

Reaction Torque Transducer

DRT

16 torque ranges from $\pm 0 - 2$ up to $\pm 0 - 6000$ Nm
for static applications
active or passive-model

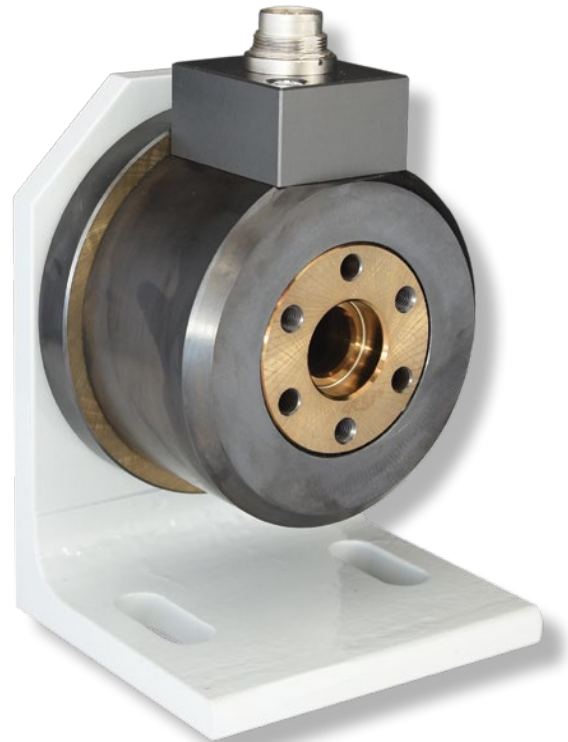
Features

- suitable for impulse screwdrivers
- side load insensitive
- permanently mountable
- exchangeable adapters
- integrated chip for sensor detection
- in connection with evaluation unit GMV2
- for screwing simulator

suitable for

- testing pulsed tools
- torque wrenches
- electric screwdrivers

This transducer was developed for static testing of pulsed tools, torque wrenches, electric screwdrivers, etc. In combination with the universal torque meter GMV2 a torque wrench can be tested without falsifying the result by excessively tightening the wrench. The transducer can be mounted in any position with the help of the flange bracket to suit the tool to be



Sensor mounted with bracket



tested. A variety of adapters are available for accepting the tool so that the tool can be tested with or without a socket. The device shaft is fitted with strain gages. It is not impacted by lateral loading because of the arrangement of the strain gages and an additional ball bearing.

