



# CATALOG

PLANT OF STEERING  
HYDROMECHANICS

V.1.0



The Plant of Steering Hydromechanics of RPC Radiy was founded in 2004. It is a specialized company division that focuses on the components production for steering systems control of wheeled transport vehicles and electrical actuators.

Steering hydromechanics products are designed for various transport vehicles (trolley-buses, buses, and trucks) and electric actuators are designated for thermal power plants, metallurgical, chemical, ore mining and processing enterprises, oil refineries, gas distribution stations, heating and water plants, public utilities, and nuclear power plants.

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# Ballscrew hydraulic booster

Ballscrew hydraulic booster is designed for vehicles steering control systems as a device that transmits and enhances the driver's impact on steering control.

## REFERENCE DESIGNATION OF MECHANISMS

Conventional designation of ballscrew hydraulic boosters should have the following structure:



# Ballscrew Hydraulic Booster 430

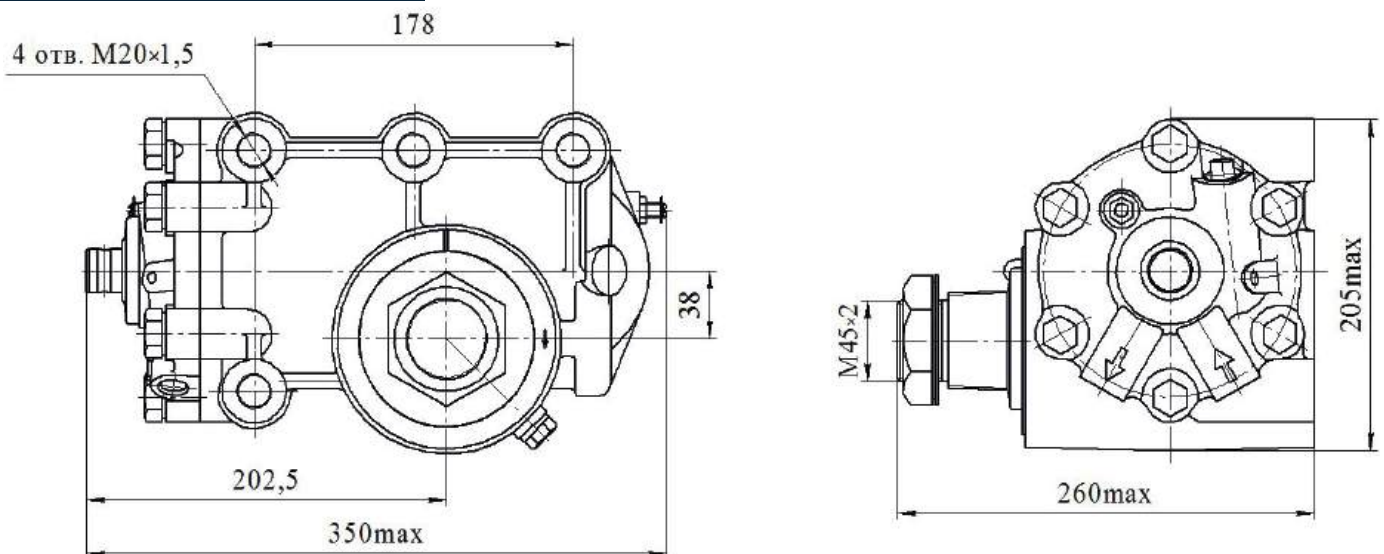


Ballscrew hydraulic booster SHVGU 430 is designed for use in vehicles' steering control systems with steering axis load up to 5000 kg as a device that transmits and boosts driver's impact on control system.

## TECHNICAL SPECIFICATIONS

Load on vehicle steering axle, κH	up to 50
Rating moment on arm shaft, H×M	4300
Transmission ratio	17,4
Related pressure of power fluid, MPa	15,0
Power fluid flow, dm <sup>3</sup> /m	9...13
Number of steering shaft rotations, degr.	4,8
Arm shaft angle	100
Weight, kg , not more	35

## DIMENSIONS



## APPLICATION



# Ballscrew Hydraulic Booster ShVGU 720

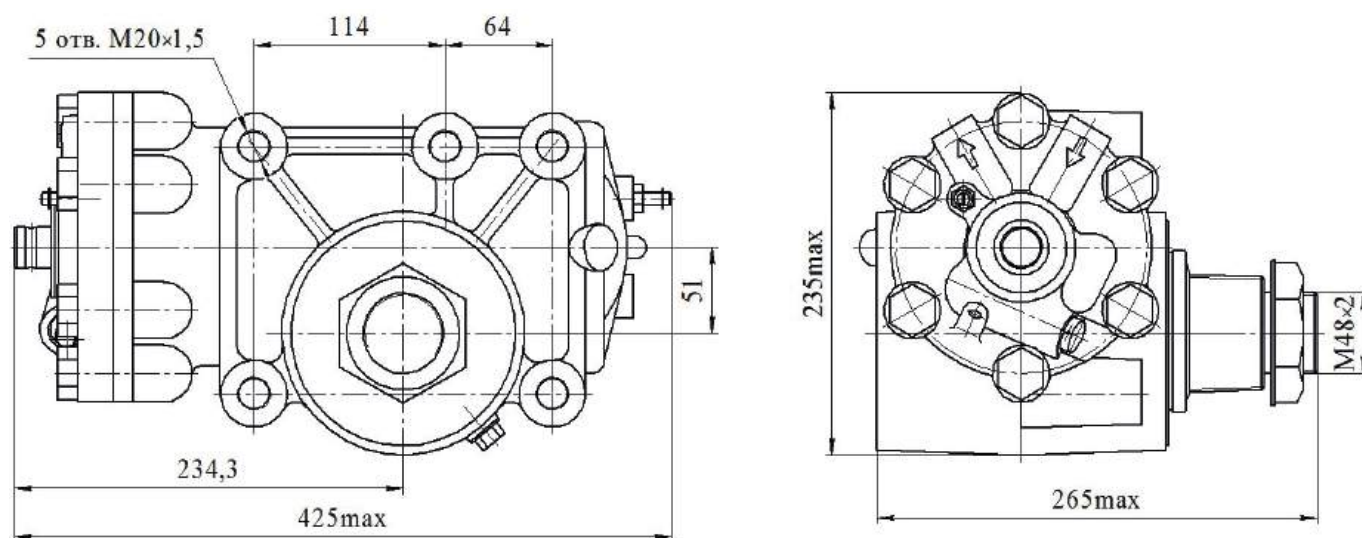


Ballscrew hydraulic booster ShVGU 720 is designed for vehicles' steering control systems with steering axle load up to 9.000 kg as a device that transmits and boosts driver's control of steering system

## TECHNICAL SPECIFICATIONS

Load on vehicle's steering axle, κH	up to 90
Rated moment on arm shaft, Nm	7200
Transmission ratio	23,2
Related pressure of power fluid, MPa	17,0
Power fluid flow, dm <sup>3</sup> /m	16...22
Number of steering shaft rotations, degr.	6,46
Arm shaft angle	100
Weight, kg , not more	52

