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मानक

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Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 6881 (1973): Link Type Pipe Cutters [PGD 6: Earth, Metal And Wood Working Hand Tools]



“ज्ञान से एक नये भारत का निर्माण”

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“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard
**SPECIFICATION FOR
LINK TYPE PIPE CUTTERS**

1. Scope — Lays down the dimensional and other requirements for the link type pipe cutters for cutting cast iron pipes in the outside diameter size range of 50 to 635 mm.

2. Capacity and Dimensions

2.1 Capacity — Pipe cutters shall be available in the nominal range size and with the number of cutting wheels appropriate to each tool as given in Table 1.

TABLE 1 CAPACITIES OF LINK TYPE PIPE CUTTERS

Nominal Range Size 1		Nominal Range Size 2		Nominal Range Size 3	
Suitable for Pipe Size mm	Number of Wheels	Suitable for Pipe Size mm	Number of Wheel	Suitable for Pipe Size mm	Number of Wheels
50 to 98	5	118 to 170	5	326 to 378	9
50 „ 118	6	118 „ 222	7	326 „ 429	10
50 „ 170	8	118 „ 274	8	326 „ 480	11
50 „ 222	10	118 „ 326	10	326 „ 532	12
				326 „ 635	14

Note — Pipe cutters in each size are related. A cutter suitable for the smallest pipe in any size may be extended by the addition of necessary ordinary links, wheels and pins for use on any other pipe size but in the same pipe range.

2.2 Dimensions — The dimensions of the various components of pipe cutters shall be as given in Tables 2 to 8.

2.2.1 General engineering tolerances shall be applicable on untoleranced dimensions.

3. Requirement

3.1 Assembly — The dimensional and surface accuracy of all connecting parts of the links, handle and fork shall be such that the resultant assembly shall be symmetrical about the centre line and parallel thereto.

3.2 Wing nuts shall conform to IS : 2636-1972 'Specification for wing nuts (first revision) '.

3.3 Requirements regarding material, hardness, manufacture, workmanship and finish, tests, marking, packing and sampling shall conform to IS : 6843-1973 'Technical supply conditions for pipe cutters '.

4. Designation — The pipe cutters shall be designated by the nominal range size, number of wheels and the number of this standard.

Example:

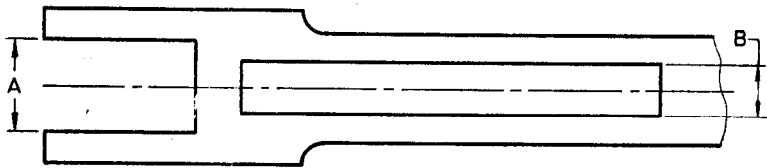
A pipe cutter of nominal range size 1 and with 5 wheels shall be designated as:

Pipe Cutter 1 × 5 IS : 6881

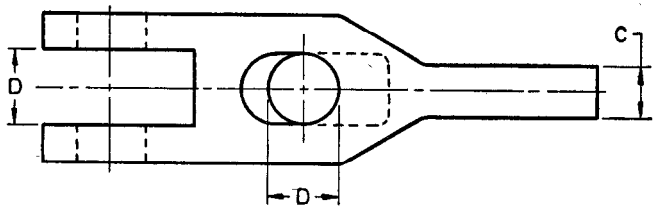
TABLE 2 DIMENSIONS FOR HANDLE AND FORK

(Clause 2.2)

All dimensions in millimetres.



HANDLE



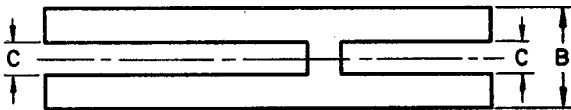
FORK

Nominal Range Size	Inside Fork A $+0.125$ $+0.025$	Inside Slot B $+0.125$ $+0.025$	Across Body C -0.025 -0.125	Feed Screw Slot D	Radius at Root of Hook R
1	25	12.5	12.5	19	4
2	28	14.0	14.0	25	5
3	28	14.0	14.0	25	5

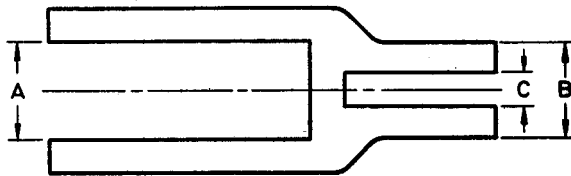
TABLE 3 DIMENSIONS FOR CONNECTING LINKS AND ORDINARY LINKS

(Clause 2.2)

All dimensions in millimetres.



CONNECTING LINK



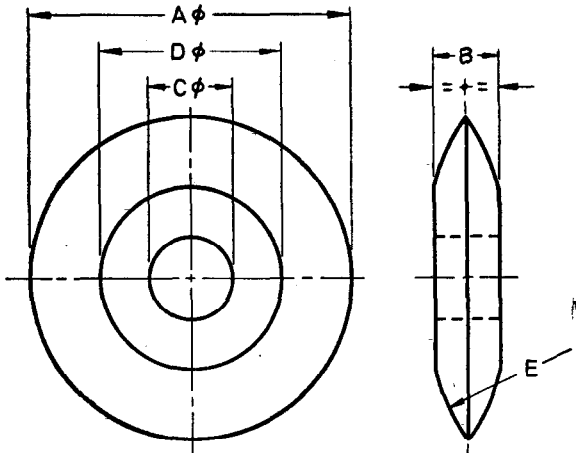
ORDINARY LINK

Nominal Range Size	Inside Fork A $+0.125$ $+0.025$	Across Link B -0.025 -0.125	Across Wheel Slot C $+0.125$ $+0.050$
1	25	25	8.0
2	28	28	9.5
3	28	28	9.5

TABLE 4 DIMENSIONS FOR CUTTER WHEELS

(Clause 2.2)

All dimensions in millimetres.