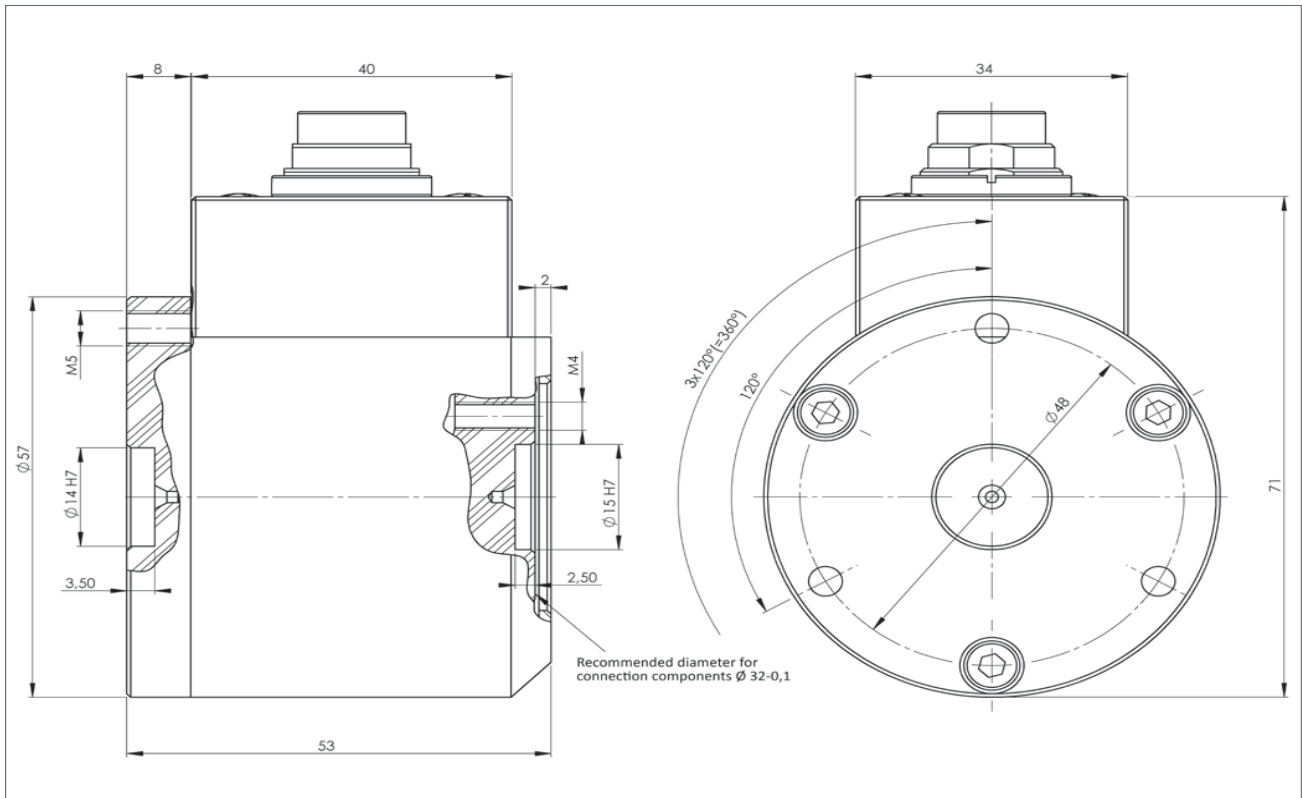
Electrical Specifications DRT

Model:	active	passive
Torque ranges: (± 0 - ... Nm)		
DRT1	2 5 10 12 20	2 5 10 12 20
DRT2	50 100 200 300	50 100 200 300
DRT3	500 1000 2000 3000	500 1000 2000 3000
DRT4	4000 5000 6000	4000 5000 6000
Supply voltage:	12 V DC \pm 10 %	12 V max.
Power consumption:	approx. 30 mA	35 mA max.
Voltage output:	0 to \pm 5 V	DRT1 + DRT2 1 mV/V DRT3 + DRT4 2 mV/V
Nonlinearity:	DRT1 + 2 0,1 % DRT3 + 4 0,15 %	0,1 % 0,15 %
Hysteresis:	0,1 %	0,1 %
Deviation at zero point:	$\leq \pm$ 100 mV	$\leq \pm$ 0,01 mV/V
Internal resistance:	---	350 Ω nominal
Operating temperature:	0 - 60 °C	0 - 60 °C
Compensated temperature range:	5 - 45 °C	5 - 45 °C
Temperature error		
Zero point:	0,02 % / K	0,02 % / K
Sensitivity	0,01 % / K	0,01 % / K
Internal protection:	IP40	IP40
Connection:	12pin-connector	6pin-connector