## DIMENSIONS



## APPLICATION

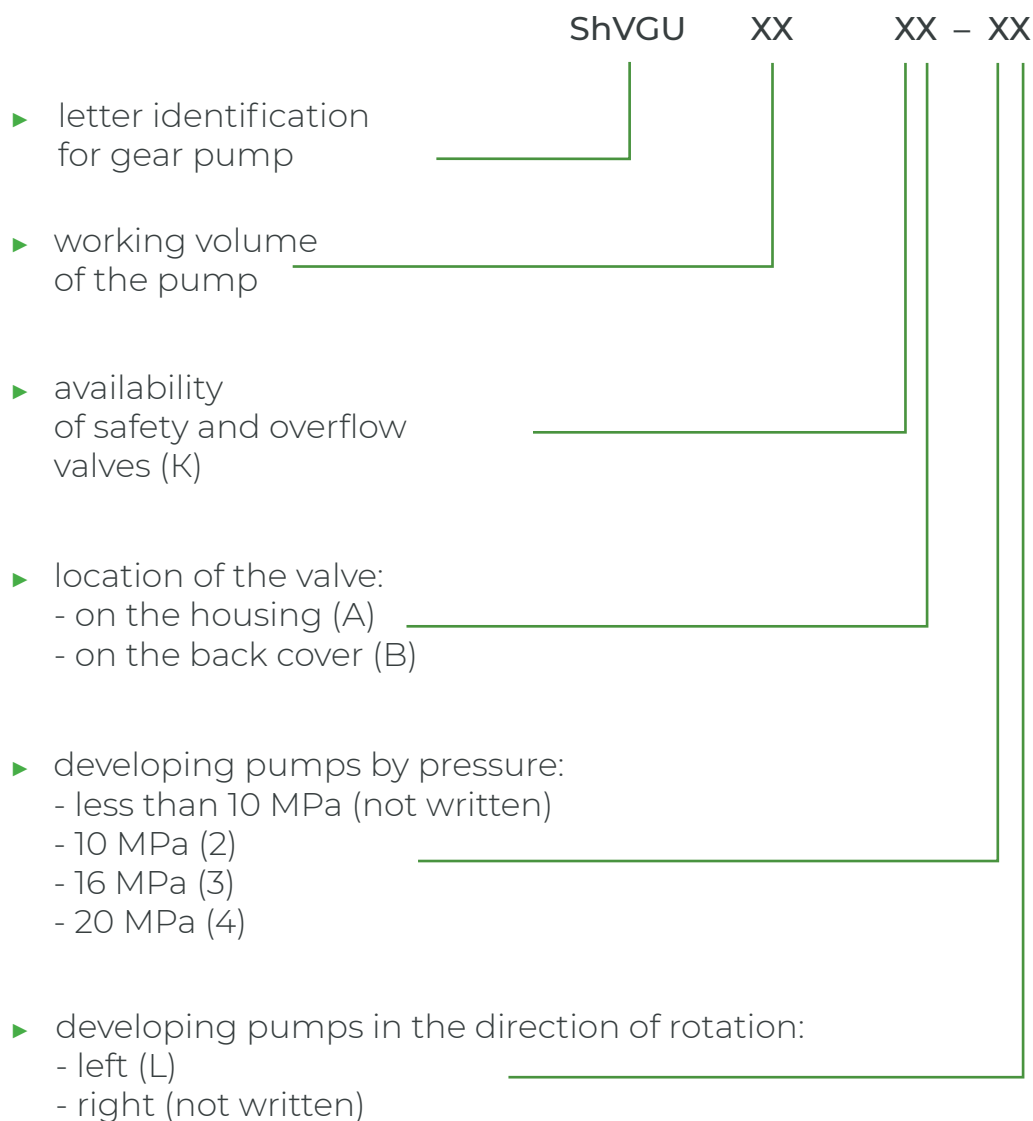


# Gear Pumps

Gear pumps are designed for power fluid pumping into vehicles' steering control systems. The pumps are equipped with a safety valve and an overflow valve to limit the liquid flow.

## REFERENCE DESIGNATION OF MECHANISMS

The reference designation for gear pumps should have the following structure:



# Gear Pump NSh 10 KA-3L

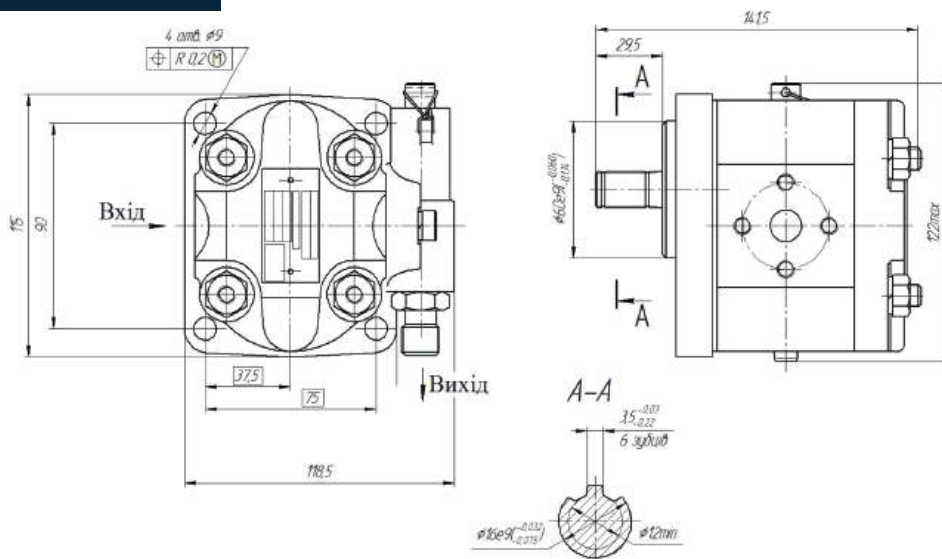


Gear Pump NSh 10KA-3L is designed for power fluid pumping into vehicles' steering control system. The pump is equipped with a safety valve and flow limiting valve

## TECHNICAL SPECIFICATIONS

Working volume, $\text{cm}^3$	10
Safety valve pressure settings, Pa	8,5...9,5
Drive shaft speed, rpm	
▶ minimum	500
▶ maximum	3600
Volume discharge $\text{dm}^3/\text{min}$	
▶ minimum	5
▶ maximum	14,4
Output shaft rotation direction	left
Weight, kg, max, not more than	3,2

## DIMENSIONS



## APPLICATION





# Gear Pump NSh 14 KA-3L

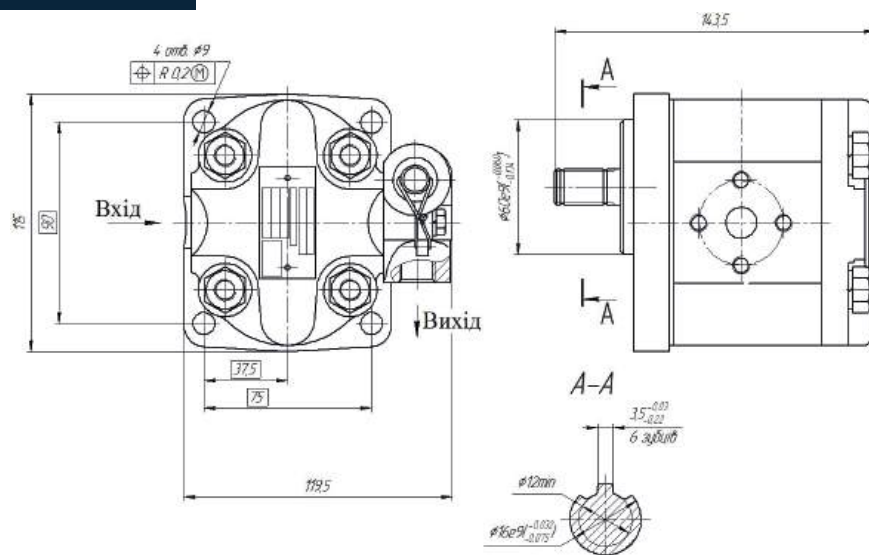


Gear Pump NSh 14KA-3L is designed for power fluid pumping into vehicles steering control system. The pump is equipped with a safety valve and flow limiting valve.

## TECHNICAL SPECIFICATIONS

Working volume, $\text{cm}^3$	14
Safety valve pressure setting, MPa	8,5...9,5
Driveshaft rotation speed, $\text{min}^{-1}$	
▶ minimum	500
▶ maximum	3600
Volume discharge, $\text{dm}^3/\text{min}$	
▶ minimum	8
▶ maximum	16,5
Output shaft rotation direction	left
Weight, kg, max, not more than	3,26

## DIMENSIONS



## APPLICATION



# Gear Pump NSh 14/16GKA-3

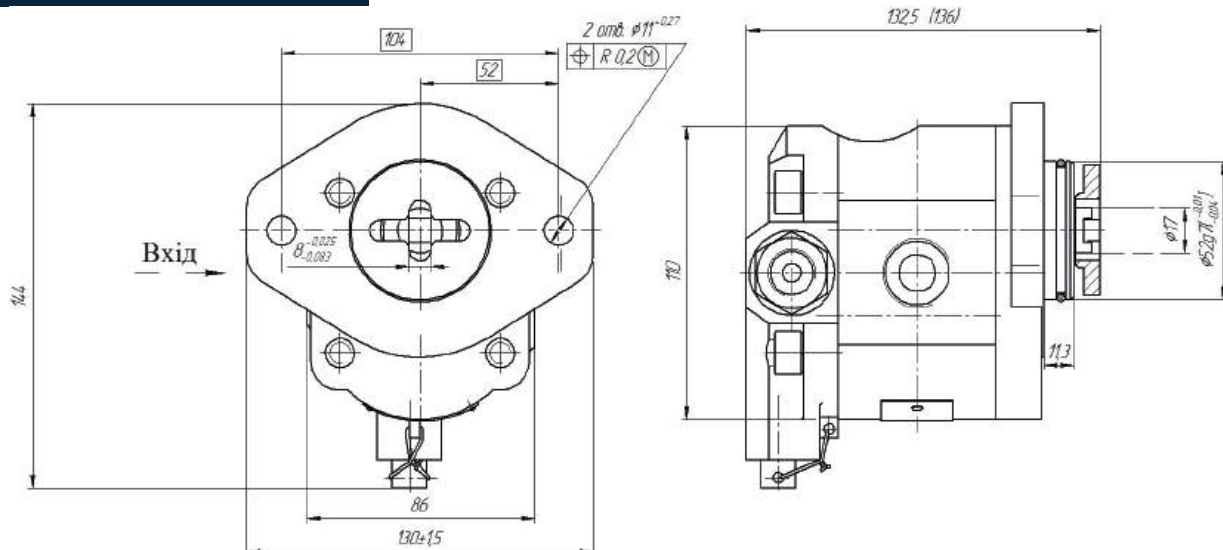


Gear Pump NSh 14/16ГКА-3 is designed for power fluid pumping into vehicles steering system. The pump is equipped with safety valve and flow limiting valve.

