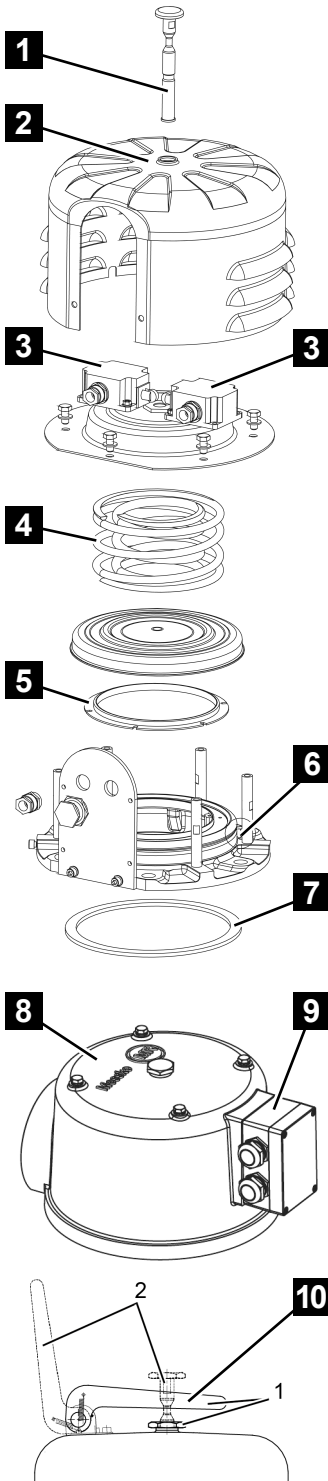




Product variants

This technical document contains detailed information about the technical properties of the product. If you would like to place an order, please use the MESSKO inquiry and order specification, which you can also find on our website <http://www.reinhausen.com> below the respective product.



Protective cover with powder coating		
2 Standard protective cover	RAL 7033 (cement gray)	
	RAL 7038 (agate gray)	
8 Protective cover with directed oil flow (OD cover)	RAL 7033 (cement gray)	
	RAL 7038 (agate gray)	
Optional:		
6 Vent screw		
10 Semaphore (not for offshore applications)	1 – OPERATION position	2 – ALARM position
Offshore model (only for OD cover)		

Triggering pressure	PSI	Bar	kPa
LMPRD 04	4 PSI ± 1	0.28 bar	28 kPa
LMPRD 05	5 PSI ± 1	0.35 bar	35 kPa
LMPRD 06	6 PSI ± 1	0.41 bar	41 kPa
LMPRD 08	8 PSI ± 1	0.55 bar	55 kPa
LMPRD 10	10 PSI ± 1	0.69 bar	69 kPa
LMPRD 12	12 PSI ± 1	0.83 bar	83 kPa
LMPRD 15	15 PSI ± 2	1.03 bar	103 kPa
LMPRD 20	20 PSI ± 2	1.38 bar	138 kPa
LMPRD 25	25 PSI ± 2	1.72 bar	172 kPa
LMPRD 30	30 PSI ± 2	2.07 bar	207 kPa

Electrical connection		
No micro-switch	Vertical plate without hole for standard cover; screw-type blank cap for OD cover	
Connection via cable screw connections	3 1 micro-switch	1 x M20 x 1.5 cable screw connection; 1 x M20 x 1.5 dummy plug
	3 2 micro-switches	2 x M20 x 1.5 cable screw connection
ANSI plug	3 1 or 2 micro-switches	
Westinghouse plug	3 1 micro-switch	with or without ground connection
	3 2 micro-switches	without ground connection
9 Connection box	3 1 micro-switch	1 x M25 x 1.5
	3 2 micro-switches	2 x M25 x 1.5

Further connections possible by request (e.g. NPT)

Sealing material	Coolant	Remark
5 NBR sealing lip (standard equipment)	Mineral oil	1 Signal pin = red (anodized)
5 Viton sealing lip	Silicone oil, pyranol	1 Signal pin = blue (anodized)
7 Mounting seal ring (optional)	NBR	Order No.: 50032703
	Viton	Order No.: 73314900
	Without mounting seal ring	

