

## Datasheet

### 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 screwdrive
- side load insensitive
- permanently mountabl
- exchangeable adapters
- integrated chip for sensor detecti
- in connection with evaluation unit GMV2
- for screwing simulato

### suitable for

- testing pulsed tool
- torque wren
- 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.

Subject to change without notice

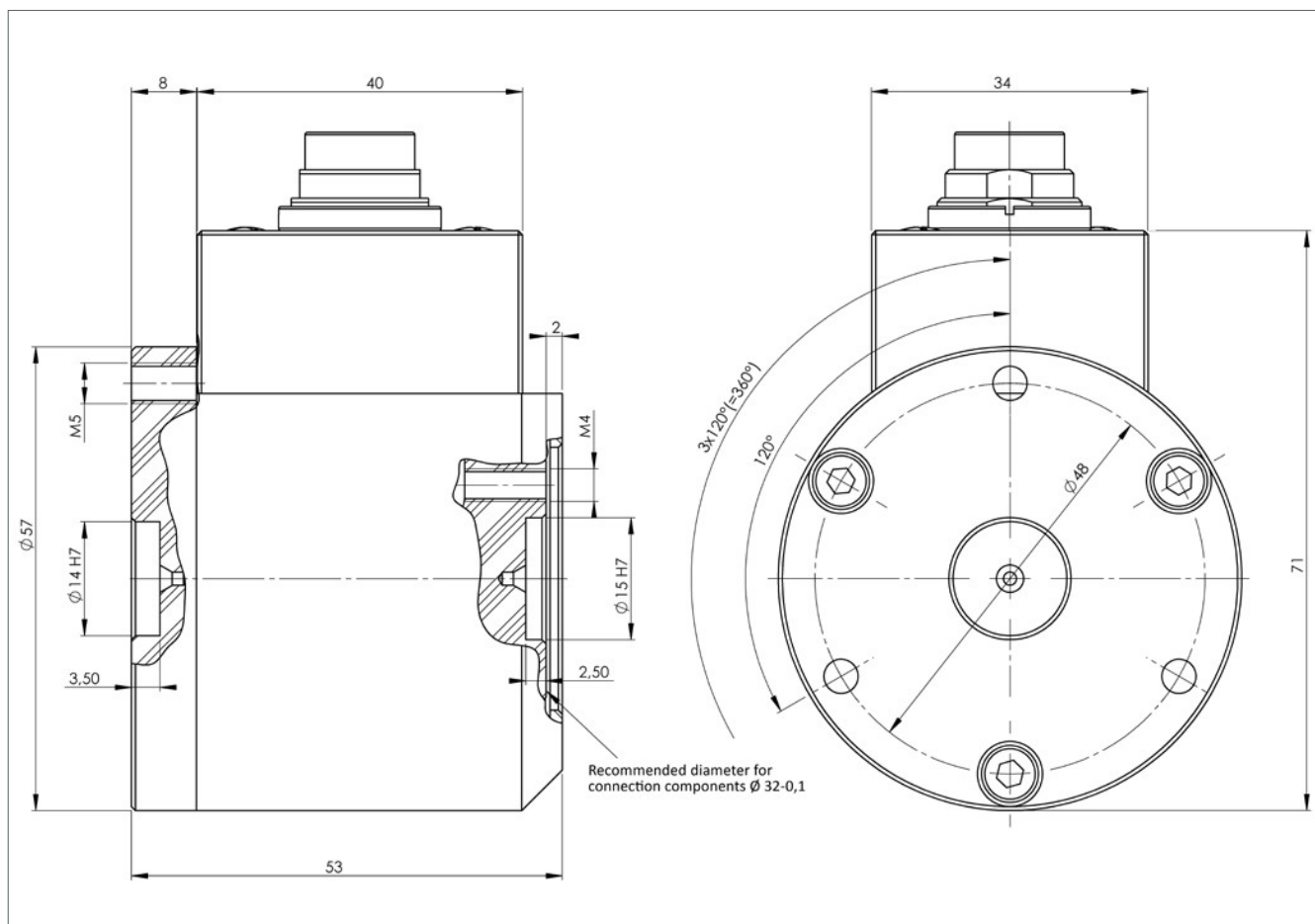
## Electrical Specifications DRT

Model:	active	passive
Torque ranges: ( $\pm 0 - \dots$ Nm)		
DRT1	2   5   10   12   20	2   5   10   12   20
DRT2	50   100   200   300	50   100   200   300