## TECHNICAL SPECIFICATIONS

	NSh 14GKA-3	NSH 16GKA-3
Working volume, $\text{cm}^3$	14	16
Safety valve pressure setting, MPa	8,5...18	
Driveshaft rotation speed, $\text{min}^{-1}$		
▶ minimum	500	
▶ maximum	3600	
Volume discharge, $\text{dm}^3/\text{min}$		
▶ minimum	8	11
▶ maximum	16,5	25
Output shaft rotation direction	right	
Weight, kg, max, not more than	3,0	3,26

## DIMENSIONS



## APPLICATION



# Angle - Head GU 90 - 3

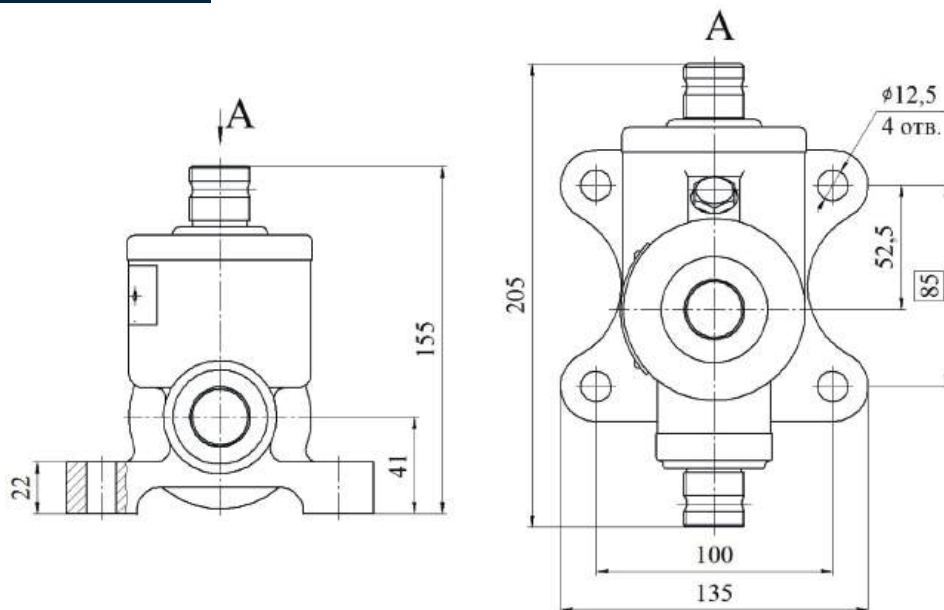


Angle-head GU 90-3 is designed for use in steering control systems of vehicles equipped with steering booster as a device to supply torque transmission from vehicle steering shaft to input steering shaft at their axis intersection.

## TECHNICAL SPECIFICATIONS

Axial angle of input and output shaft, degr.	90
The maximum torque transmitted, N×m	125
Transmission ratio	1,0
Maximum static torque, N×m	500
Mechanical play, max.time, min	30
Input shaft torque moment at release output shaft, Nm	0,8
Weight, kg	5,5

## DIMENSIONS



## APPLICATION



# Hydraulic Station SG 16

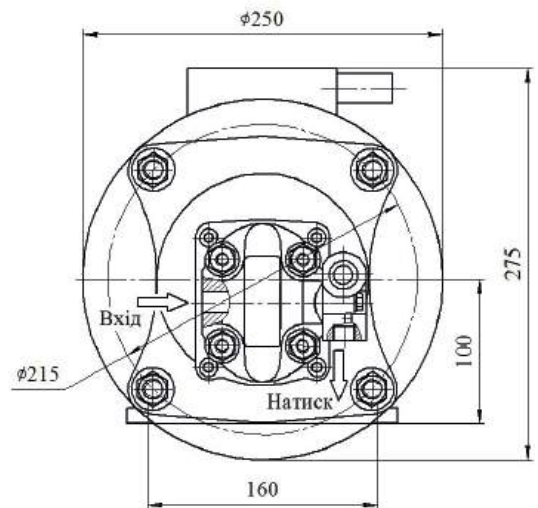
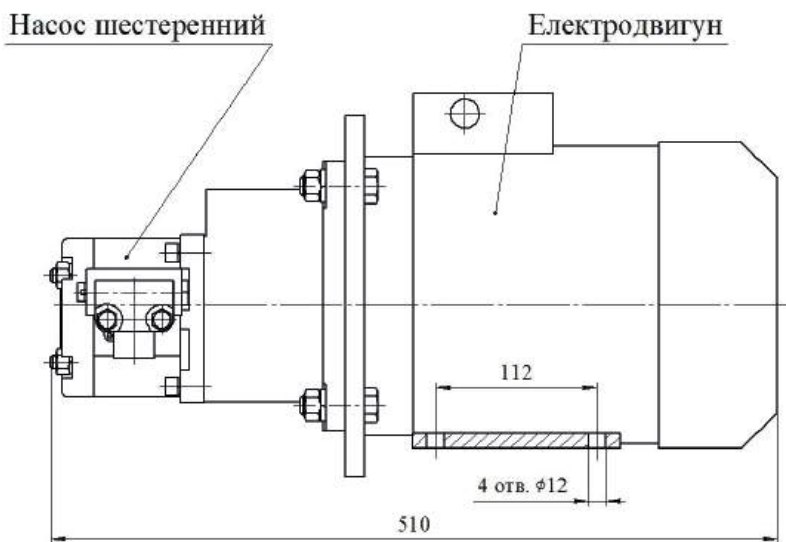


Hydraulic station SG16 is designed for steering control systems of trolleybuses, it supplies power fluid to steering booster system.

## TECHNICAL SPECIFICATIONS

Pump volume flow, dm <sup>3</sup> /min	14,5...16
Adjustment range of pressure cutoff valve, MPa	7,0...15
Average noise level at a distance of one meter from the source, dB(A)	84
Power of Motor, kW	3,0
Weight, kg	33

## DIMENSIONS



## APPLICATION



# Telescopic Steering Shaft VRT 80

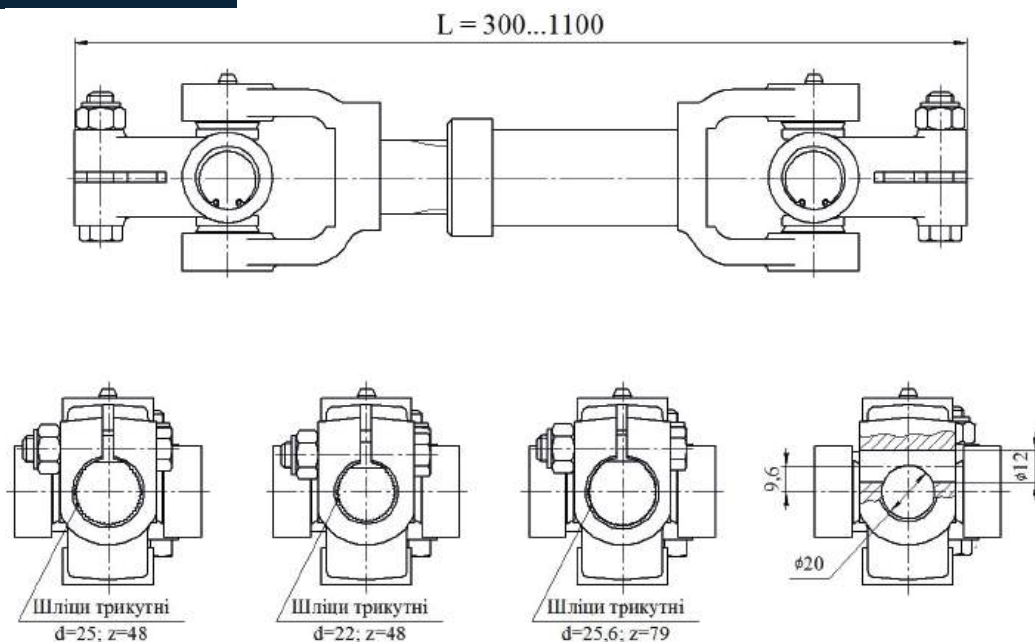


Telescopic Steering Shaft VRT 80 is designed for vehicle steering control systems as a device that connects the elements of the steering column with the input shaft of the steering mechanism or intermediate links. It provides torque transmission and compensates for the discrepancy in the axes and longitudinal dimensions of the connecting elements at angles of inclination of their axes not more than 35° on each side of the VRT.

