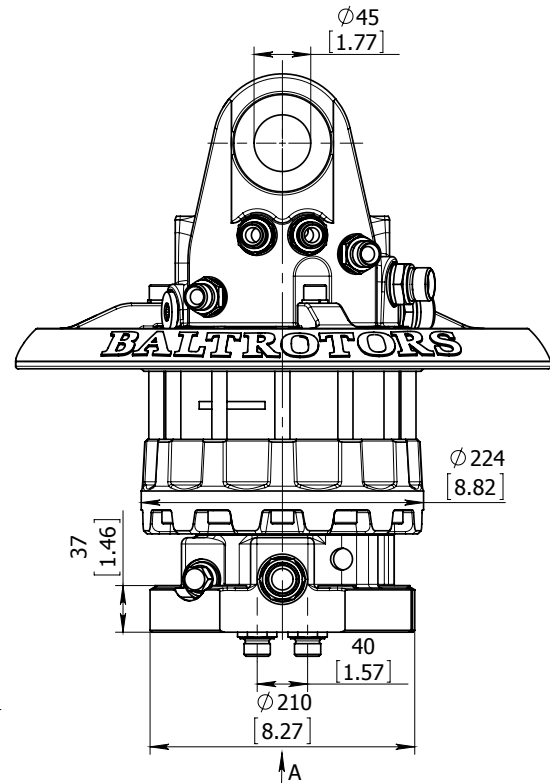
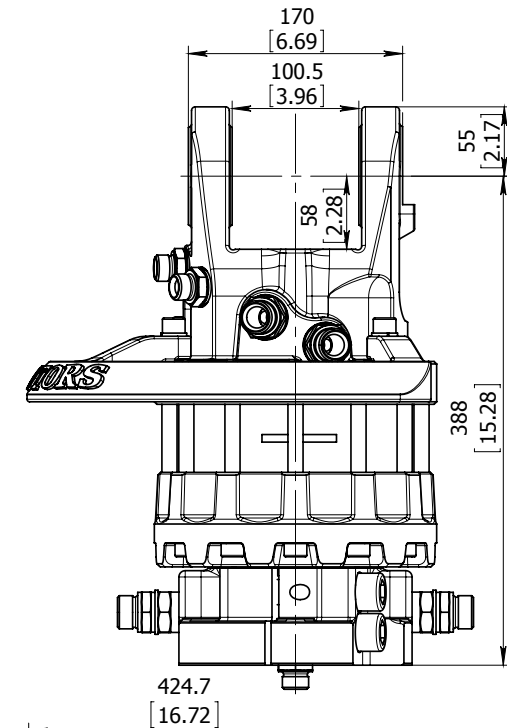
Rotator	↔R↔	Max 25 MPa (3625 psi)
Grapple / Tool open	↔G↔	Max 20 MPa (2900 psi)
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)
Extra oil function	1 2	Max 30 MPa (4350 psi)

## Connection:

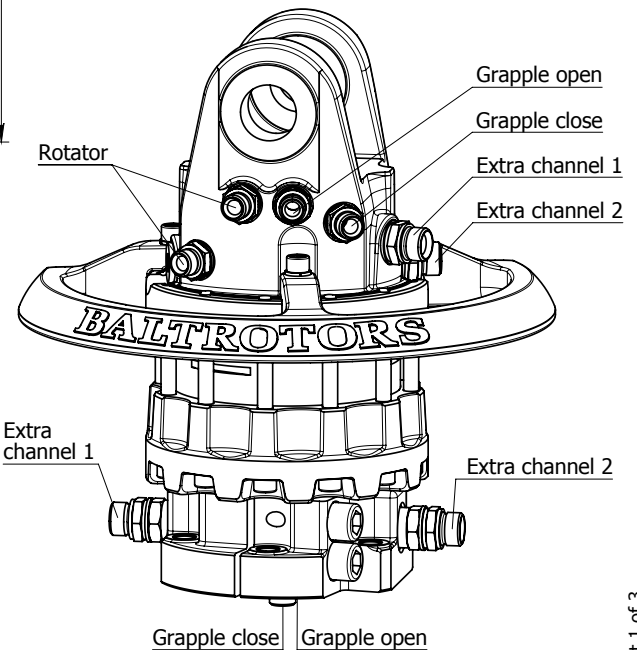
G 1/2
G 1/2
G 1/2
G 3/4

# ROTATOR GRS12S

Specially designed for grapple saw



VIEW A



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+120 (26982) -90 (20236)
Max axial load dynamic, KN (lbf)	+60 (13491) -45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	2900 (2139)
Rec oilflow, l/min (US gallon)	35 (9.25)
Weight, kg (lb)	78 (172)

## Max working pressure:

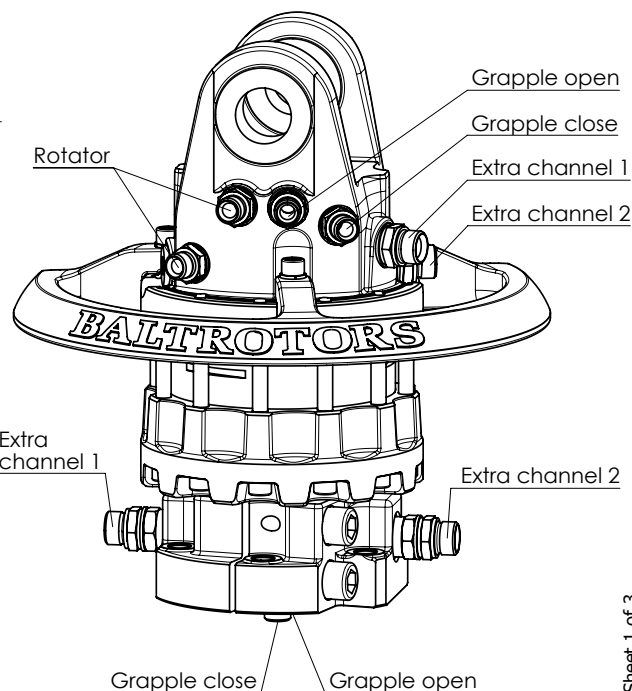
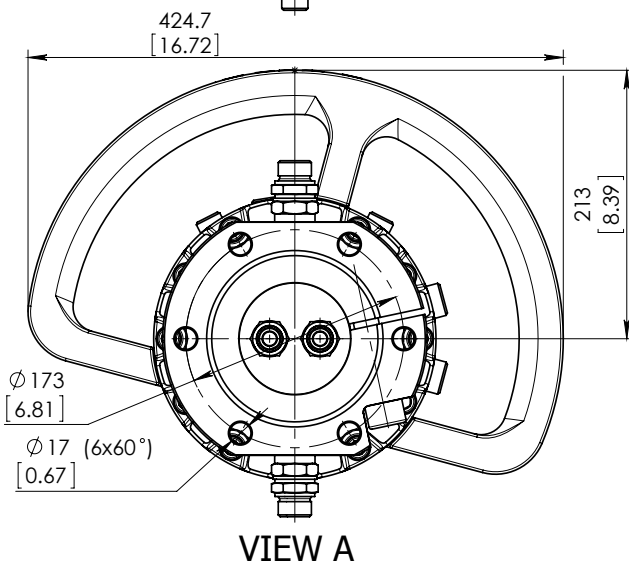
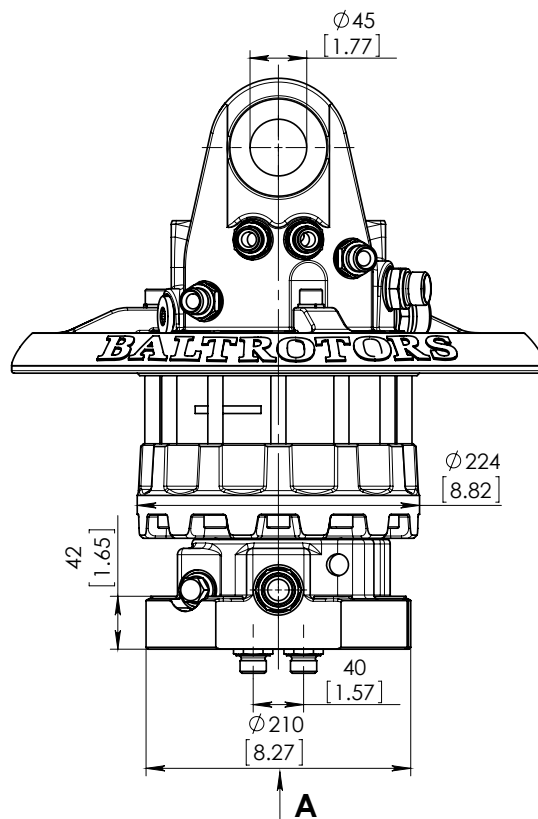
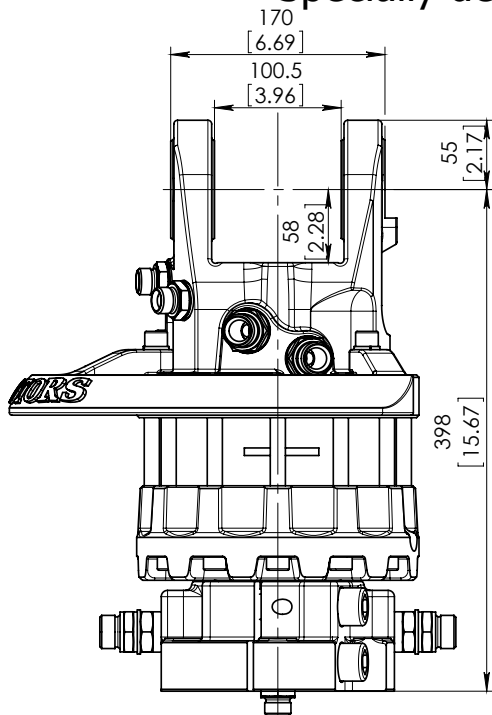
Rotator	<b>←R→</b>	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	<b>←G→</b>	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	<b>→G←</b>	Max 30 MPa (4350 psi)	G 1/2
Extra oil function	<b>1 2</b>	Max 30 MPa (4350 psi)	G 3/4

## Connection:



# ROTATOR GRS16S

Specially designed for grapple saw



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+160 (35976) -90 (20236)
Max axial load dynamic, KN (lbf)	+80 (17988) -45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	3400 (2500)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	79 (175)

## Max working pressure:

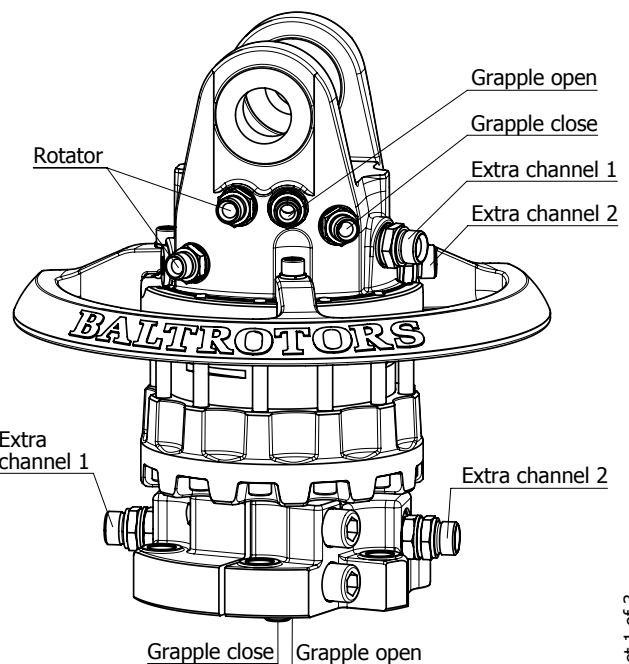
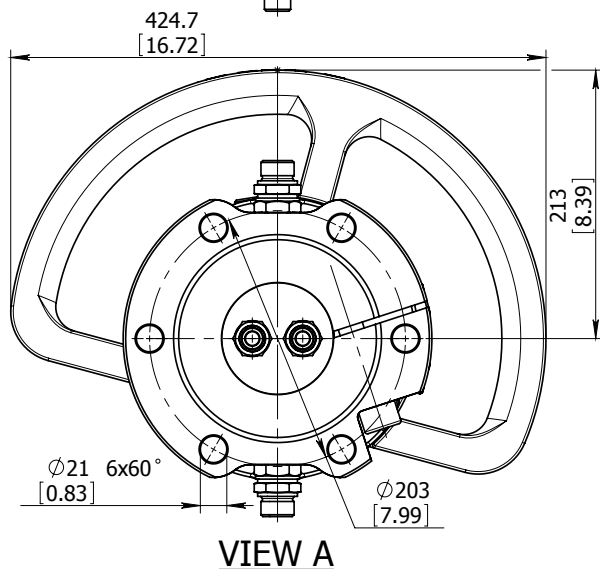
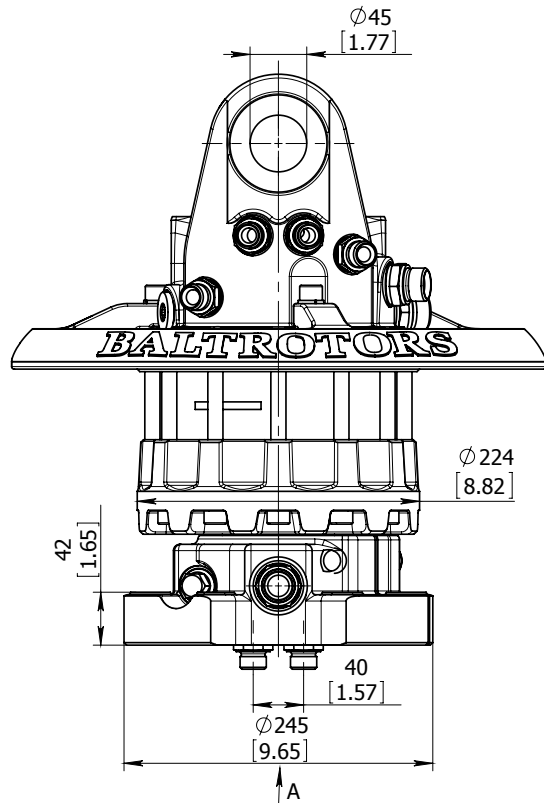
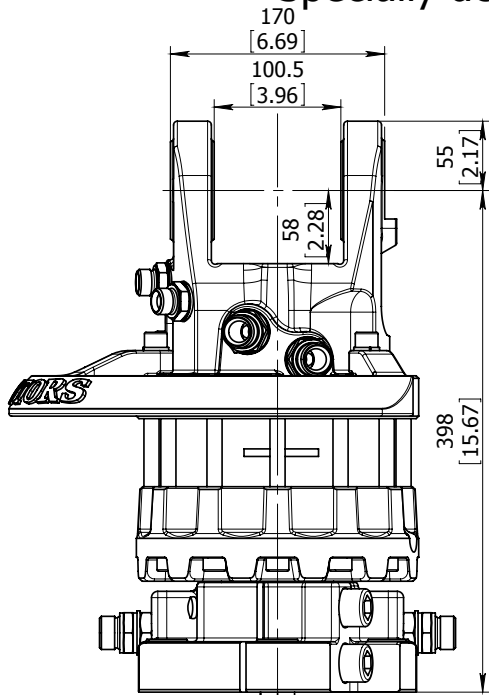
Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2
Extra oil function	1 2	Max 30 MPa (4350 psi)	G 3/4

## Connection:

Sheet 1 of 3  
16.05.2016.

# ROTATOR GRS16S203

Specially designed for grapple saw



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	+160 (35976) - 90 (20236)
Max axial load dynamic, KN (lbf)	+80 (17988) - 45 (10118)
Torque at 25Mpa (3625psi), Nm (lb ft)	3400 (2500)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	83 (183)

### Max working pressure:

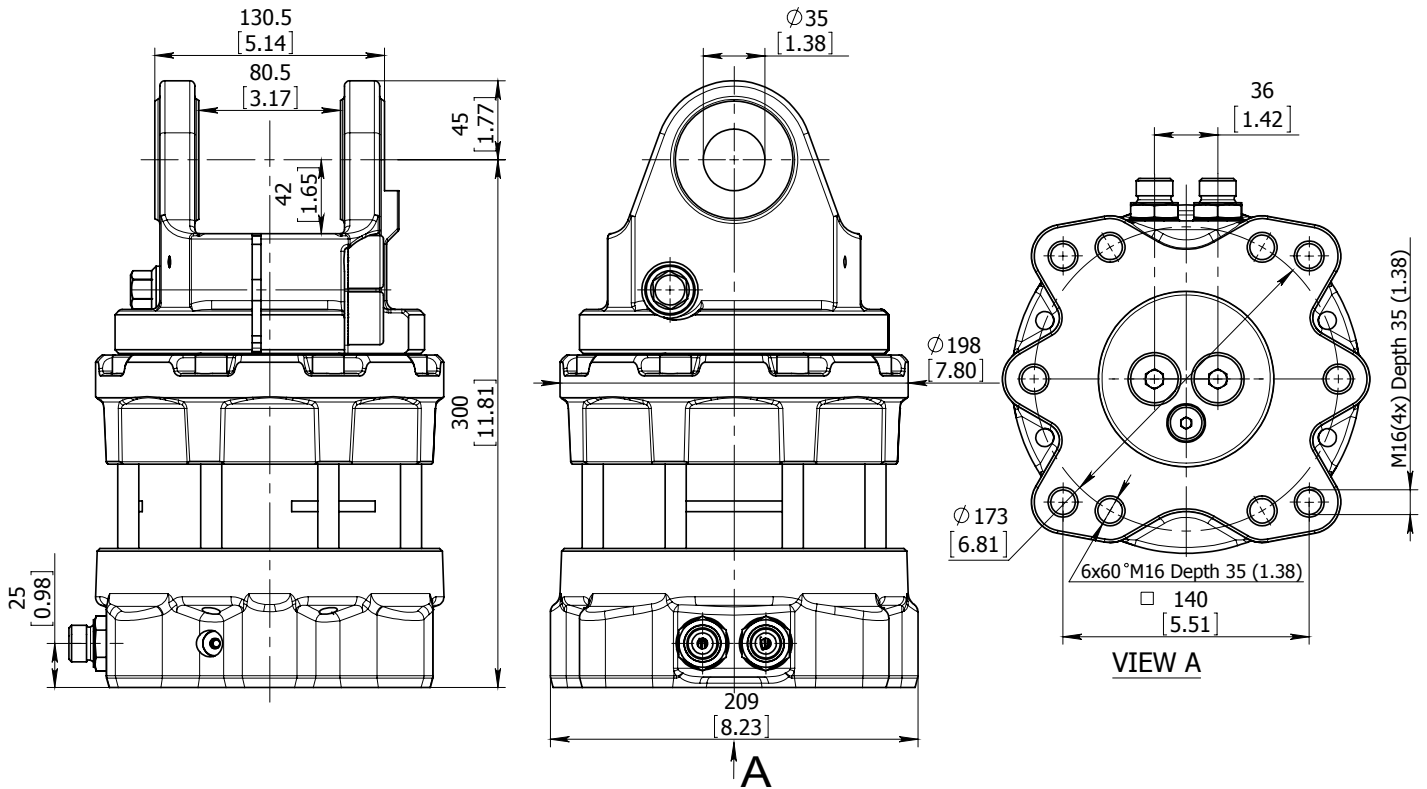
Rotator	←R→	Max 25 MPa (3625 psi)	G 1/2
Grapple / Tool open	←G→	Max 20 MPa (2900 psi)	G 1/2
Grapple / Tool close	→G←	Max 30 MPa (4350 psi)	G 1/2
Extra oil function	1 2	Max 30 MPa (4350 psi)	G 3/4

### Connection:

Sheet 1 of 3  
16.05.2016.

# ROTATOR HR6

Specially designed for the Harvester heads



## Technical data

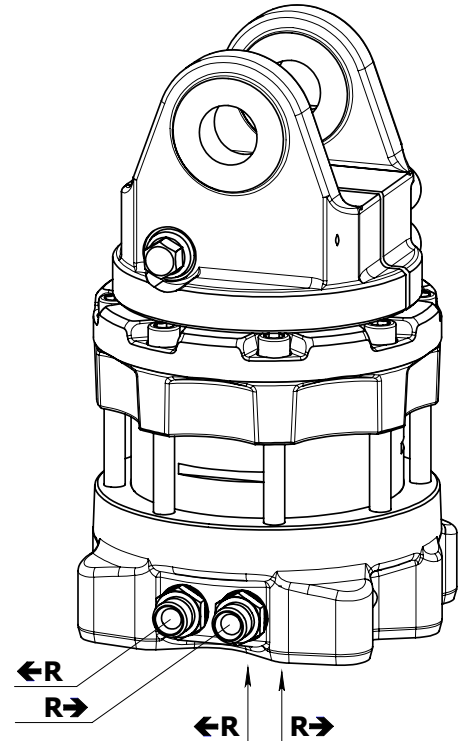
Rotation	Unlimited
Max axial load static, KN (lbf)	+60 (13491) - 45 (10118)
Max axial load dynamic, KN (lbf)	+30 (6745) - 25 (5621)
Torque at 25MPa (3625psi), Nm (lb ft)	1700 (1253)
Rec oilflow, l/min (US gallon)	25 (6.6)
Weight, kg (lb)	46 (101)

### Max working pressure:

Rotator **←R→** Max 25 MPa (3625 psi)

### Connection:

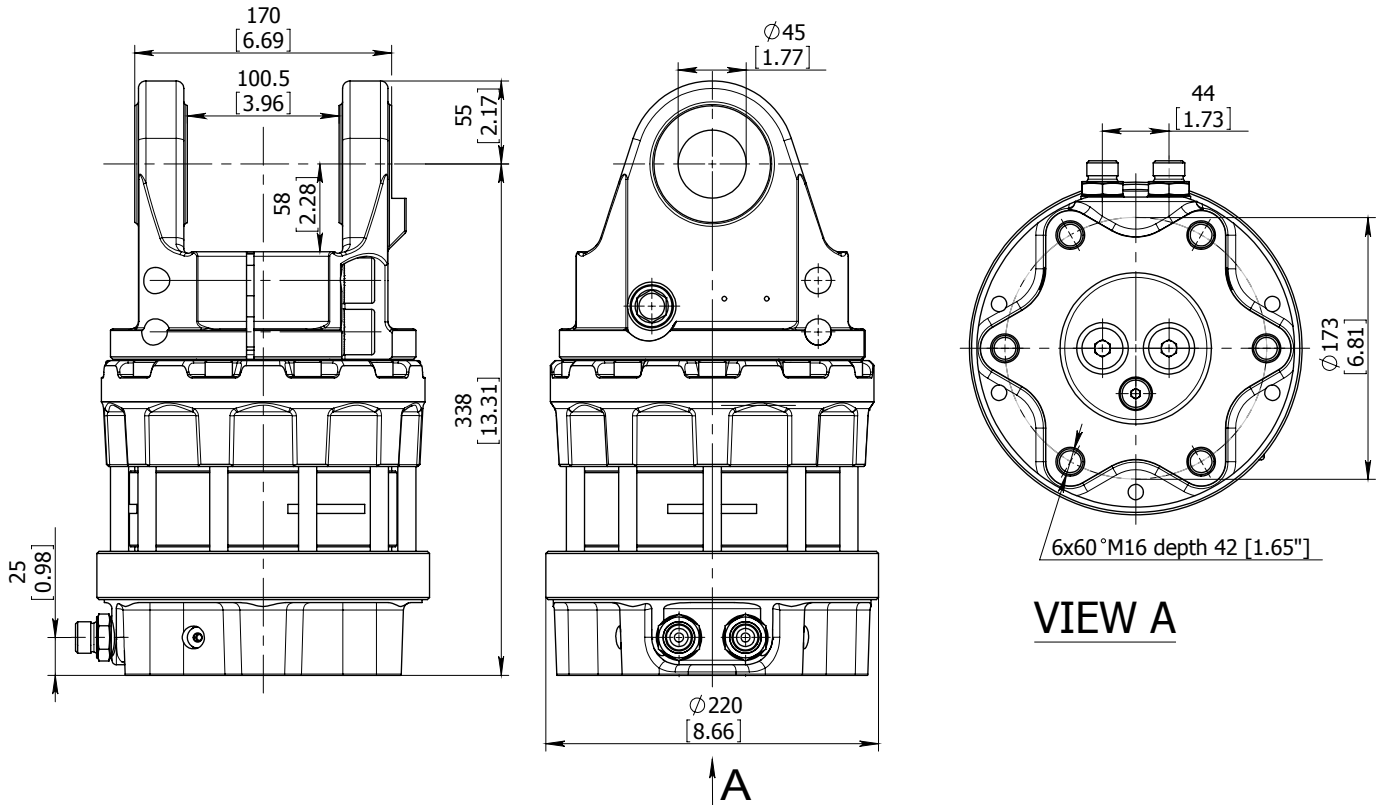
G 1/2



2011.10.24. Sheet 1 of 3

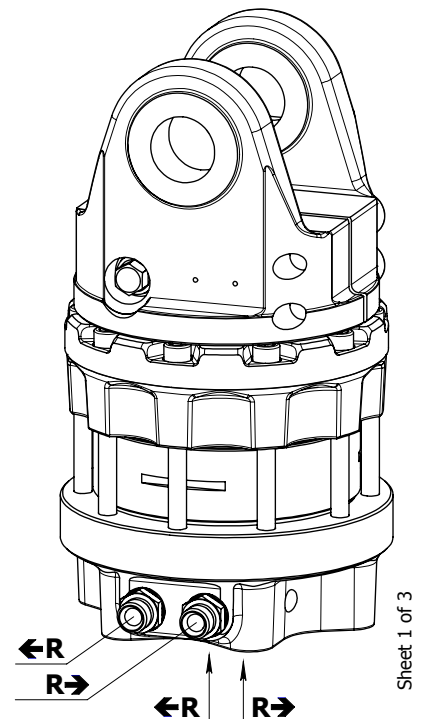
# ROTATOR HR10SM

Specially designed for the Harvester heads



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	+100 (22485) - 90 (20236)
Max axial load dynamic, kN (lbf)	+50 (11242) - 45 (10118)
Torque at 25MPa (3625psi), Nm (lb ft)	2400 (1770)
Rec oilflow, l/min (US gallon)	30 (7.9)
Weight, kg (lb)	64 (140)
<b>Max working pressure:</b>	<b>Connection:</b>
Rotator ←R→ Max 25 MPa (3625 psi)	G 1/2

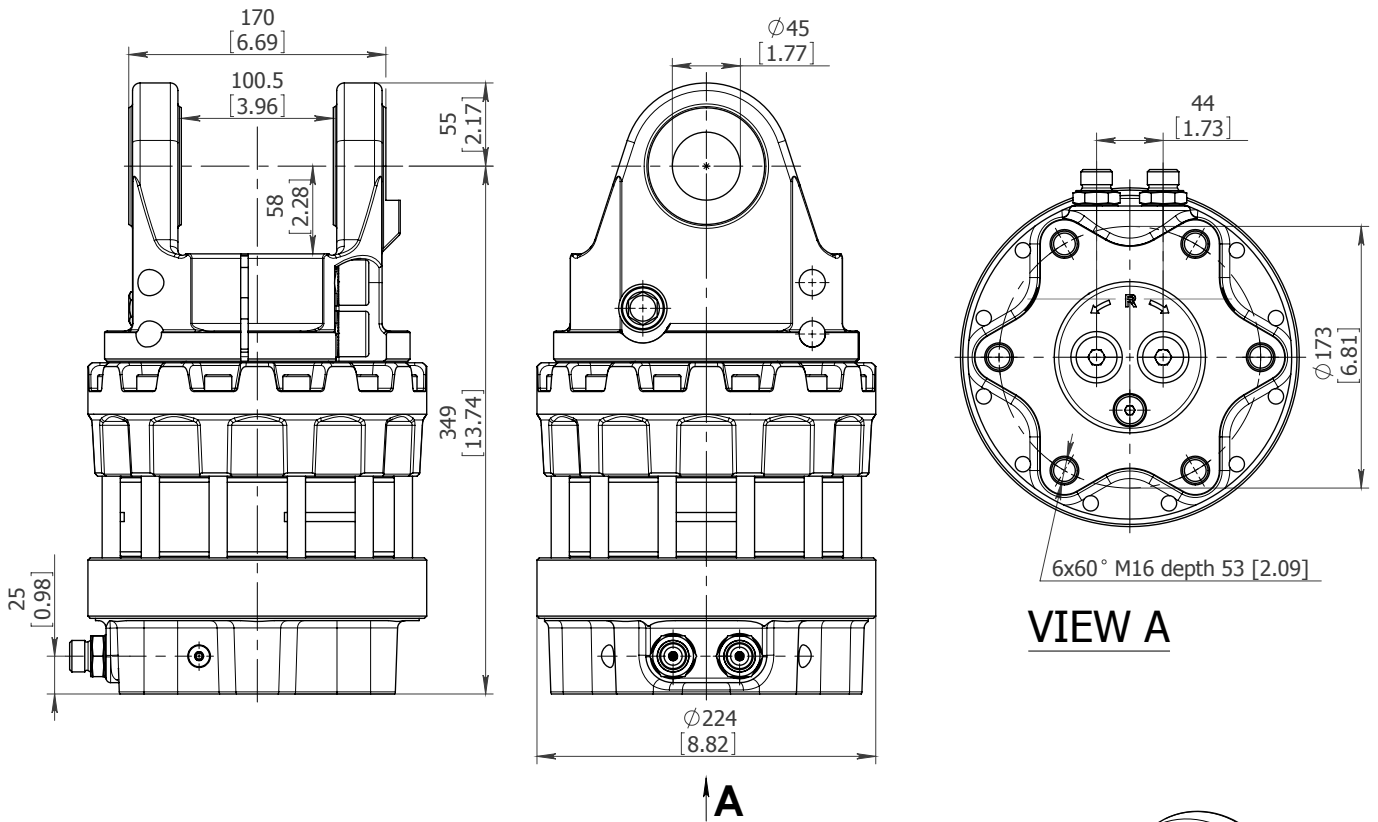


Sheet 1 of 3  
2011.10.24.