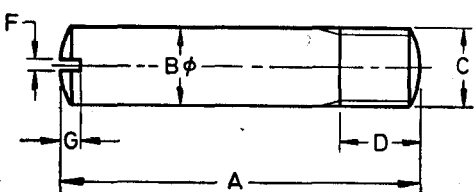


Nominal Range Size	Nominal Outside Diameter A	Width Through Boss + 0.000 - 0.125	Bore C + 0.075 - 0	Nominal Diameter of Boss D	Nominal Radius E
1	40	8.0	10.2	22.4	25
2	45	9.5	12.2	25.0	31.5
3	50	9.5	12.2	30.0	31.5

TABLE 5 DIMENSIONS FOR WHEEL PINS

(Clause 2.2)

All dimensions in millimetres.

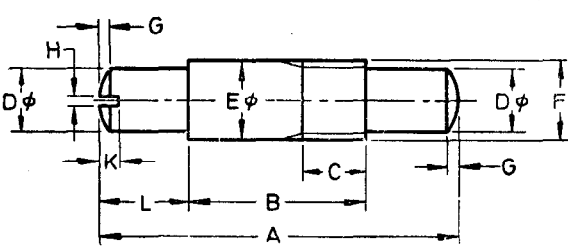


Nominal Range Size	Nominal Overall Length A	Pin Diameter B - 0.050 - 0.125	ISO Metric Screw Thread C	Nominal Length of Thread D	Width of Slot F	Depth of Slot G
1	45	10	M10 × 0.75	10.0	1.0	2.5
2 and 3	53	12	M12 × 1	12.5	1.6	3.0

TABLE 6 DIMENSIONS FOR CONNECTING PINS

(Clause 2.2)

All dimensions in millimetres.

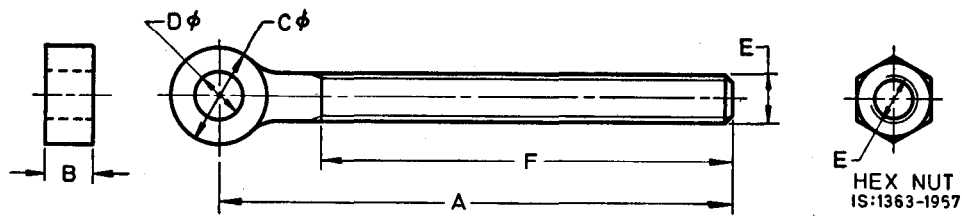


Nominal Range Size	Nominal Overall Length A	Length B + 0 - 0.75	Length of Thread C	Diameter of Connecting Ends D	Pin Diameter E - 0.050 - 0.125	ISO Screw Thread F	Depth of End Radius G	Width of Slot H	Depth of Slot K	Length End to Shoulder L
1	45	22.4	8.0	8.0	10.0	M10 × 0.75	0.75	1.0	2.5	11.2
2 and 3	53	26.5	9.5	9.5	12.0	M12 × 1	1.50	1.6	3.0	13.2

TABLE 7 DIMENSIONS FOR FEED SCREW AND NUT

(Clause 2.2)

All dimensions in millimetres.

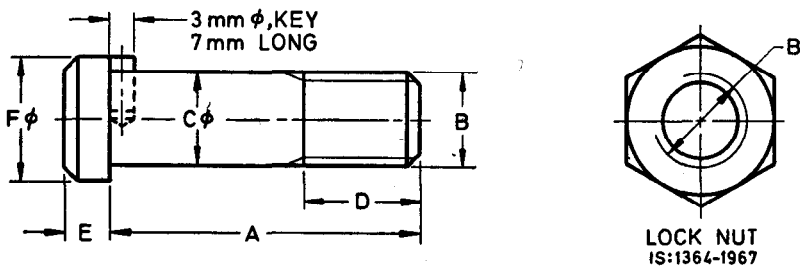


Nominal Range Size	Length from End to Hole Centre A	Maximum Width Through Boss B	Nominal Diameter of Boss C	Diameter of Hole D	ISO Metric Screw Thread E	Length of Thread F
1	132	12.5	25	12.5	M12×1.75	106
2	180	14.0	28	12.5	M14×2	150
3	212	14.0	33.5	12.5	M14×2	170

TABLE 8 DIMENSIONS FOR HANDLE BOLTS AND NUTS

(Clause 2.2)

All dimensions in millimetres.



Nominal Range Size	Nominal Length A	ISO Metric Screw Thread B	Bolt Diameter C +0.000 -0.125	Length of Thread D	Head Thickness E	Head Diameter F
1	40.0	M12×1.75	12	15	5.6	16
2 and 3	47.5	M12×1.75	12	15	5.6	16

Note — The handle of each pipe cutter is fitted with one of each length of the bolts given in the table. Apart from length A, bolts are similar.

EXPLANATORY NOTE

While preparing this standard assistance has been derived from Draft British Standard No. 71/32387 (Revision of BS : 1857) ' Pipe cutter ' issued by British Standards Institution and standards issued on the subject by Chief Inspectorate of General Stores, Kanpur.