## TECHNICAL SPECIFICATIONS

The diameter of the circumscribed circle, mm	80
Maximum torque, N×m	125
Maximum static moment, N×m	225
Lengths range, mm	300...1100
The maximum accepted angle of inclination of cardan joints, degr	35
The shafts are equipped with a damping device, which provides absence of noise during vibration loads	

## DIMENSIONS



## APPLICATION



# Oil Tank BM 1,6



The oil tank is designed to supply the working fluid of the pumps of hydraulic drives in the hydraulic systems of motor vehicles to cool and clean the working fluid from mechanical inclusions.

## TECHNICAL SPECIFICATIONS

Volume of working fluid, dm<sup>3</sup>

- ▶ minimum
- ▶ maximum

1,6  
1,7

Nominal fineness of filtration, μm

25

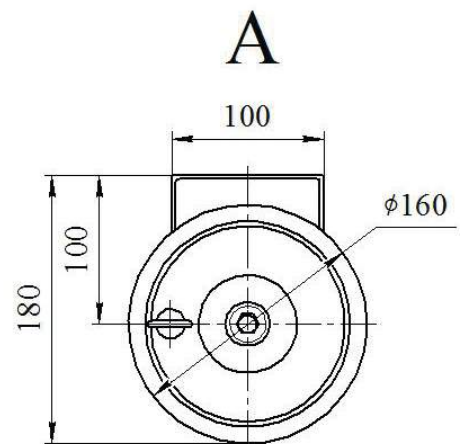
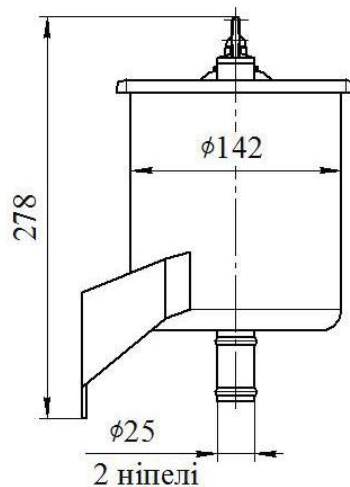
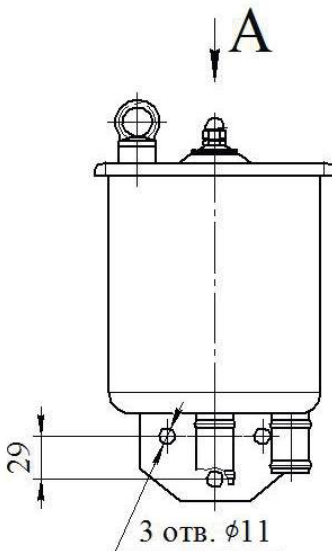
Nominal filter element fluid flow, dm<sup>3</sup>/min

24

Weight (without oil), kg, max.

2,0

## DIMENSIONS



## APPLICATION



# Steering Shaft Cardan KR 80x115

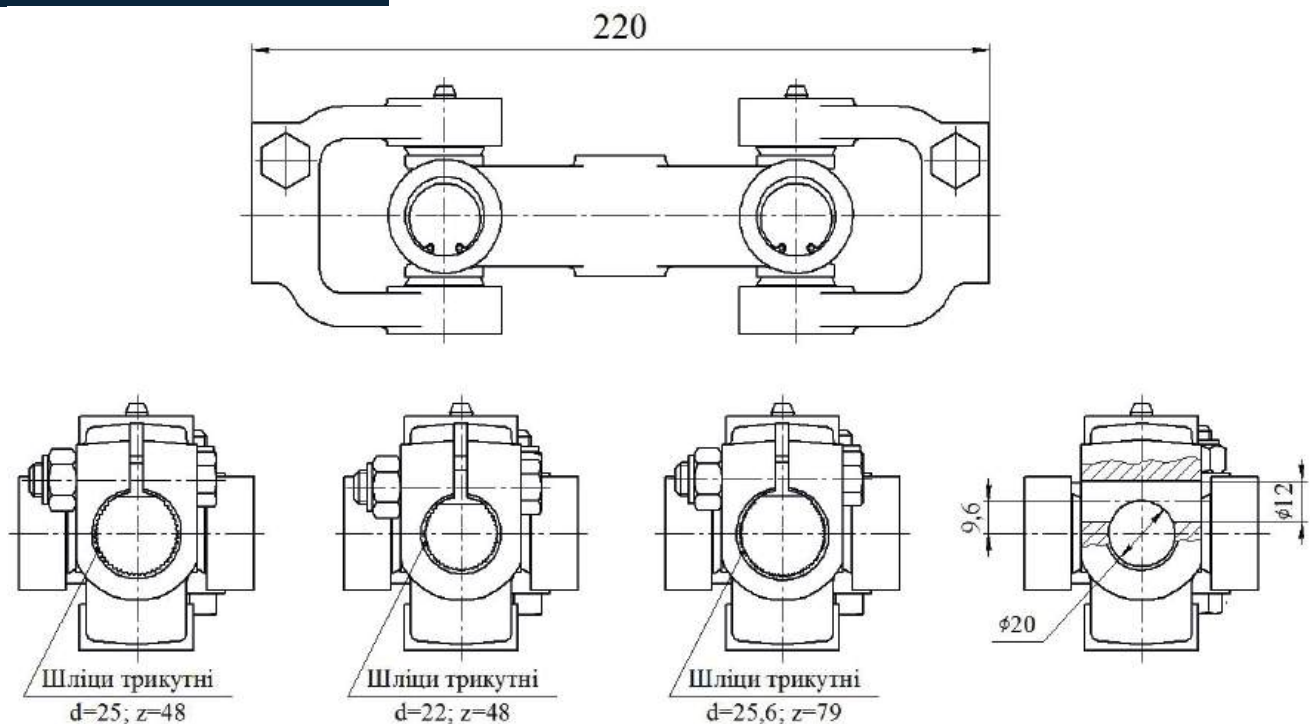


Steering shaft cardan KR 80x115 is used in steering control systems for vehicles to connect the elements of the steering column with the input shaft of the steering mechanism or intermediate links. It provides torque transmission and compensates for the discrepancy of the axes of these elements when their axes, according to the configuration, intersect.

## TECHNICAL SPECIFICATIONS

Maximum rotation torque, N×m	125
Static moment, N×m, max.	500
Maximum accepted inclination angle of cardan joints, degr.	35
Weight, kg	1,2...1,7