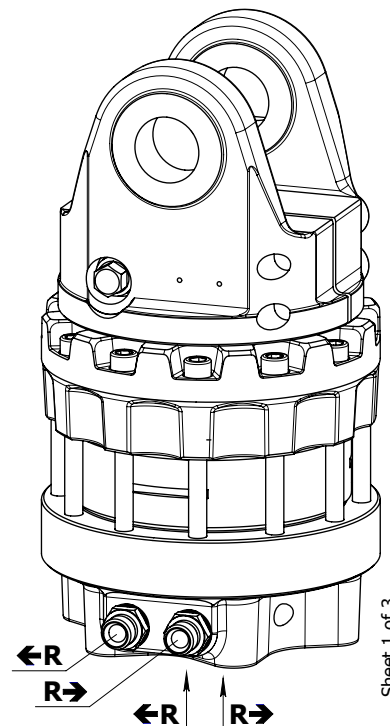
# ROTATOR HR12SM

Specially designed for the Harvester heads



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	+120 (26982) -100 (22485)
Max axial load dynamic, kN (lbf)	+60 (13491) -50 (11242)
Torque at 25MPa (3625psi), Nm (lb ft)	2900 (2139)
Rec oilflow, l/min (US gallon)	35 (9.25)
Weight, kg (lb)	69 (152)
<b>Max working pressure:</b>	<b>Connection:</b>
Rotator ←R→ Max 25 MPa (3625 psi)	G 1/2

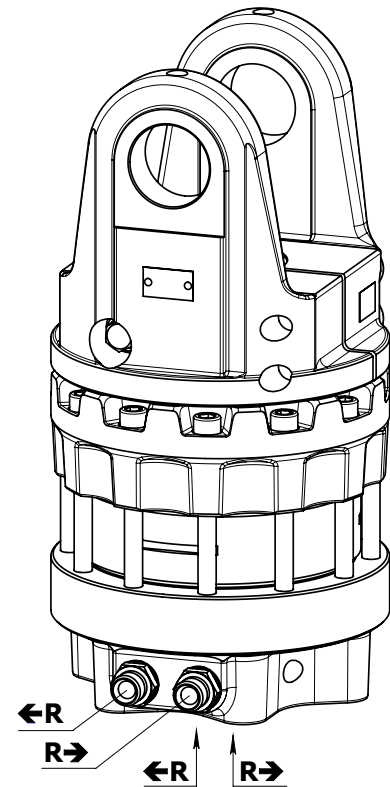
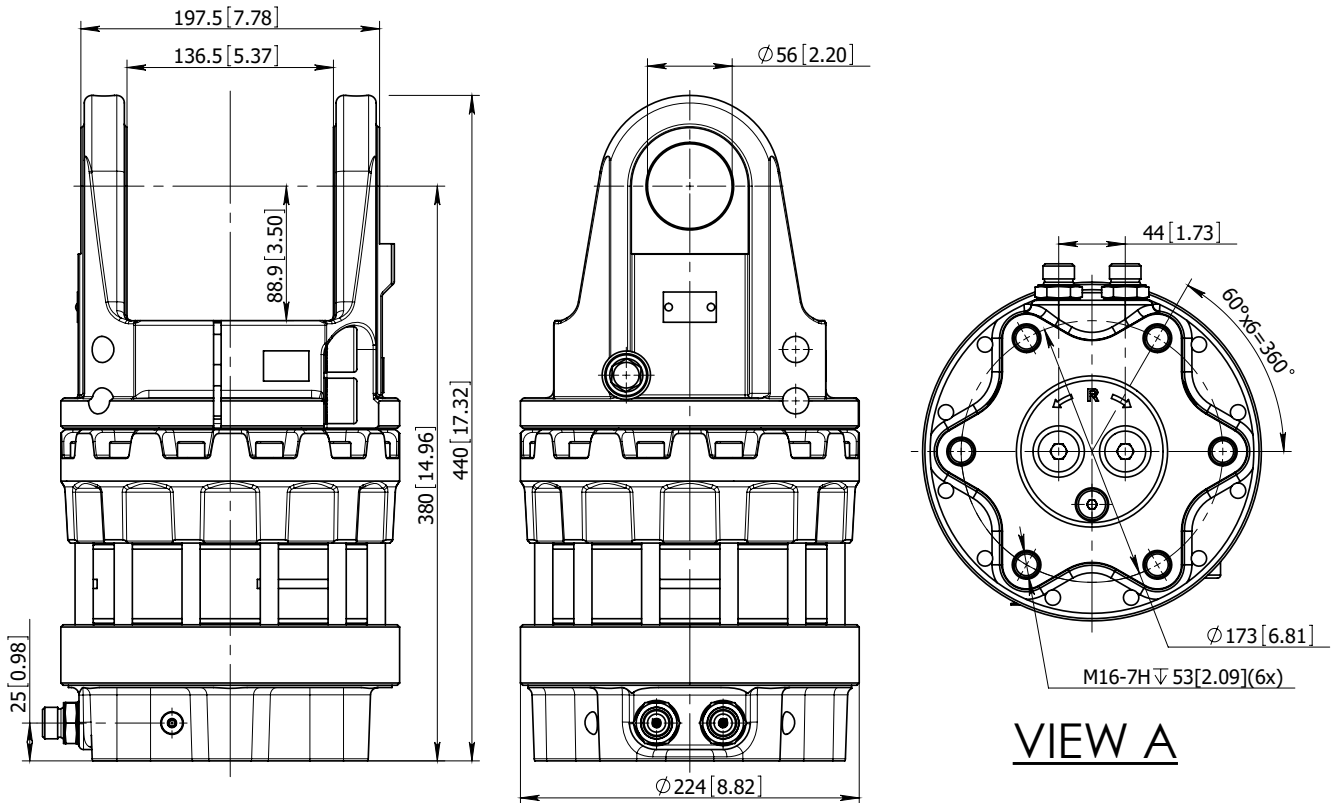


Sheet 1 of 3

03.03.2017

# ROTATOR HR12-01

Specially designed for the Harvester heads



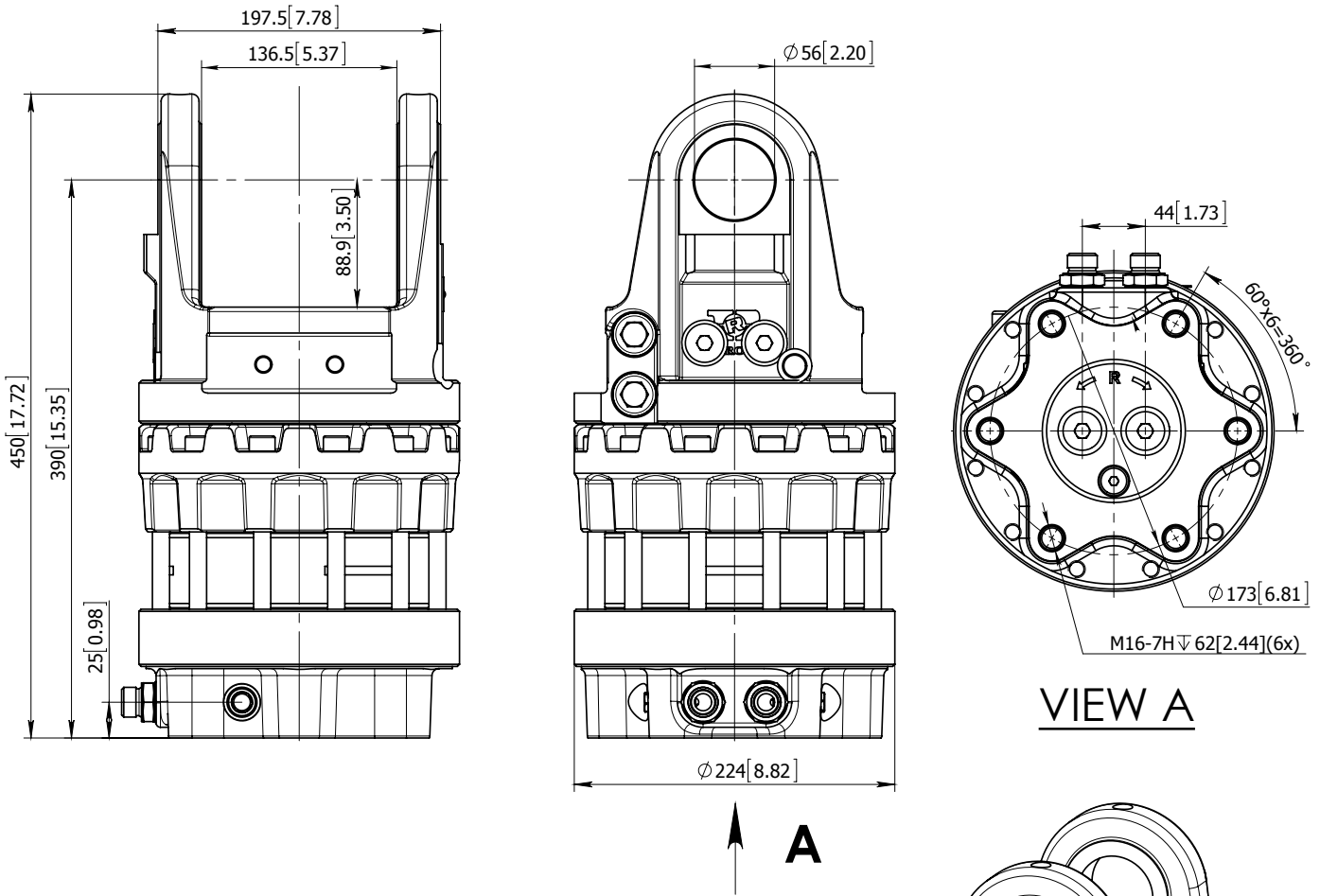
## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	+120 (26982) -100 (22485)
Max axial load dynamic, kN (lbf)	+60 (13491) -50 (11242)
Torque at 25MPa (3625psi), Nm (lb ft)	2900 (2139)
Rec oilflow, l/min (US gallon)	35 (9.25)
Weight, kg (lb)	74 (162)
<b>Max working pressure:</b>	<b>Connection:</b>
Rotator ←R→ Max 25 MPa (3625 psi)	G 1/2

06.03.2017 Sheet 1 of 3

# ROTATOR HR16-02

Specially designed for the Harvester heads



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	+160 (35976) -100 (22485)
Max axial load dynamic, kN (lbf)	+80 (17988) -50 (11242)
Torque at 25MPa (3625psi), Nm (lb ft)	3500 (2581)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	76 (169)

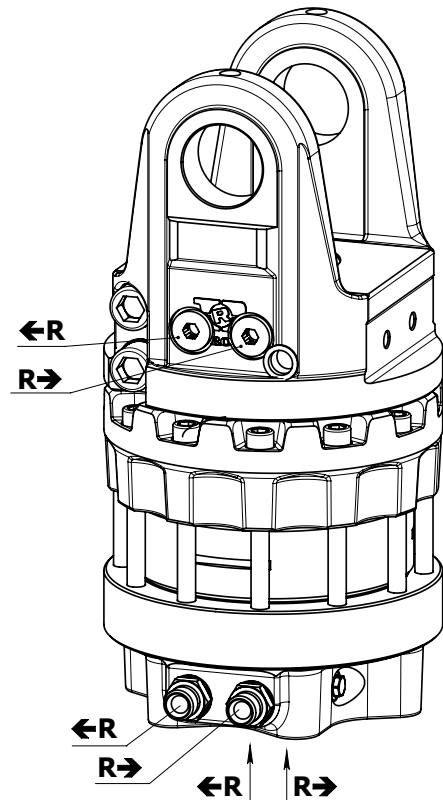
### Max working pressure:

Rotator ←R→ Max 25 MPa (3625 psi)\*

\* Relief valves fitted

### Connection:

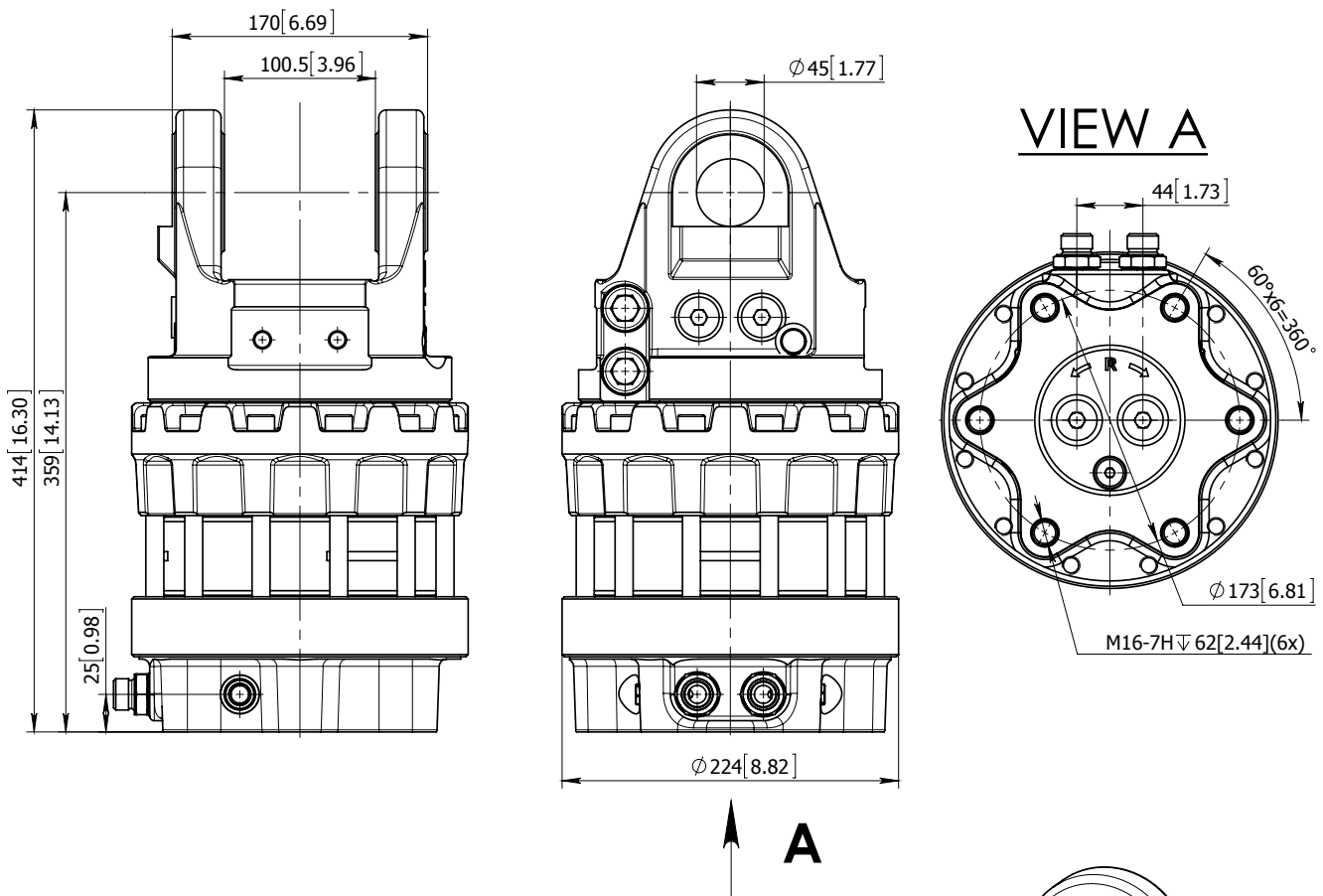
G 1/2



17.02.2016. Sheet 1 of 3

# ROTATOR HR16-03

Specially designed for the Harvester heads



## Technical data

Rotation	Unlimited
Max axial load static, kN (lbf)	+160 (35976)
	-100 (22485)
Max axial load dynamic, kN (lbf)	+80 (17988)
	-50 (11242)
Torque at 25MPa (3625psi), Nm (lb ft)	3500 (2581)
Rec oilflow, l/min (US gallon)	40 (10.6)
Weight, kg (lb)	71 (157)

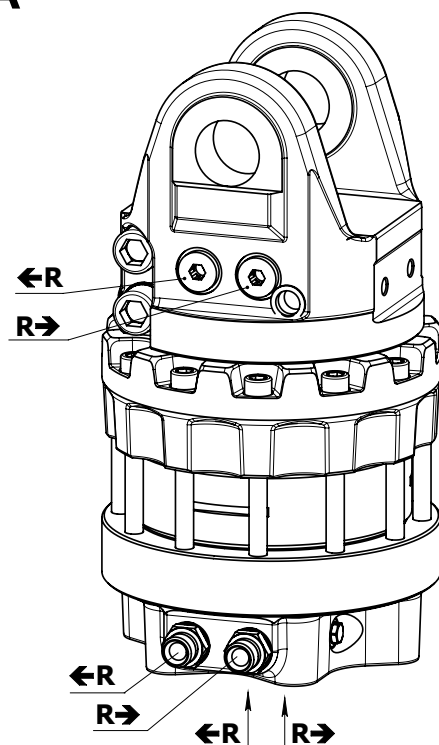
### Max working pressure:

Rotator ←R→ Max 25 MPa (3625 psi)\*

\* Relief valves fitted

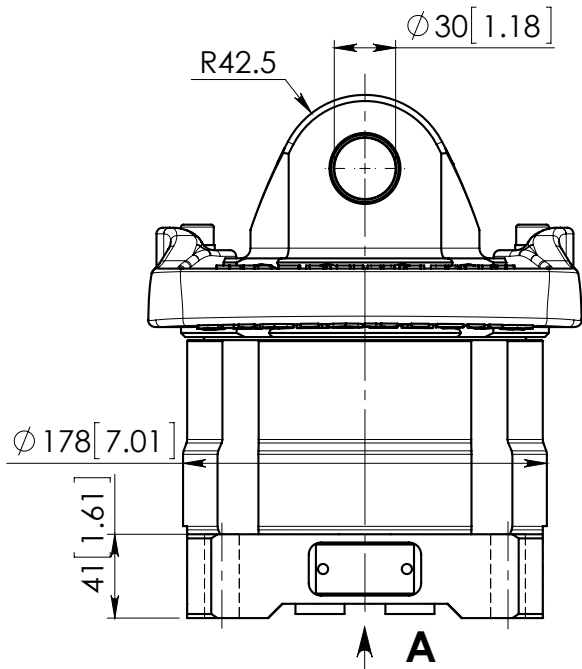
### Connection:

G 1/2

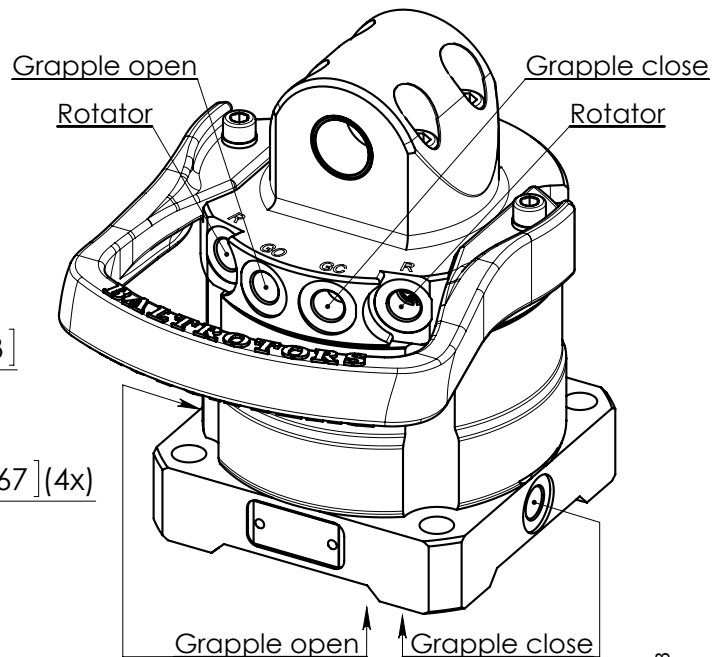
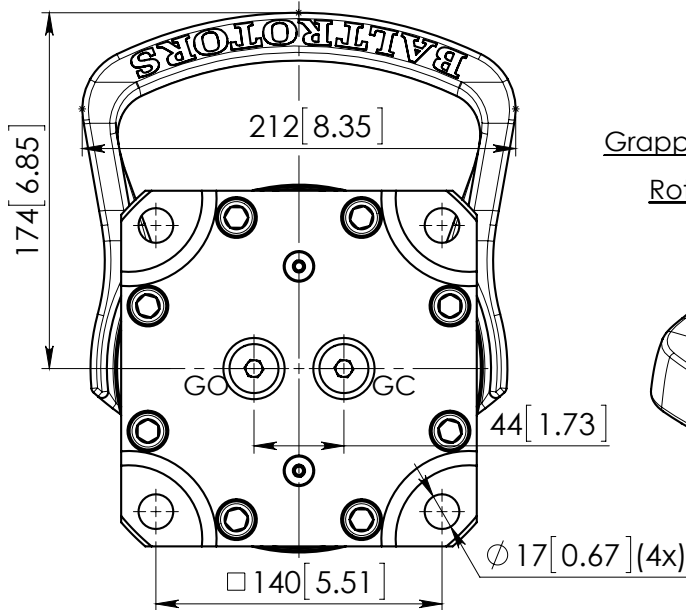
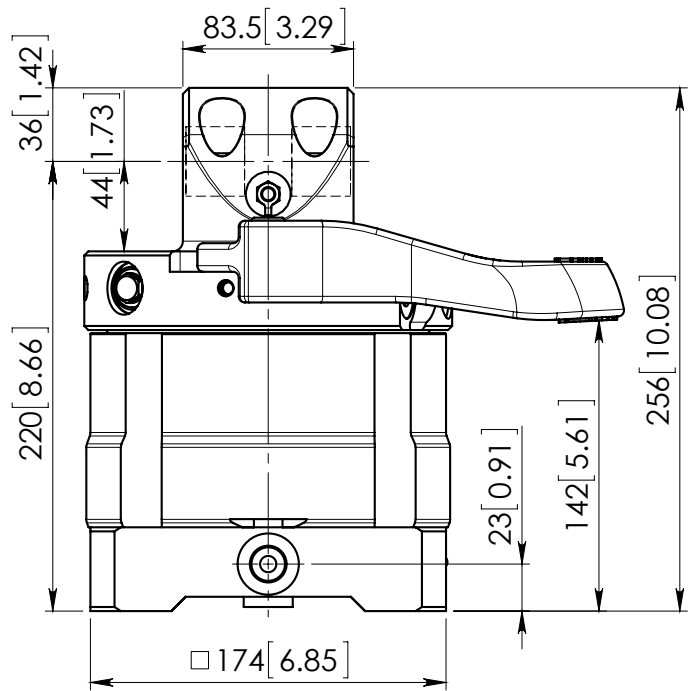


17.02.2016. Sheet 1 of 3

# ROTATOR GPRA5



VIEW A



## Technical data

Rotation	Unlimited
Max axial load	50 KN (11240 lbf)
Torque at 25 Mpa (3625 psi)	1100 Nm (811 lb ft)
Rated displacement	325 cm <sup>3</sup> /rev. (20 in <sup>3</sup> /rev.)
Rotation speed	max 20 rpm
Oil duct area for grapple	50 mm <sup>2</sup> (0.078 in <sup>2</sup> )
Weight	36 kg (79 lb)

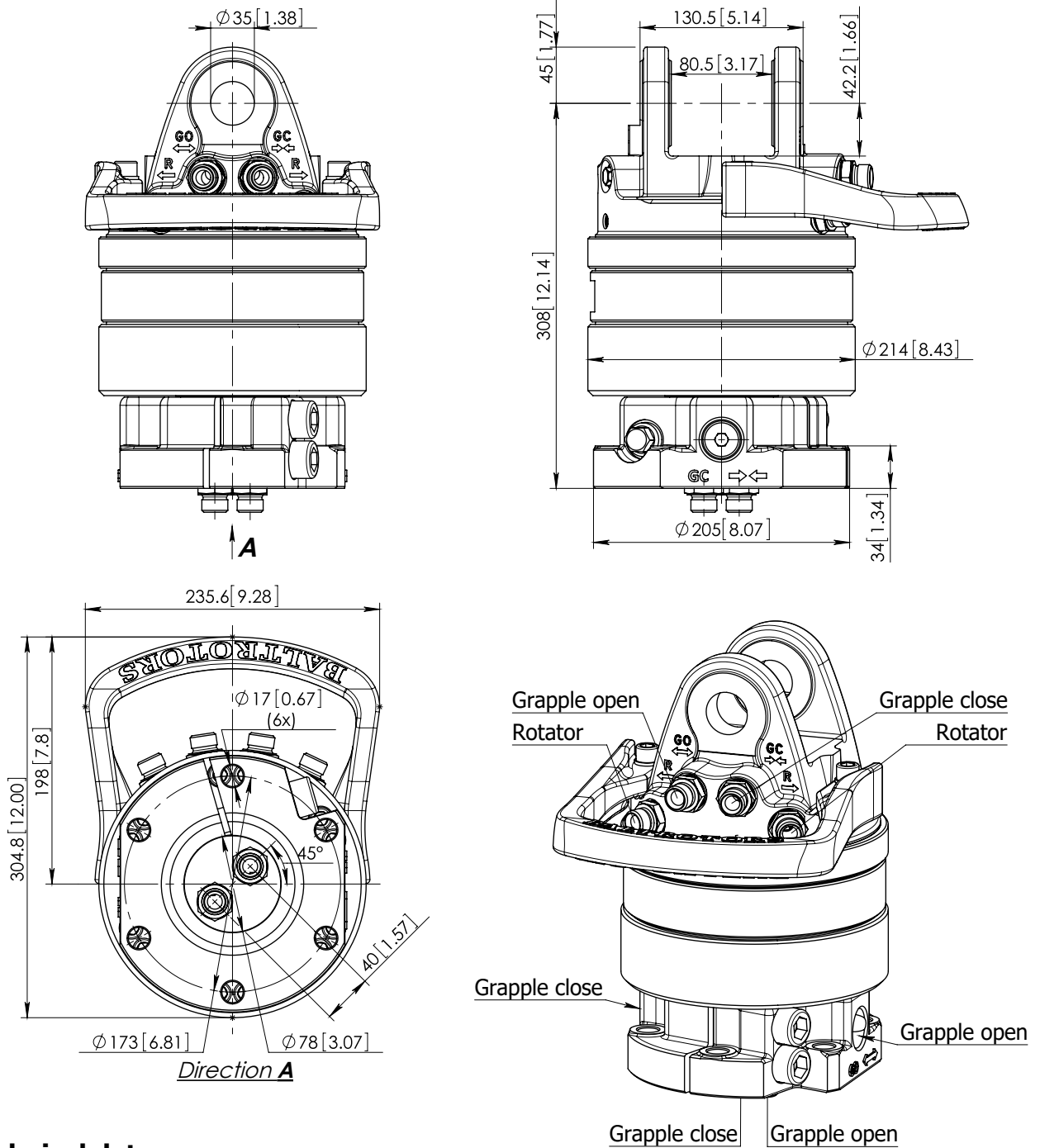
Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa (3625 psi)*	9 l/min (2.4 gal(US)/min)	M 18x1.5
<b>GO</b> - grapple/tool open	35 MPa (5076 psi)		M 18x1.5
<b>GC</b> - grapple/tool close	35 MPa (5076 psi)		M 18x1.5

\* Relief valves fitted

Sheet 1 of 3

05.09.2014

# ROTATOR GPR10



## Technical data

Rotation	Unlimited
Max axial load static, KN (lbf)	100 (22485)
Max axial load dynamic, KN (lbf)	50 (11242)
Torque at 25Mpa (3625psi), Nm (lb ft)	1950 (1438)
Rec oilflow, l/min (US gallon)	22 (5.8)
Weight, kg (lb)	59 (130)

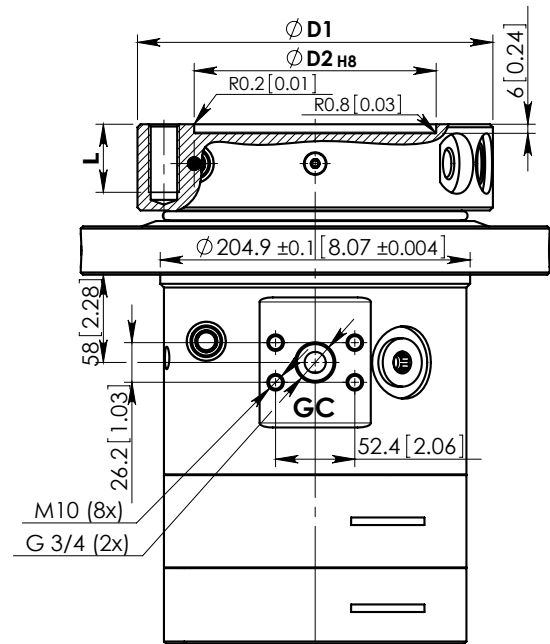
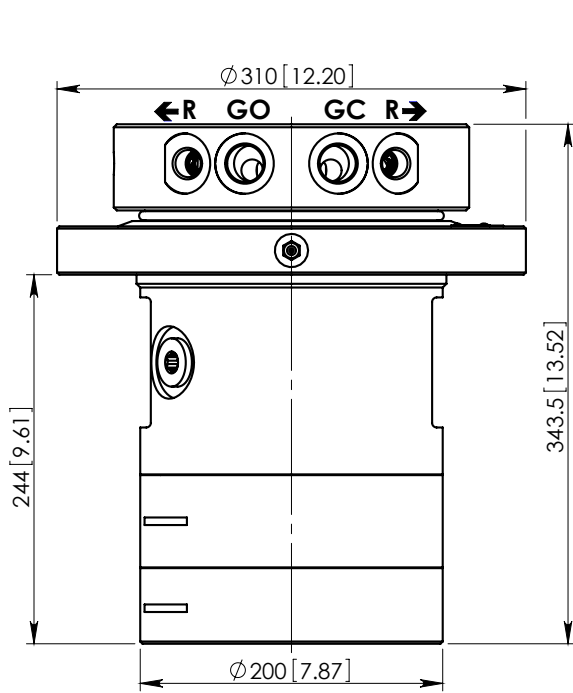
### Max working pressure:

### Connection:

Rotator	↔R↔	Max 25 MPa (3625 psi)*	G 1/2
Grapple / Tool open	↔GO↔	Max 30 MPa (4351 psi)	G 1/2
Grapple / Tool close	↔GC↔	Max 30 MPa (4351 psi)	G 1/2

\*Relief valves fitted

# INDUSTRIAL ROTATOR GIR12, GIR12-01



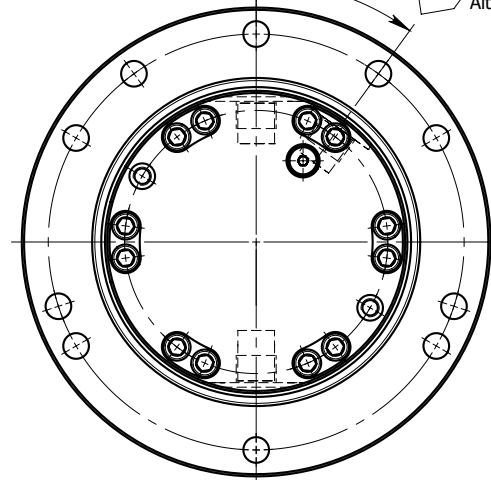
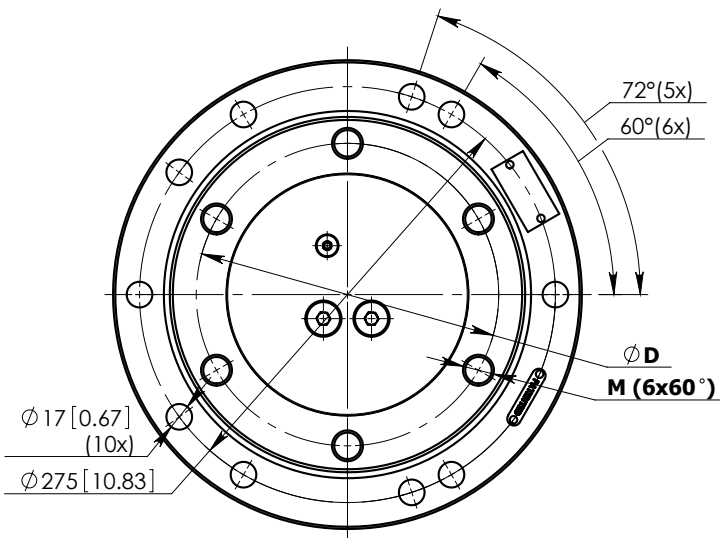
**A**

**GC**

**GC Alternative**

**GO**

**View A**



## Technical data

Rotation	Unlimited
Max axial load static	±250 KN [56202 lbf]
Max axial load dynamic	±80 KN [17985 lbf]
Torque at 20 Mpa	2000 Nm [1475 lb ft]
Rated displacement	724 cm <sup>3</sup> /rev. [44.2 in <sup>3</sup> /rev.]
Rotation speed	max 30 rpm
Oil duct area for grapple	150 mm <sup>2</sup> [0.232in <sup>2</sup> ]

	D	D1	D2	M	L	Weight
<b>GIR 12</b>	200 [7.87]	235 [9.25]	160 [6.3]	M20	45 [1.77]	85 kg [188 lb]
<b>GIR 12-01</b>	180 [7.09]	210 [8.27]	140 [5.51]	M16	40 [1.57]	82 kg [180 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	21 MPa [3045 psi]*	25 l/min [6.6 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	32 MPa [4640 psi]*		G 3/4, SAE 1
<b>GC</b> - grapple/tool close	32 MPa [4640 psi]*		G 3/4, SAE 1

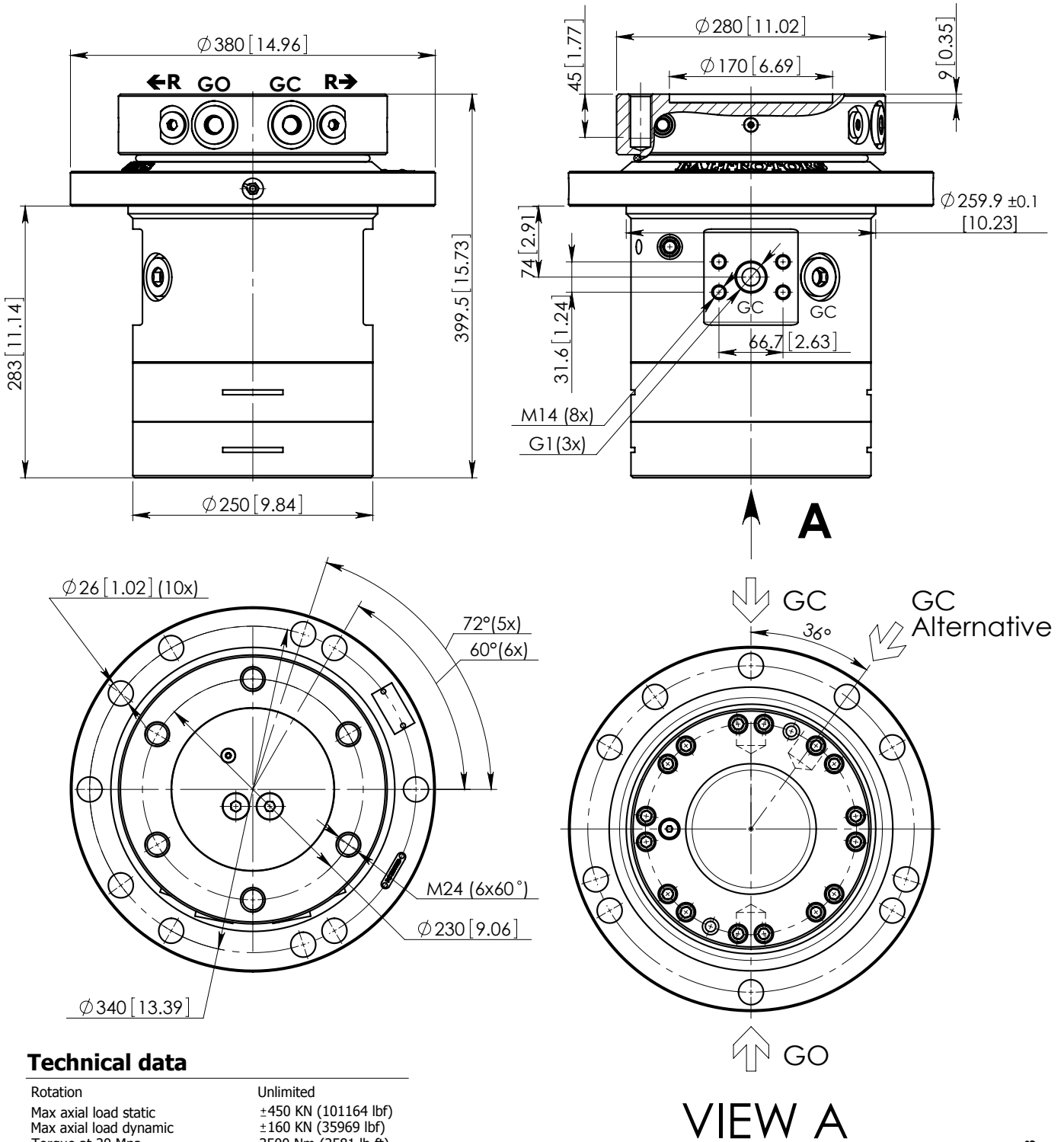
**Operating machine**  
e.g. excavator max weight  
Connected via link 14 t

\* Relief valves fitted

Sheet 1 of 3

21.03.2016

# INDUSTRIAL ROTATOR GIR25



## Technical data

Rotation	Unlimited
Max axial load static	±450 kN (101164 lbf)
Max axial load dynamic	±160 kN (35969 lbf)
Torque at 20 Mpa	3500 Nm (2581 lb ft)
Rated displacement	1304 cm <sup>3</sup> /rev
Rotation speed	max 25 rpm
Oil duct area for grapple	260 mm <sup>2</sup> (0.403 in <sup>2</sup> )
Weight	143 kg (314 lb)

Function	Max working pressure	Rec oilflow	Connections
<b>R</b> - rotation	21 MPa (3045 psi)*	35l/min	G 1/2
<b>GO</b> - grapple/tool open	32 MPa (4641 psi)*		G 1, SAE 1 1/4
<b>GC</b> - grapple/tool close	32 MPa (4641 psi)*		G 1, SAE 1 1/4

