

**Annexure 1: Specification for Torque Screwdriver and Torque Wrench
along with Accessories**

Specification of a) Torque Screwdriver and b) Torque Wrench with Interchangeable Head, having field adjustable Torque setting provision, required for application of Torque on fasteners are given below. Offered torque wrench accessories shall cater to fasteners having Allen head as well as hexagonal head. Torque wrenches with interchangeable head will be used along with either an open-end/ring spanner or a ratchet head with square drive considering the joint accessibility and type. The interchangeable head of the Torque wrench can be either spigot end or rectangular cavity (Male/Female). However, accessories (attachment end fittings) shall be provided to suit offered torque wrench interchangeable head (end) type.

Bidder has to explicitly provide response against each specification point given in the “Bidder response” column. In case response against any specification clause is not provided either in the form of compliance or non-compliance, offer submitted by the bidder will be summarily rejected. Wherever bidder has been asked to submit documents in the “Bidder Response” column, Bidder shall submit the details as an attachment. In case Bidder has not submitted required documents as per specification clause, offer submitted by the bidder will be summarily rejected.

If bidder wants to provide any other relevant information in addition to the asked details, separate documents can be enclosed along with the offer. During technical evaluation of bids, if Purchaser ask for any clarification against submitted response from bidder or for any of the specification clause of the enquiry, Bidder shall submit complete details against the clarification in single response within the prescribed time. Failing which, offer will not be considered for further evaluation and will be summarily rejected declaring the bid technically Non-compliant.

This enquiry is a two part tender. First is Technical bid and the other is price bid. Bidder shall enclose required documents in technical bid and price bid as asked hereafter. Bidder shall ensure that no mention of quoted price is available in the Technical part of the bid. In case any mention of quoted price is available in any form in the technical bid, offer will not be considered for further evaluation and will be summarily rejected declaring the bid Technically Non-compliant.

Bidder has to offer prices as per lot defined in Table 2. Offer evaluation will be done on Lot basis as given in Table 2. If all the items of defined lot are not offered, offer for that particular lot will not be considered for evaluation.

Sl. No.	Technical Specification of Torque Wrench		Bidder Response (Compliance/ Non-Compliance)
1	Item	a) Adjustable Torque Screw Driver as per Sl. No. 1 and 2 of Table 1 b) Click/Break Type Torque Wrench with Interchangeable Head and field adjustable Torque Setting as per Sl. No. 3 to 7 of Table 1	
2	Head Attachment	Refer Table 1	
3	Type	Refer Table 1	
4	Torque Range	Refer Table 1	
5	Graduation on Torque Scale/Least Count; N.m	Refer Table 1	
6	Accuracy/Display Deviation Value	Refer Table 1	
7	Calibration Standard	ISO 6789 latest version or equivalent	
8	Torque Wrench Head Attachment	a) Open End Spanner Head attachment compatible for offered head type	
		b) Ring spanner attachment compatible for offered head type	
		c) Ratchet head (having quick release pin/provision) with square drive (M) compatible for offered head type	
9	Quantity	Refer Table 2	
10	Size of Open End Spanner, Ring Spanner and Ratchet with square drive as head attachment for interchangeable head type Torque Wrench	Refer Table 1 and 2	

Sl. No.	Technical Specification of Torque Wrench		Bidder Response (Compliance/ Non-Compliance)
11	Material of Construction	Metal Body made of Aluminum/Steel	
12	Maximum Length	Refer Table 1	
13	Testing	Calibration certificate for each of the offered torque wrench complying with the accuracy requirement given in Table 1	
14	Accessories	Refer Table 2	
15	<u>Guarantee/Warranty:</u> All Torque wrenches along with accessories shall be guaranteed/warranted against any material & manufacturing defects as well as for satisfactory performance over a period of 12 months from the date of receipt of items at SAC, Ahmedabad.		
16	<u>Delivery Period:</u> 16 weeks from date of P.O.		