DRT3	500   1000	500   1000   2000   3000
DRT4	4000   5000   6000	4000   5000   600
Supply voltage:	12 V DC $\pm 10$ %	12 V max.
Power consumption:	approx. 30 mA	35 mA max.
Voltage output:	0 to $\pm$ V	DRT1 + DRT2 1 mV/V DRT3 + DRT4 2 mV/V
Nonlinearity:	RT1 +2 0,1 % DRT3 + 4 0,15 %	0,1 % 0,15 %
Hysteresis:	0,1 %	0,1 %
Deviation at zero poi	$\leq \pm 100$ mV	$\leq \pm 0,01$ mV/V
Internal resistance:	---	350 $\Omega$ 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-connecto

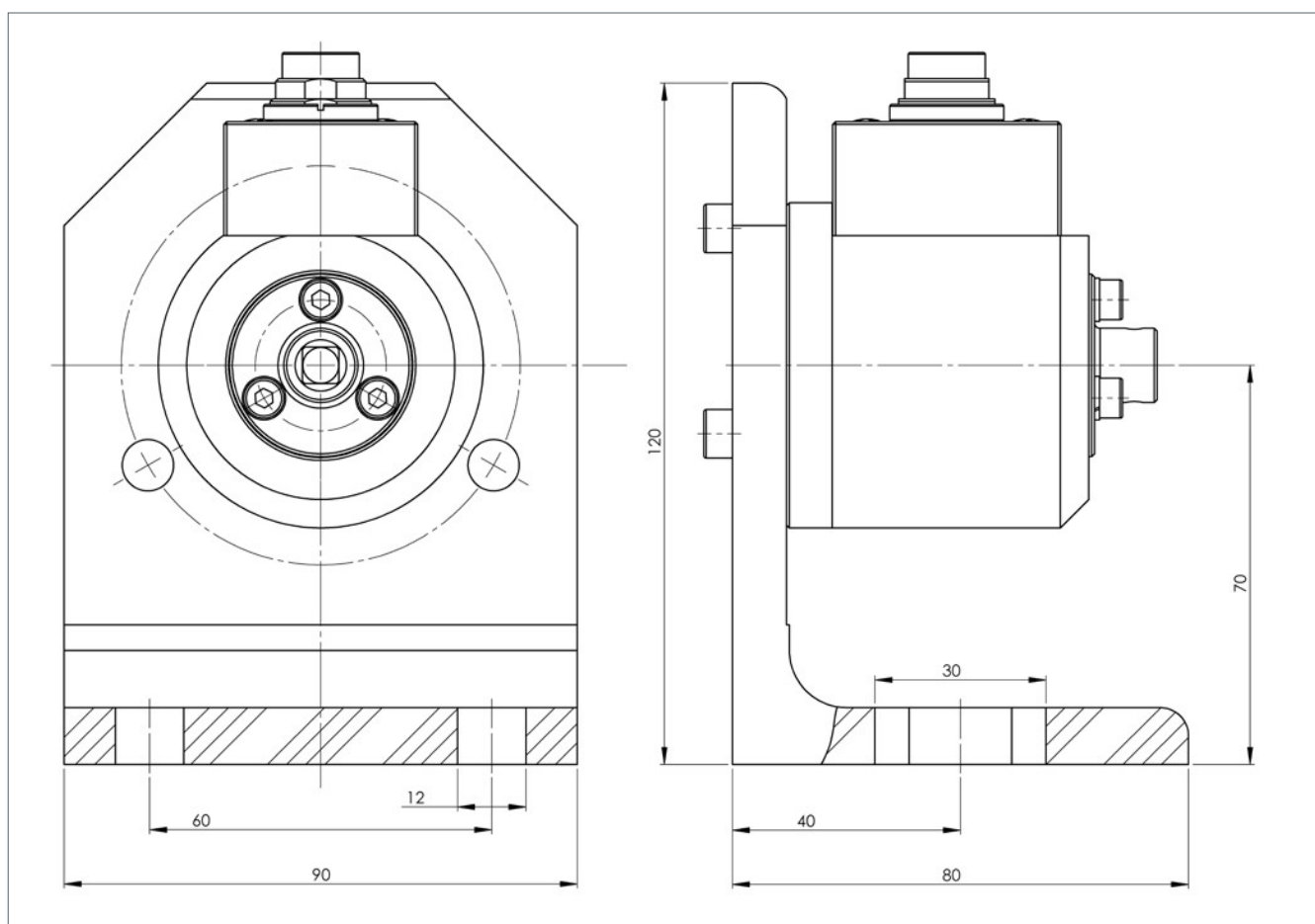
Model	Weight approx. (kg) without mounting bracket	Weight approx. (kg) with mounting bracket
DRT1	0,7	1,8
DRT2	1,6	2,8
DRT3	5,6	17
DRT4	23	52