\* Relief valve fitted

## Operating machine

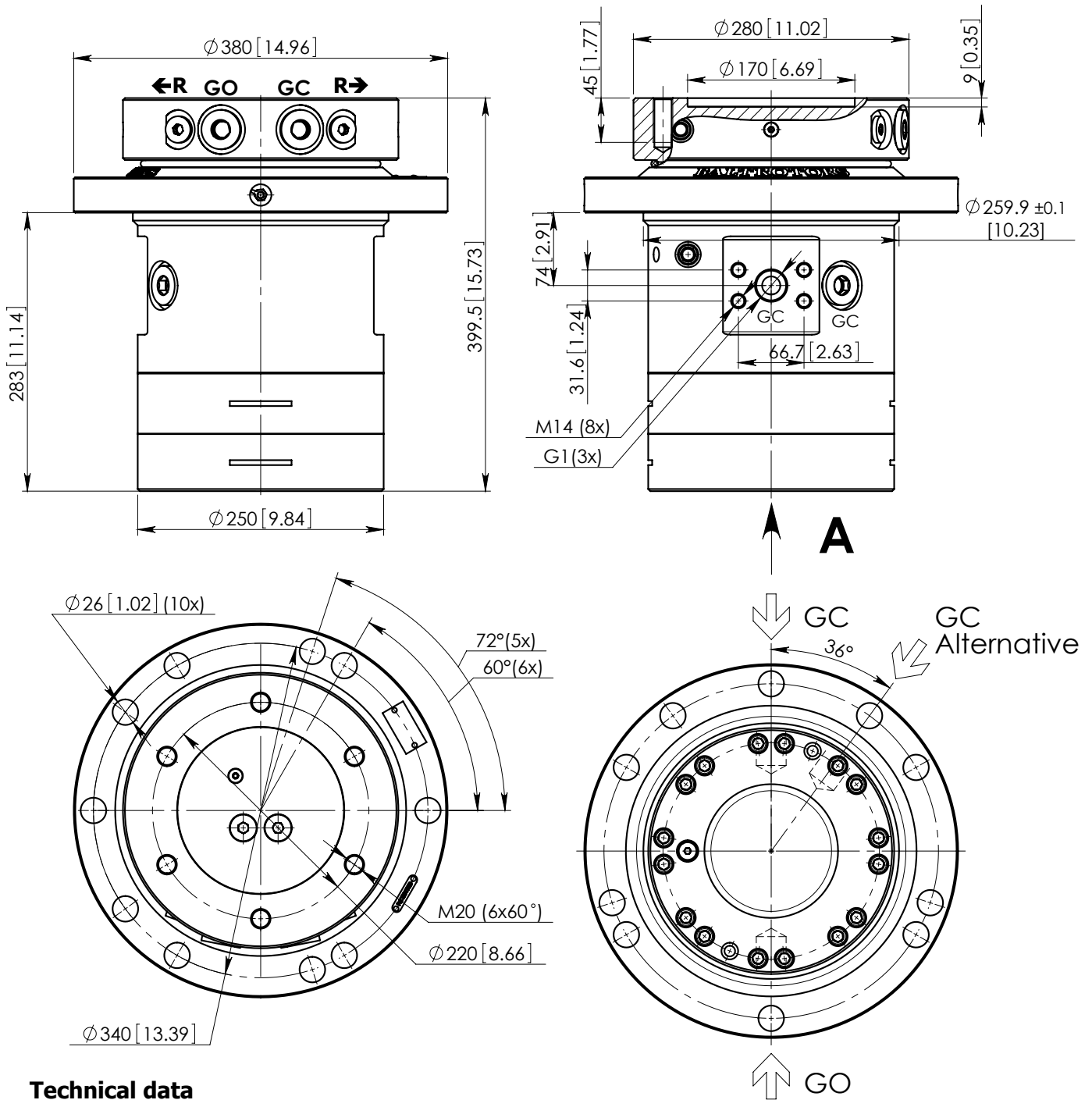
e.g. excavator max weight  
Connected via link 18 t

Sheet 1 of 3

18.02.2016



# INDUSTRIAL ROTATOR GIR25-01



## Technical data

Rotation	Unlimited
Max axial load static	±450 kN (101164 lbf)
Max axial load dynamic	±160 kN (35969 lbf)
Torque at 20 MPa	3500 Nm (2581 lb ft)
Rated displacement	1304 cm <sup>3</sup> /rev
Rotation speed	max 25 rpm
Oil duct area for grapple	260 mm <sup>2</sup> (0.403 in <sup>2</sup> )
Weight	143 kg (315 lb)

Function	Max working pressure	Rec oilflow	Connections
<b>R</b> - rotation	21 MPa (3045 psi)*	35l/min	G 1/2
<b>GO</b> - grapple/tool open	32 MPa (4641 psi)*		G 1, SAE 1 1/4
<b>GC</b> - grapple/tool close	32 MPa (4641 psi)*		G 1, SAE 1 1/4

\* Relief valve fitted

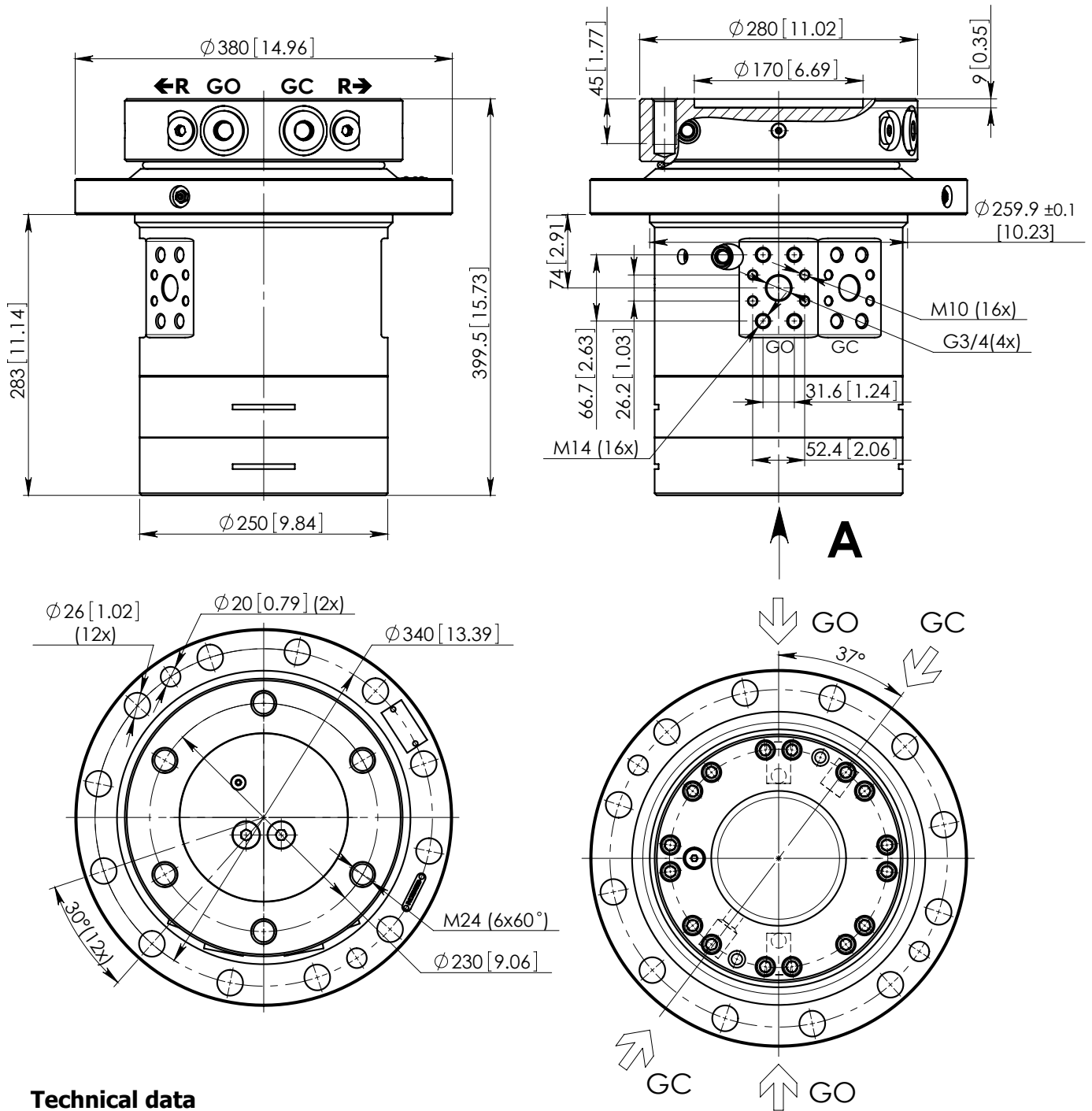
## Operating machine

e.g. excavator max weight  
Connected via link 18 t

Sheet 1 of 3

18.02.2016

# INDUSTRIAL ROTATOR GIR25-02



## Technical data

Rotation	Unlimited
Max axial load static	±450 kN (101164 lbf)
Max axial load dynamic	±160 kN (35969 lbf)
Torque at 20 Mpa	3500 Nm (2581 lb ft)
Rated displacement	1304 cm <sup>3</sup> /rev
Rotation speed	max 25 rpm
Oil duct area for grapple	260 mm <sup>2</sup> (0.403 in <sup>2</sup> )
Weight	143 kg (315 lb)

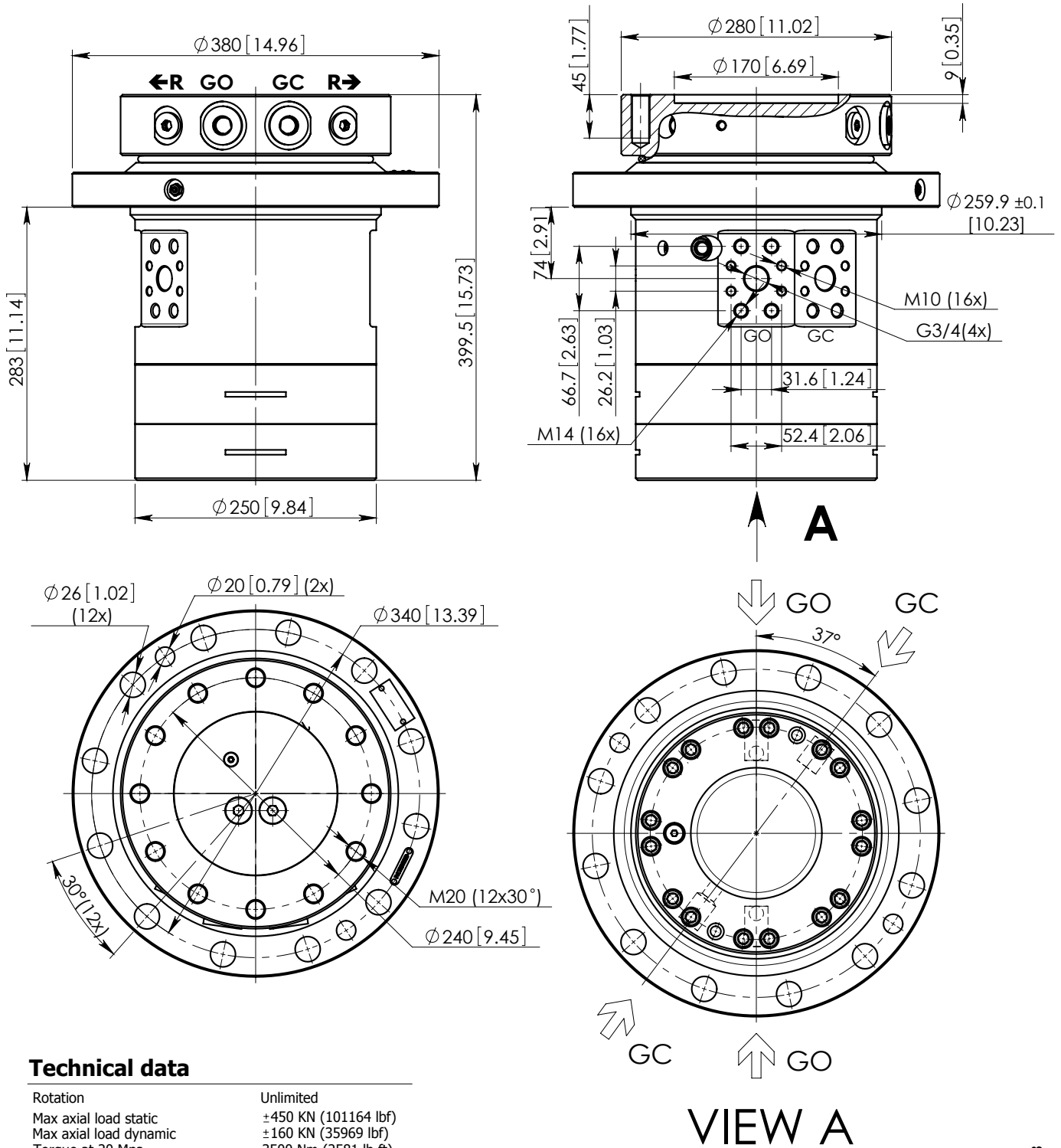
Function	Max working pressure	Rec oilflow	Connections	Operating machine e.g. excavator max weight
<b>R</b> - rotation	21 MPa (3045 psi)*	35l/min	G 1/2	Connected via link 18 t
<b>GO</b> - grapple/tool open	32 MPa (4641 psi)*		G 3/4, SAE 1 1/4, SAE 1	
<b>GC</b> - grapple/tool close	32 MPa (4641 psi)*		G 3/4, SAE 1 1/4, SAE 1	

\* Relief valve fitted

Sheet 1 of 3

18.02.2016

# INDUSTRIAL ROTATOR GIR25-04



## Technical data

Rotation	Unlimited
Max axial load static	±450 kN (101164 lbf)
Max axial load dynamic	±160 kN (35969 lbf)
Torque at 20 Mpa	3500 Nm (2581 lb ft)
Rated displacement	1304 cm <sup>3</sup> /rev
Rotation speed	max 25 rpm
Oil duct area for grapple	260 mm <sup>2</sup> (0.403 in <sup>2</sup> )
Weight	143 kg (315 lb)

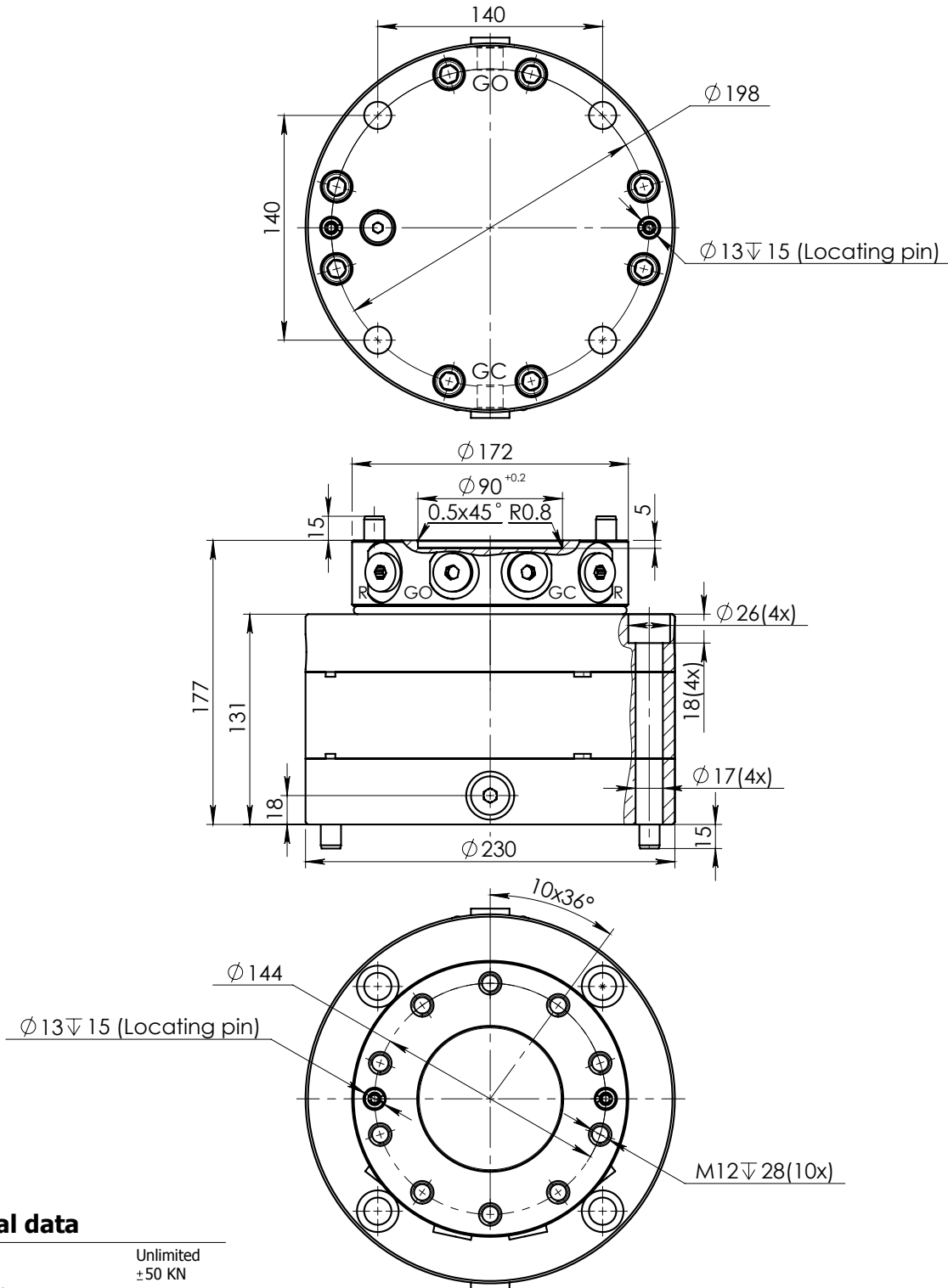
Function	Max working pressure	Rec oilflow	Connections	Operating machine e.g. excavator max weight
<b>R</b> - rotation	21 MPa (3045 psi)*	35l/min	G 1/2	Connected via link 18 t
<b>GO</b> - grapple/tool open	32 MPa (4641 psi)*		G 3/4, SAE 1 1/4, SAE 1	
<b>GC</b> - grapple/tool close	32 MPa (4641 psi)*		G 3/4, SAE 1 1/4, SAE 1	

\* Relief valve fitted

Sheet 1 of 3

18.02.2016

# INDUSTRIAL ROTATOR CPR5



## Technical data

Rotation	Unlimited
Max axial load	±50 KN
Max radial load	36 KN
Torque at 25 Mpa	1350 Nm
Rated displacement	354 cm <sup>3</sup> /rev.
Rotation speed	max 30 rpm
Oil duct area for grapple	95 mm <sup>2</sup>
Weight	45 kg

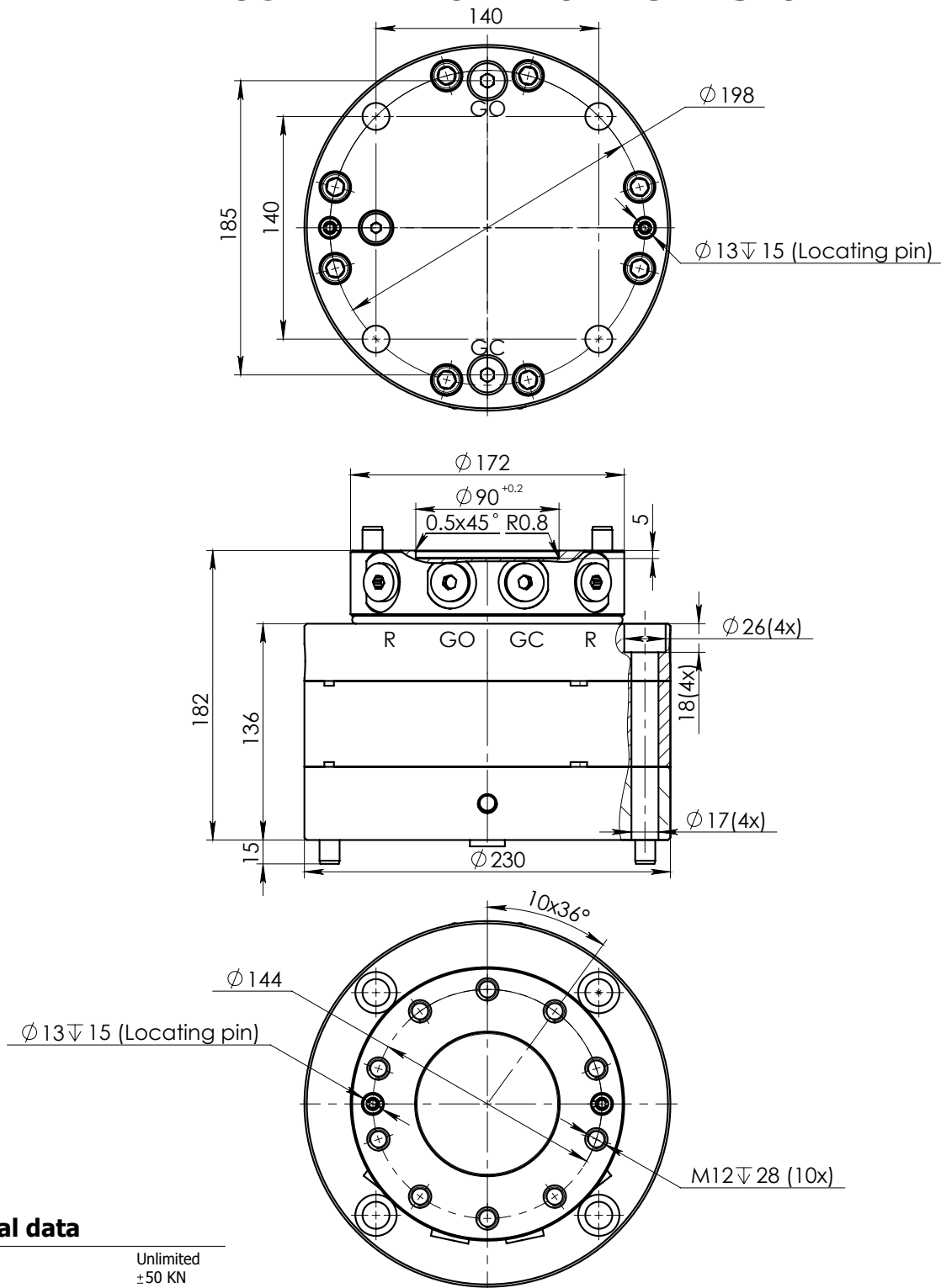
Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa*	15 l/min	M 18x1.5
<b>GO</b> - grapple/tool open	35 MPa		M 18x1.5
<b>GC</b> - grapple/tool close	35 MPa		M 18x1.5

\* Relief valves fitted

Sheet 1 of 3

17.01.2017

# INDUSTRIAL ROTATOR **CPR5-01**



## Technical data

Rotation	Unlimited
Max axial load	±50 KN
Max radial load	36 KN
Torque at 25 Mpa	1350 Nm
Rated displacement	354 cm <sup>3</sup> /rev.
Rotation speed	max 30 rpm
Oil duct area for grapple	95 mm <sup>2</sup>
Weight	47 kg

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa*	15 l/min	M 18x1.5
<b>GO</b> - grapple/tool open	35 MPa		Upper - M 18x1.5; Lower - G 3/8
<b>GC</b> - grapple/tool close	35 MPa		Upper - M 18x1.5; Lower - G 3/8

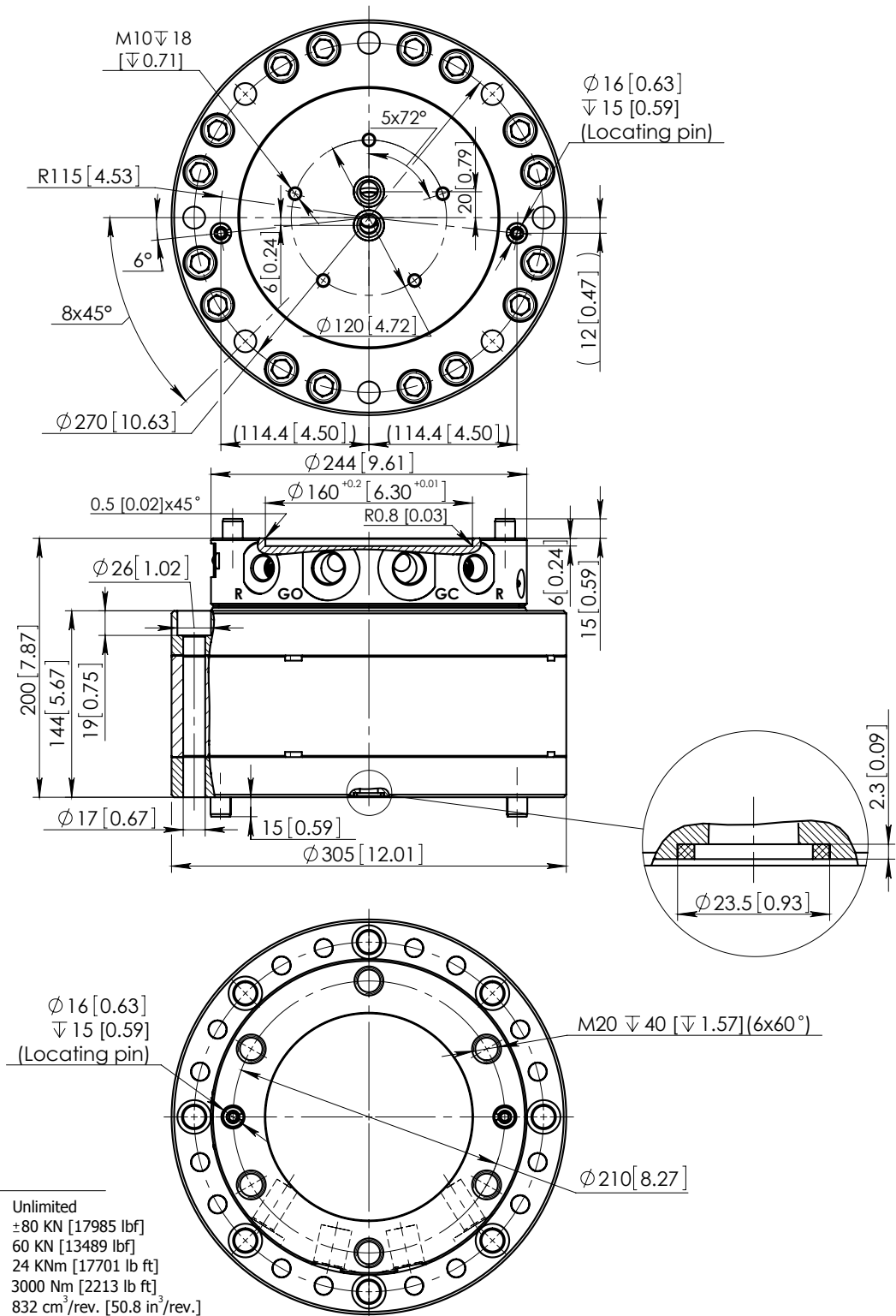
\* Relief valves fitted

Sheet 1 of 3

17.01.2017

# INDUSTRIAL ROTATOR CPR8

(PATENTED)



## Technical data

Rotation	Unlimited
Max axial load	±80 kN [17985 lbf]
Max radial load	60 kN [13489 lbf]
Moment of deflection	24 kNm [17701 lb ft]
Torque at 25 Mpa	3000 Nm [2213 lb ft]
Rated displacement	832 cm <sup>3</sup> /rev. [50.8 in <sup>3</sup> /rev.]
Rotation speed	max 30 rpm
Oil duct area for grapple	150 mm <sup>2</sup> [0.232 in <sup>2</sup> ]
Weight	92 kg [203 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa [3625 psi] *	30 l/min [7.9 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	35 MPa [5076 psi]		G 3/4
<b>GC</b> - grapple/tool close	35 MPa [5076 psi]		G 3/4

\* Relief valves fitted

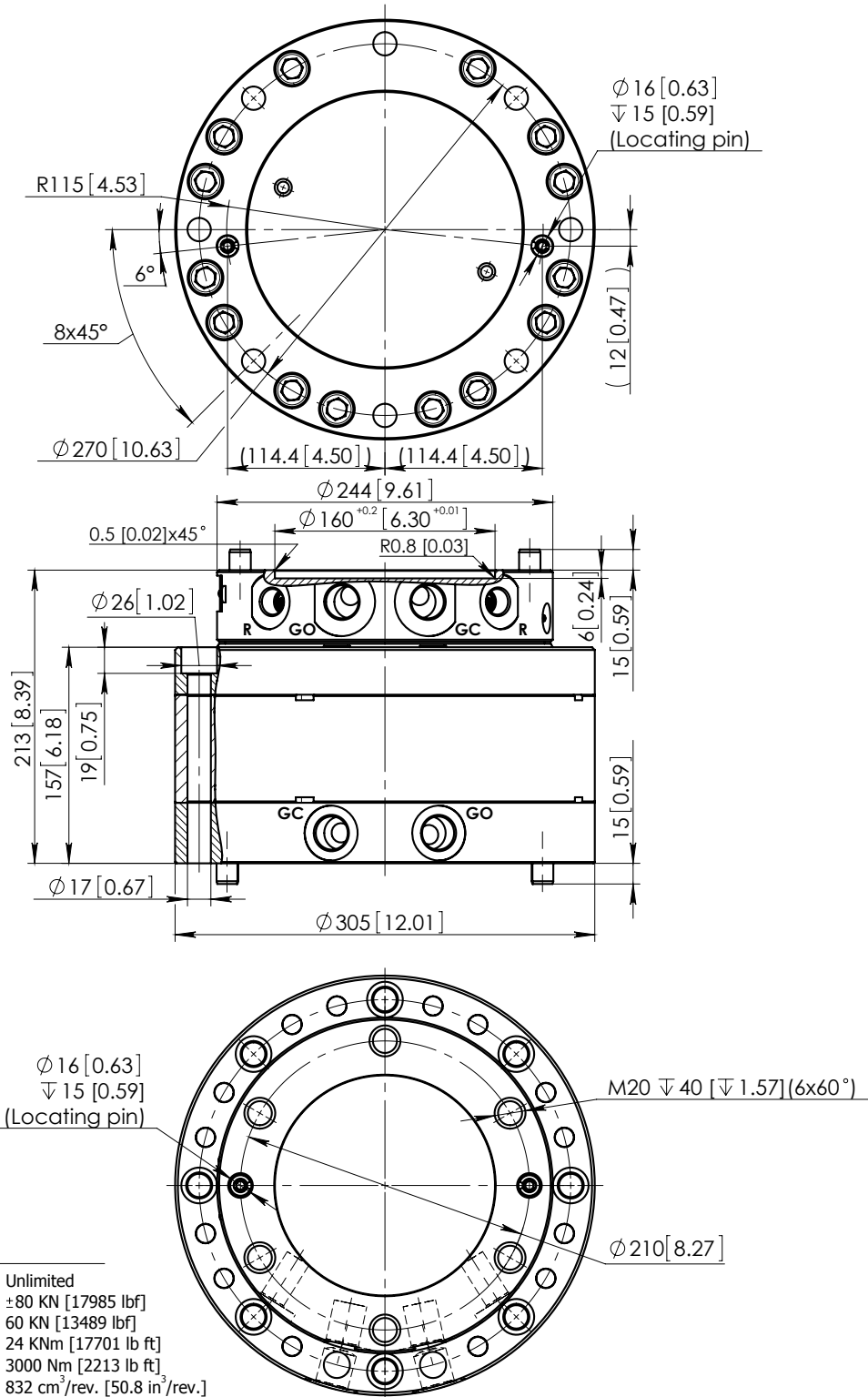
## Operating machine

e.g. excavator max weight

Connected via link	16t
Rigid mounted	10.5t

# INDUSTRIAL ROTATOR **CPR8-01**

(PATENTED)



## Technical data

Rotation	Unlimited
Max axial load	±80 kN [17985 lbf]
Max radial load	60 kN [13489 lbf]
Moment of deflection	24 kNm [17701 lb ft]
Torque at 25 Mpa	3000 Nm [2213 lb ft]
Rated displacement	832 cm <sup>3</sup> /rev. [50.8 in <sup>3</sup> /rev.]
Rotation speed	max 30 rpm
Oil duct area for grapple	150 mm <sup>2</sup> [0.232 in <sup>2</sup> ]
Weight	99 kg [217 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa [3625 psi] *	30 l/min [7.9 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	35 MPa [5076 psi]		G 3/4
<b>GC</b> - grapple/tool close	35 MPa [5076 psi]		G 3/4

\* Relief valves fitted

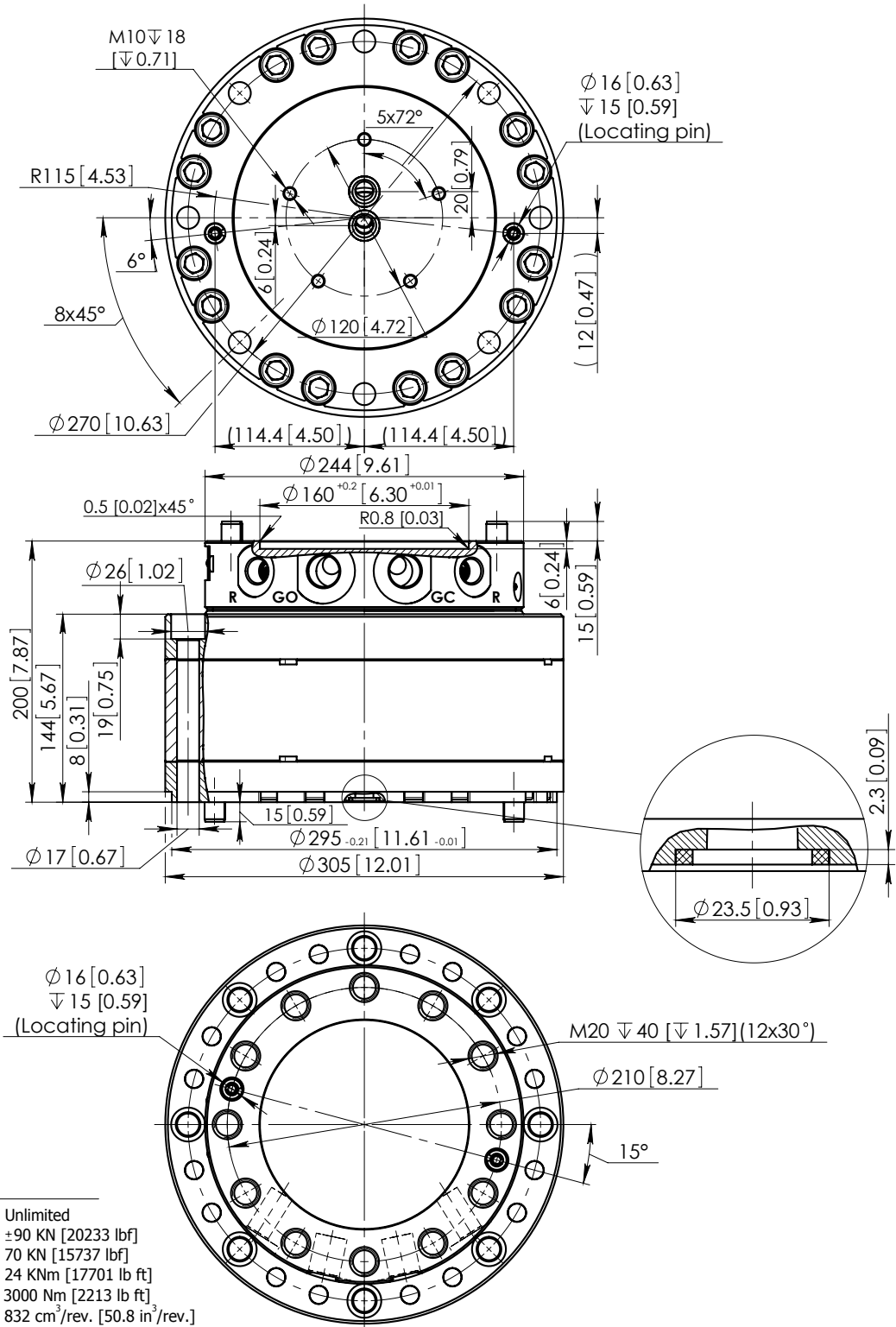
## Operating machine

e.g. excavator max weight

Connected via link 16t  
Rigid mounted 10.5t

# INDUSTRIAL ROTATOR CPR9

(PATENTED)



## Technical data

Rotation	Unlimited
Max axial load	$\pm 90$ KN [20233 lbf]
Max radial load	70 KN [15737 lbf]
Moment of deflection	24 KNm [17701 lb ft]
Torque at 25 Mpa	3000 Nm [2213 lb ft]
Rated displacement	832 cm <sup>3</sup> /rev. [50.8 in <sup>3</sup> /rev.]
Rotation speed	max 30 rpm
Oil duct area for grapple	150 mm <sup>2</sup> [0.232 in <sup>2</sup> ]
Weight	91 kg [201 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa [3625 psi] *	30 l/min [7.9 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	35 MPa [5076 psi]		G 3/4
<b>GC</b> - grapple/tool close	35 MPa [5076 psi]		G 3/4