## DIMENSIONS



## APPLICATION

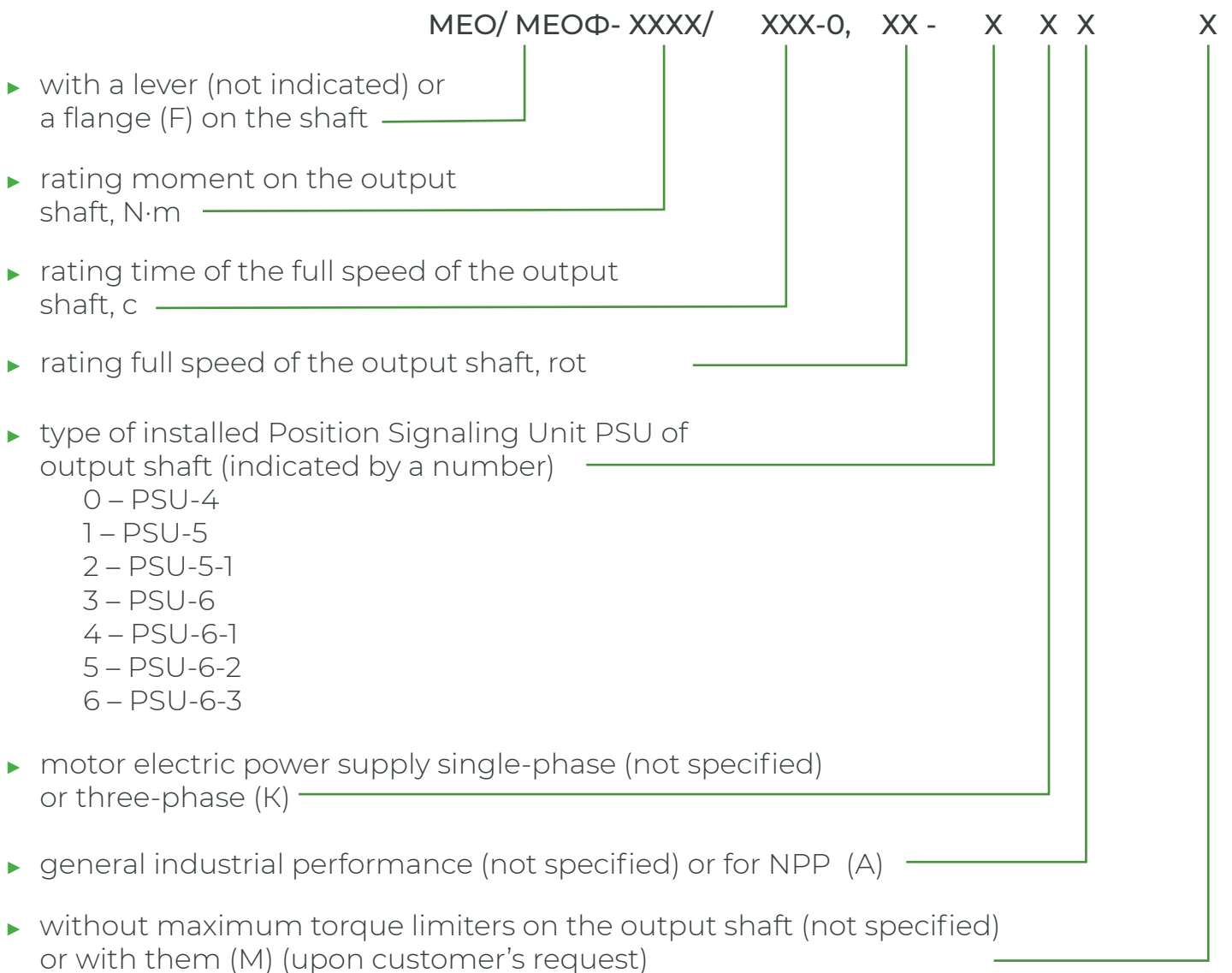


# Single Turn Electric Actuators MEO

Single-turn electric actuators are designed to move control components in the systems of automatic regulation of processes in accordance with command signals of automatic regulation and control devices in process control systems at nuclear energy facilities and other industries.

## REFERENCE DESIGNATION OF MECHANISMS

Conventional designation of mechanisms should have the following structure:



Single-turn electric actuators (MEO) are supplied to domestic market of Ukraine and exported to other countries.



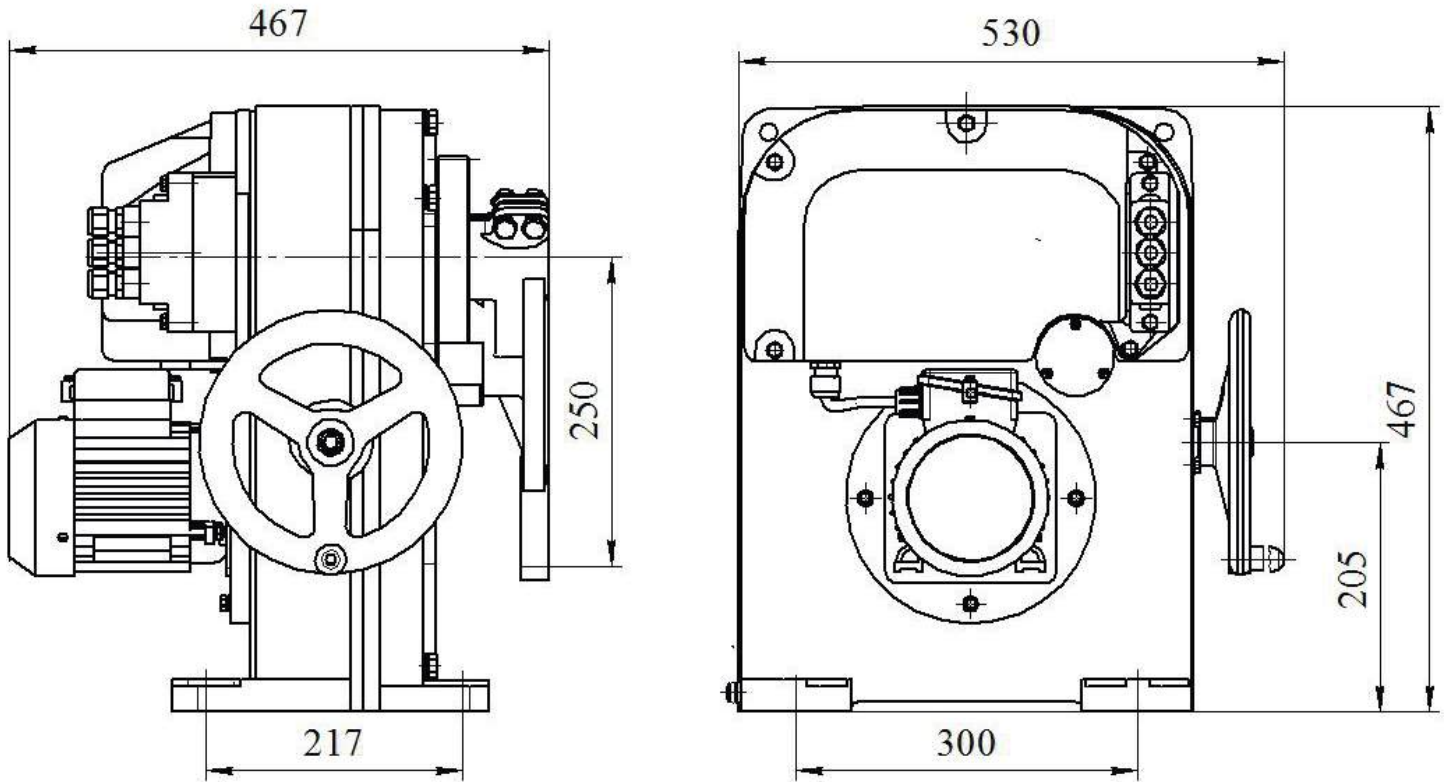
# Single-turn electric actuator MEO 1600



## TECHNICAL SPECIFICATIONS

Designation	Actuator output parameter			Weight, kg	Power consumed, W not more than	The current consumed by electric motor, A, not more	Current to start the electric motor, A
	Rating moment on the output shaft N×m	Rating time of full speed of output shaft	Rating full speed of output shaft, rot				
MEO-1600/25-0,25	1600	25	0,25	165	300	0,67	3,35
MEO-1600/63-0,63		63	0,63		300	0,67	3,35

## DIMENSIONS

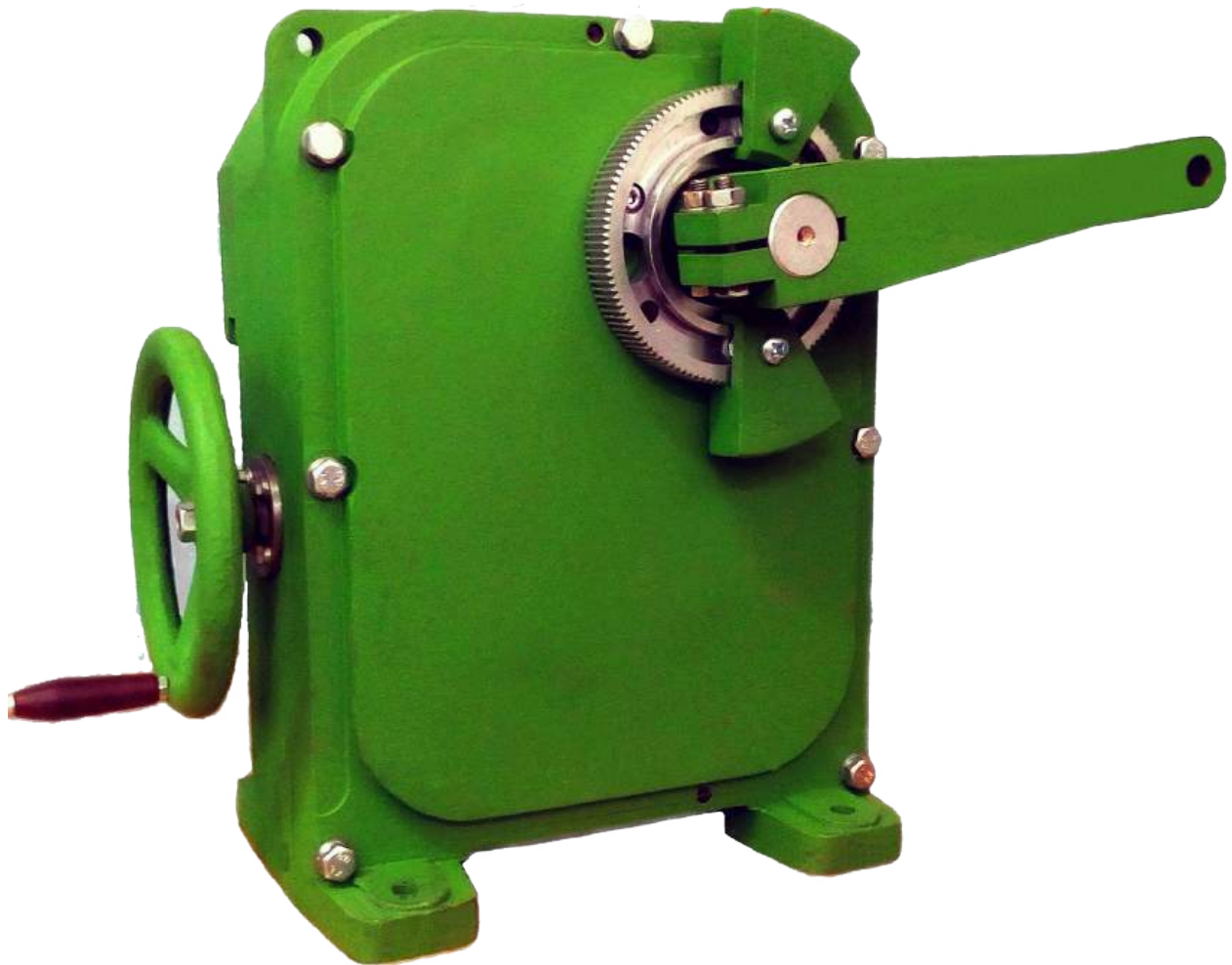


1 – speed changing device; 2 – PSU; 3 – manual drive; 4 – electric motor; 5 – lever; 6 – grounding bolt