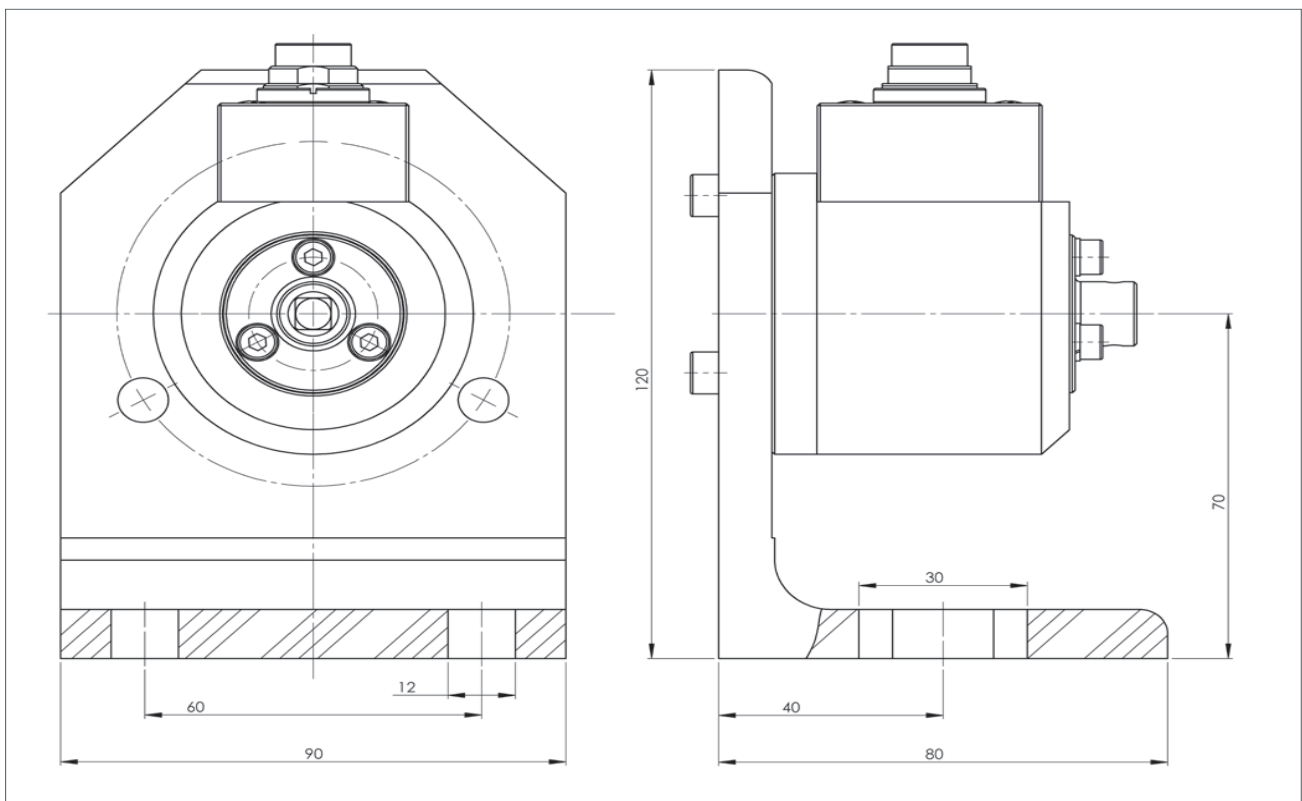
Model	Weight approx. (kg) without mounting bracket	Weight approx. (kg) with mounting bracket
DRT1	0,7	1,8
DRT2	1,6	2,8
DRT3	5,6	17
DRT4	23	52

Model	Torque range (± 0 - ... Nm)	Spring constant (N)	Rated axial load (N)	Overload capacity
DRT1	2	175	290	100 %
	5	330	290	100 %
	10	510	290	100 %
	12	550	290	100 %
	20	820	290	100 %
DRT2	50	2040	430	100 %
	100	2830	430	100 %
	200	4070	430	100 %
	300	5150	430	100 %
DRT3	500	4070	8150	50%
	1000	6790	8150	50%
	2000	11300	8150	50%
	3000	14310	8150	50%
DRT4	4000	17670	27000	50%
	5000	20610	27000	50%
	6000	23370	27000	50%