Model	Torque range ( $\pm 0 - \dots$ Nm)	Spring cons (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%
DRT4	2000	11300	8150	50%
	3000	14310	8150	50%
	4000	17670	27000	50%
DRT4	5000	20610	27000	50%
	6000	23370	27000	50%

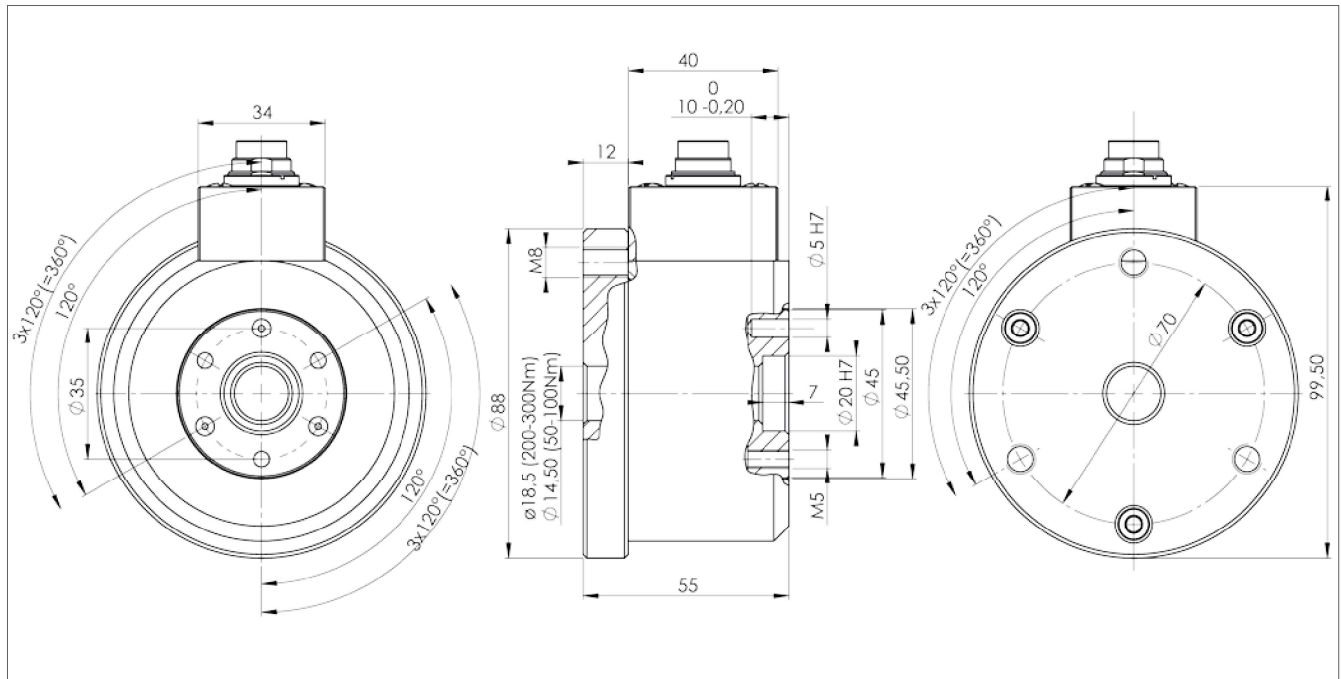
## Mechanical Dimensions DRT1



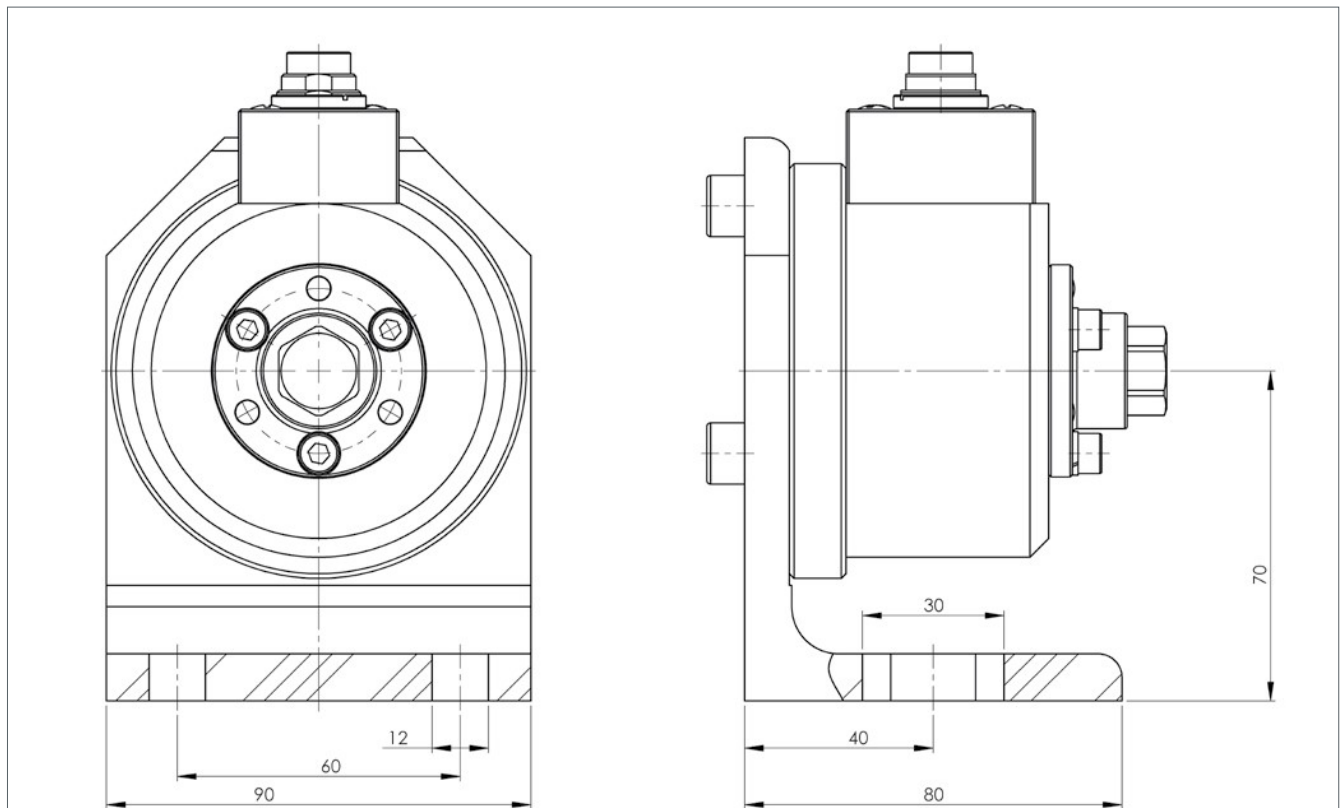
## Mechanical Dimensions DRT1 with Mounting Bracket