\* Relief valves fitted

## Operating machine

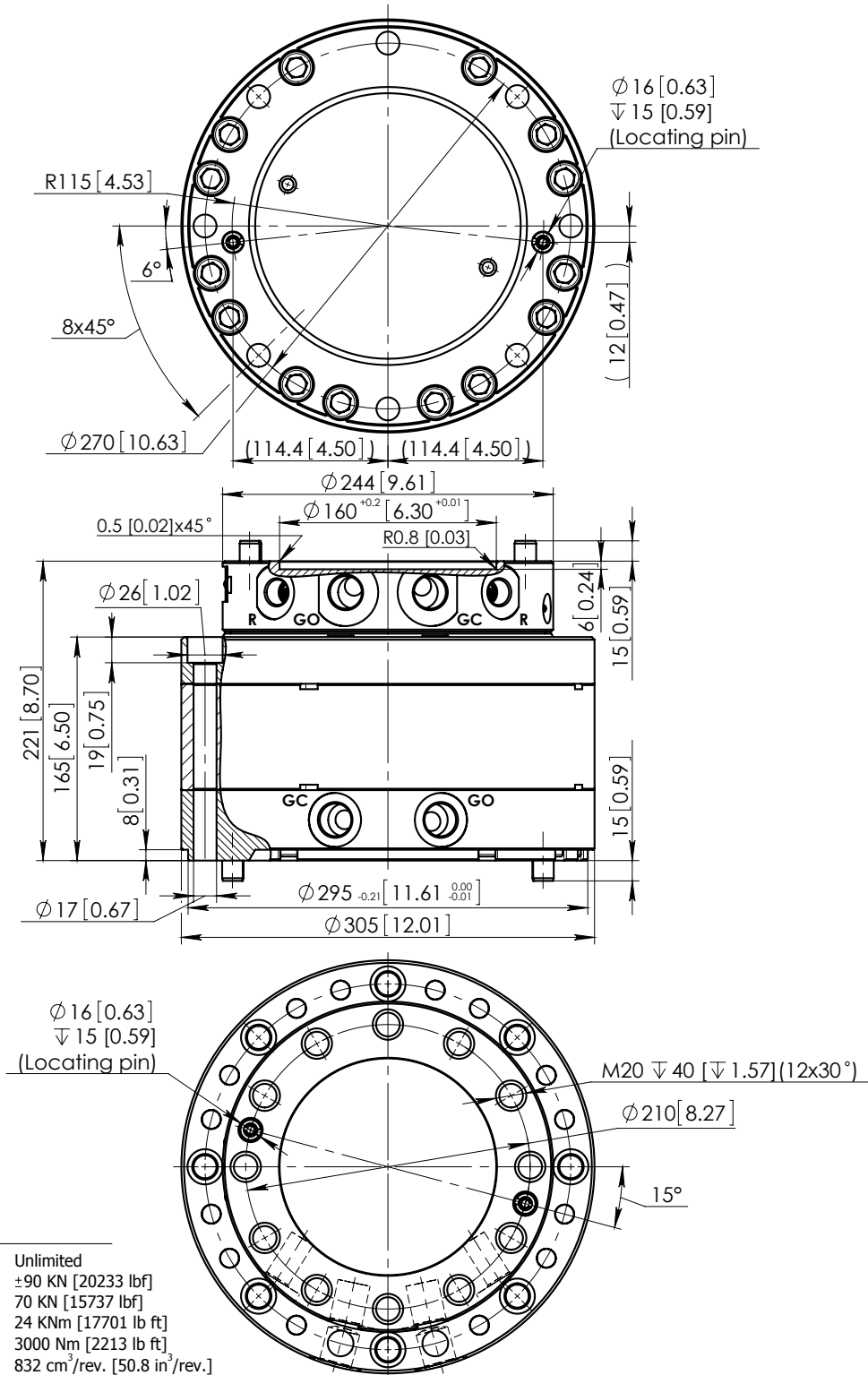
e.g. excavator max weight

Connected via link	16t
Rigid mounted	10.5t



# INDUSTRIAL ROTATOR **CPR9-01**

(PATENTED)



## Technical data

Rotation	Unlimited
Max axial load	±90 kN [20233 lbf]
Max radial load	70 kN [15737 lbf]
Moment of deflection	24 kNm [17701 lb ft]
Torque at 25 Mpa	3000 Nm [2213 lb ft]
Rated displacement	832 cm <sup>3</sup> /rev. [50.8 in <sup>3</sup> /rev.]
Rotation speed	max 30 rpm
Oil duct area for grapple	150 mm <sup>2</sup> [0.232 in <sup>2</sup> ]
Weight	101 kg [222 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa [3625 psi] *	30 l/min [7.9 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	35 MPa [5076 psi]		G 3/4
<b>GC</b> - grapple/tool close	35 MPa [5076 psi]		G 3/4

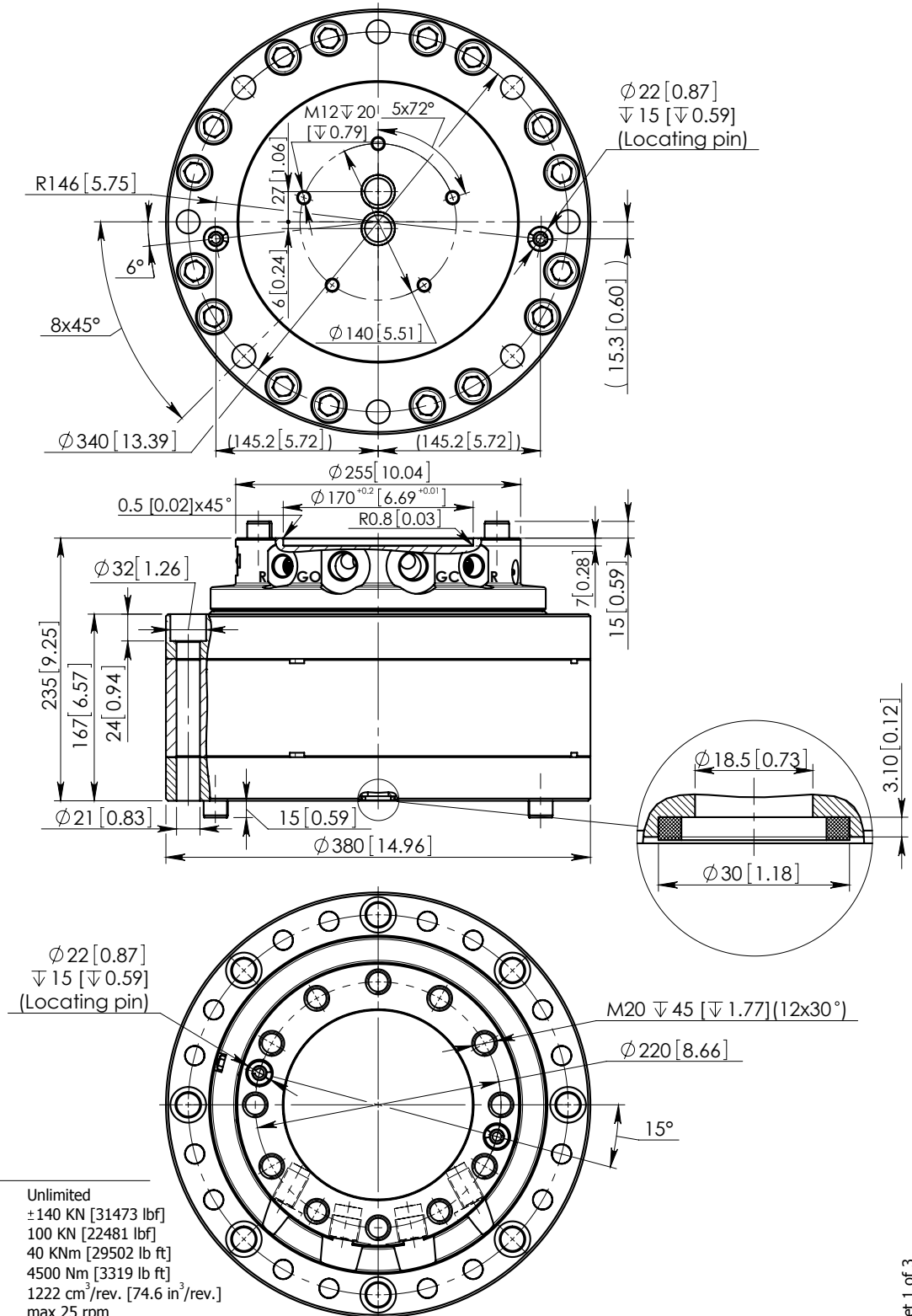
\* Relief valves fitted

## Operating machine

e.g. excavator max weight

Connected via link 16t  
Rigid mounted 10.5t

# INDUSTRIAL ROTATOR CPR14 (PATENTED)



## Technical data

Rotation	Unlimited
Max axial load	±140 kN [31473 lbf]
Max radial load	100 kN [22481 lbf]
Moment of deflection	40 kNm [29502 lb ft]
Torque at 25 Mpa	4500 Nm [3319 lb ft]
Rated displacement	1222 cm <sup>3</sup> /rev. [74.6 in <sup>3</sup> /rev.]
Rotation speed	max 25 rpm
Oil duct area for grapple	260 mm <sup>2</sup> [0.403 in <sup>2</sup> ]
Weight	160 kg [354 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa [3625 psi] *	35 l/min [9.2 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	35 MPa [5076 psi]		G 3/4
<b>GC</b> - grapple/tool close	35 MPa [5076 psi]		G 3/4

\* Relief valves fitted

**Operating machine**  
e.g. excavator max weight

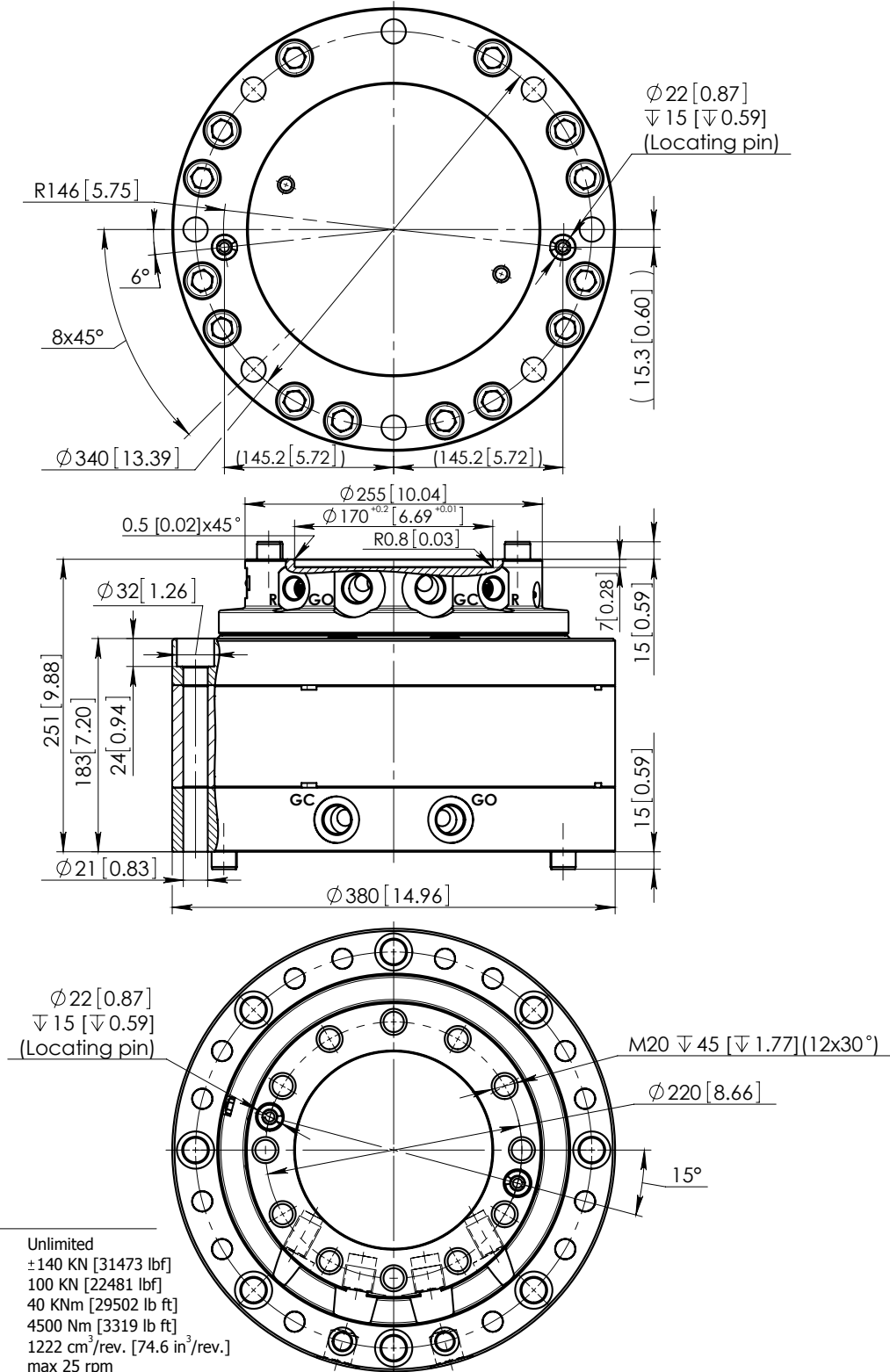
Connected via link 29t  
Rigid mounted 21t

Sheet 1 of 3

02.11.2016

# INDUSTRIAL ROTATOR **CPR14-01**

(PATENTED)



## Technical data

Rotation	Unlimited
Max axial load	±140 kN [31473 lbf]
Max radial load	100 kN [22481 lbf]
Moment of deflection	40 kNm [29502 lb ft]
Torque at 25 Mpa	4500 Nm [3319 lb ft]
Rated displacement	1222 cm <sup>3</sup> /rev. [74.6 in <sup>3</sup> /rev.]
Rotation speed	max 25 rpm
Oil duct area for grapple	260 mm <sup>2</sup> [0.403 in <sup>2</sup> ]
Weight	173 kg [381 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa [3625 psi] *	35 l/min [9.2 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	35 MPa [5076 psi]		G 3/4
<b>GC</b> - grapple/tool close	35 MPa [5076 psi]		G 3/4

\* Relief valves fitted

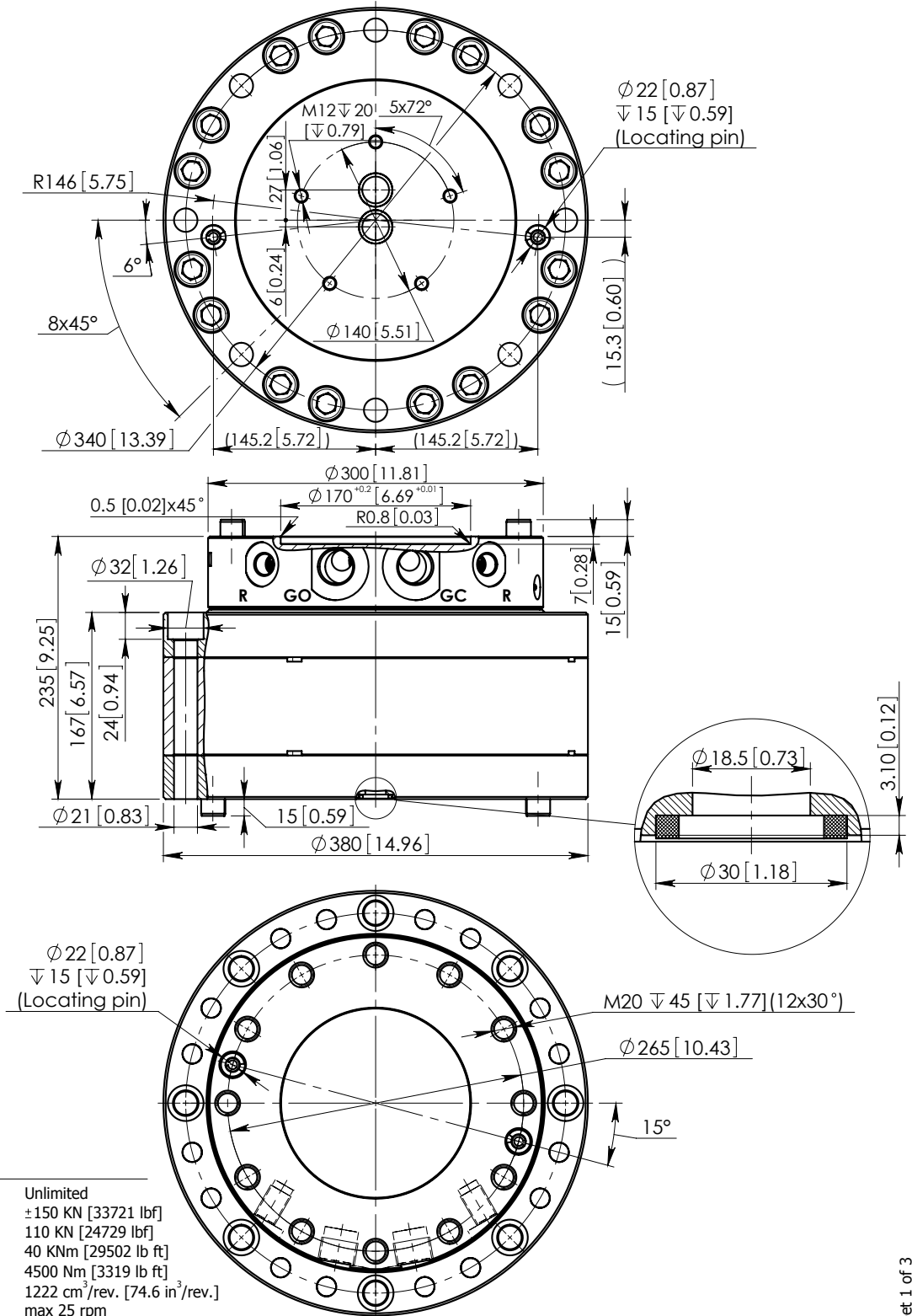
## Operating machine

e.g. excavator max weight

Connected via link 29t  
Rigid mounted 21t

# INDUSTRIAL ROTATOR **CPR15**

(PATENTED)



## Technical data

Rotation	Unlimited
Max axial load	± 150 kN [33721 lbf]
Max radial load	110 kN [24729 lbf]
Moment of deflection	40 kNm [29502 lb ft]
Torque at 25 Mpa	4500 Nm [3319 lb ft]
Rated displacement	1222 cm <sup>3</sup> /rev. [74.6 in <sup>3</sup> /rev.]
Rotation speed	max 25 rpm
Oil duct area for grapple	260 mm <sup>2</sup> [0.403 in <sup>2</sup> ]
Weight	167 kg [367 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa [3625 psi] *	35 l/min [9.2 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	35 MPa [5076 psi]		G 1
<b>GC</b> - grapple/tool close	35 MPa [5076 psi]		G 1

\* Relief valves fitted

## Operating machine

e.g. excavator max weight

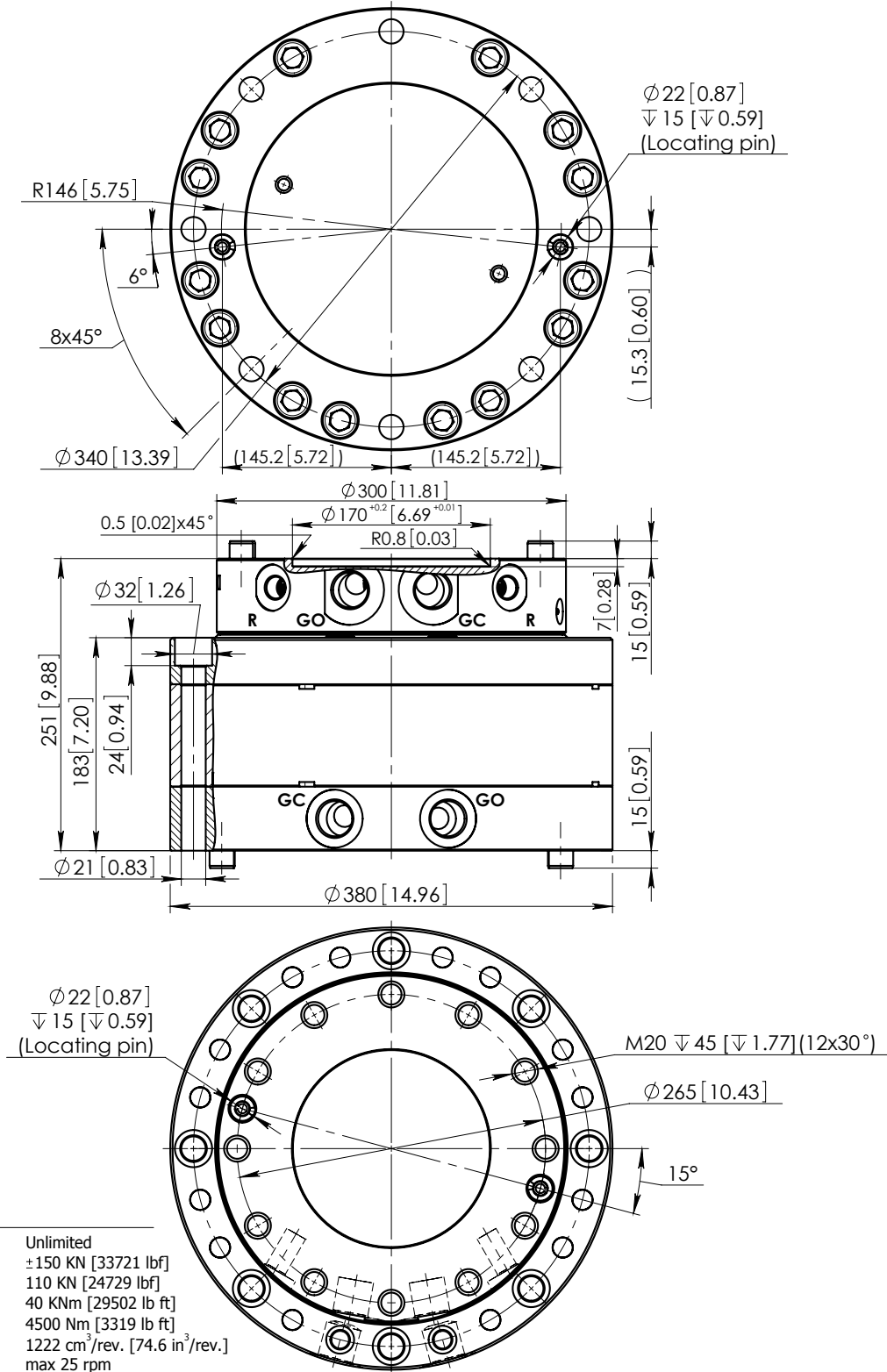
Connected via link 29t  
Rigid mounted 21t

Sheet 1 of 3

02.11.2016

# INDUSTRIAL ROTATOR **CPR15-01**

(PATENTED)



## Technical data

Rotation	Unlimited
Max axial load	$\pm 150$ KN [33721 lbf]
Max radial load	110 KN [24729 lbf]
Moment of deflection	40 KNm [29502 lb ft]
Torque at 25 Mpa	4500 Nm [3319 lb ft]
Rated displacement	1222 cm <sup>3</sup> /rev. [74.6 in <sup>3</sup> /rev.]
Rotation speed	max 25 rpm
Oil duct area for grapple	260 mm <sup>2</sup> [0.403 in <sup>2</sup> ]
Weight	179 kg [395 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa [3625 psi] *	35 l/min [9.2 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	35 MPa [5076 psi]		G 1
<b>GC</b> - grapple/tool close	35 MPa [5076 psi]		G 1

\* Relief valves fitted

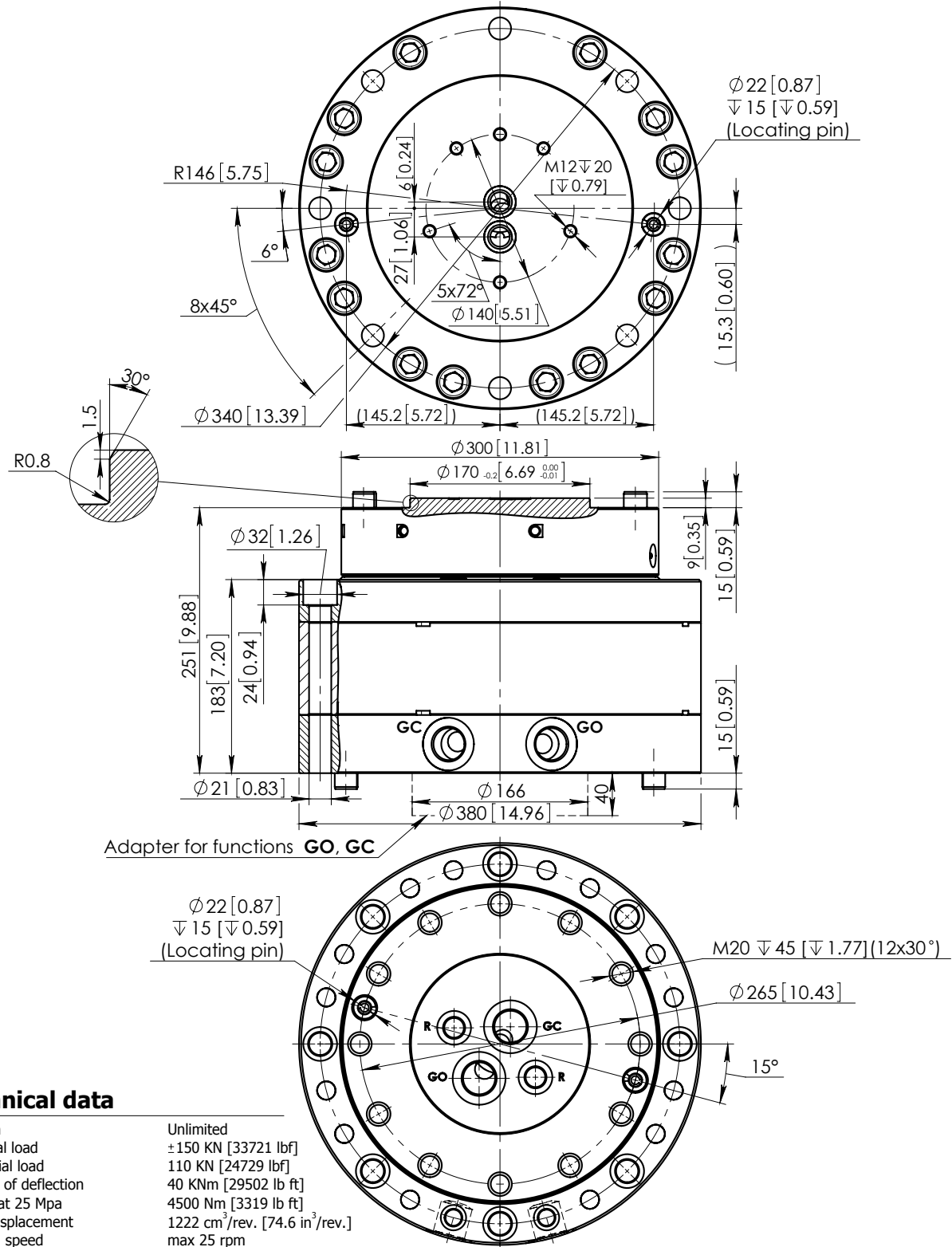
## Operating machine

e.g. excavator max weight

Connected via link 29t  
Rigid mounted 21t

# INDUSTRIAL ROTATOR **CPR15-03**

(PATENTED)



## Technical data

Rotation	Unlimited
Max axial load	±150 kN [33721 lbf]
Max radial load	110 kN [24729 lbf]
Moment of deflection	40 kNm [29502 lb ft]
Torque at 25 Mpa	4500 Nm [3319 lb ft]
Rated displacement	1222 cm <sup>3</sup> /rev. [74.6 in <sup>3</sup> /rev.]
Rotation speed	max 25 rpm
Oil duct area for grapple	260 mm <sup>2</sup> [0.403 in <sup>2</sup> ]
Weight	182 kg [401 lb]

Function	Max working pressure	Rec oilflow	Connection
<b>R</b> - rotation	25 MPa [3625 psi] *	35 l/min [9.2 gal(US)/min]	G 1/2
<b>GO</b> - grapple/tool open	35 MPa [5076 psi]		G 1
<b>GC</b> - grapple/tool close	35 MPa [5076 psi]		G 1

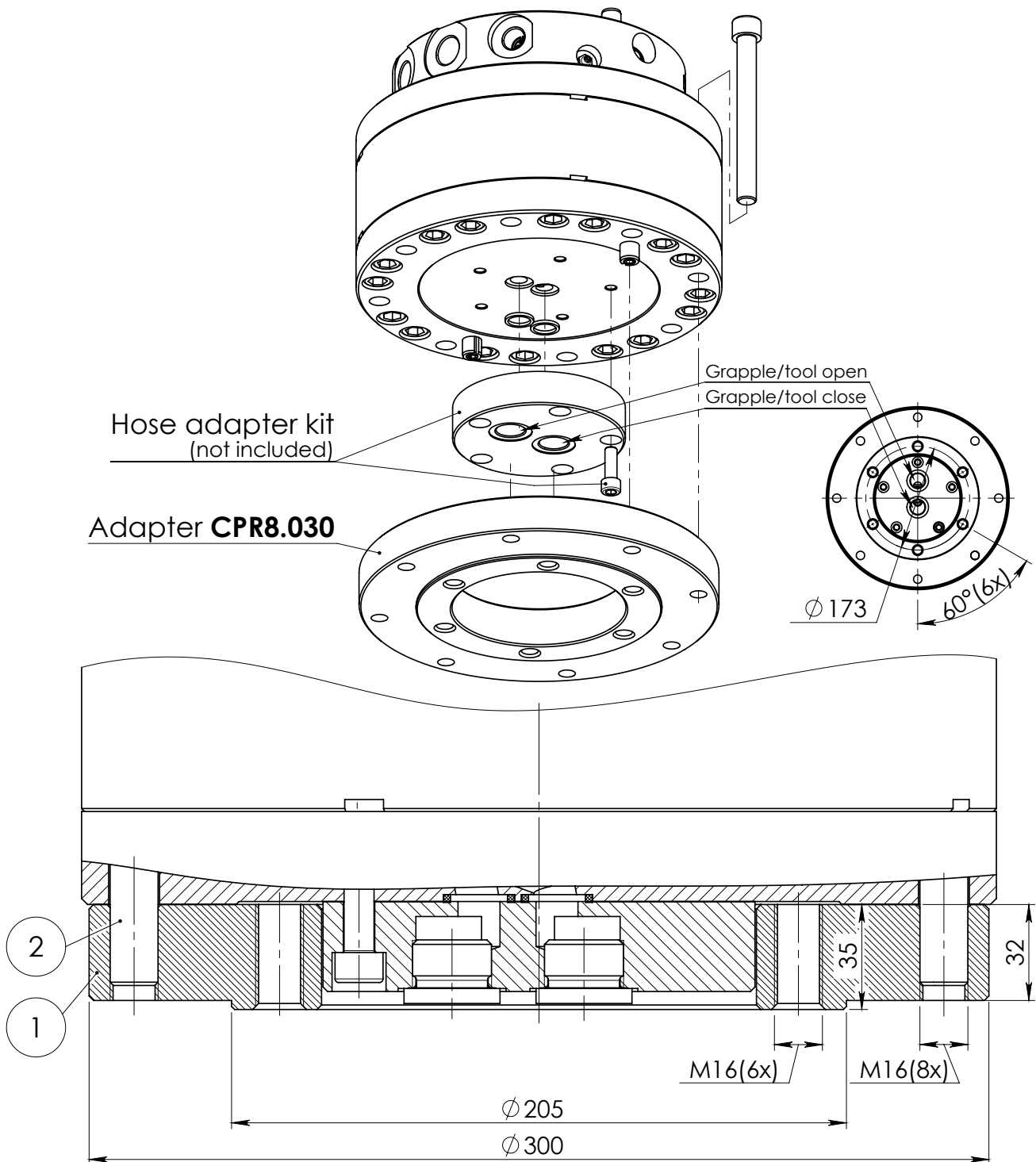
\* Relief valves fitted

## Operating machine

e.g. excavator max weight

Connected via link 29t  
Rigid mounted 21t

# Adapter **CPR8.030** for Industrial rotator **CPR8** series

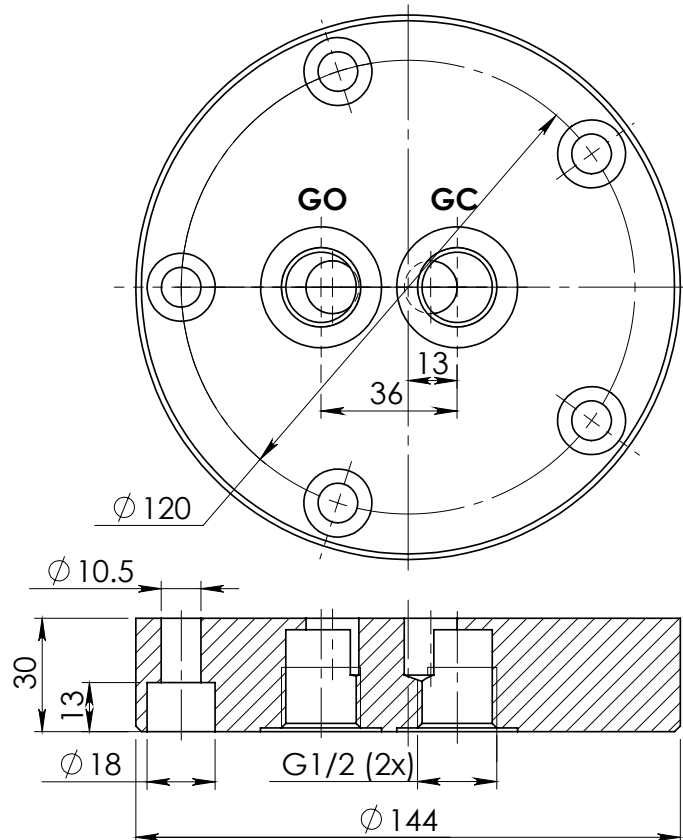
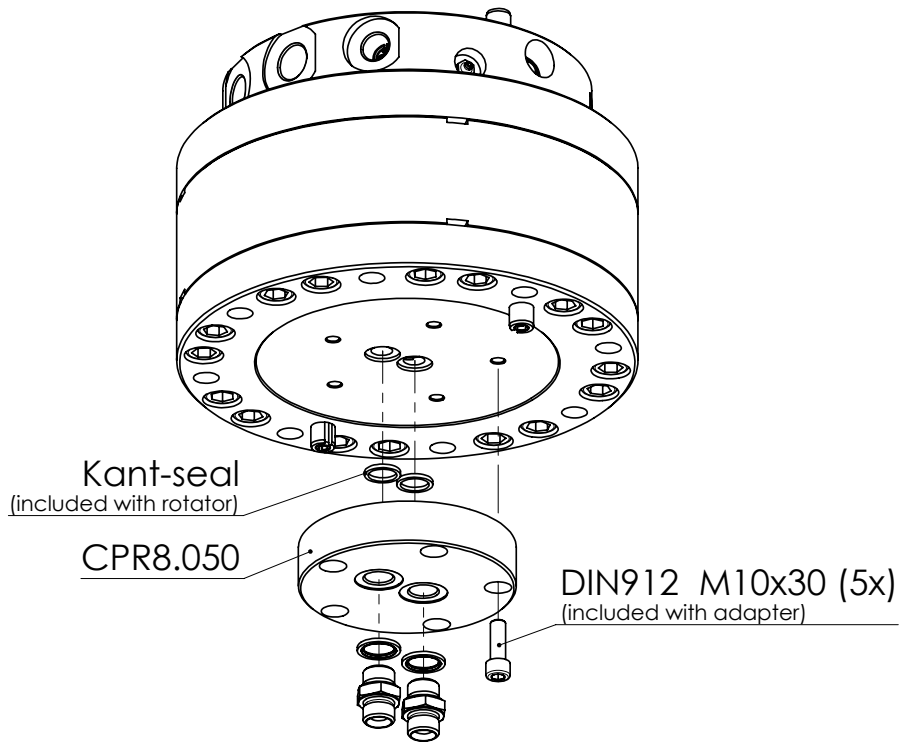