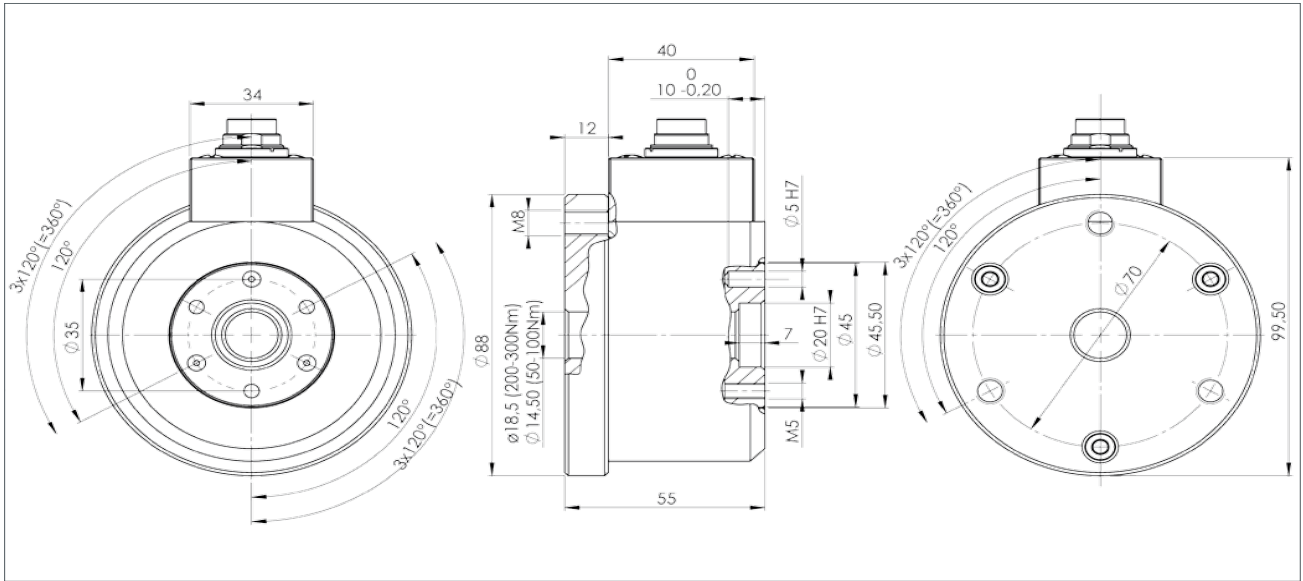
Mechanical Dimensions DRT1



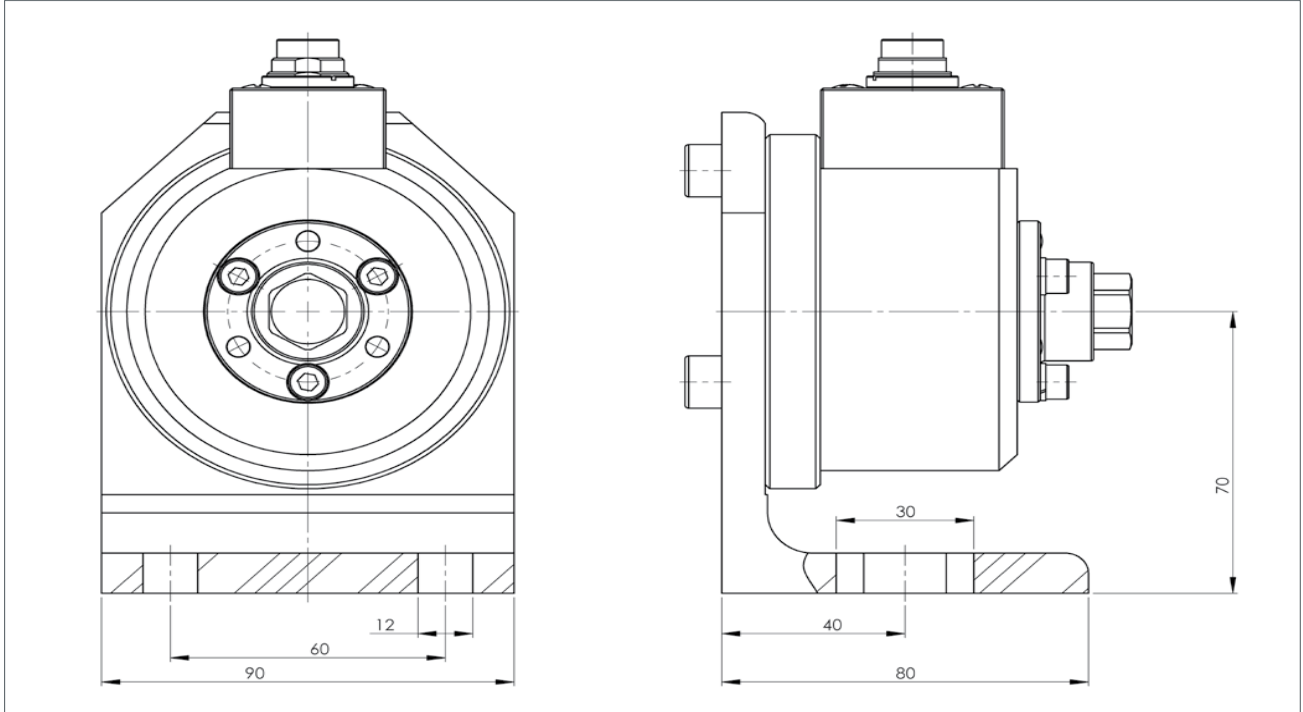
Mechanical Dimensions DRT1 with Mounting Bracket