Degree of protection	
IP 65	
IP 66 , available for	Standard protective cover with cable screw connection
	OD cover with cable screw connection
	OD cover with connection box



Technical data

Operating conditions	MESSKO® MPreC®
Ambient temperature	-40 °C...+80 °C
Oil	-30 °C...+120 °C
Storage temperature	-40 °C...+80 °C
Degree of protection	IP 65 in accordance with nach IEC 60 529 Optional IP66 in accordance with IEC 60 529 for – Standard protective cover with cable screw connection – Cover with directed oil flow with screwed cable screw connection – Cover with directed oil flow with connection box
General	MESSKO® MPreC®
Materials	
Flange	Seawater-proof aluminum casting
Standard protective cover	Seawater-proof aluminum with powder coating RAL 7033 or RAL 7038
Protective cover for directed oil flow	Seawater-proof aluminum casting with powder coating RAL 7033 or RAL 7038; sealing lip (NBR) included in the scope of delivery
Valve plate	Stainless steel
Mounting seal ring (optional)	NBR or Viton
Sealing lip	NBR or Viton, depending on the coolant
Springs	Spring steel in accordance with EN 10270-1 SH, synthetically coated (cathodic corrosion protection)
Signal pin	Seawater-proof aluminum; red (anodized) for standard sealing lip (NBR); blue (anodized) for Viton
Semaphore	Corrosion-resistant steel with powder coating RAL 1026, luminous yellow (not suitable for offshore applications)
Vent screw	Self-securing; stainless steel; SW 10 Optionally available without vent screw
Dimensions	
Fastening	Ø 235 mm [Ø 9.25"] bolt circle of the 6 holes Ø 15.5 mm (Ø 0.61")
Protective cover	Ø 291 mm [Ø 11.46"] standard protective cover Ø 295 mm [Ø 11.61"] cover with directed oil flow
Height (in triggered state)	Max. 234.5 mm [9.23"] standard protective cover without semaphore Max. 340 mm [13.39"] standard protective cover with semaphore Max. 246 mm [9.96"] cover with directed oil flow without semaphore Max. 342 mm [13.46"] cover with directed oil flow with semaphore
Mounting seal ring	Optionally available, Ø 200 mm x Ø 178.5 mm x 4.25 mm [Ø 7.87" x Ø 7.03" x 0.17"], NBR or Viton
Connection cable length for plug variant	1219 mm [48"]; 1829 mm [72"]; 2134 mm [84"]; 2438 mm [96"]; 3658 mm [144"]; 4572 mm [180"]; 5004 mm [197"]; 5080 mm [200"]; 6096 mm [240"]; 7620 mm [300"]; 9144 mm [360"]; 10,000 mm [394"]; 11,990 mm [472"]; 15,010 mm [591"]; 20,110 mm [792"]
Micro-switch	MESSKO® MPreC®
Contacts	1 x NO (normally open), 1 x NC (normally closed) for each micro-switch Special design: Micro-switch 2 x NO (normally open contact)
Housing material	Seawater-proof aluminum
Rated operating voltage	$U_e = 240 \text{ V}$
Contact bridge (standard equipment)	Utilization category AC-15; 240 V / 3 A in accordance with EC 60947-5-1 Conventional thermal current: $I_{th_e} = 10 \text{ A}$
Contact bridge with gold-plated contacts	Utilization category AC-15; 240 V / 3 A in accordance with EC 60947-5-1 Conventional thermal current: $I_{th_e} = 10 \text{ A}$
Contact bridge with 2 x normally open contacts	Utilization category AC-15; 240 V / 1.5 A in accordance with EC 60947-5-1 Conventional thermal current: $I_{th_e} = 5 \text{ A}$
Rated insulation voltage	AC: 2500 V / 1 min

Connection data

Connection via cable screw connection (gland)