Table 1: Specification Details of Torque Wrench and accessories

Sl. No.	Torque Range; N.m	Type	Torque Wrench Head Type	Maximum Dimension/ Length of the Torque Wrench	Graduation on Torque Scale/ Least Count; N.m	Accuracy/ Display Deviation Value	Head Attachment (For Quantity Refer Table 2)		
							Open End Spanner Head Attachment	Ring Spanner head attachment	Ratchet head with Square drive
1	0.25 - 1.2	Adjustable Torque Screw Driver	¼” Female Hexagon Drive	200 mm	0.01	± 6% on set tolerance value	-	-	-
2	1.2 - 5			225 mm	0.1		-	-	-
3	0.4 - 2	Click/Break Type Torque Wrench with Interchangeable Head and field adjustable Torque Setting	Spigot End or Rectangular Cavity(Male) or Rectangular Cavity (Female)	150 mm	0.02	± 3% on set tolerance value	¼” across flat width	¼” across flat width	¼” Square drive(M)
4	2 - 10			200 mm	0.1		¼” across flat width	3/8” across flat width	¼” Square drive(M)
5	5 - 20			300 mm	0.25		M6 & M8	-	3/8 ” or 1/4” Square drive(M)
6	20 - 100			400 mm	1		M8 and M10	-	3/8 ” or ½” Square drive(M)
7	80 - 300			650 mm	2		M12, M14, M16, M20 & M24	-	1/2” Square drive(M) or higher size

Note:

- 1) Open end spanner head attachments, ring spanner attachments as well as quick release pin/provision Ratchet head with male square drive attachments for interchangeable heads shall be compatible with offered torque wrench head type.
- 2) For quantity of Torque Screwdriver, Torque Wrench and Accessories, Refer Table 2.
- 3) Bidder has to offer price as per lot defined in Table 2. Offer evaluation will be done on Lot basis as defined in Table 2.
- 4) If all the items are not offered in defined lot, offer for that particular lot will not be considered for evaluation.
- 5) All accessories shall be designed to take torque/load offered for range of torque wrench.

Table 2: Quantity, Accessories Details and LOT Definition for offer evaluation

Lot No.	Sl. No.	Description of Items	Quantity	Bidder Response (Compliance/ Non-Compliance)
A	1	Adjustable Torque Screw Driver of Range 0.25 to 1.2 N.m as per Sl. No. 1 of Table 1	4 Nos.	
B	1	Adjustable Torque Screw Driver of Range 1.2 to 5 N.m as per Sl. No. 2 of Table 1	3 Nos.	
C	1	Interchangeable Head Type Torque Wrench with adjustable Torque Setting of Range 0.4 to 2 N.m as per Sl. No. 3 of Table 1	2 Nos.	
	2	Open End Spanner attachment having ¼” across flat at one end and compatible with offered torque wrench head as per Sl. No. 3 of Table 1	2 Nos.	
	3	Ring Spanner attachment of size ¼” at one end and compatible with offered torque wrench head at other end as per Sl. No. 3 of Table 1	2 Nos.	
	4	Ratchet with ¼” Square Drive(M) at one end & compatible with offered torque wrench head at other end as per Sl. No. 3 of Table 1	2 Nos.	
	5	Adjustable attachment for using different size of Allen key at one end and compatible with offered torque wrench head at other end as per Sl. No. 3 of Table 1	2 Nos.	
D	1	Interchangeable Head Type Torque Wrench with adjustable Torque Setting of Range 2 to 10 N.m as per Sl. No. 4 of Table 1	2 Nos.	
	2	Open End Spanner attachment having 1/4” across flat at one end and compatible with offered torque wrench head at other end as per Sl. No. 4 of Table 1	2 Nos.	
	3	Ring Spanner attachment of size 3/8” at one end and compatible with offered torque wrench head at other end as per Sl. No. 4 of Table 1	2 Nos.	
	4	Ratchet with ¼” Square Drive(M) at one end & compatible with offered torque wrench head at other end as per Sl. No. 4 of Table 1	2 Nos.	