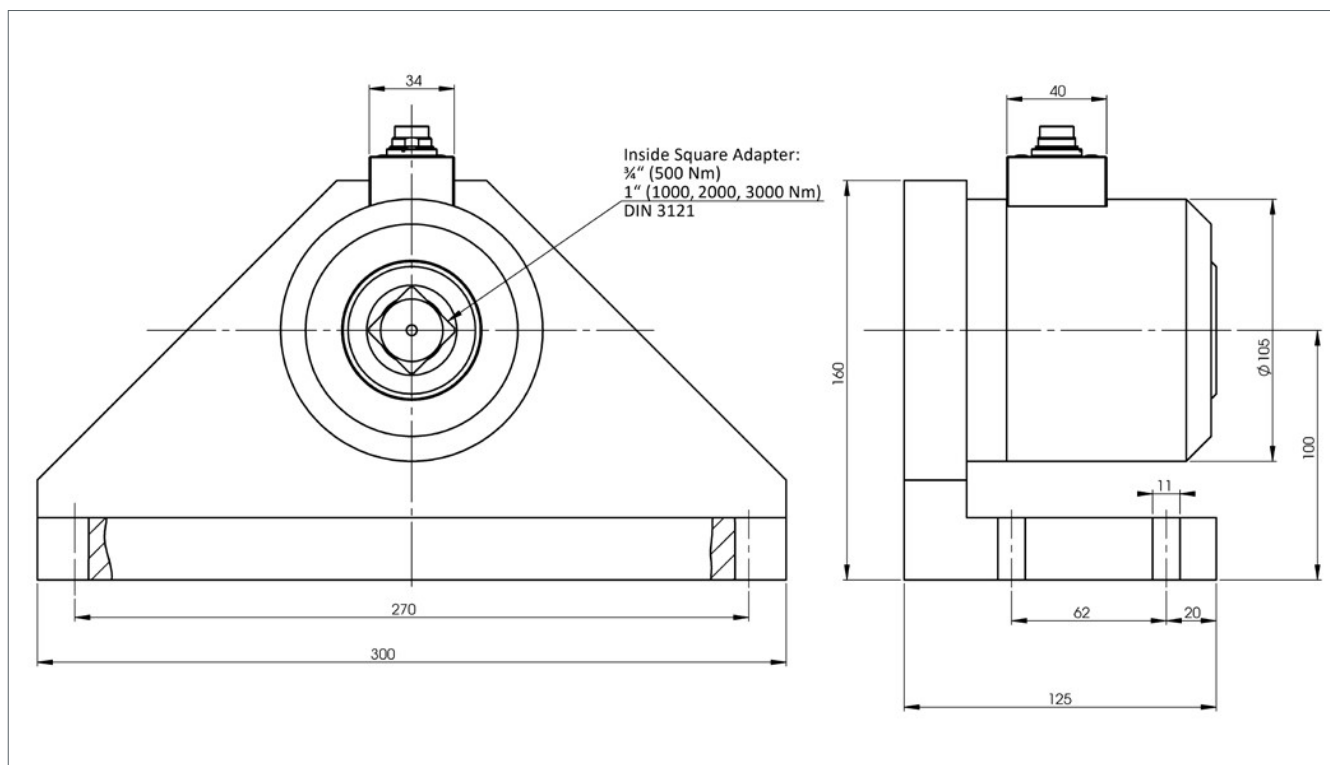
## Mechanical Dimensions DRT2



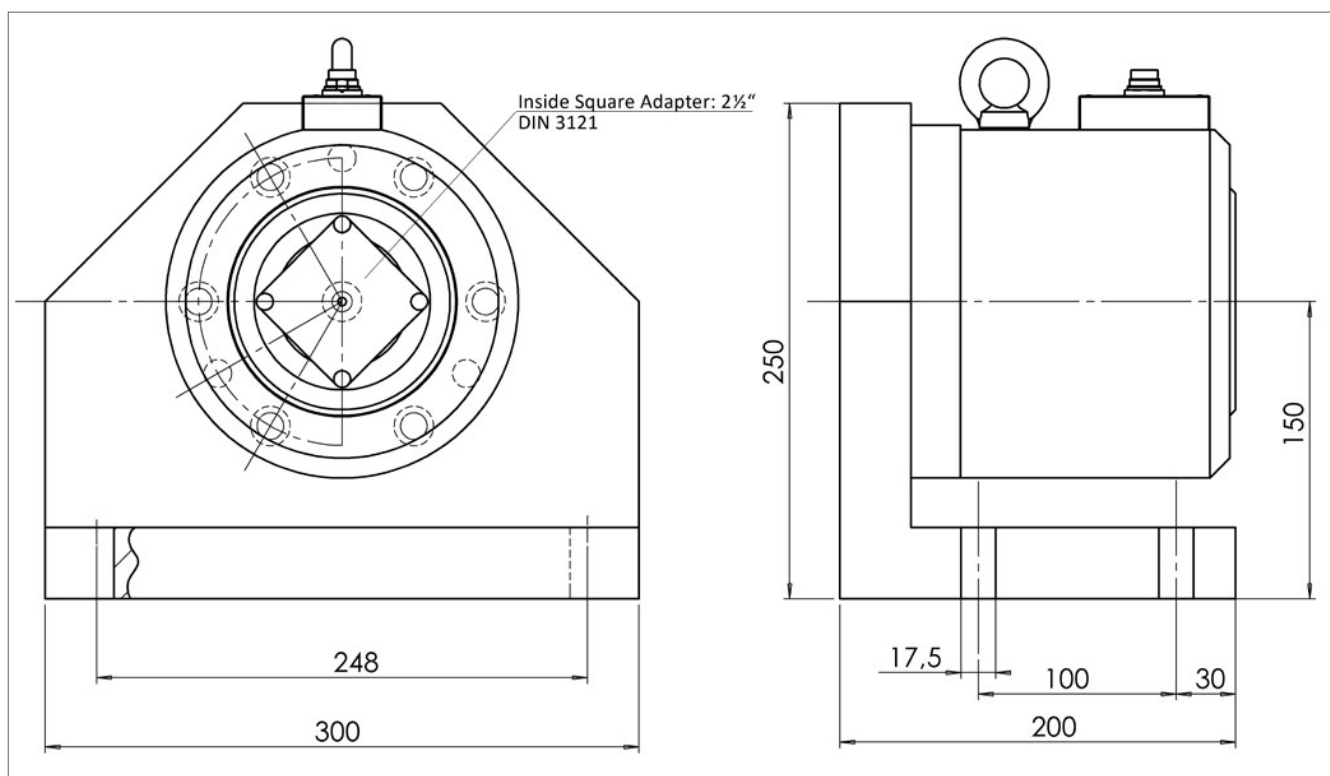
## Mechanical Dimensions DRT2 with Mounting Bracket and Adapter



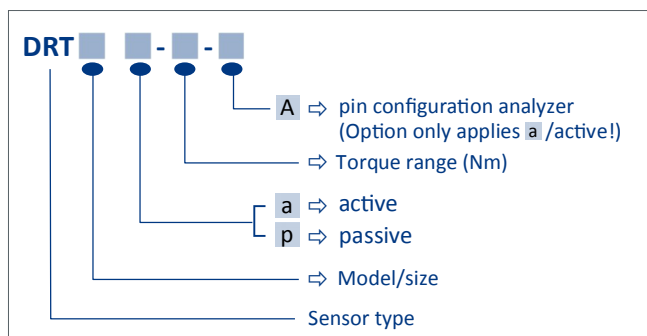
## Mechanical Dimensions DRT3



## Mechanical Dimensions DRT4



## Ordering code system



## Ordering Code Accessories DRT1

<b>DRT1-Mounting Bracket</b>
<b>Hexagon Adapter DIN ISO 272:</b>
DRT1 - SW 5,5
DRT1 - SW 7
DRT1 - SW 8
DRT1 - SW 10
DRT1 - SW 13
<b>Inside Square Adapter:</b>
DRT1 - 1/4" DIN 3121-H
DRT1 - 1/4" DIN 3121-without keyway

## Ordering Code Accessories DRT2

<b>DRT2-Mounting Bracket</b>	
<b>Hexagon Adapter DIN ISO 272:</b>	
DRT2 - SW 13	DRT2 - SW 14
DRT2 - SW 15	DRT2 - SW 16
DRT2 - SW 17	DRT2 - SW 18
DRT2 - SW 19	DRT2 - SW 20
DRT2 - SW 21	DRT2 - SW 22
<b>Inside Square Adapter:</b>	
DRT2 - 1/4" DIN 3121-H	
DRT2 - 3/8" DIN 3121-H	
DRT2 - 1/2" DIN 3121-H	
DRT2 - 1/4" DIN 3121 without keyway	
DRT2 - 3/8" DIN 3121 without keyway	
DRT2 - 1/2" DIN 3121 without keyway	

## Ordering Code Accessories DRT3

<b>DRT3-Mounting Bracket</b>
<b>Inside Square Adapter:</b>
DRT3 - 1" - 3/4"

## Ordering Code Accessories DRT4

<b>DRT4-Mounting Bracket</b>
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## more Accessories

Cables

Analycers

Screwing Simulators