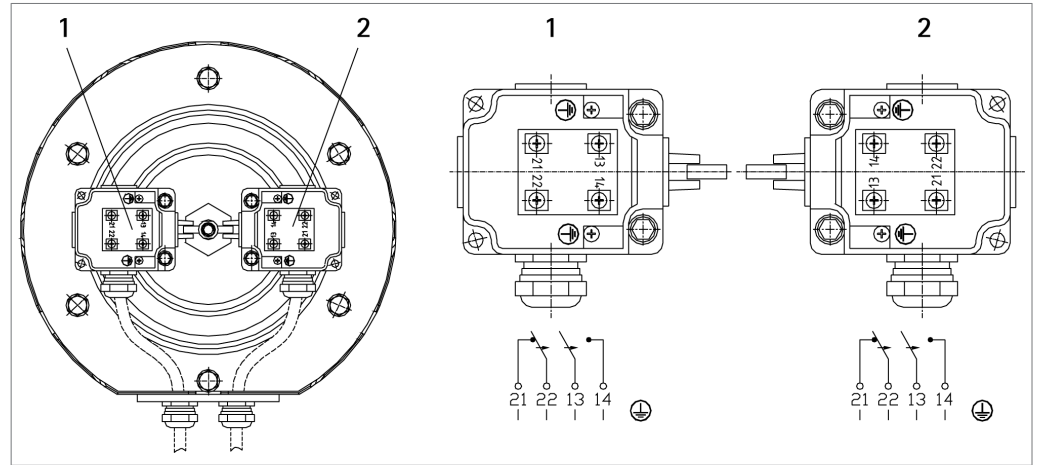


Figure 1: Standard protective cover

1 Micro-switch 1, see page 1/3

2 Micro-switch 2, see page 1/3

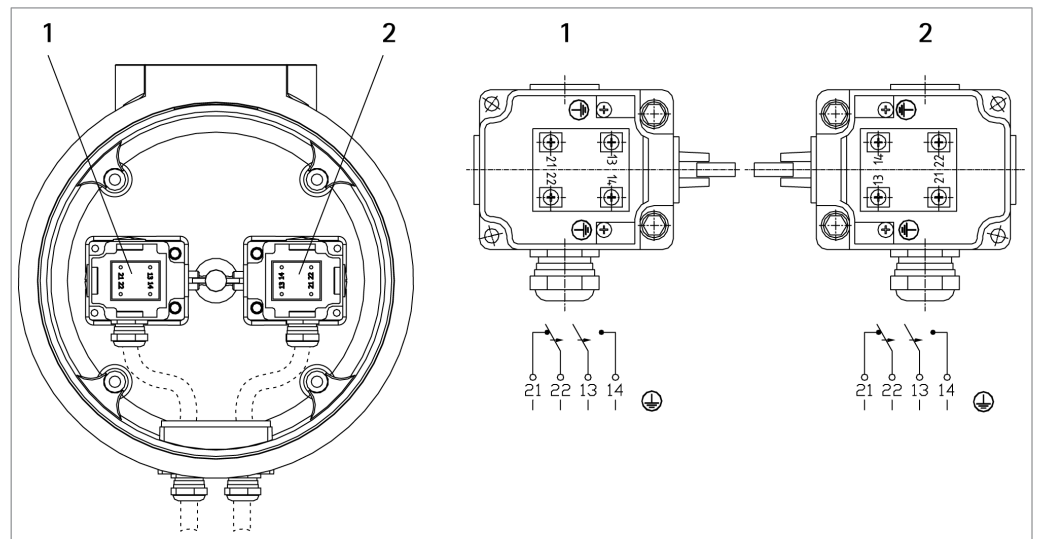


Figure 2: Protective cover with directed oil flow

MESSKO® MPreC®	Connection data	
Cable screw connection	1 micro-switch:	Cover/vertical plate: 1 x M20x1.5 (SW 24) for cable Ø 8...15 mm 1 x dummy plug M20x1.5 Switch housing: 1 x M20x1.5
	2 micro-switches:	Cover/vertical plate: 2 x M20x1.5 (SW 24) for cable Ø 8...15 mm Switch housing: 2 x M20x1.5
Degree of protection	IP 65 in accordance with IEC 60 529 (with mounted protective cover) IP 66 in accordance with IEC 60 529 (optionally with mounted protective cover)	
Connection terminals	Single-wire: 0.5...2.5 mm ² , AWG 20-10 or Litz wire with ferrule: 0.5...1.5 mm ² , AWG 20-15	