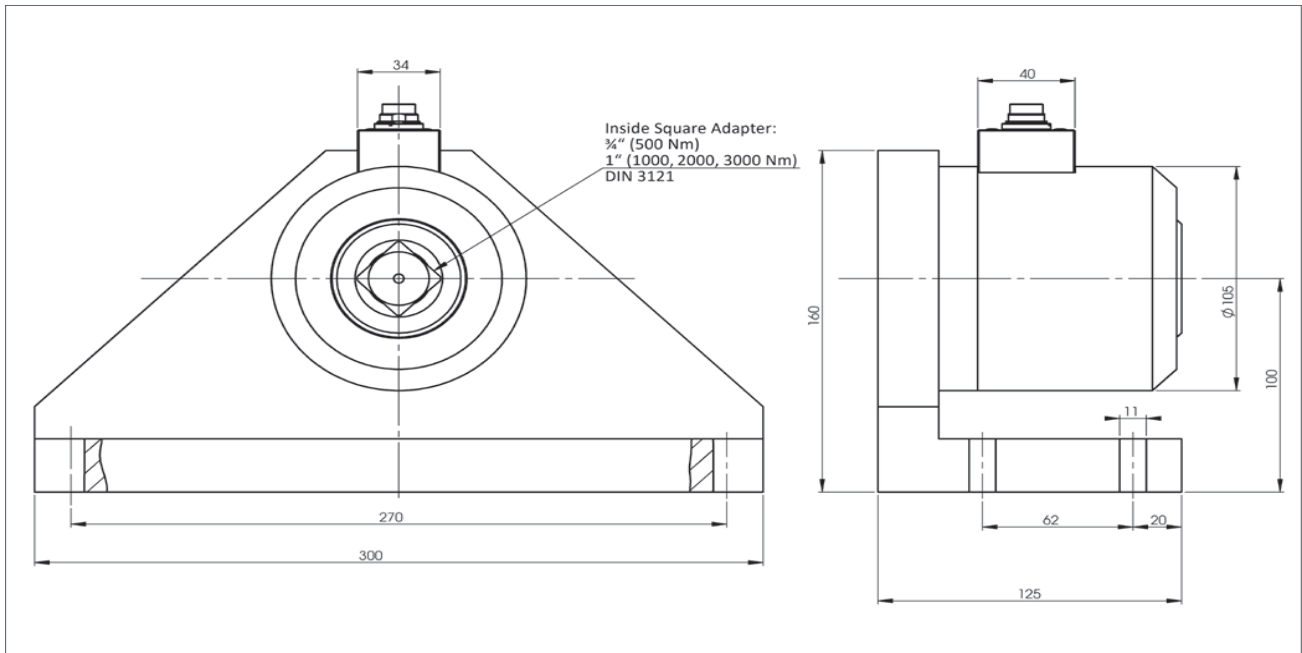
Mechanical Dimensions DRT2



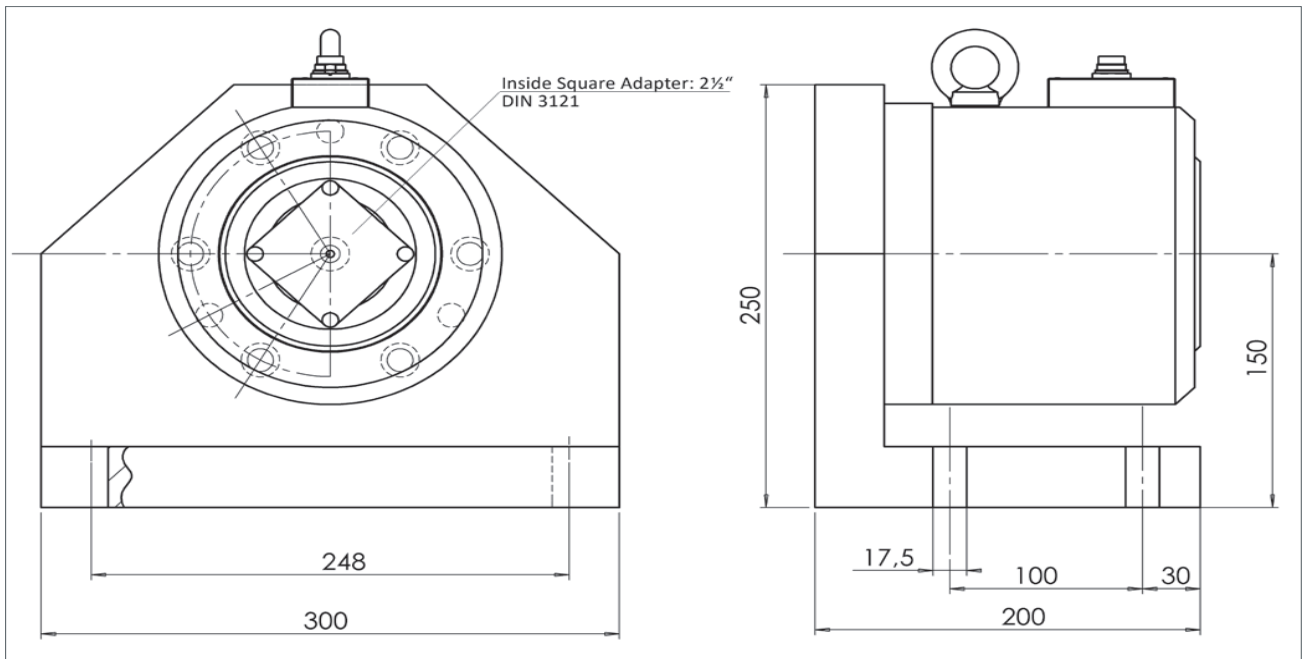
Mechanical Dimensions DRT2 with Mounting Bracket and Adapter