**List of parts included**

Pos.	Part	Title	Quantity	Notes
1	CPR8.030	Adapter	1	
2	G111.1460	Screw	8	DIN912 M16x150 12.9

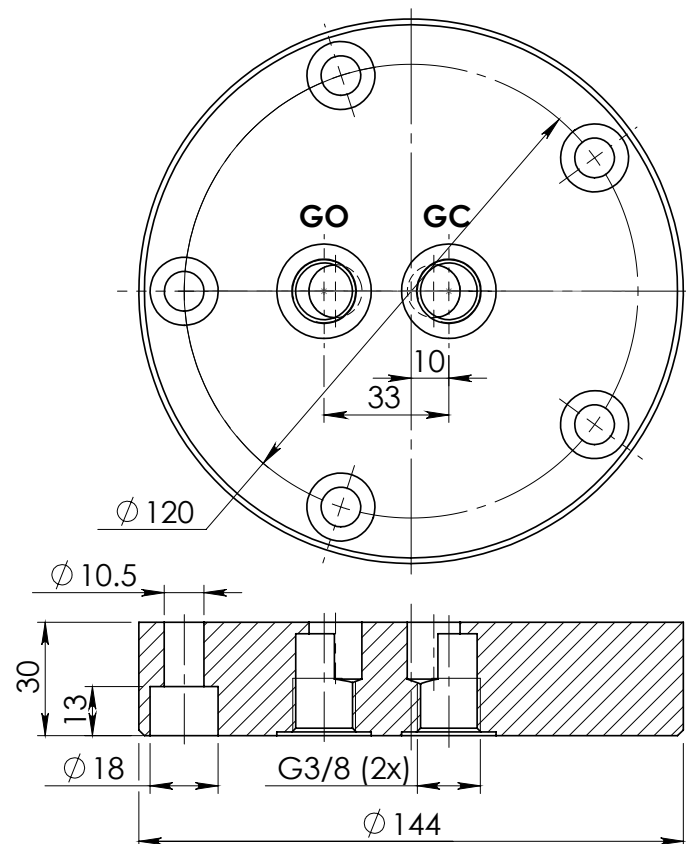
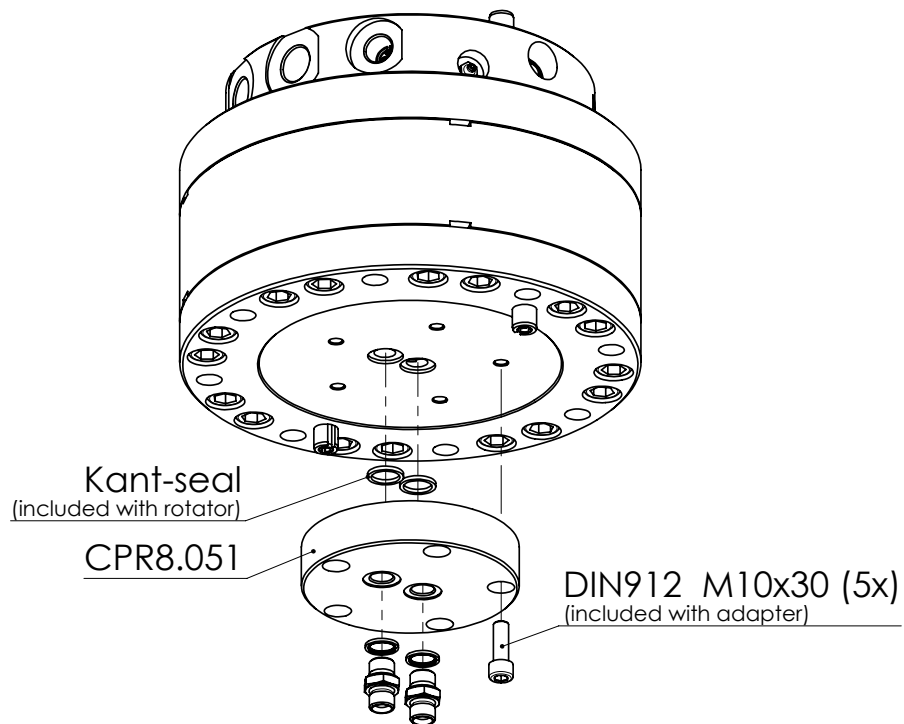
2010.02.08. Sheet 1 of 1

# Adapter **CPR8.050** for Industrial rotator **CPR8** series

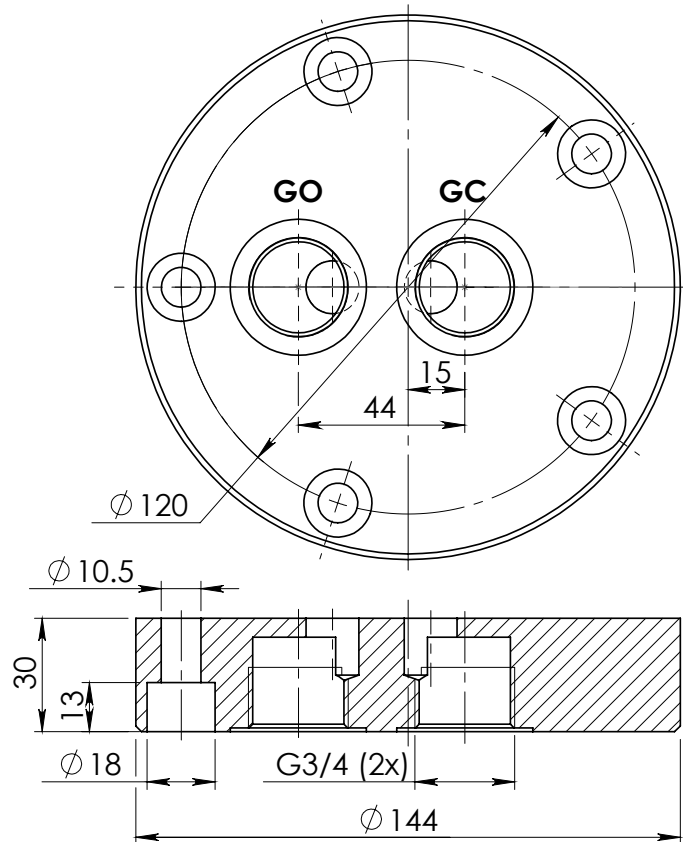
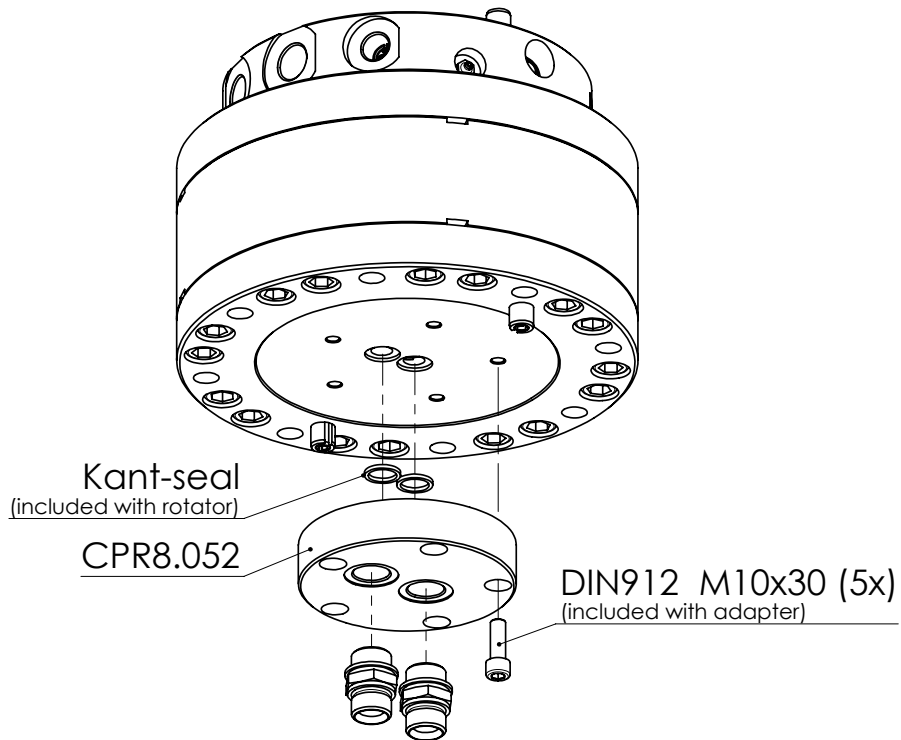




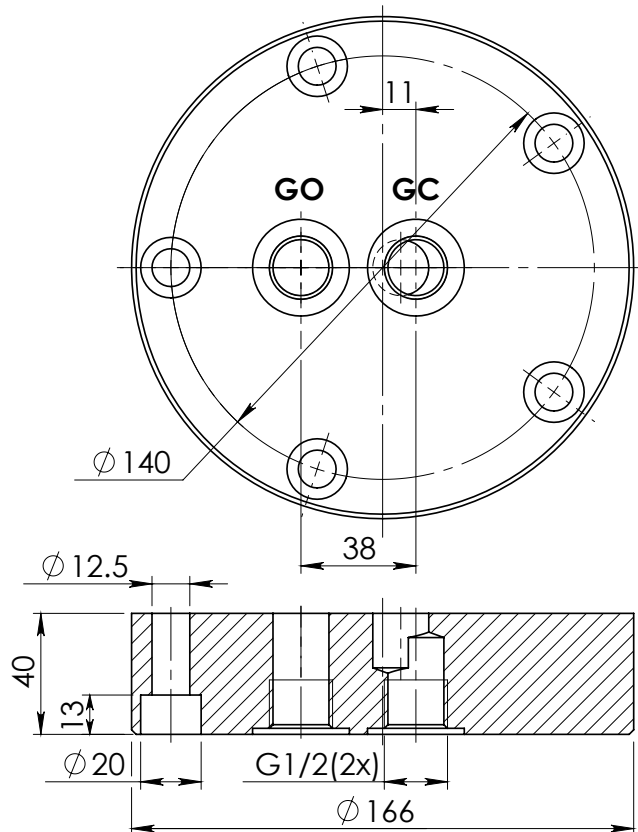
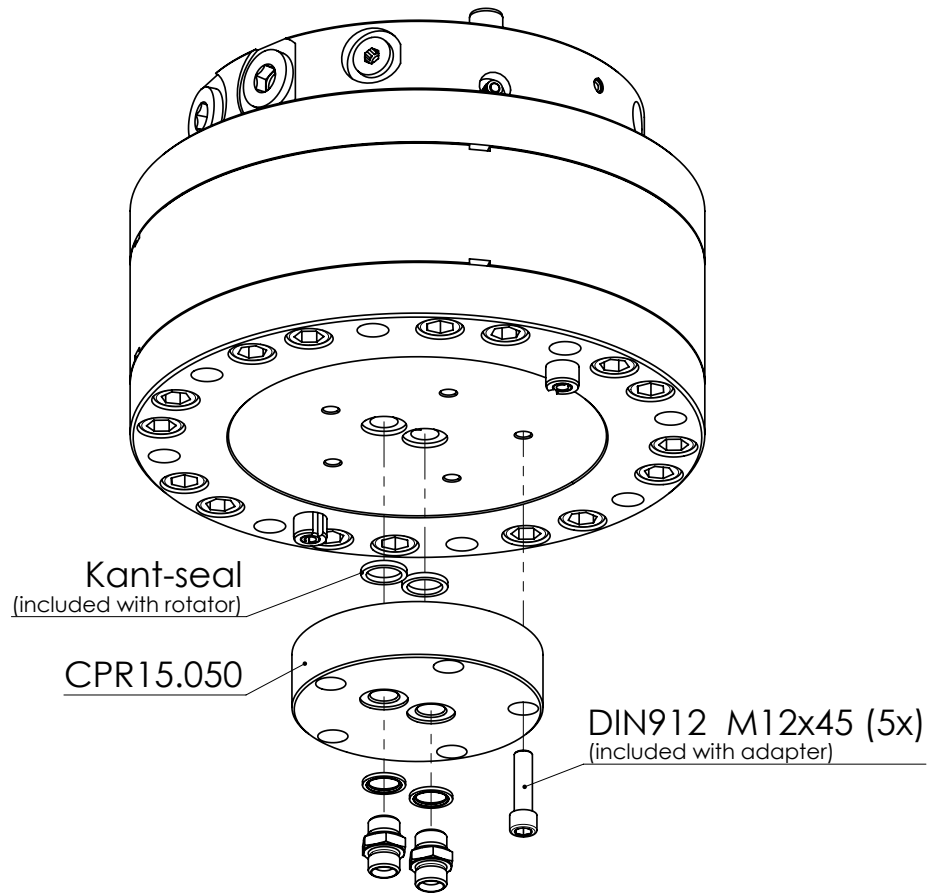
# Adapter **CPR8.051** for Industrial rotator **CPR8** series



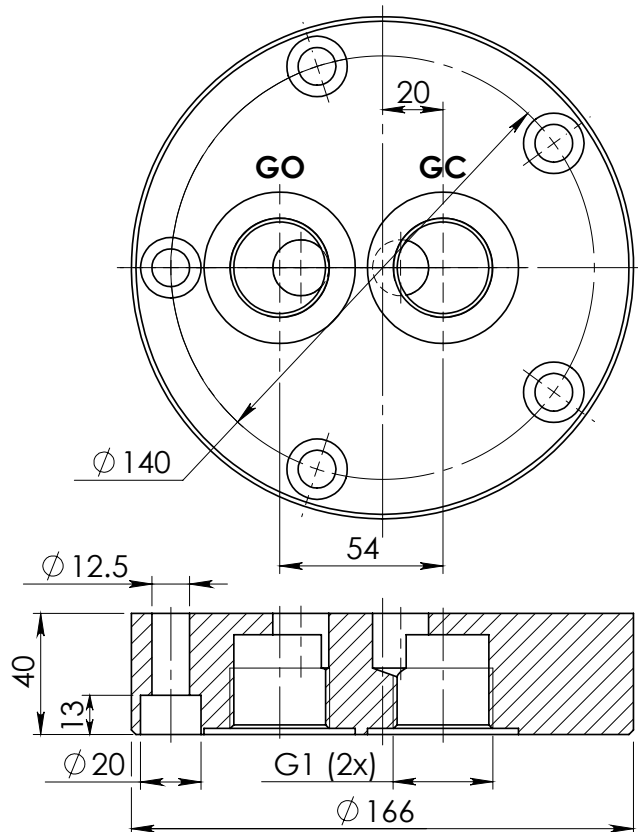
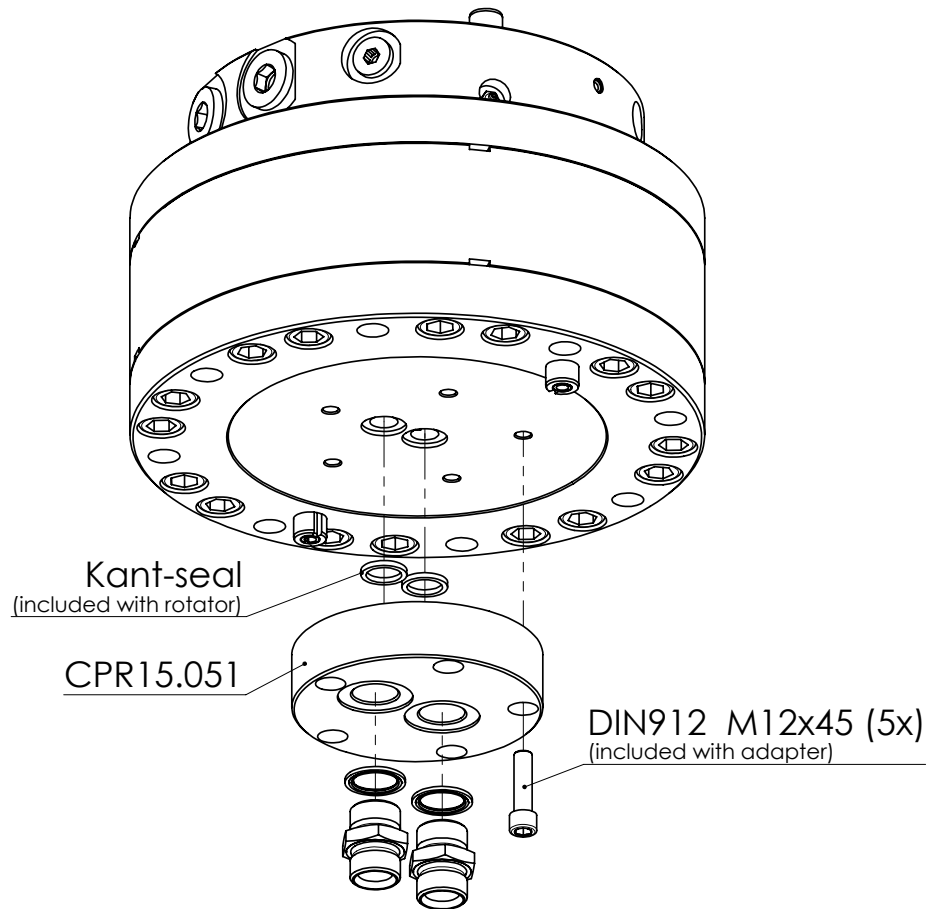
# Adapter **CPR8.052** for Industrial rotator **CPR8** series



# Adapter **CPR15.050** for Industrial rotator **CPR15** series

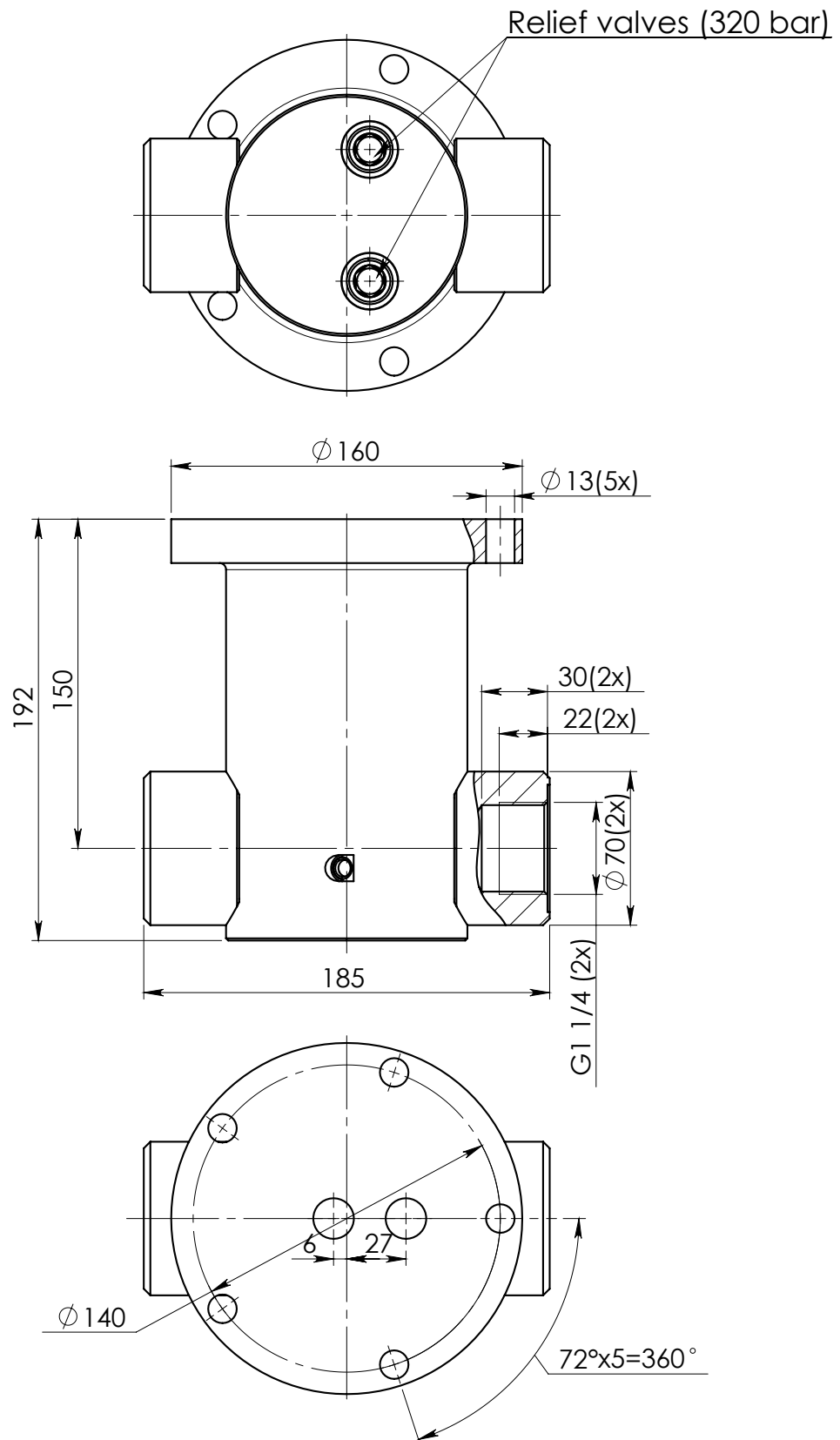


# Adapter **CPR15.051** for Industrial rotator **CPR15** series



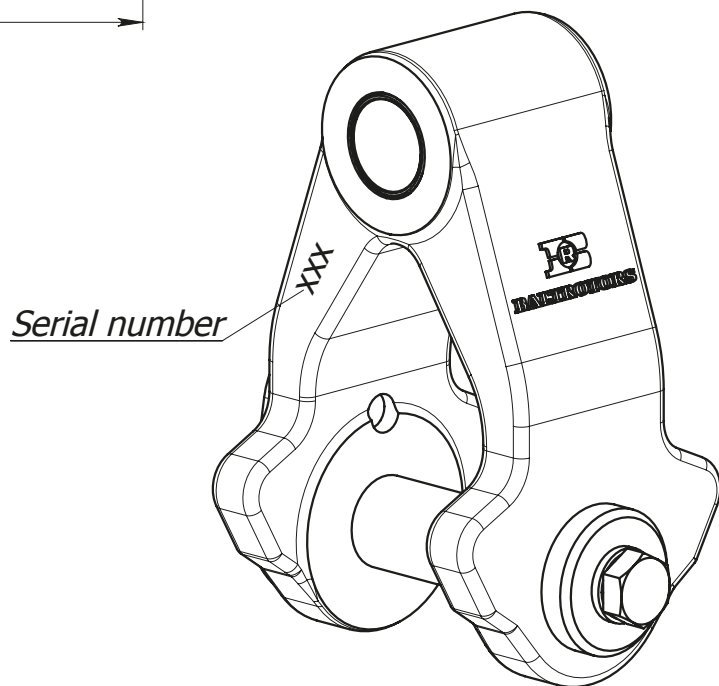
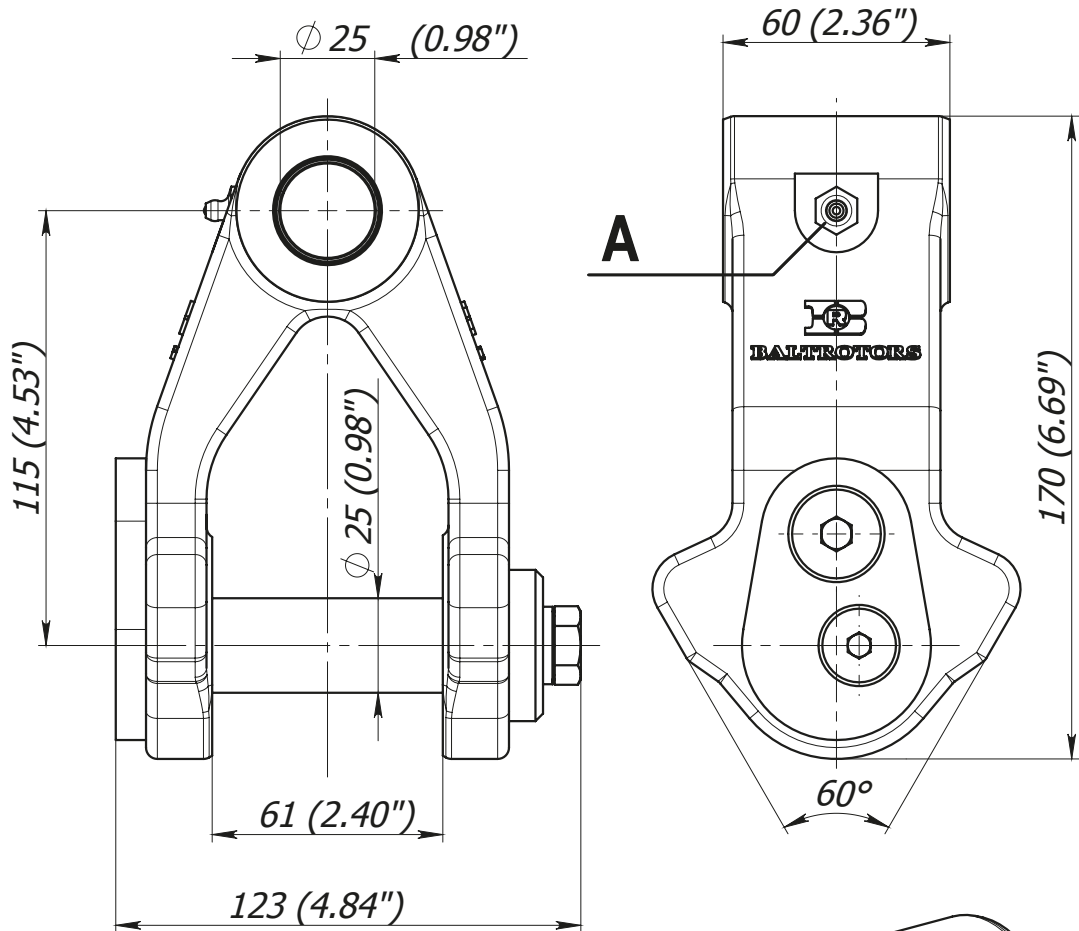
2009.11.06. Sheet 1 of 1

# Adapter **CPR15.500** for Industrial rotator **CPR15**



2009.04.27. Sheet 1 of 1

# LINK BRM1-60-01

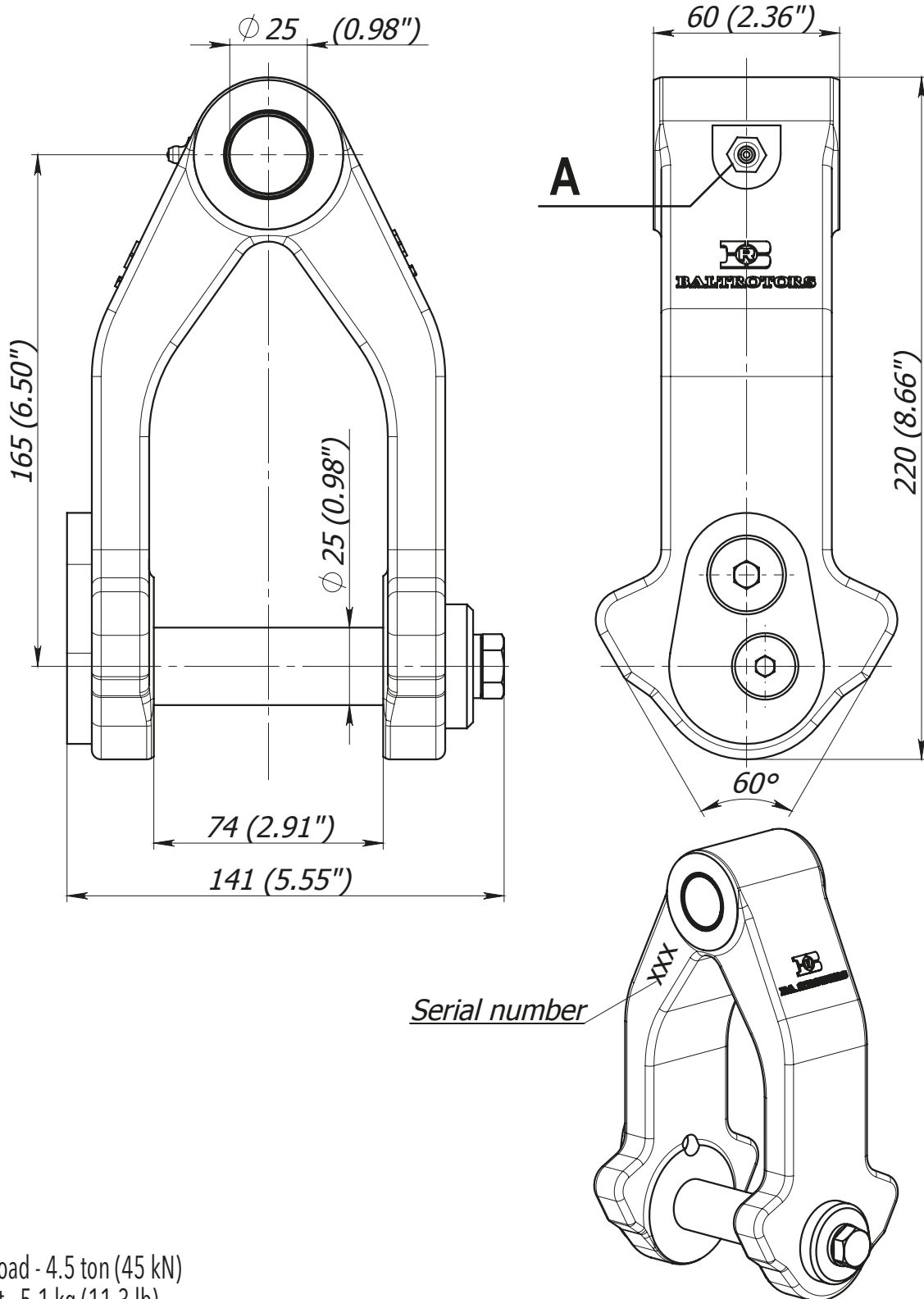


Max. Load - 3 ton (30 kN)

Weight - 3.7 kg (8.3 lb)

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

# LINK BRM1-73-01

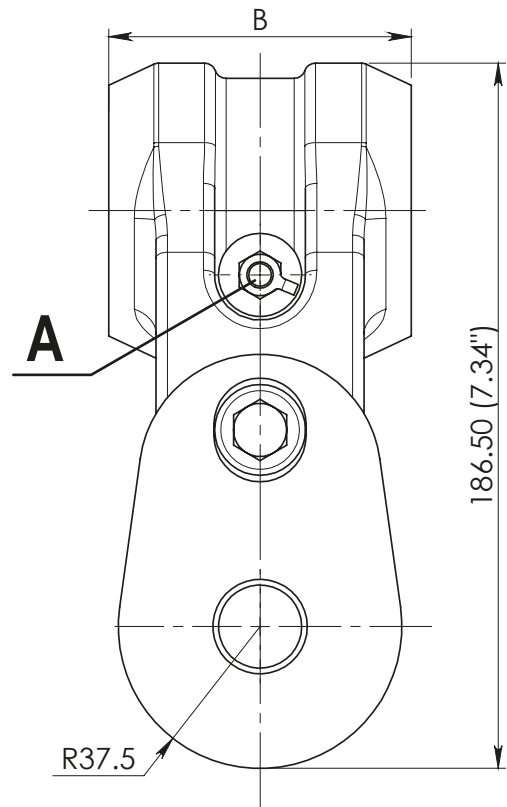
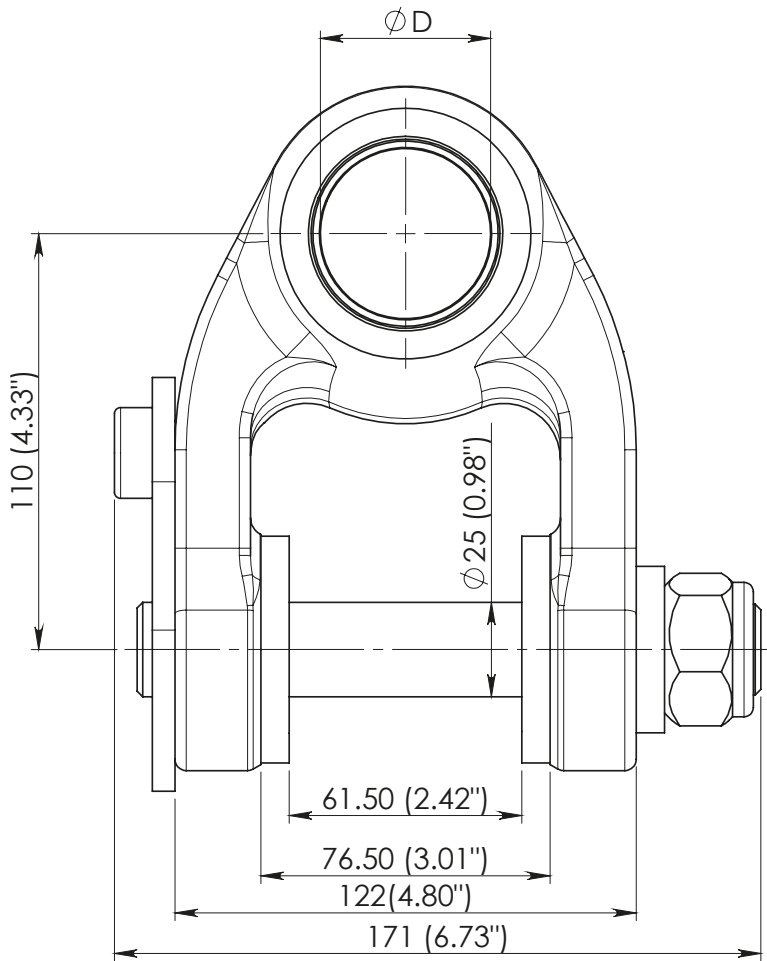