## APPLICATION



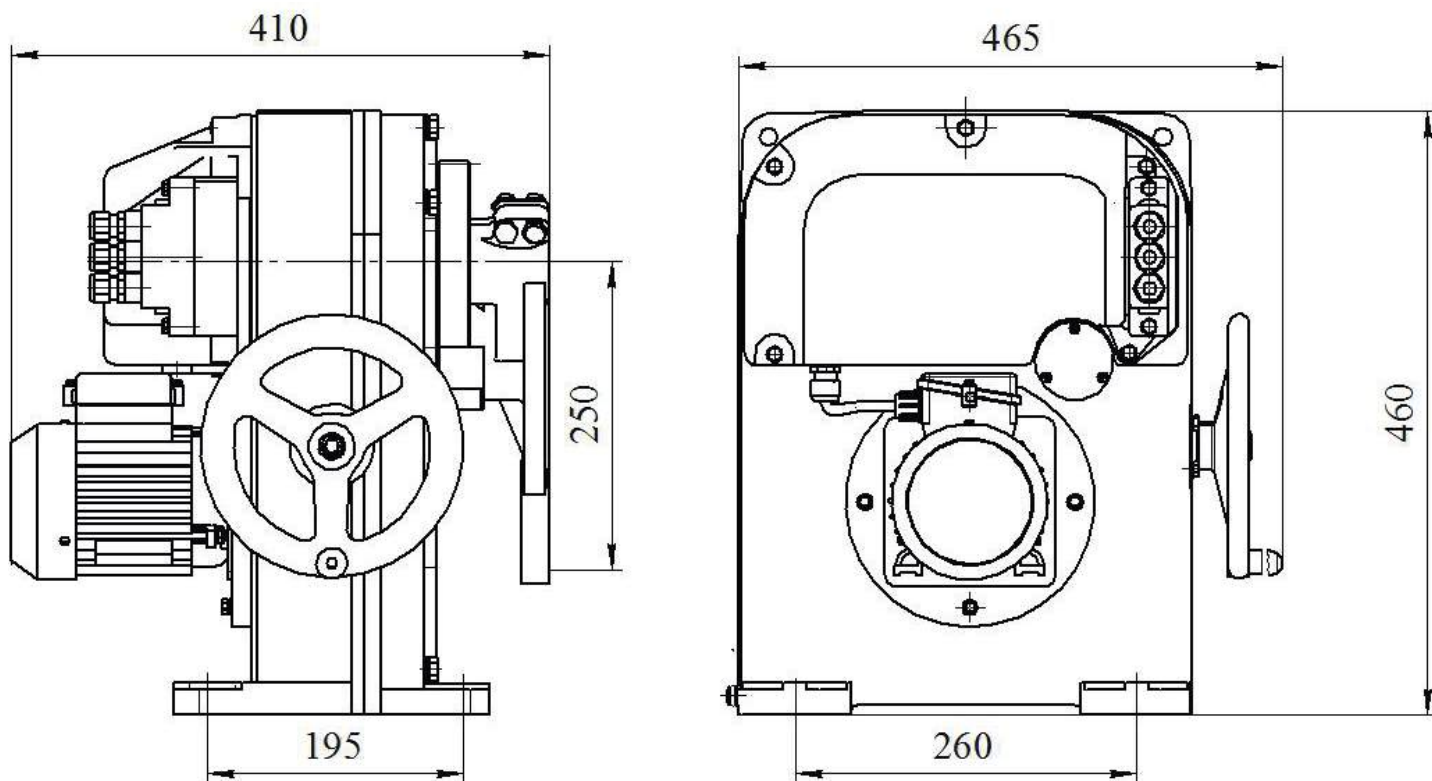
# Single-turn Electric Actuator MEO 630



## TECHNICAL SPECIFICATIONS

Designation	Actuator output parameter			Weight, kg	Power consumed, W, not more	Current consumed by electric motor, A, not more	Current to start the electric motor, A
	Rating moment on the output shaft, N×m	Rating time of full speed of output shaft	Rating full speed of output shaft, rot.				
MEO-630/25-0,25	630	25	0,25	90	320	0,79	0,79
MEO-630/25-0,63		25	0,63		320	0,79	0,79
MEO-630/63-0,63		63	0,63		320	0,79	0,79
MEO-630/63-0,25		63	0,25		270	1,57	1,57
MEO-630/160-0,63		160	0,63		270	1,57	1,57

## DIMENSIONS

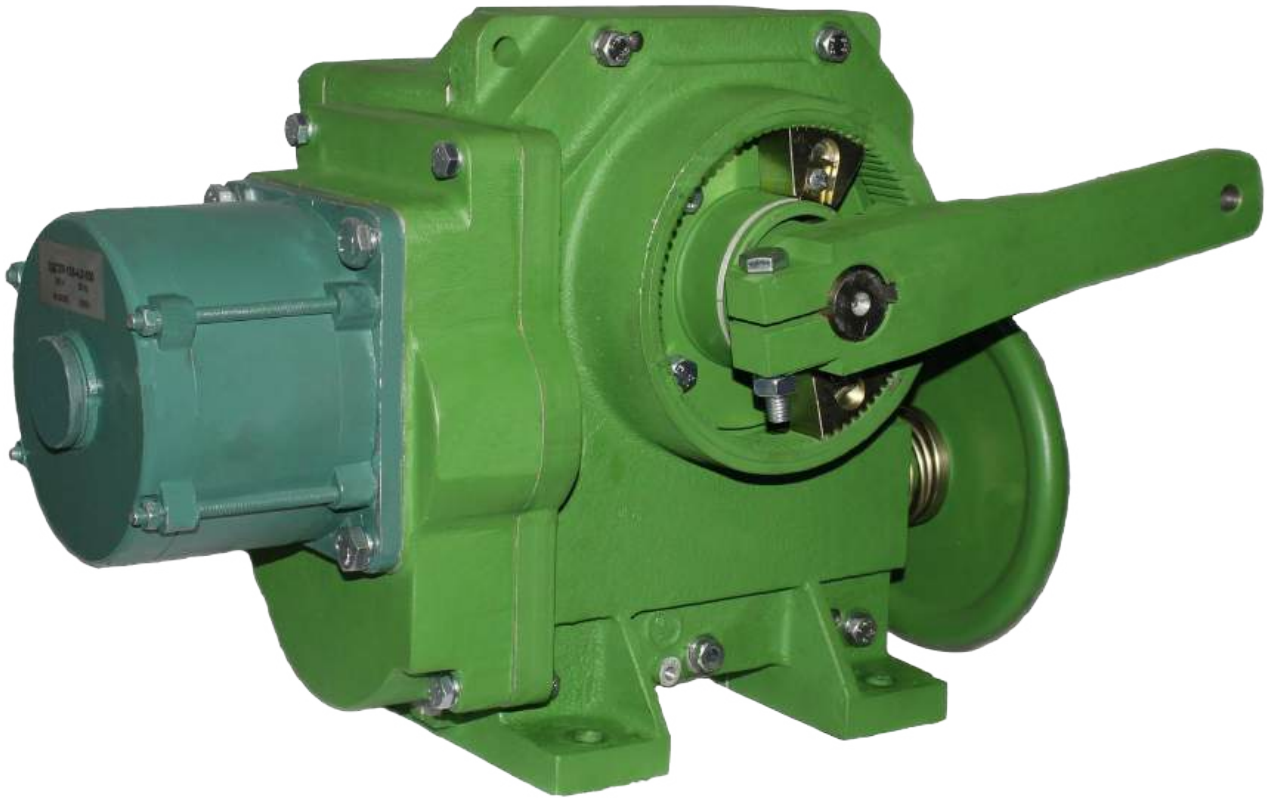


1 – speed changing device; 2 – PSU; 3 – manual drive; 4 – electric motor; 5 – lever; 6 – grounding bolt