Table 2: Quantity, Accessories Details and LOT Definition for offer evaluation

Lot No.	Sl. No.	Description of Items	Quantity	Bidder Response (Compliance/ Non-Compliance)
D-Cont.	5	Adjustable attachment for using different size of Allen key at one end and compatible with offered torque wrench head at other end as per Sl. No. 4 of Table 1	2 Nos.	
E	1	Interchangeable Head Type Torque Wrench with adjustable Torque Setting of Range 5 to 20 N.m as per Sl. No. 5 of Table 1	1 No.	
	2	Open End Spanner attachment compatible with offered torque wrench head at one end and compatible for hex head fasteners of size M6 & M8 at other end as per Sl. No. 5 of Table 1	1 No. each	
	3	Ratchet with ¼” or 3/8” Square Drive(M) at one end & compatible with offered torque wrench head at other end as per Sl. No. 5 of Table 1	1 No.	
	4	Allen key bit adaptor having one end compatible with 1/4” square drive(M) and other end with socket head fasteners of size M6 & M8 as per Sl. No. 5 of Table 1	1 No. each	
	5	Conversion adaptor for 1/4”square drive(M) to 3/8”square drive(F)	2 Nos.	
F	1	Interchangeable Head Type Torque Wrench with adjustable Torque Setting of Range 20 to 100 N.m as per Sl. No. 6 of Table 1	1 No.	
	2	Open End Spanner attachment compatible with offered torque wrench head at one end and compatible for Hex head fasteners of size M8 & M10 at other end as per Sl. No. 6 of Table 1	1 No. each	
	3	Ratchet with 3/8” or ½” Square Drive(M) at one end & compatible with offered torque wrench head at other end as per Sl. No. 6 of Table 1	1 No.	
	4	Allen key bit adaptor having one end compatible with 3/8” square drive(M) and other end with socket head fasteners of size M8 & M10 as per Sl. No. 6 of Table 1	1 No. each	
	5	Conversion adaptor for 3/8”square drive(M) to ½” square drive(F)	2 Nos.	

Table 2: Quantity, Accessories Details and LOT Definition for offer evaluation

Lot No.	Sl. No.	Description of Items	Quantity	Bidder Response (Compliance/ Non-Compliance)
G	1	Interchangeable Head Type Torque Wrench with adjustable Torque Setting of range 80 – 300 N.m as per Sl. No. 7 of Table 1	1 No.	
	2	Open End Spanner attachment compatible with offered torque wrench head at one end and compatible for Hex head fasteners of size M12, M14, M16, M20 & M24 as per Sl. No. 7 of Table 1	1 No. each	
	3	Ratchet with 1/2” Square Drive(M) or higher size at one end & compatible with offered torque wrench head at other end as per Sl. No. 7 of Table 1	1 No.	
	4	Allen key bit adaptor having one end compatible with 1/2” square drive(M) or offered size given in Sl. No. 3 of lot G above and other end with socket head fasteners of size M12, M14, M16, M20 & M24 as per Sl. No. 7 of Table 1	1 No. each	

Sl. No.	Bid Documentation	Bidder Response (Compliance / Non-Compliance)
The following documents (in English) shall be provided by the vendor along with the quotation for each of the offered products		
17	Complete technical description of each of the offered torque wrench along with product description and dimensions as per specification given in Table 1	Bidder shall enclose product catalogue/ datasheet and drawings of offered torque wrench.
18	Complete technical description of all accessories along with product description and dimensions as per specification given in Table 2	Bidder shall enclose product catalogue/ datasheet of all offered accessories
19	All accessories offered along with the torque wrench are designed to take required torque/load as per rating of offered torque wrench	
20	Bidder shall confirm that calibration certificate meeting the accuracy requirement mentioned in Table 1 will be provided for each of the offered torque wrench.	
21	Bidder shall confirm that accessories for torque wrenches as per table 2 will be provided.	
22	Bidder shall confirm their acceptability for part order as per lot defined in Table 2.	
The following documents (in English) shall be provided by the Supplier along with the consignment at the time of Delivery:		
23	Guarantee/Warranty certificate	
24	Calibration Certificate for all torque wrenches	
25	Packing List for torque wrenches and accessories	
26	Instruction and Operation Manual, if any	
Packing		
27	All products shall be supplied in suitable packing to avoid any damage during transportation.	
Material Receipt Inspection		
28	Material receipt inspection of torque wrenches and accessories will be carried out for acceptance after receipt at SAC; Ahmedabad.	