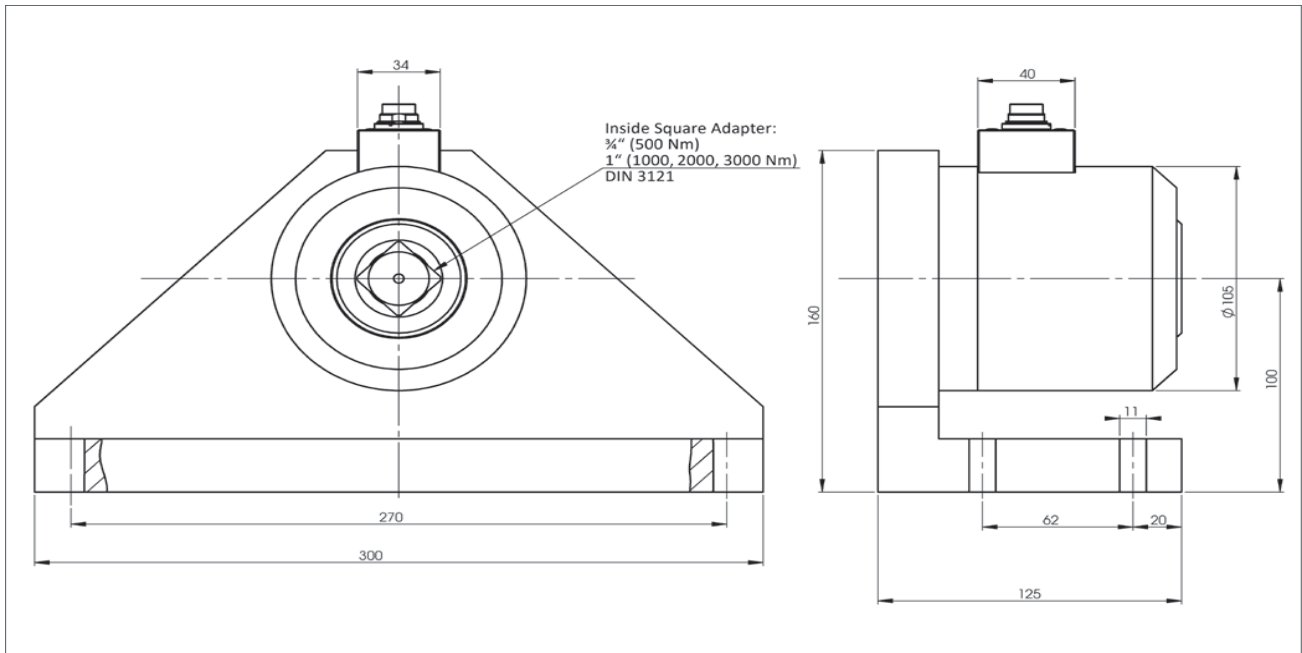
Mechanical Dimensions DRT3



Mechanical Dimensions DRT4



Mechanical Dimensions DRT3



Mechanical Dimensions DRT4