## APPLICATION



# Single-turn Electric Actuator MEO 250

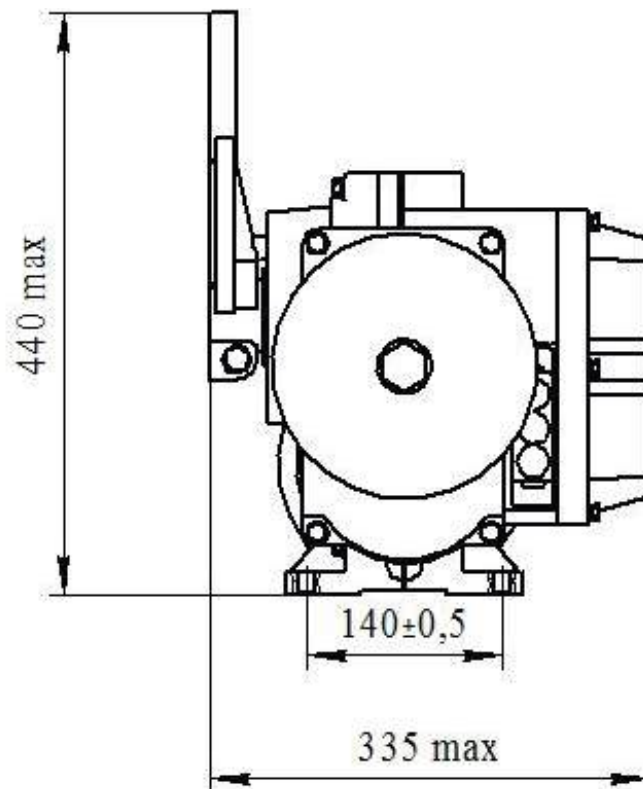
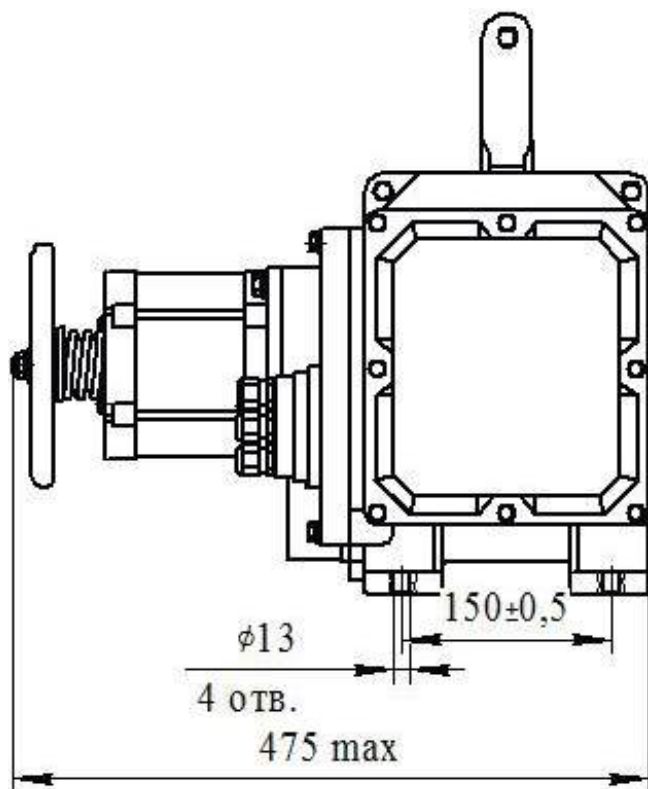


## TECHNICAL SPECIFICATIONS

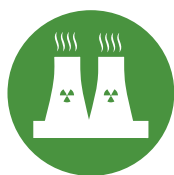
Designation	Actuator output parameter			Weight, kg	Power consumed W not more than	Current consumed by electric motor, A not more than	Current to start the electric motor, A
	Rating moment on the output shaft, N×m	Rating time of full speed of output shaft	Rating full speed of output shaft, rot.				
MEO-250/25-0,25	250	25	0,25	30	270	1,57	1,57
MEO-250/63-0,63		63	0,63		270	1,57	1,57
MEO-250/63-0,25		63	0,25		180	1,0	1,0
MEO-250/160-0,63		160	0,63		180	1,0	1,0
MEO-250/10-0,25		10	0,25	85	320	0,79	3,16
MEO-250/25-0,63		250	0,63		320	0,79	3,16

Note: MEO-250/10-0,25 and MEO-250/25-0,63 are manufactured in the housing of MEO 630