Max. Load - 4.5 ton (45 kN)

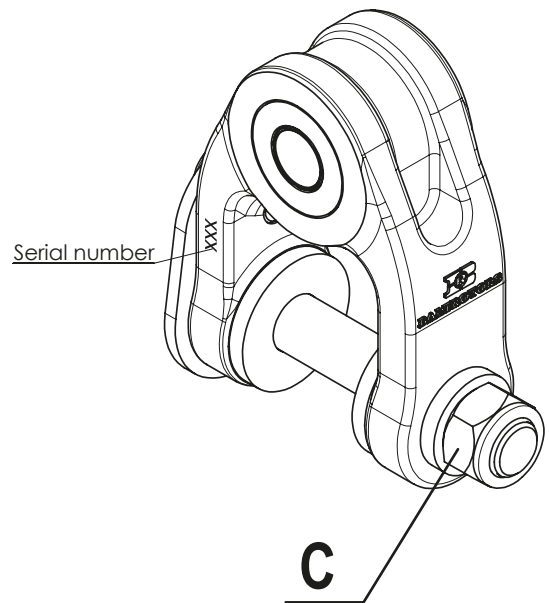
Weight - 5.1 kg (11.3 lb)

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

# LINK BR1



Dimensions			
Crane nose pivot pin diameter $\varnothing D$ (mm)	Link width B (mm)		
	80 <sup>0</sup> <sub>-0.3</sub> (3.15")	70 <sup>0</sup> <sub>-0.3</sub> (2.76")	60 <sup>0</sup> <sub>-0.3</sub> (2.36")
45 (1.77")	BR1/80/45	BR1/70/45	BR1/60/45
40 (1.57")	BR1/80/40	BR1/70/40	BR1/60/40
35 (1.38")	BR1/80/35	BR1/70/35	BR1/60/35
30 (1.18")	BR1/80/30	BR1/70/30	BR1/60/30
25 (0.98")	BR1/80/25	BR1/70/25	BR1/60/25
20 (0.79")	BR1/80/20	BR1/70/20	BR1/60/20



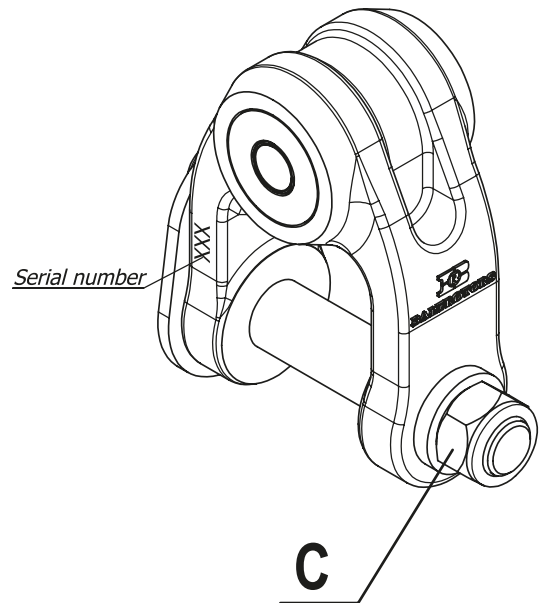
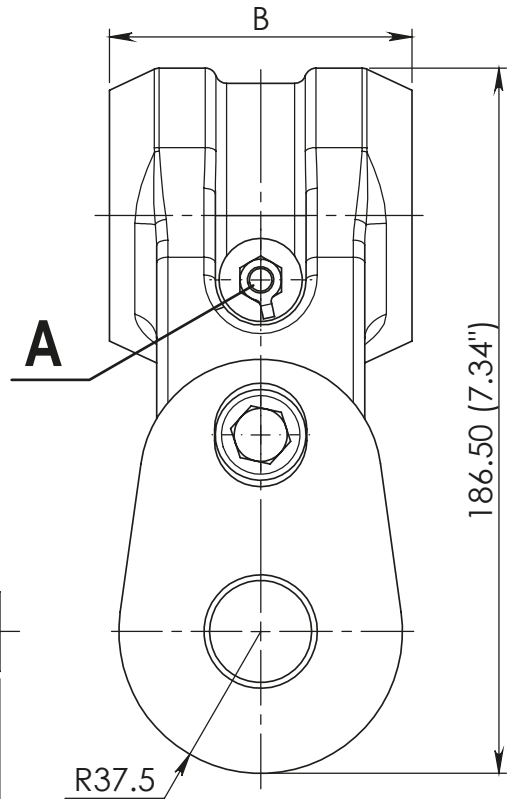
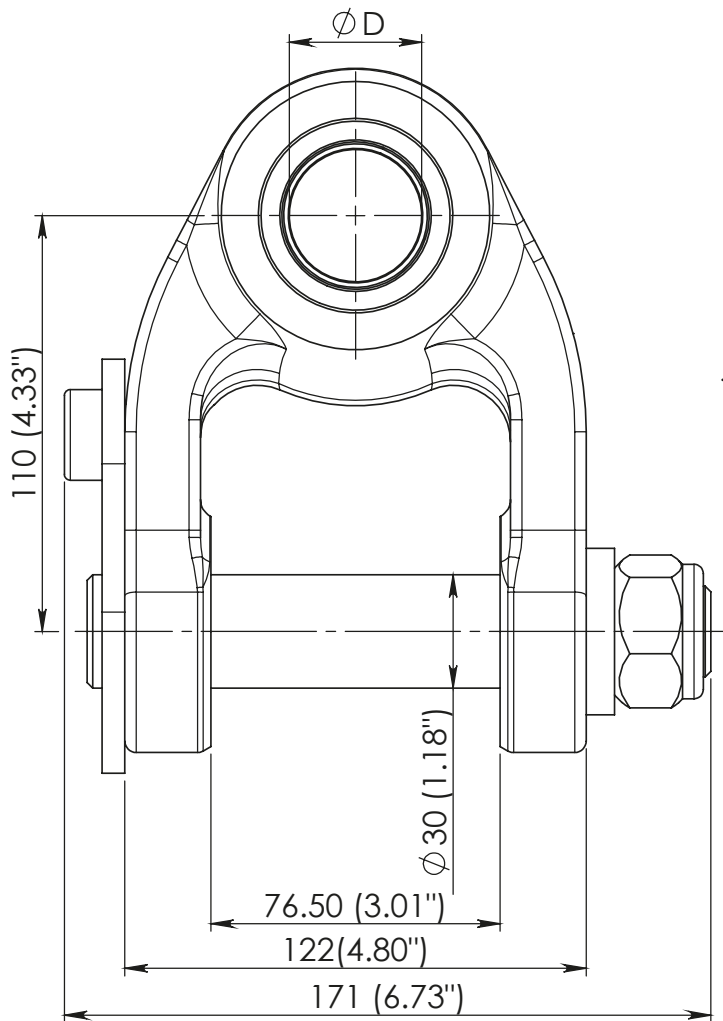
Max. Load - 5.5 ton (55 kN); Weight - 5.5±1 kg (12.1±2.2 lb)

Pin locking nut (C) has to be tightened with a torque of 120 Nm (89 lb ft).

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.



# LINK BR1-A



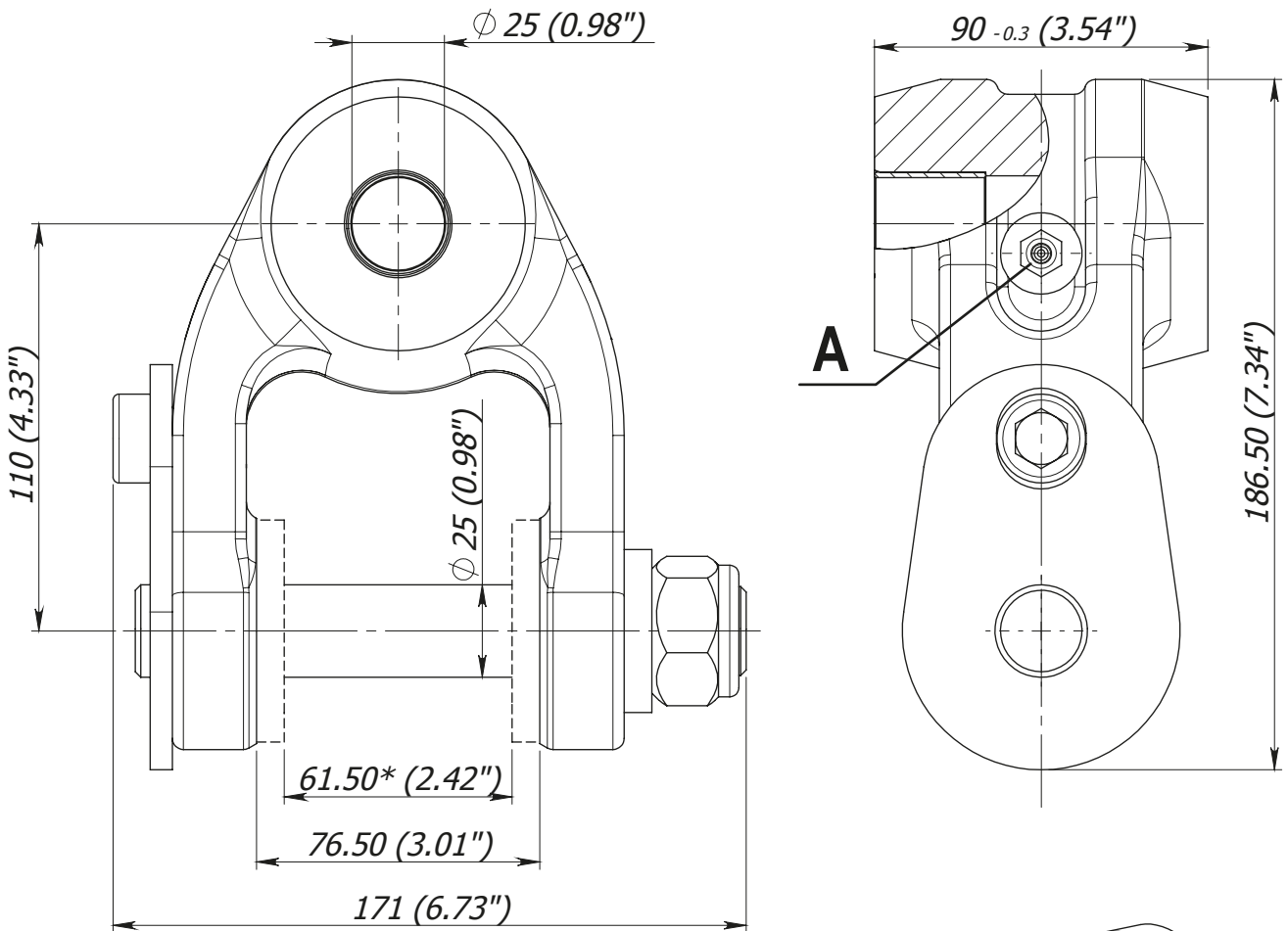
Dimensions			
Crane nose pivot pin diameter $\varnothing D$ (mm)	Link width B (mm)		
	80 <sup>0</sup> <sub>0.3</sub> (3.15")	70 <sup>0</sup> <sub>0.3</sub> (2.76")	60 <sup>0</sup> <sub>0.3</sub> (2.36")
45 (1.77")	BR1-A/80/45	BR1-A/70/45	BR1-A/60/45
40 (1.57")	BR1-A/80/40	BR1-A/70/40	BR1-A/60/40
35 (1.38")	BR1-A/80/35	BR1-A/70/35	BR1-A/60/35
30 (1.18")	BR1-A/80/30	BR1-A/70/30	BR1-A/60/30
25 (0.98")	BR1-A/80/25	BR1-A/70/25	BR1-A/60/25
20 (0.79")	BR1-A/80/20	BR1-A/70/20	BR1-A/60/20

Max. Load - 5.5 ton (55 kN); Weight - 5.5±1 kg (12.1±2.2 lb)

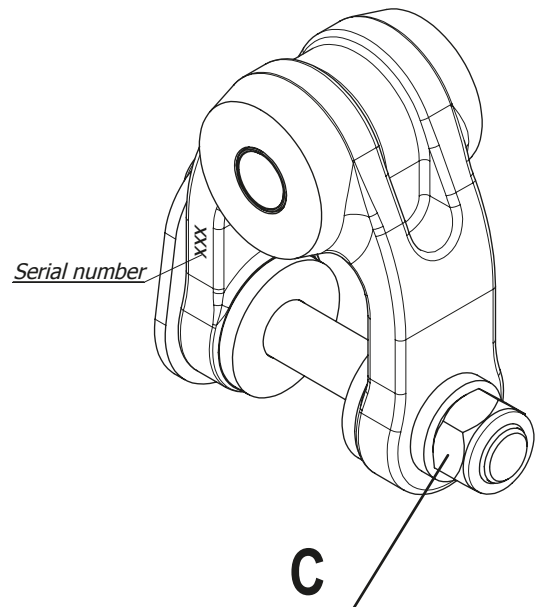
Pin locking nut (C) has to be tightened with a torque of 120 Nm (89 lb ft).

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

# LINK BR1/90/25



\* Only by request for rotator GR 30



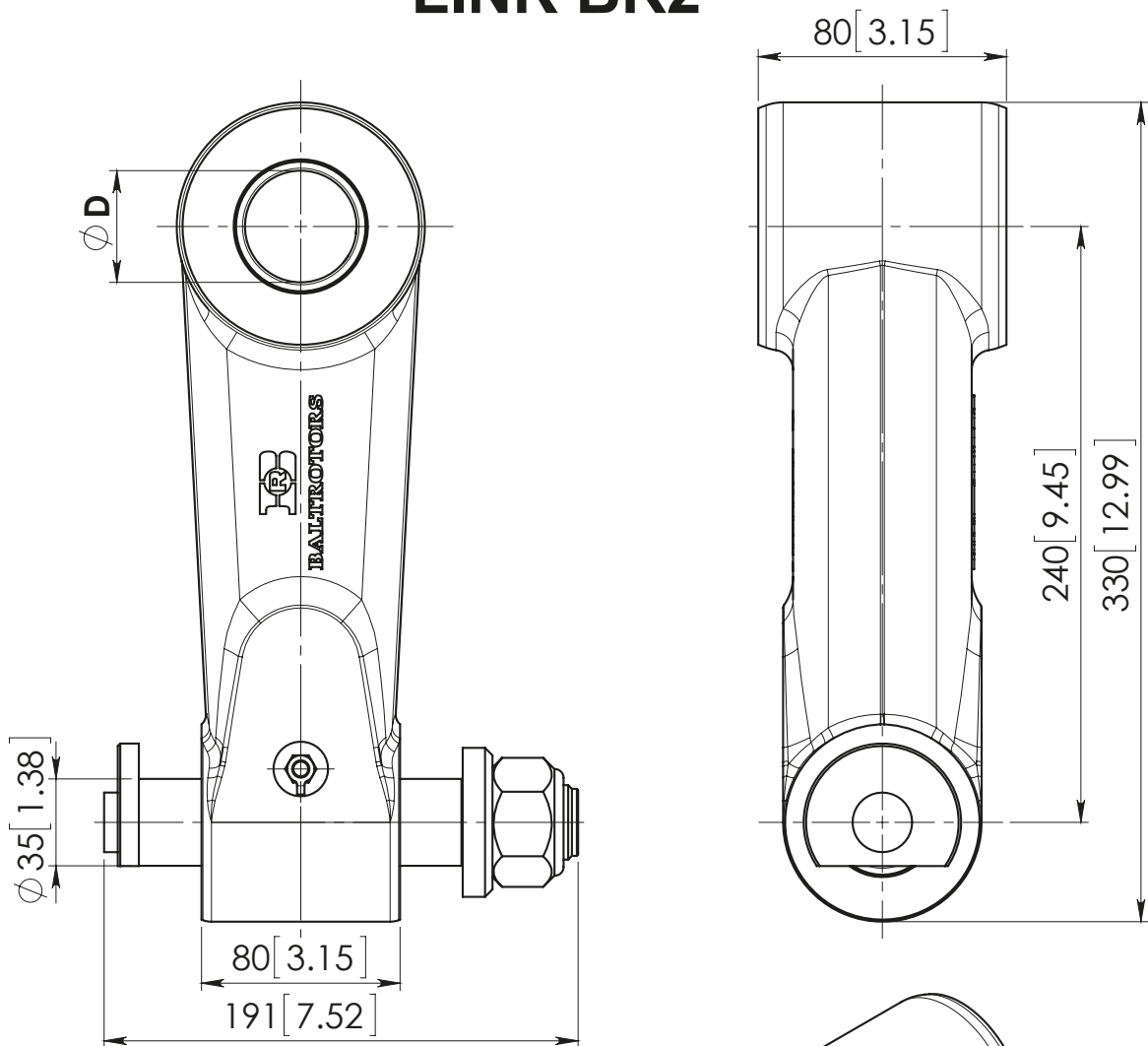
Max. Load - 5.5 ton (55 kN)

Weight - 5.5±1 kg (12.1±2.2 lb)

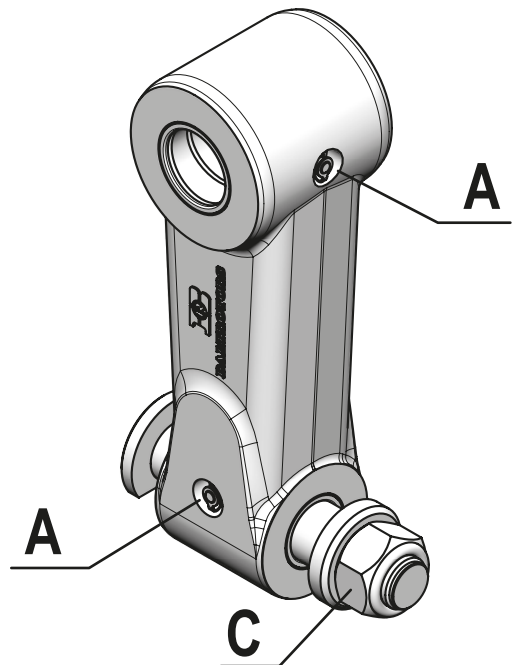
Pin locking nut (C) has to be tightened with a torque of 120 Nm (89 lb ft).

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

# LINK BR2



Bushing diameter [mm]	
Upper bushing $\phi D$ :	Link name:
45 [1.77"]	BR2/45
40 [1.57"]	BR2/40
35 [1.38"]	BR2/35
30 [1.18"]	BR2/30



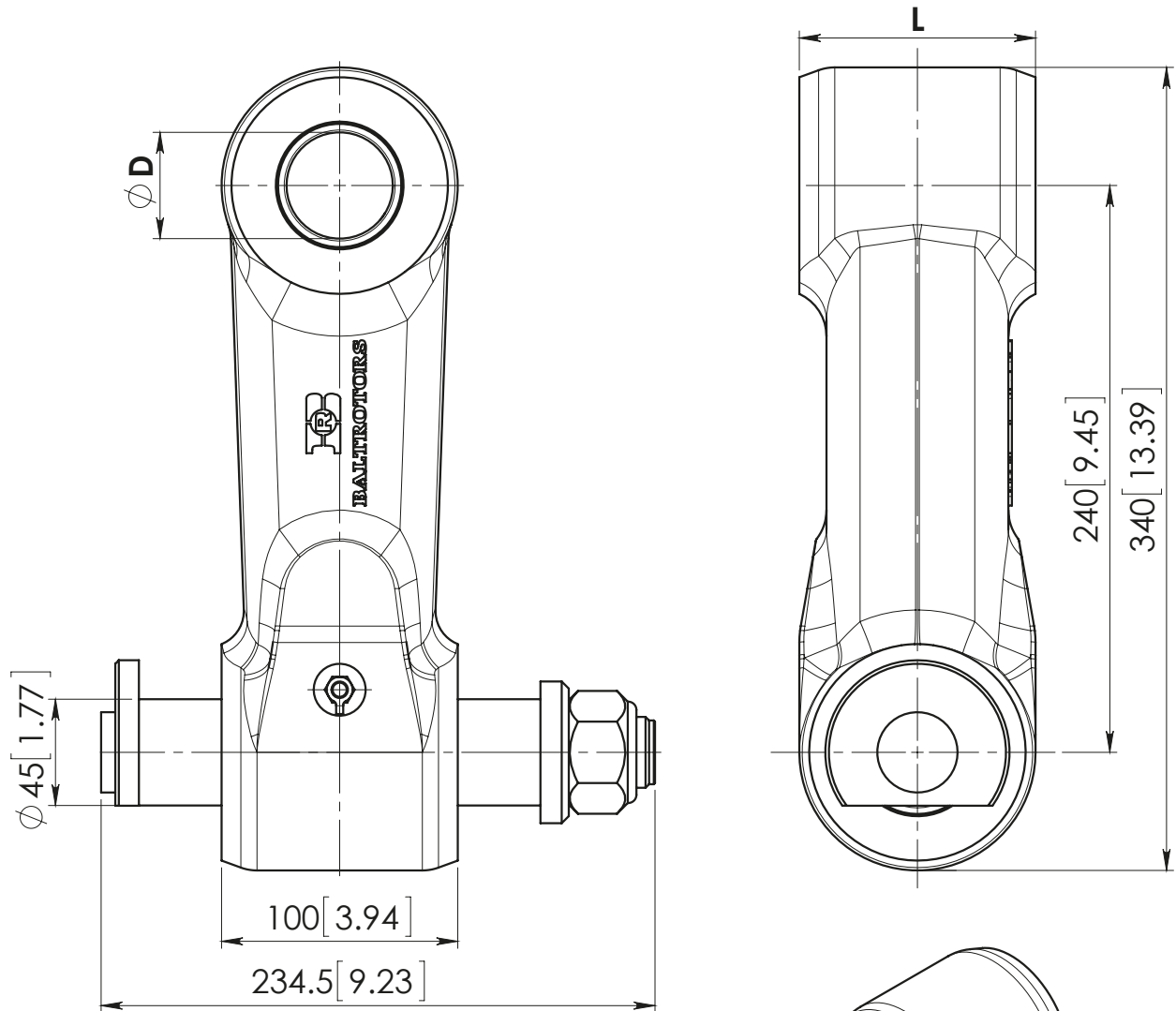
Max. Load - 10 ton (100 kN)

Weight -  $16 \pm 0.5$  kg ( $35.3 \pm 1.1$  lb)

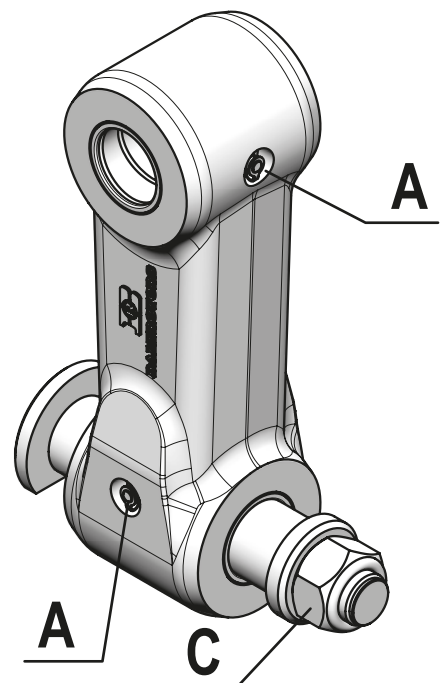
Pin locking nut (C) has to be tightened with a torque of 120 Nm (89 lb ft).

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipples (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

# LINK BR3



Bushing diameter [mm]:		
Upper bushing $\phi D$	L=100	L=80
50 [1.97"]	BR3/50	BR3-80/50
45 [1.77"]	BR3/45	BR3-80/45
40 [1.57"]	BR3/40	BR3-80/40
35 [1.38"]	BR3/35	-
30 [1.18"]	-	BR3-80/30
45 [1.77"]	BR3B/45**	BR3-80B/45**



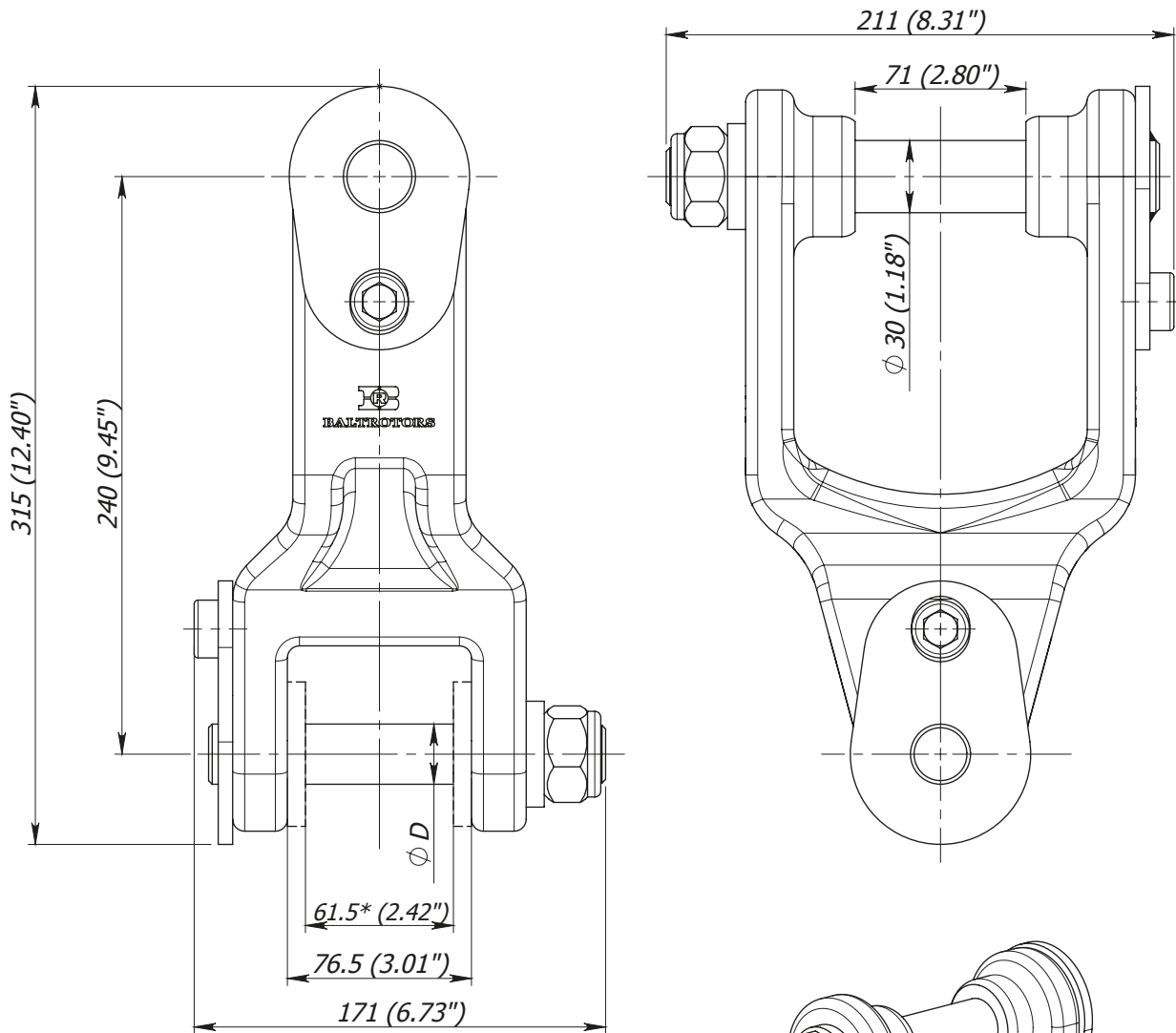
\*\*Link is assembled with bronze bushing instead of steel.

Max. Load - 16 ton (160 kN); Weight -  $21 \pm 1$  kg ( $46.2 \pm 2.2$  lb)

Pin locking nut (C) has to be tightened with a torque of 120 Nm (89 lb ft).

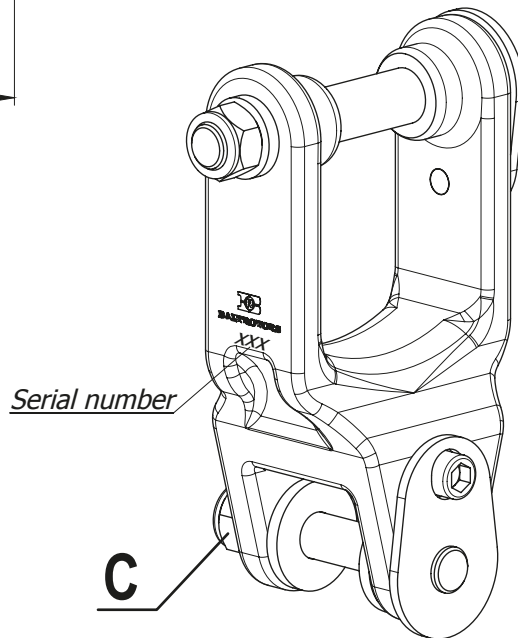
Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipples (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

# LINK BR4 / BR4-A



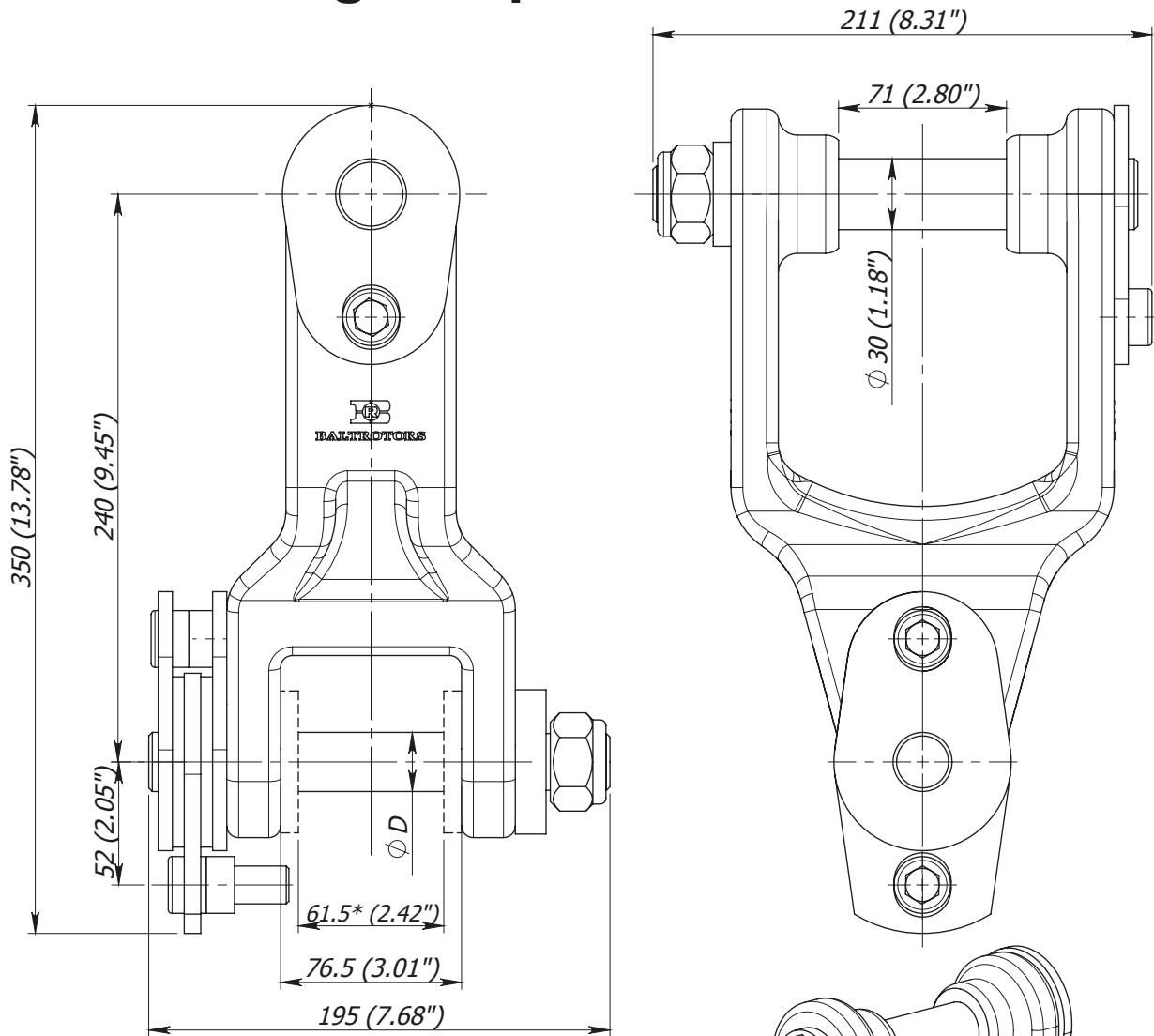
\* Only by request for rotator GR 30

Link	Pin diameter D (mm)
BR 4	25 (0.98")
BR 4-A	30 (1.18")



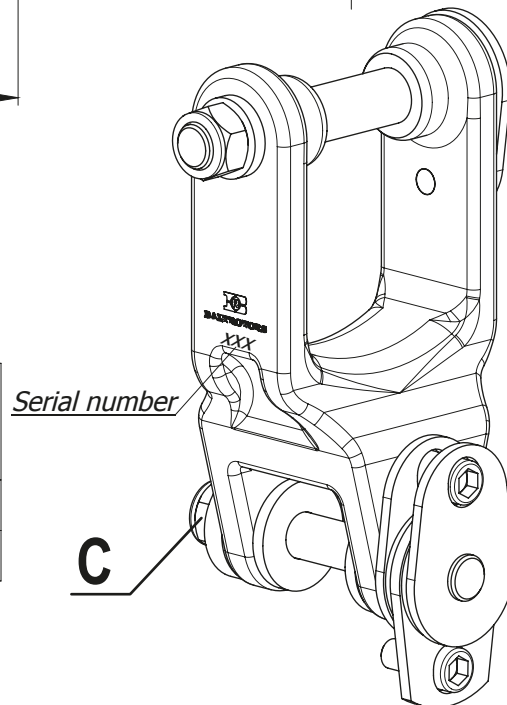
Max. Load - 5.5 ton (55 kN)  
 Weight - 11.7±0.5 kg (25.8±1.1 lb)  
 Pin locking nut (C) has to be tightened with a torque of 120 Nm (89 lb ft).