Connection via connection box

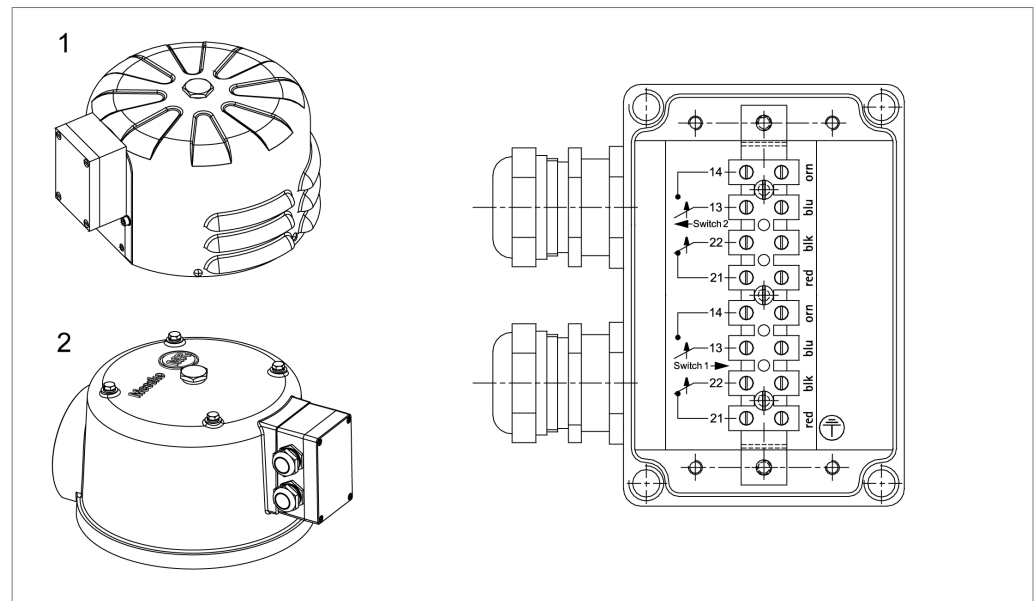


Figure 6: Connection box

1 Standard cover

2 Protective cover with directed oil flow

MESSKO® MPreC®	Connection data	
Cable screw connection	1 micro-switch:	Connection box: 1 x M25x1.5 for cable diameter 8...15 mm (wrench size 24); 1 x dummy plug M25x1.5 Switch housing: 1 x M20x1.5
	2 micro-switches:	Connection box: 2 x M25x1.5 for cable diameter of 8...15 mm (wrench size 24) Switch housing: 2 x M20x1.5
Degree of protection	IP65 in accordance with IEC 60 529	
	Only optional for OD cover: IP66 in accordance with IEC 60 529	
Connection terminals	Single-wire: 0.5...2.5 mm ² , AWG 20-10 or Litz wire with ferrule: 0.5...1.5 mm ² , AWG 20-15	