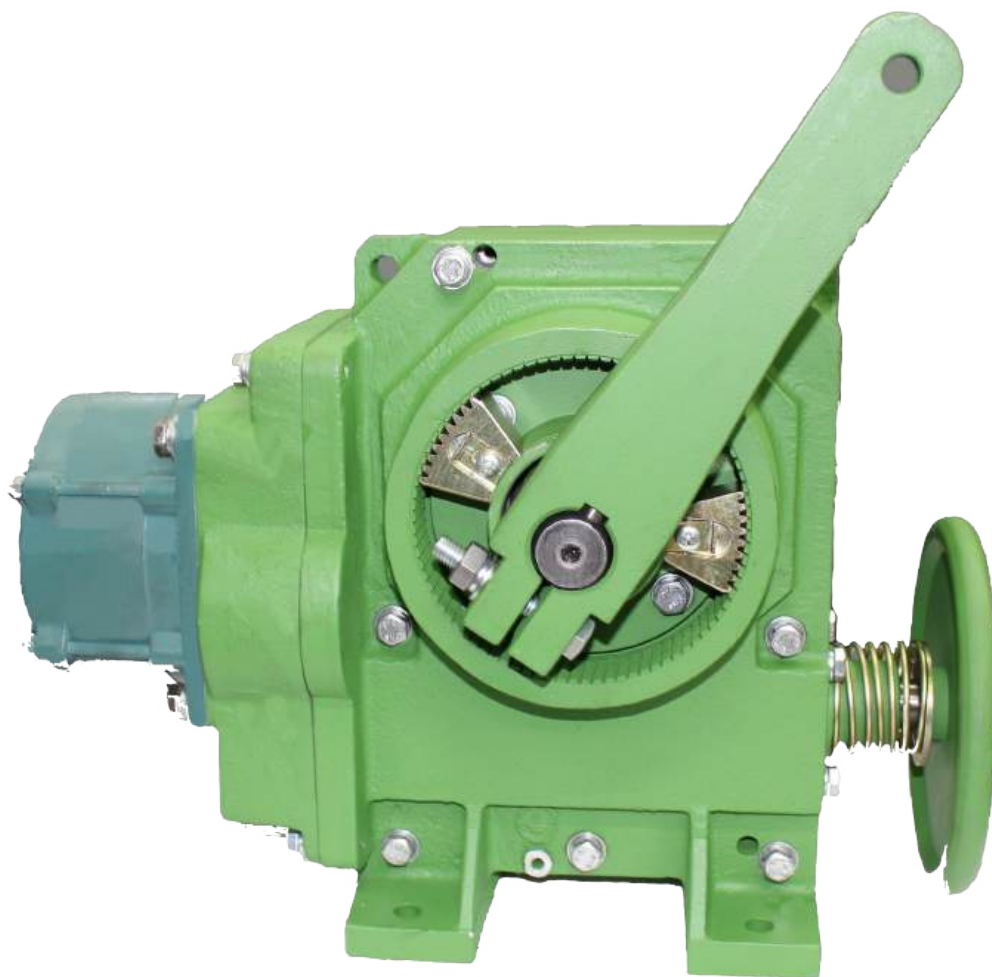
## DIMENSIONS



## APPLICATION



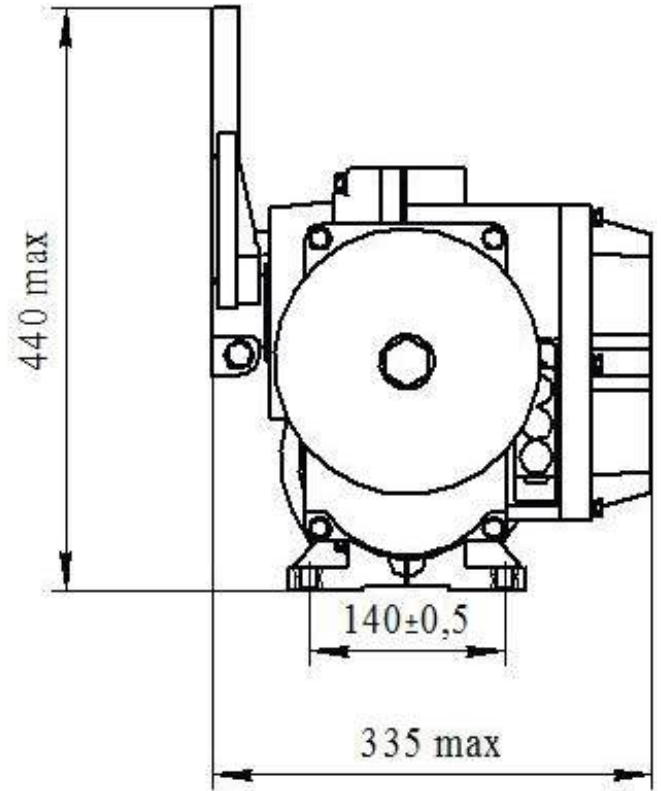
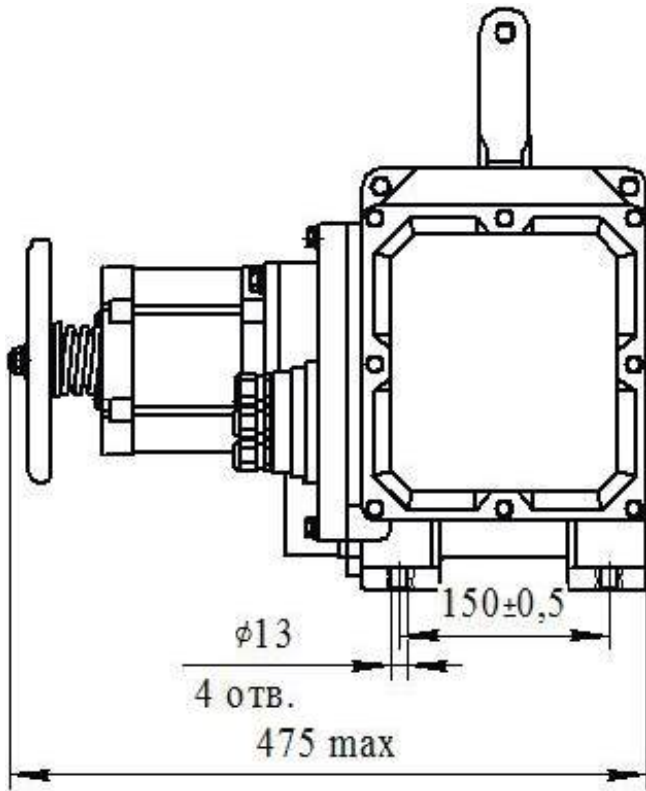
# Single-turn Electric Actuator MEO 100



## TECHNICAL SPECIFICATIONS

Designation	Actuator output parameter			Weight, kg	Power consumed W not more than	Current consumed by electric motor, A not more than	Current to start the electric motor, A
	Rating moment on the output shaft, N×m	Rating time of full speed of output shaft	Rating full speed of output shaft, rot.				
MEO-100/10-0,25	100	10	0,25	30	270	1,57	1,57
MEO-100/25-0,63		25	0,63		270	1,57	1,57
MEO-100/25-0,25		25	0,25		180	1,0	1,0
MEO-100/63-0,63		63	0,63		180	1,0	1,0
MEO-100/160-0,63		160	0,25		180	1,0	1,0

## DIMENSIONS



## APPLICATION





# Single-turn Electric Actuator MEO 40

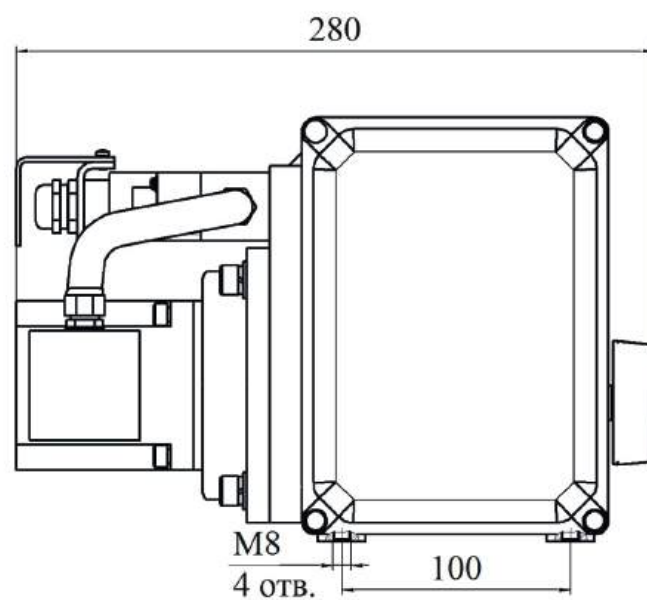
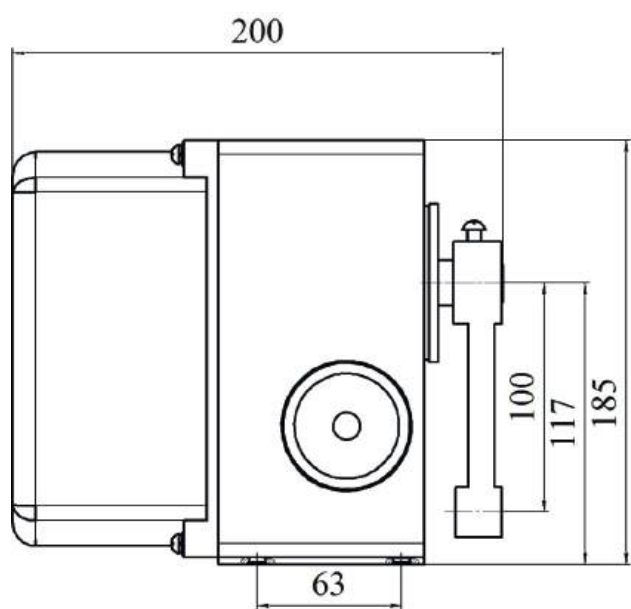


## TECHNICAL SPECIFICATIONS

Designation	Actuator output parameter			Weight, kg	Power consumed W not more than	Current consumed by electric motor, A not more than	Current to start the electric motor, A
	Rating moment on the output shaft, N×m	Rating time of full speed of output shaft	Rating full speed of output shaft, rot.				
MEO-40/10-0,25	40	10	0,25	30	180	1,4	1,45
MEO-40/25-0,63		25	0,63		180	1,4	1,45
MEO-40/25-0,25		25	0,25	8,2	100	0,7	0,7
MEO-40/63-0,63		63	0,63		100	0,7	0,7
MEO-40/63-0,25		63	0,25		60	0,28	0,28
MEO-40/160-0,63		160	0,63		60	0,28	0,28

Note: MEO-40/10-0,25 are manufactured in housing of MEO 250

## DIMENSIONS



## APPLICATION



# Position Signaling Unit

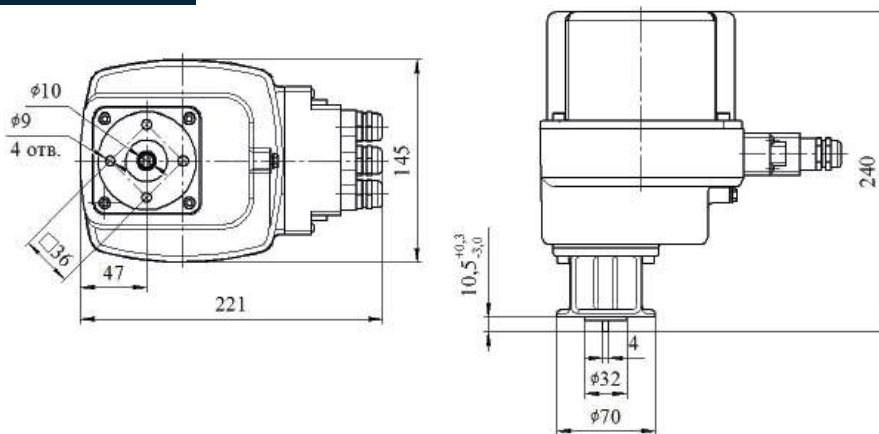


Position Signalling Unit (PSU) is designed to determine the current position value of the working part of the multi-turn pipeline shut-off valve, output units of multi-turn electric actuators and/or multi-turn electric drives, and also to signal that they have reached their final or intermediate positions and to generate signals blocking the movement of those parts once they have reached the final position at nuclear power plants and other industries.

## TECHNICAL SPECIFICATIONS

PSU model	Rating full speed of input shaft, rot.	Weight, kg, max
PSU-1-35	35	5,5
PSU-1-18,8	18,8	
PSU-1-7,5	7,5	
PSU-1-0,63	0,63	
PSU-1-100	100	

## DIMENSIONS



## APPLICATION