# Swing damper BR40 / BR40-A



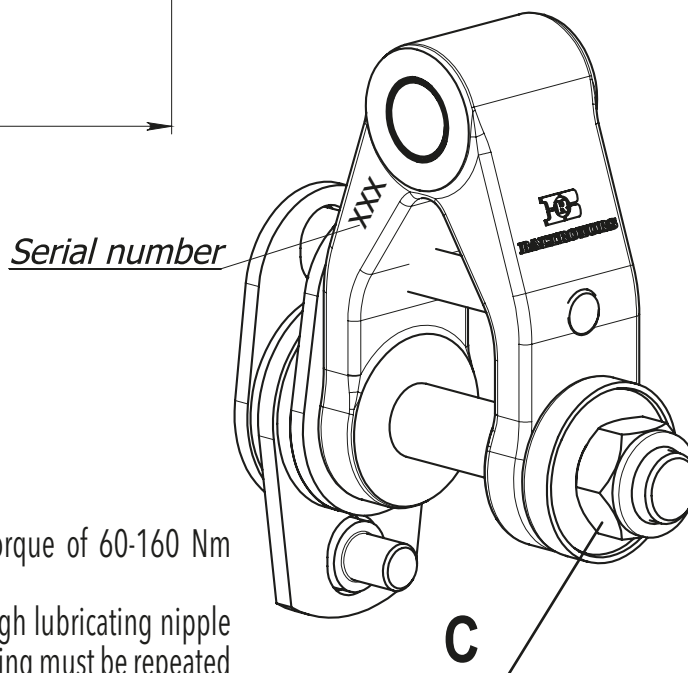
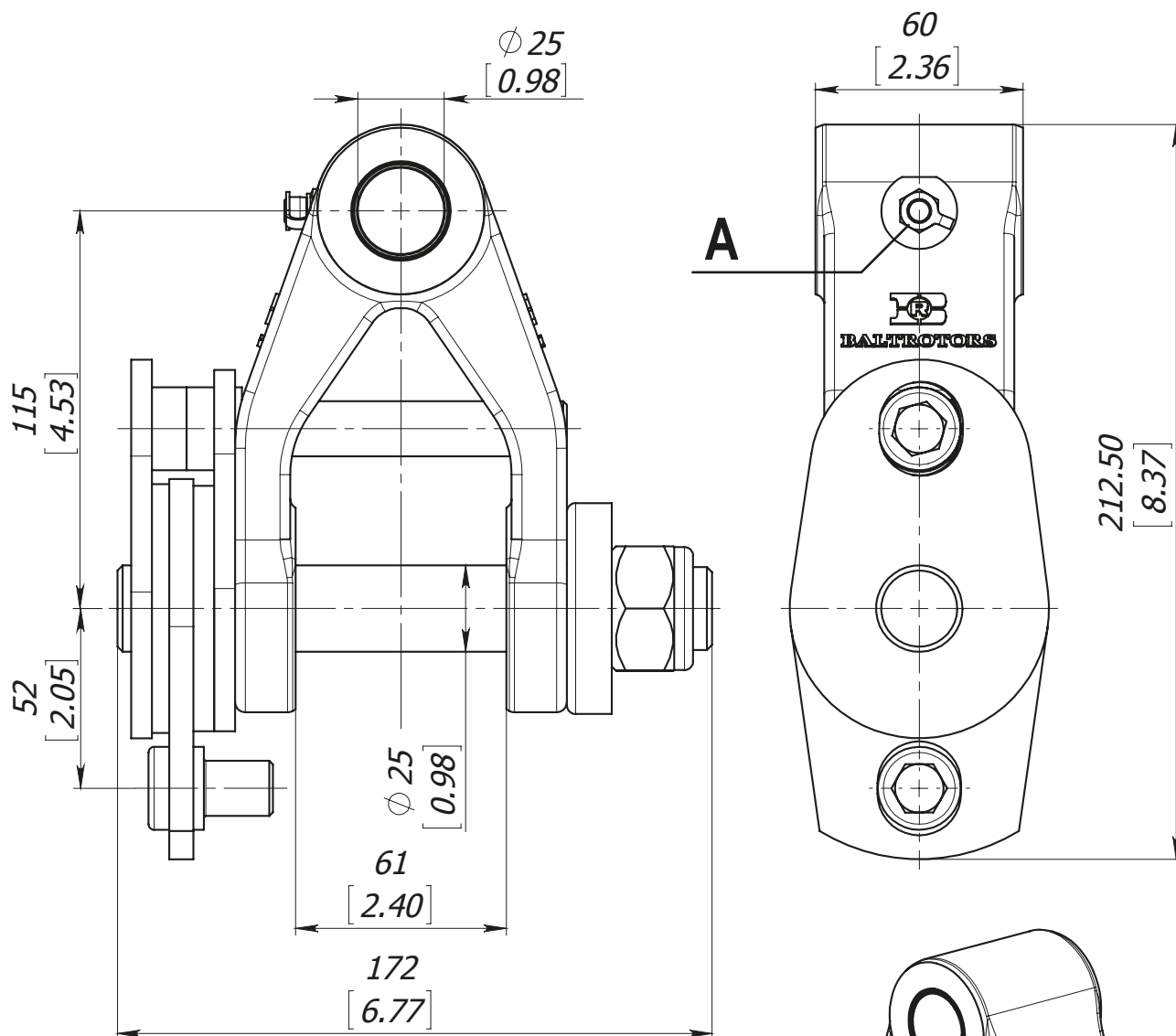
\* Only by request for rotator GR 30

Link	Pin diameter D (mm)
BR 40	25 (0.98")
BR 40-A	30 (1.18")



Max. Load - 5.5 ton (55 kN)  
 Weight - 12.6±0.5 kg (27.8±1.1 lb)  
 Pin locking nut (C) has to be tightened with a torque of 60-160 Nm (45-120 lb ft) dependent on desired brake power.

# Swing damper BRM10-60



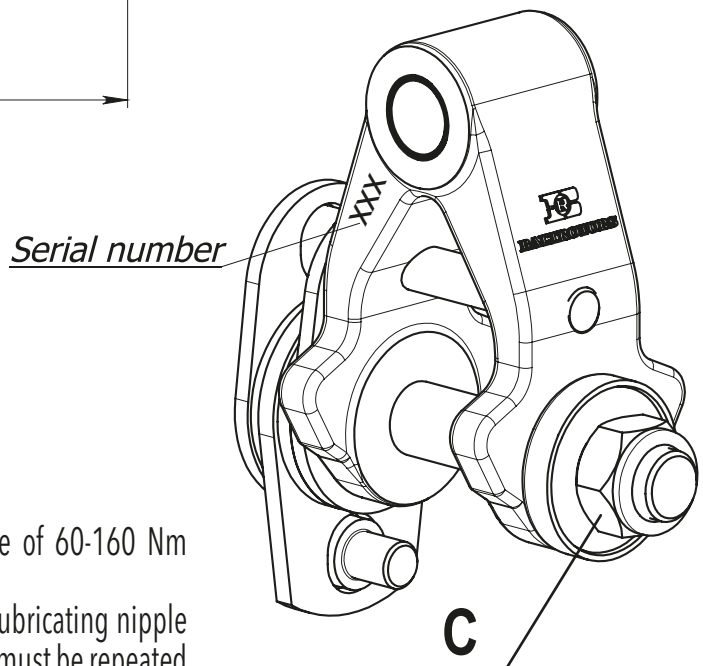
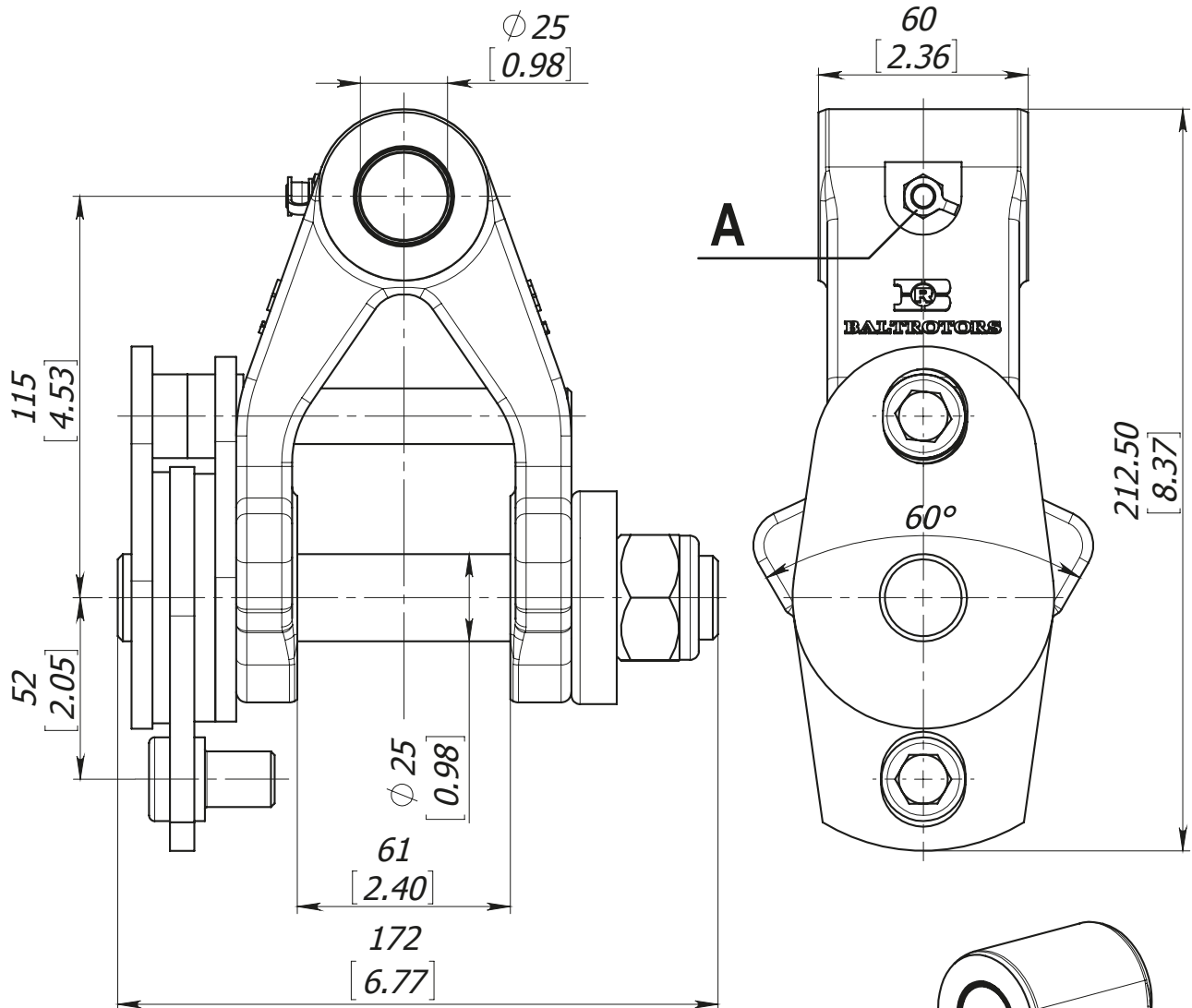
Max. Load - 3 ton (30 kN)

Weight - 5 kg (11 lb)

Pin locking nut (C) has to be tightened with a torque of 60-160 Nm (45-120 lb ft) dependent on desired brake power.

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

# Swing damper BRM10-60-01



Max. Load - 3 ton (30 kN)

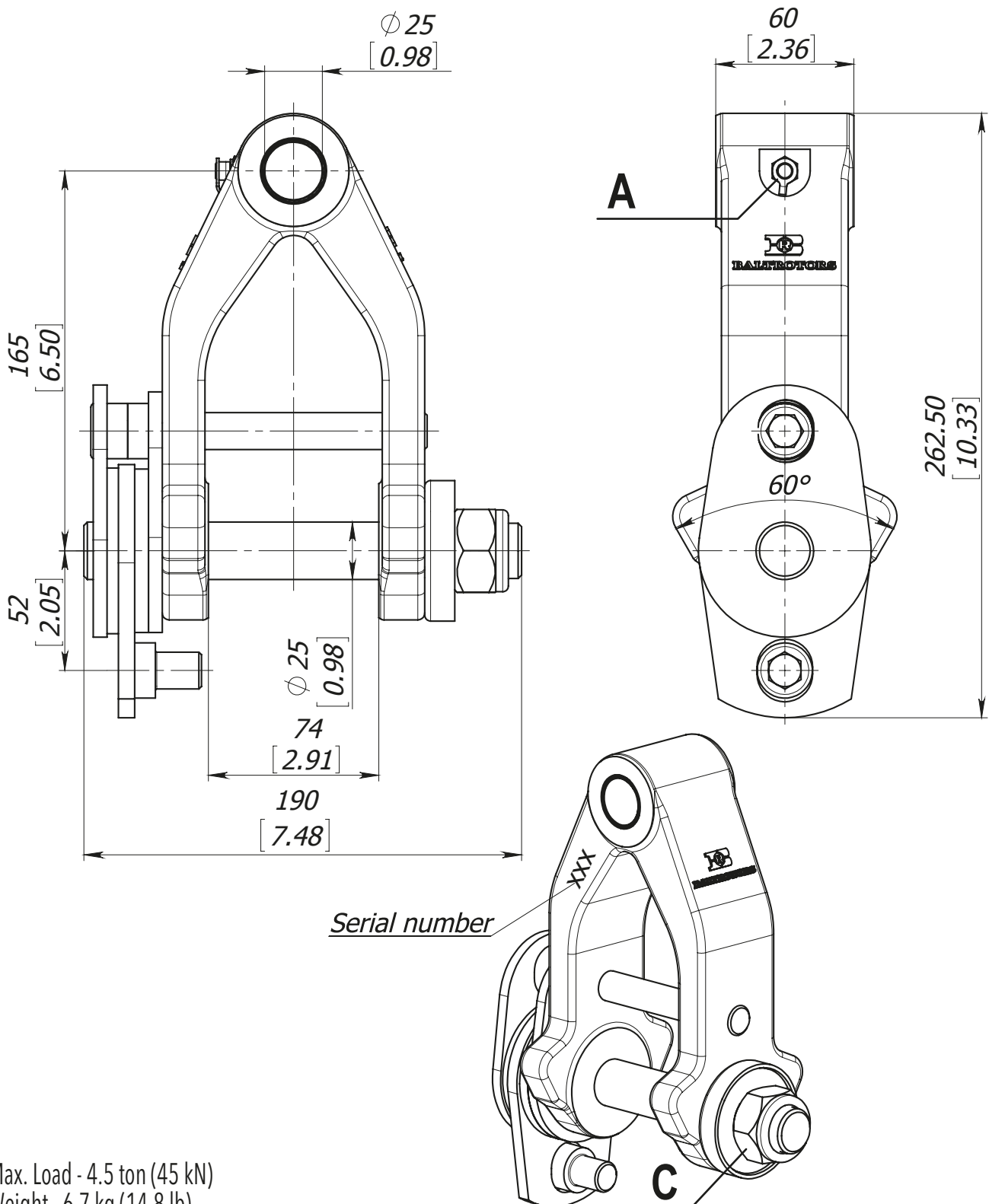
Weight - 5.3 kg (11.6 lb)

Pin locking nut (C) has to be tightened with a torque of 60-160 Nm (45-120 lb ft) dependent on desired brake power.

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.



# Swing damper BRM10-73-01



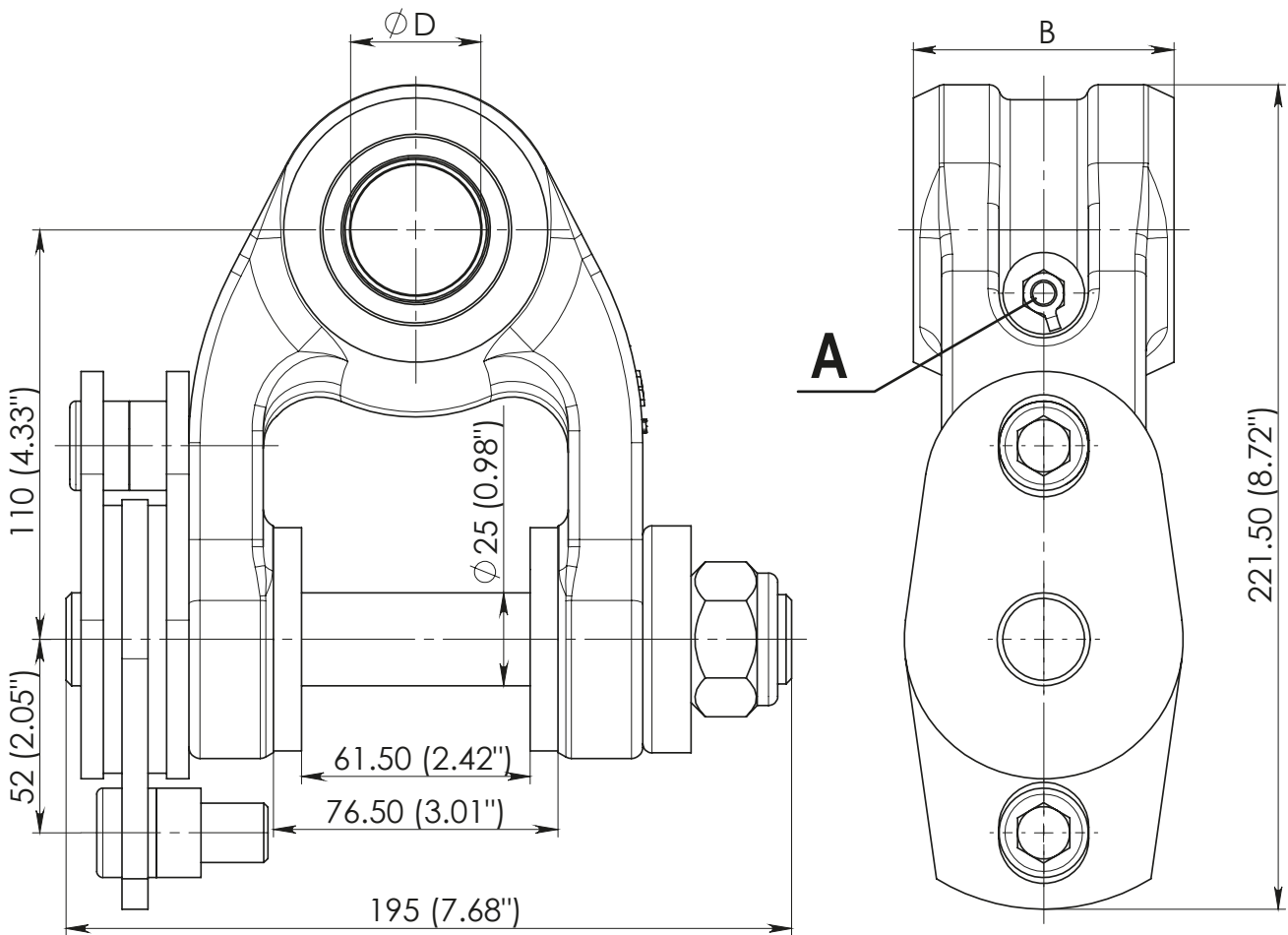
Max. Load - 4.5 ton (45 kN)

Weight - 6.7 kg (14.8 lb)

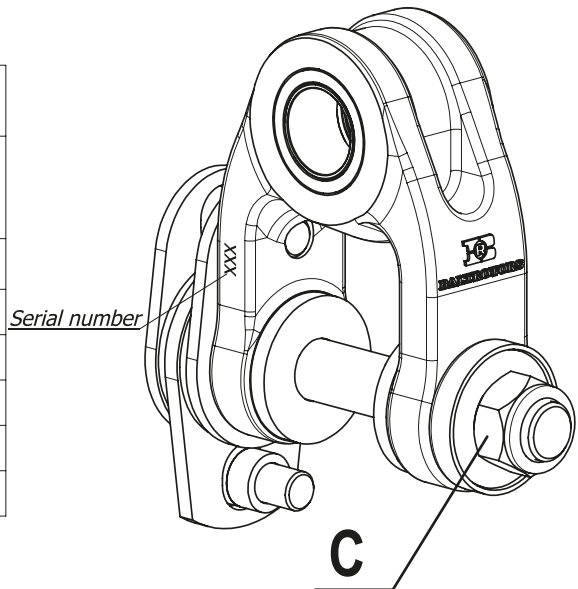
Pin locking nut (C) has to be tightened with a torque of 60-160 Nm (45-120 lb ft) dependent on desired brake power.

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

# Swing damper BR10



Dimensions			
Crane nose pivot pin diameter $\varnothing D$ (mm)	Link width B (mm)		
	80 <sup>0</sup> <sub>-0.3</sub> (3.15")	70 <sup>0</sup> <sub>-0.3</sub> (2.76")	60 <sup>0</sup> <sub>-0.3</sub> (2.36")
45 (1.77")	BR10/80/45	BR10/70/45	-
40 (1.57")	BR10/80/40	-	-
35 (1.38")	BR10/80/35	BR10/70/35	-
30 (1.18")	BR10/80/30	BR10/70/30	BR10/60/30
25 (0.98")	BR10/80/25	BR10/70/25	BR10/60/25



Max. Load - 5.5 ton (55 kN)

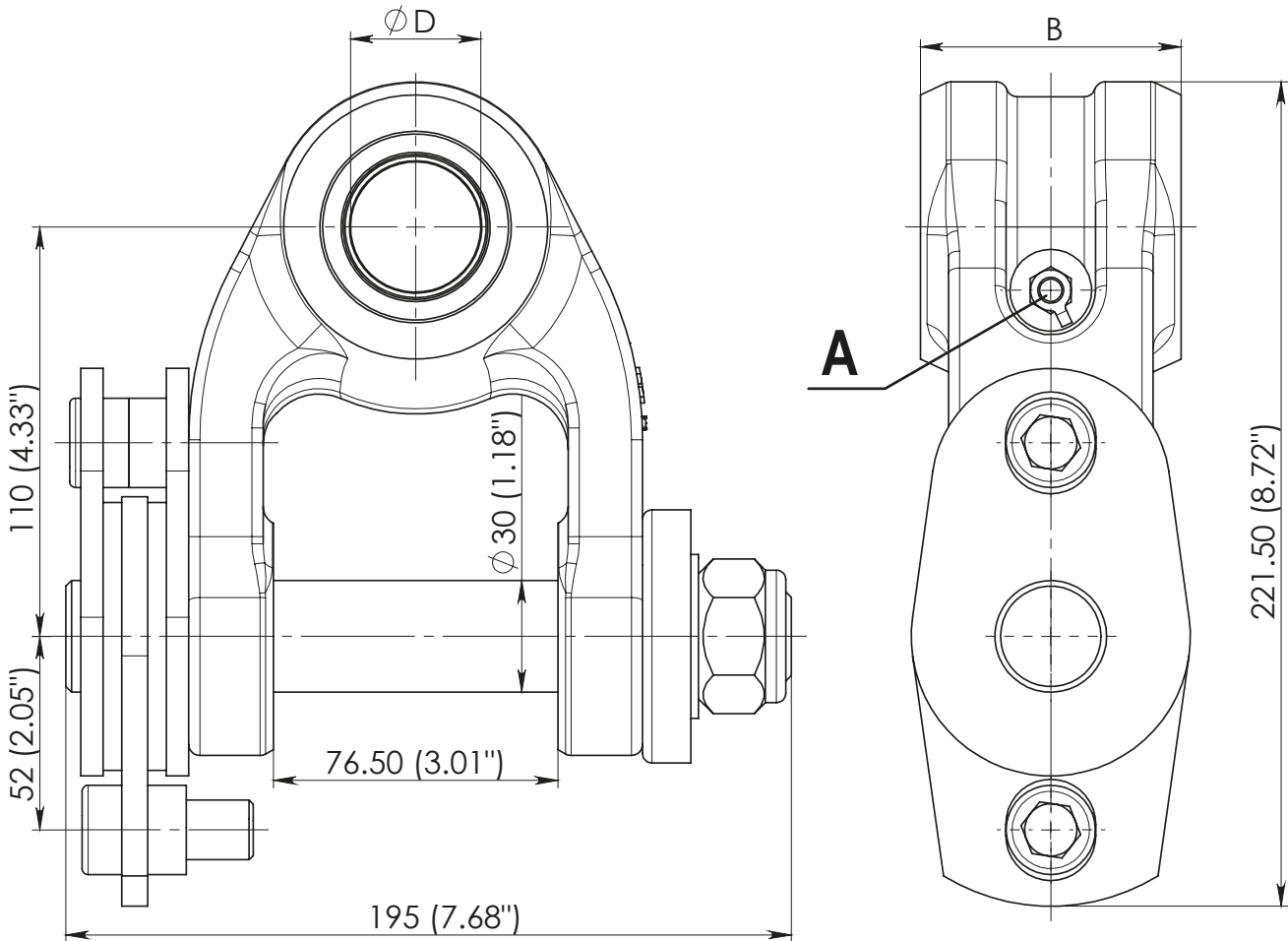
Weight - 6.5±1 kg (14.5±2.2 lb)

Pin locking nut (C) has to be tightened with a torque of 60-160 Nm (45-120 lb ft) dependent on desired brake power.

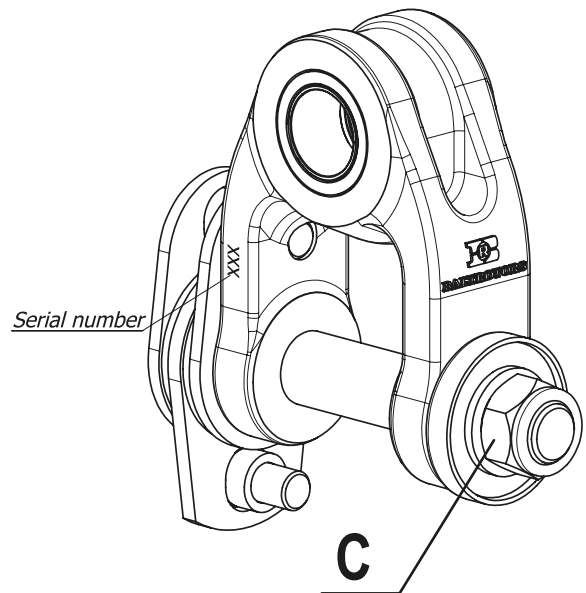
Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces.

Greasing must be repeated after every 8 working hours of the link.

# Swing damper BR10-A



Dimensions		
Crane nose pivot pin diameter $\varnothing D$ (mm)	Link width B (mm)	
		80 <sup>0</sup> <sub>-0.3</sub> (3.15")
45 (1.77")	BR10-A/80/45	-
40 (1.57")	BR10-A/80/40	-
35 (1.38")	BR10-A/80/35	-
30 (1.18")	BR10-A/80/30	BR10-A/60/30



Max. Load - 5.5 ton (55 kN)

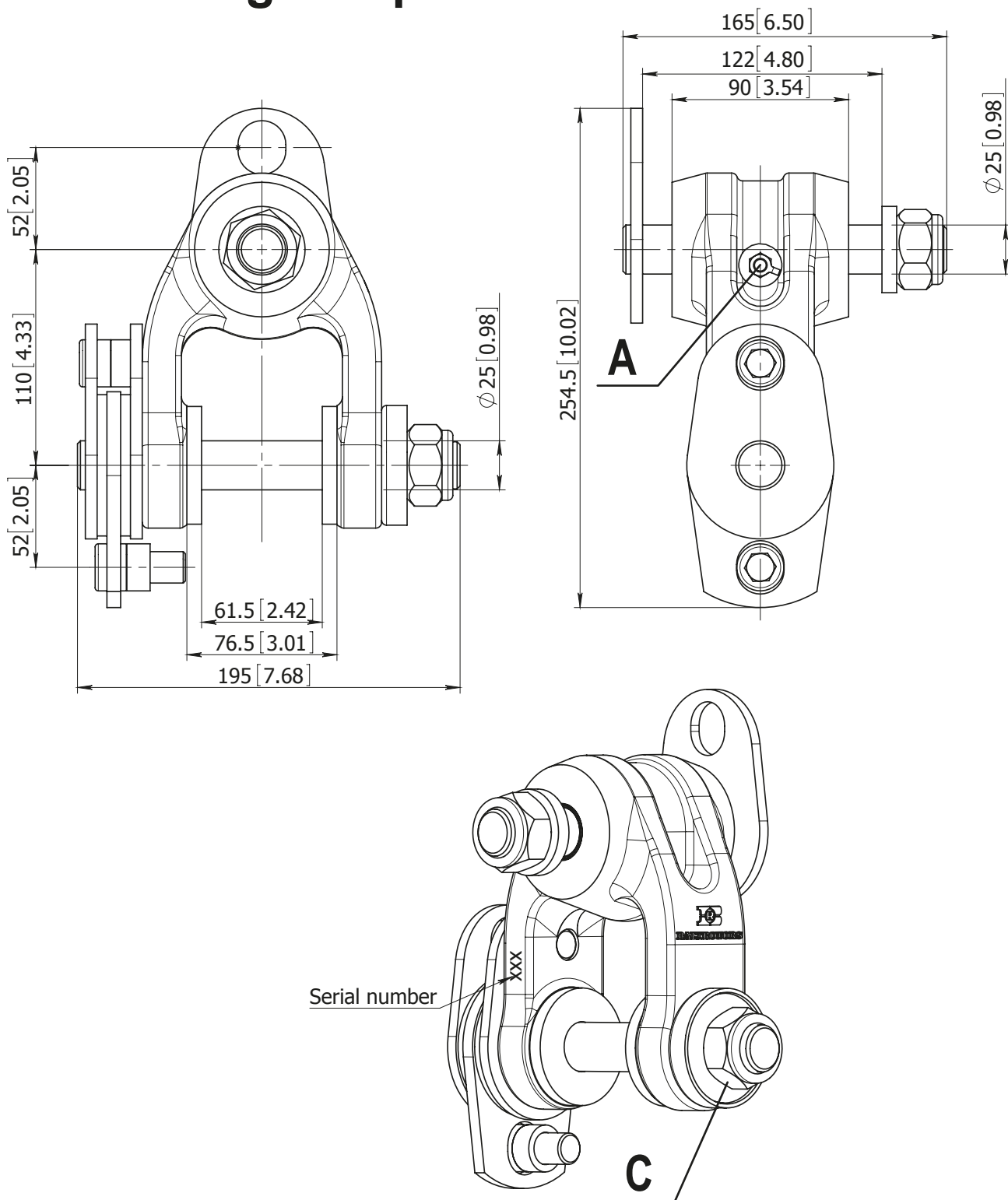
Weight - 6.5±1 kg (14.5±2.2 lb)

Pin locking nut (C) has to be tightened with a torque of 60-160 Nm (45-120 lb ft) dependent on desired brake power.

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces.

Greasing must be repeated after every 8 working hours of the link.

# Swing damper BR10-90-25-2



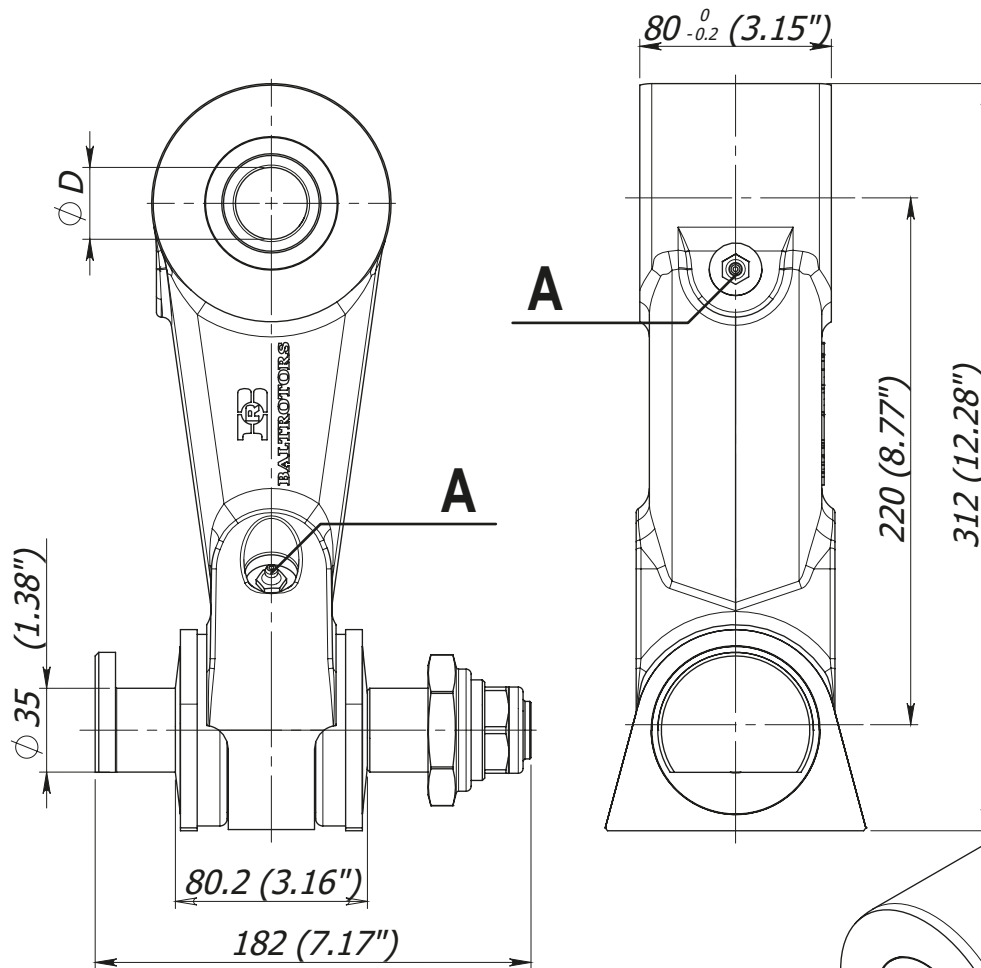
Max. Load - 5.5 ton (55 kN)

Weight - 8.5±0.5 kg (18.7±1.1 lb)

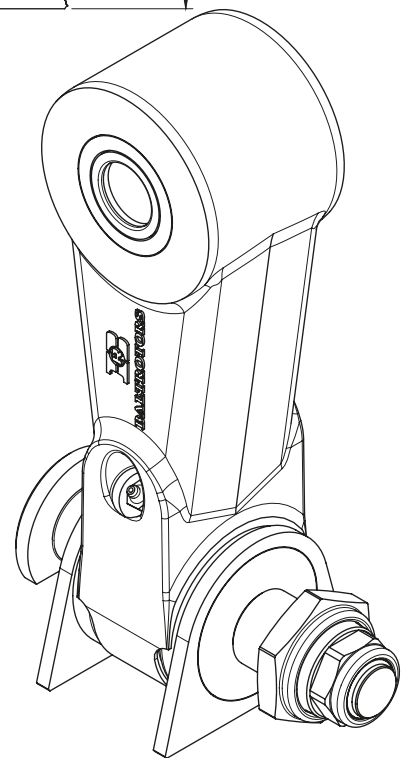
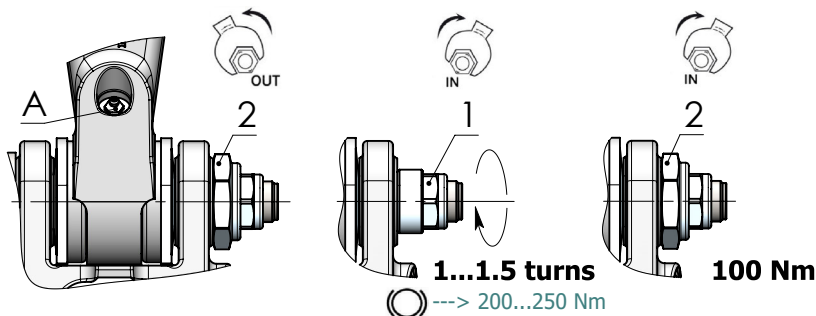
Pin locking nut (C) has to be tightened with a torque of 60-160 Nm (45-120 lb ft) dependent on desired brake power.