Dimensions

Protective cover

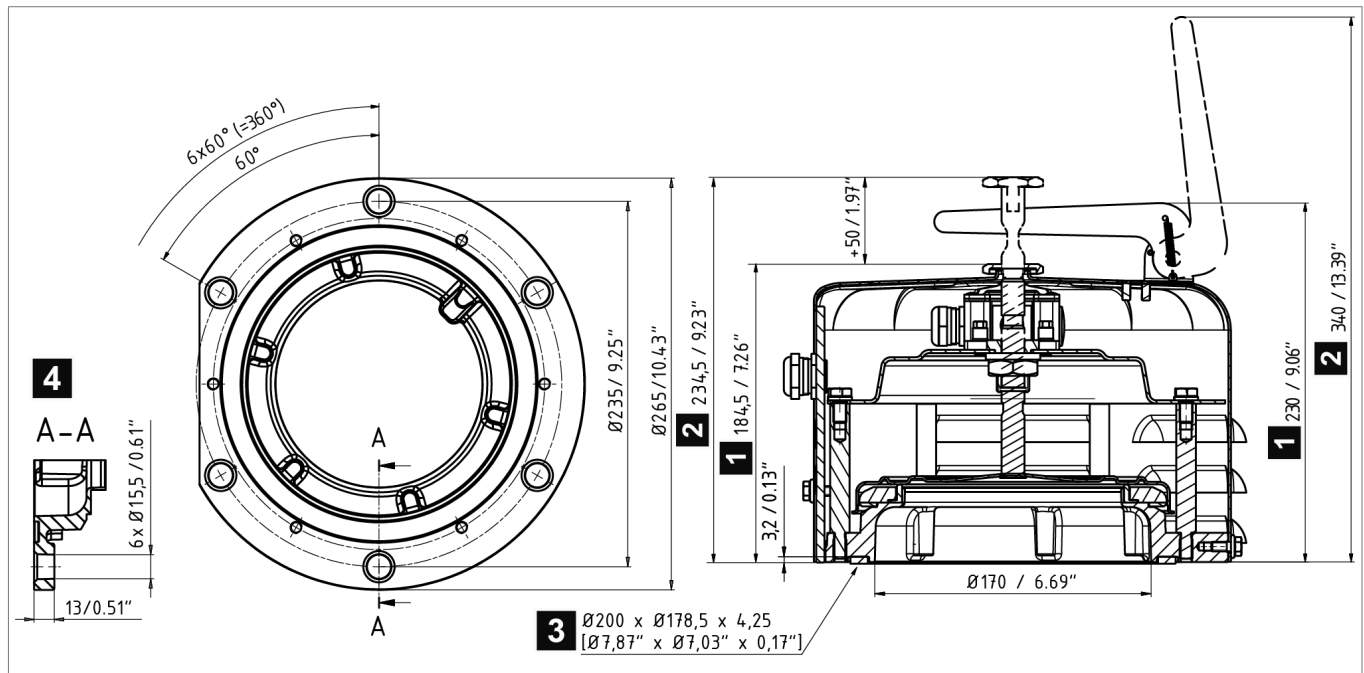


Figure 8: Standard protective cover dimensions

1 OPERATION position	2 ALARM position
3 Mounting seal ring	4 Screw connection

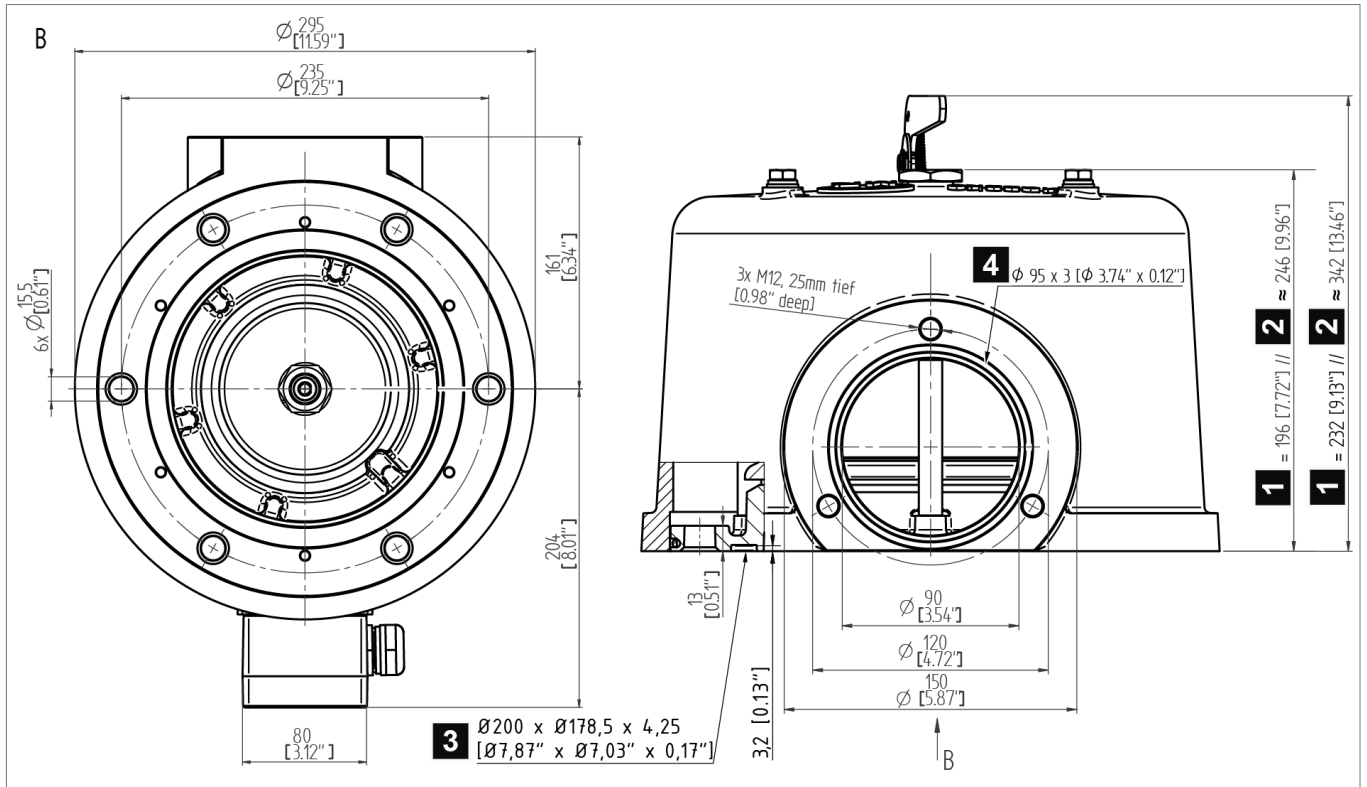


Figure 9: Dimensions of protective cover with directed oil flow (OD cover)

1 OPERATION position	2 ALARM position
3 Mounting seal ring	4 Groove for O-ring (NBR)

Flange on protective cover with directed oil flow (OD cover)