Fill grease Statoil Uniway Li62 (or equivalent) through lubricating nipple (A), until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

# Swing damper BR20KS



Link	Diameter D (mm)	Weight (kg)
BR 20 KS/45	45 (1.77")	13.65 (30.00 lb)
BR 20 KS/35	35 (1.38")	13.99 (30.84 lb)
BR 20 KS/30	30 (1.18")	14.14 (31.17 lb)



To adjust the brake of the link, following actions have to be done:

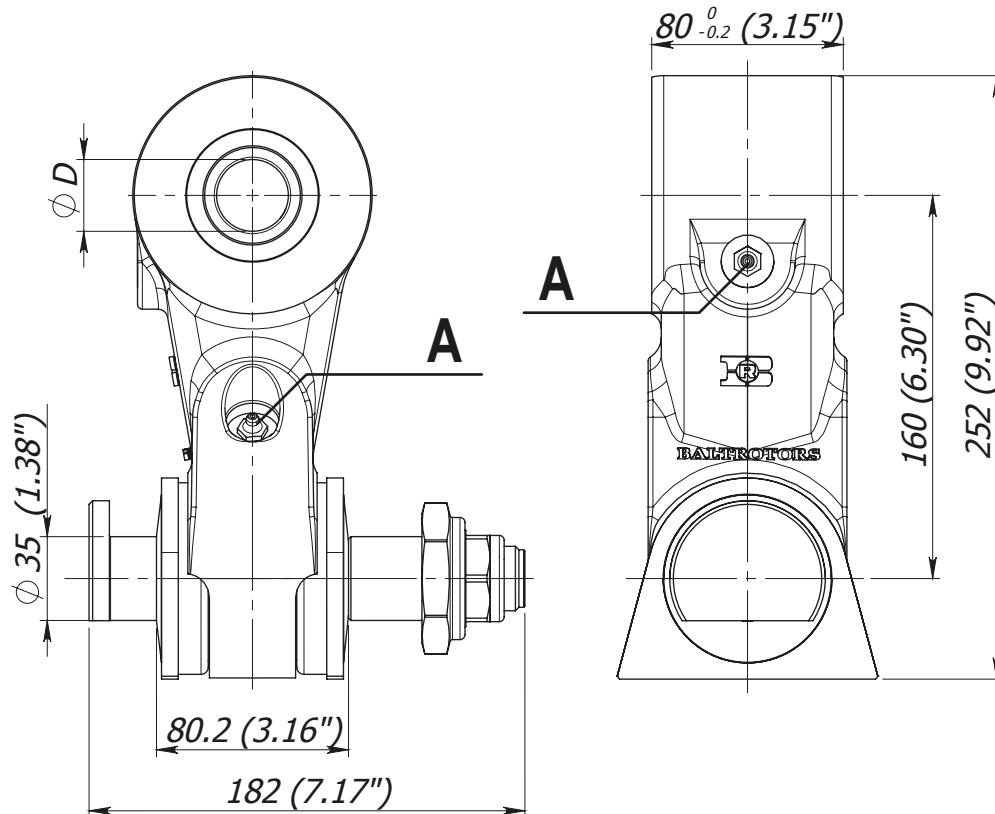
- unscrew / release the Lock nut (pos.2)
- screw the Adjusting nut (pos.1) until the Disc spring starts to clamp
- tighten the Adjusting nut (pos.1) at **1...1.5 turns**, that will provide braking moment of **200...250 Nm** (148...185 lb ft)
- tighten the Lock nut (pos.2) with tightening torque 100 Nm (74 lb ft).

## Max. Load - 10 ton (100 kN)

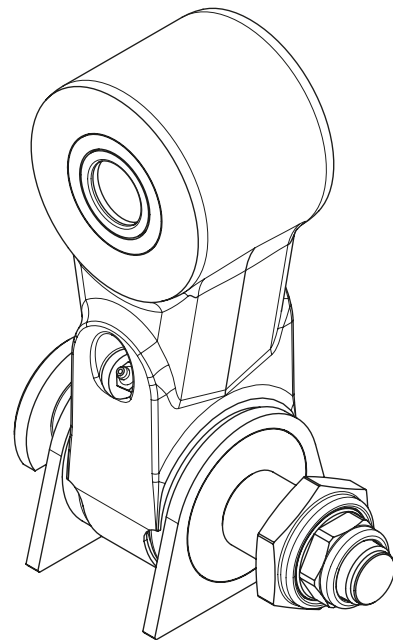
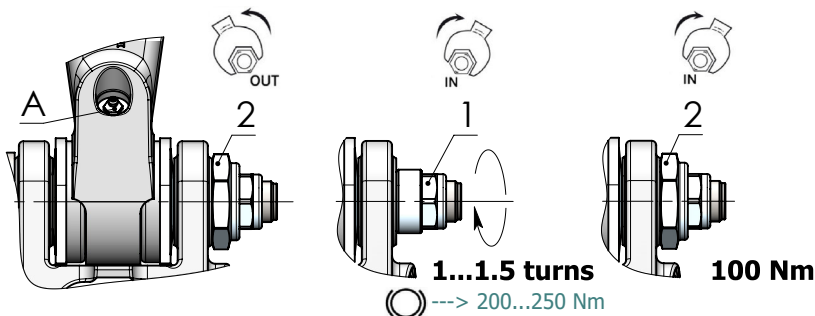
Greasing of lower slide bearing and brake cones are already done through lubricating nipple (A). Fill grease Statoil Uniway Li62 (or equivalent) until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

**NOTICE! The link is delivered ungreased. It should be well greased before taking into exploitation!**

# Swing damper BR20KSC



Link	Diameter D (mm)	Weight (kg)
BR 20 KSC/45	45 (1.77")	11.16 (24.60 lb)
BR 20 KSC/40	40 (1.57")	11.39 (25.11 lb)
BR 20 KSC/35	35 (1.38")	11.50 (25.35 lb)



To adjust the brake of the link, following actions have to be done:

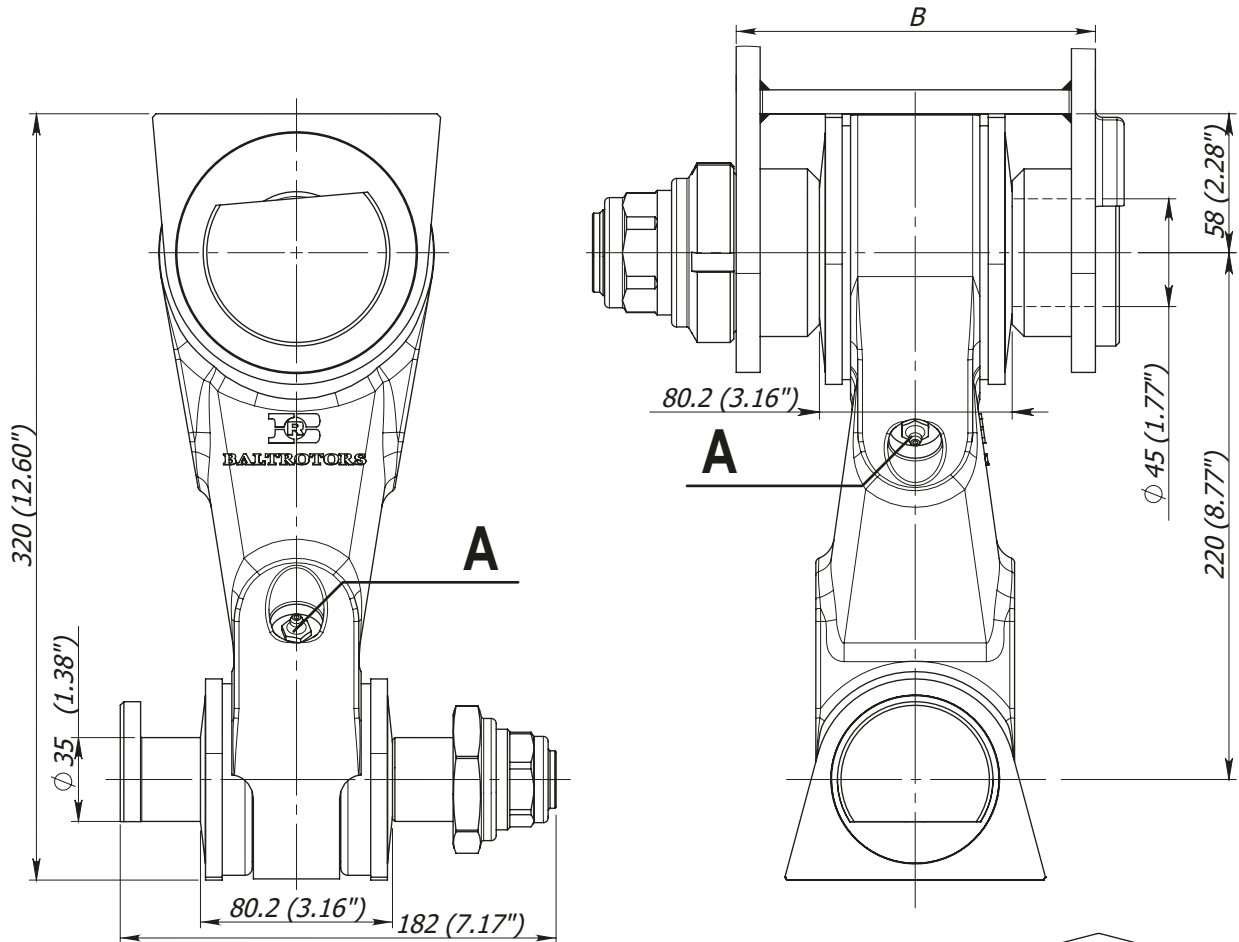
- unscrew / release the Lock nut (pos.2)
- screw the Adjusting nut (pos.1) until the Disc spring starts to clamp
- tighten the Adjusting nut (pos.1) at **1...1.5 turns**, that will provide braking moment of **200...250 Nm** (148...185 lb ft)
- tighten the Lock nut (pos.2) with tightening torque 100 Nm (74 lb ft).

## Max. Load - 10 ton (100 kN)

Greasing of lower slide bearing and brake cones are already done through lubricating nipple (A). Fill grease Statoil Uniway Li62 (or equivalent) until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

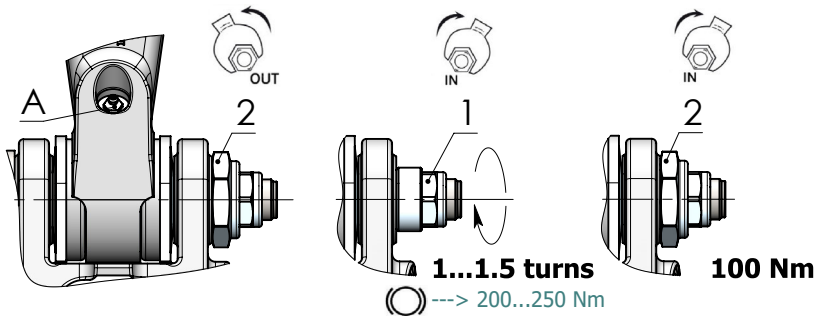
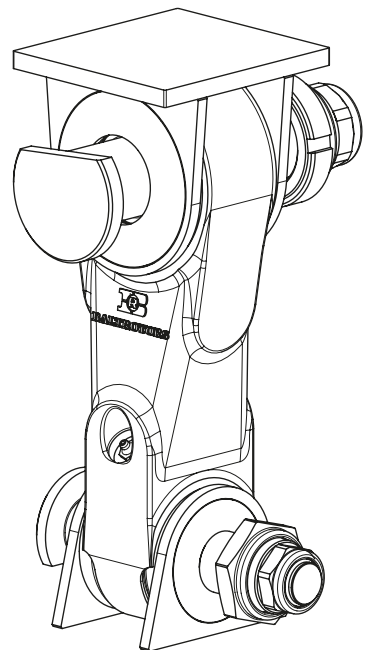
**NOTICE! The link is delivered ungreased. It should be well greased before taking into exploitation!**

# Dual swing damper BR22KS



Link	Crane nose outer width B (mm)	Weight (kg)
BR 22 KS/160	160 (6.29'')	17.65 (38.91 lb)
BR 22 KS/150	150 (5.90'')	17.53 (38.64 lb)
BR 22 KS/140	140 (5.51'')	17.40 (38.36 lb)
BR 22 KS/130	130 (5.12'')	17.28 (38.09 lb)
BR 22 KS/120	120 (4.72'')	17.15 (37.80 lb)

It is possible to change size B by client's request.



To adjust the brake of the link, following actions have to be done:

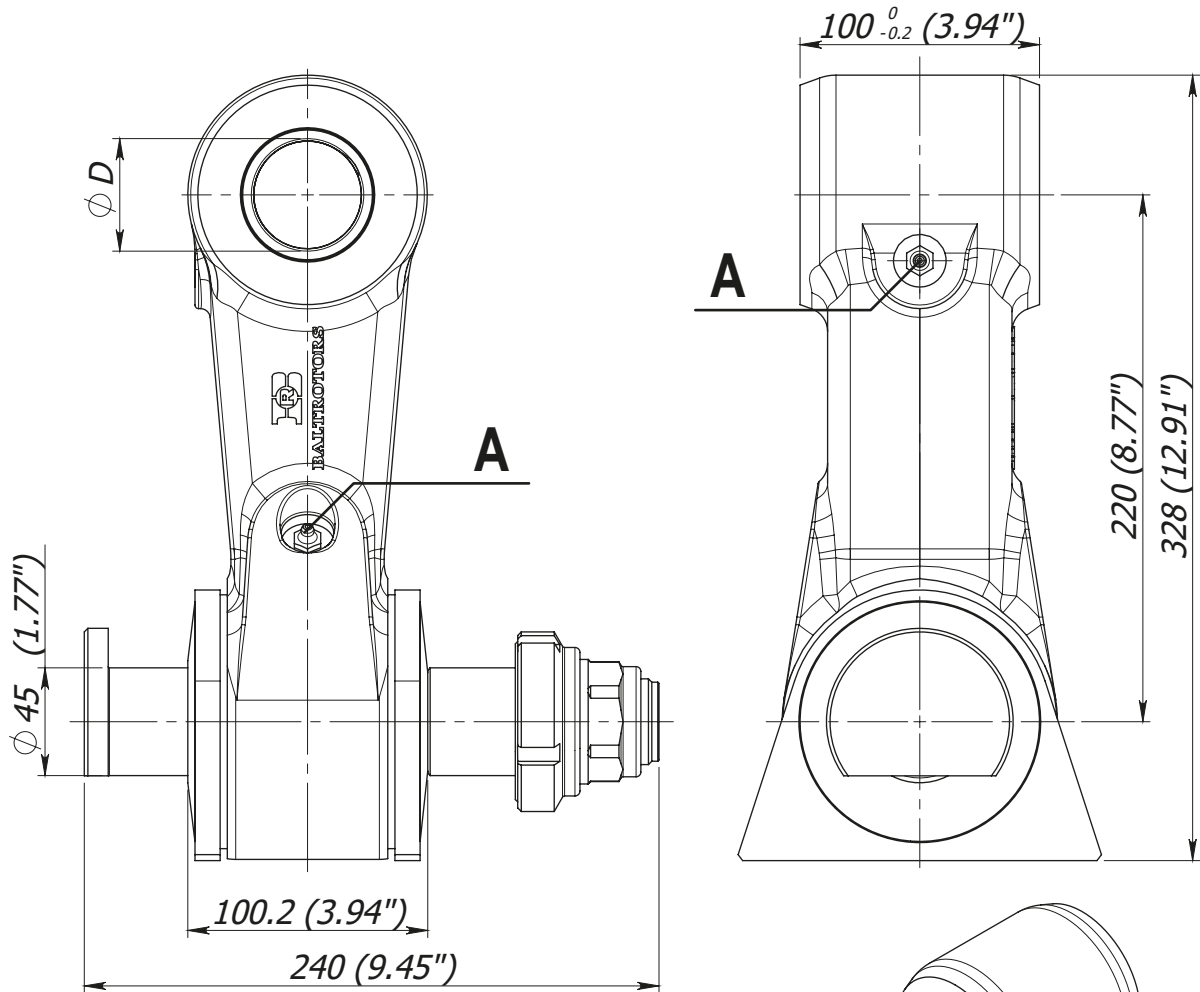
- unscrew / release the Lock nut (pos.2)
- screw the Adjusting nut (pos.1) until the Disc spring starts to clamp
- tighten the Adjusting nut (pos.1) at **1...1.5 turns**, that will provide braking moment of **200...250 Nm** (148...185 lb ft)
- tighten the Lock nut (pos.2) with tightening torque 100 Nm (74 lb ft).

## Max. Load - 10 ton (100 kN)

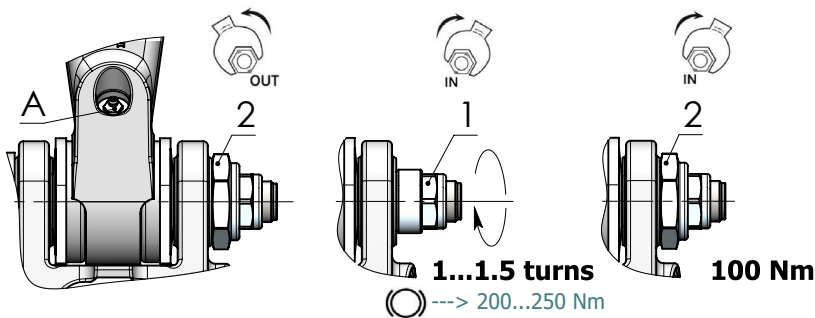
Greasing of lower slide bearing and brake cones are already done through lubricating nipple (A). Fill grease Statoil Uniway Li62 (or equivalent) until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

**NOTICE! The link is delivered ungreased. It should be well greased before taking into exploitation!**

# Swing damper BR30KS



Link	Diameter D (mm)	Weight (kg)
BR 30 KS/45	45 (1.77")	20.39 (44.95 lb)



To adjust the brake of the link, following actions have to be done:

- unscrew / release the Lock nut (pos.2)
- screw the Adjusting nut (pos.1) until the Disc spring starts to clamp
- tighten the Adjusting nut (pos.1) at **1...1.5 turns**, that will provide braking moment of **200...250 Nm** (148...185 lb ft)
- tighten the Lock nut (pos.2) with tightening torque 100 Nm (74 lb ft).

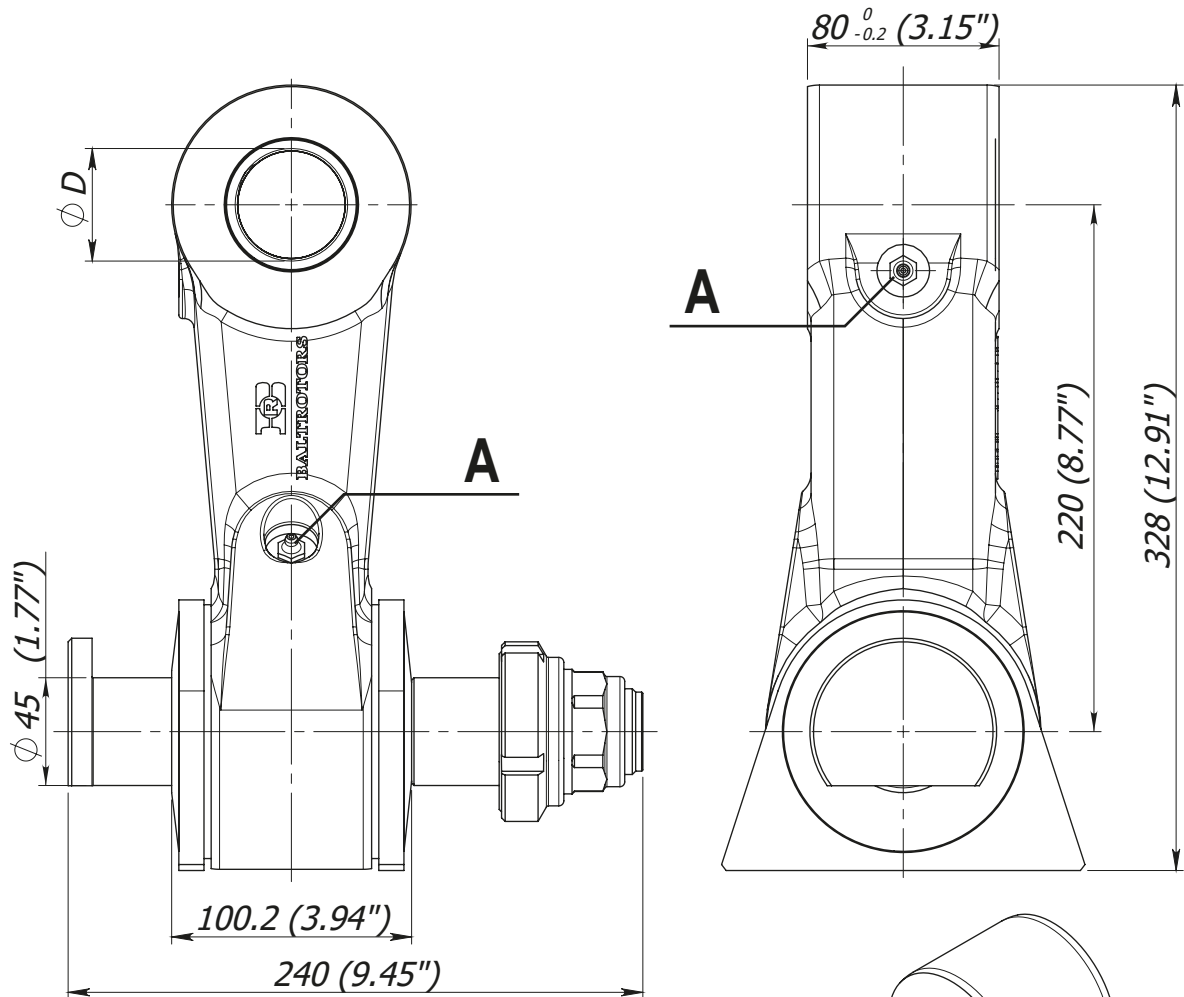
### Max. Load - 16 ton (160 kN)

Greasing of lower slide bearing and brake cones are already done through lubricating nipple (A). Fill grease Statoil Uniway Li62 (or equivalent) until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

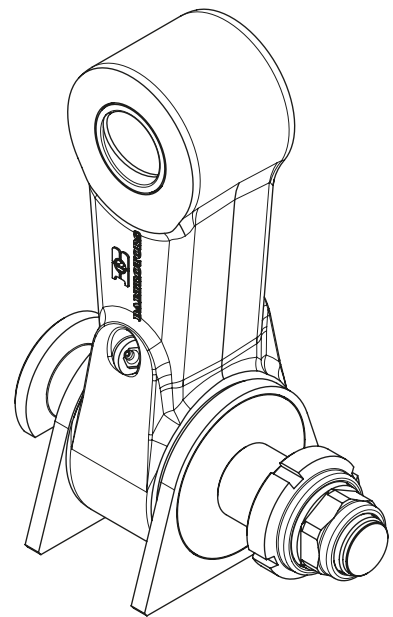
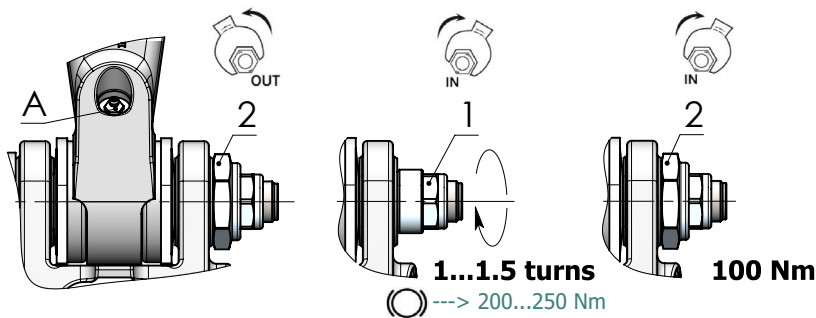
**NOTICE! The link is delivered ungreased. It should be well greased before taking into exploitation!**



# Swing damper BR30KS-80



Link	Diameter D (mm)	Weight (kg)
BR 30 KS-80/45	45 (1.77")	19.52 (43.03 lb)
BR 30 KS-80/40	40 (1.57")	19.73 (43.50 lb)



To adjust the brake of the link, following actions have to be done:

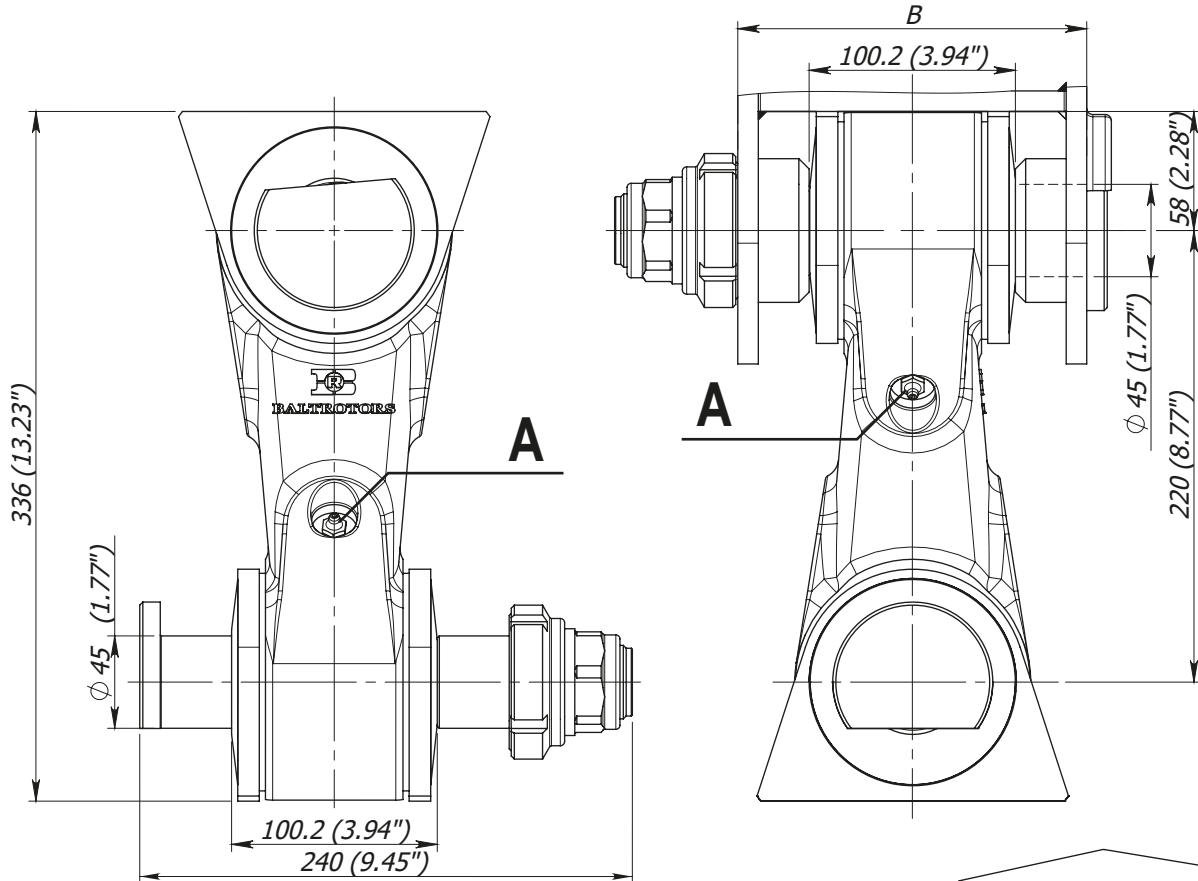
- unscrew / release the Lock nut (pos.2)
- screw the Adjusting nut (pos.1) until the Disc spring starts to clamp
- tighten the Adjusting nut (pos.1) at **1...1.5 turns**, that will provide braking moment of **200...250 Nm** (148...185 lb ft)
- tighten the Lock nut (pos.2) with tightening torque 100 Nm (74 lb ft).

**Max. Load - 16 ton (160 kN)**

Greasing of lower slide bearing and brake cones are already done through lubricating nipple (A). Fill grease Statoil Uniway Li62 (or equivalent) until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

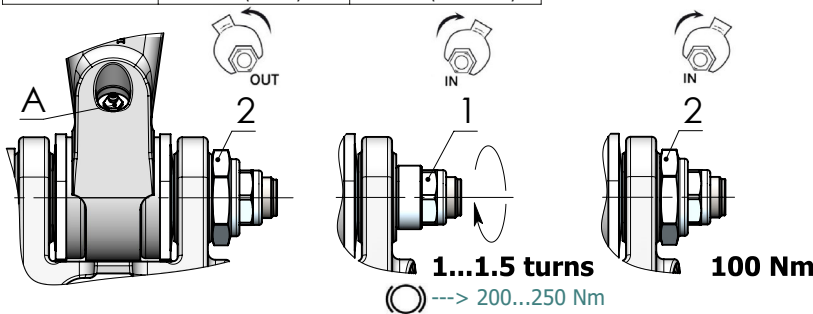
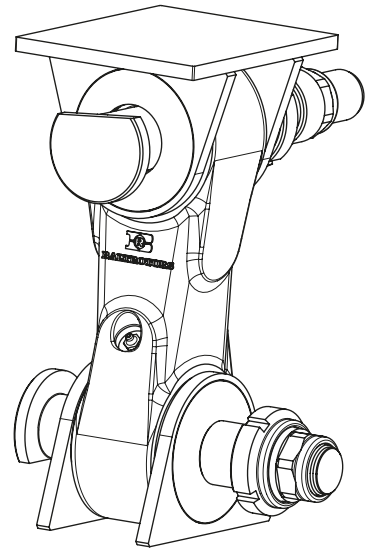
**NOTICE! The link is delivered ungreased. It should be well greased before taking into exploitation!**

# Dual swing damper BR32KS



Link	Crane nose outer width B (mm)	Weight (kg)
BR 32 KS/200	200 (7.87")	25.78 (56.84 lb)
BR 32 KS/190	190 (7.48")	25.65 (56.55 lb)
BR 32 KS/180	180 (7.09")	25.53 (56.28 lb)
BR 32 KS/170	170 (6.69")	25.40 (55.98 lb)
BR 32 KS/160	160 (6.29")	25.28 (55.73 lb)
BR 32 KS/150	150 (5.90")	25.15 (55.45 lb)

It is possible to change size B by client's request.



To adjust the brake of the link, following actions have to be done:

- unscrew / release the Lock nut (pos.2)
- screw the Adjusting nut (pos.1) until the Disc spring starts to clamp
- tighten the Adjusting nut (pos.1) at **1...1.5 turns**, that will provide braking moment of **200...250 Nm** (148...185 lb ft)
- tighten the Lock nut (pos.2) with tightening torque 100 Nm (74 lb ft).

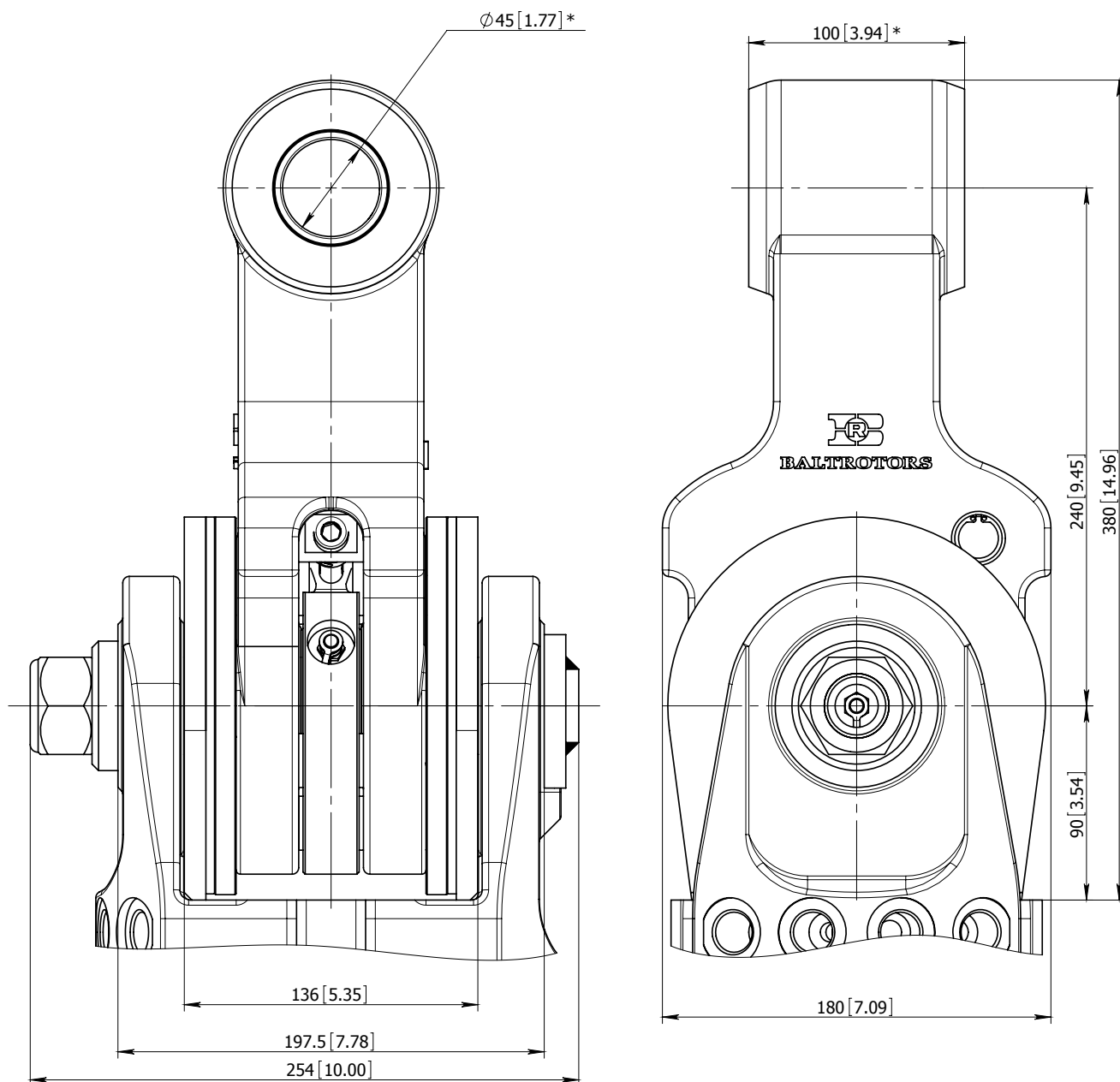
### Max. Load - 16 ton (160 kN)

Greasing of lower slide bearing and brake cones are already done through lubricating nipple (A). Fill grease Statoil Uniway Li62 (or equivalent) until it will appear to the external surfaces. Greasing must be repeated after every 8 working hours of the link.

**NOTICE! The link is delivered ungreased. It should be well greased before taking into exploitation!**

# SWING DAMPER DLG30

PATENTED



\* - Other dimensions are available upon customer request

## Technical data

Max load, kN  
Nominal braking torque of the disc brake, Nm  
Max braking torque of the disc brake, Nm  
Weight, kg

160 (35969 lbf)  
600 (442 lb ft)  
700 (516 lb ft)  
36 (79 lb)