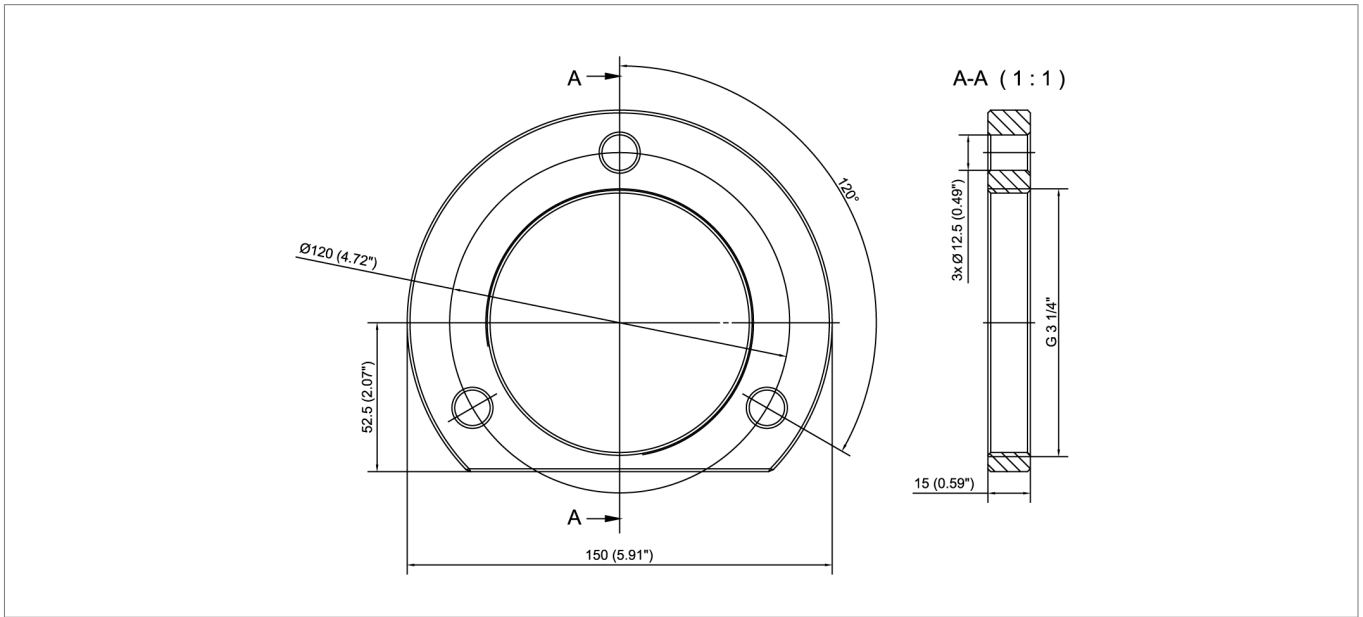


Figure 10: Flange with internal thread (optional)

MESSKO® MPreC®	Flange with internal thread
Material	1.4301 stainless steel
Order No.	73647900

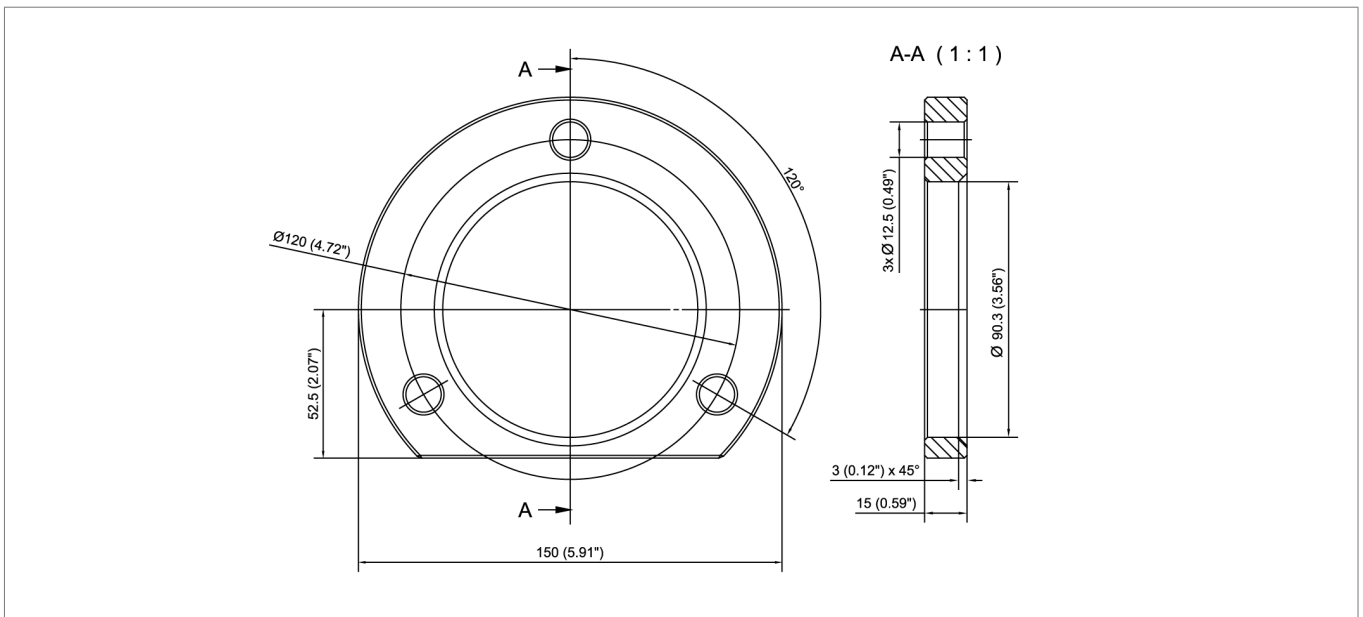


Figure 11: Welding flange (optional)

MESSKO® MPreC®	Welding flange
Material	1.4301 stainless steel
Order No.	74045000