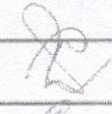
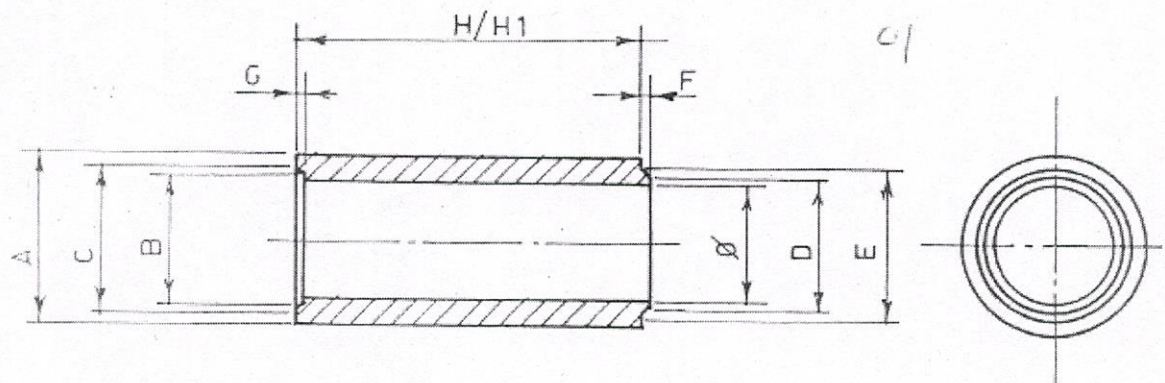


	संस्थान क्रय विनिर्देश (सी.एफ.एफ.पी - हरिद्वार) PLANT PURCHASE SPECIFICATION (CFFP - HARDWAR)	FF06010 Rev 03 पृष्ठ का Page 3 of 3			
RECORD OF CHANGES					
	REV CODE	NO. OF CHANGES	NATURE OF CHANGE	SIGN	DATE
	01		Comments of French expert Mr. Dumas incorporated in Clause No. 4 & 8		28.3.02
	02		Clause 6 & 7 modified to incorporate original manufacturer's test certificate and packing conditions		29.8.09
	03		Individual packing of sleeves deleted. Clause 4 modified for removal of deletion of Pyrometric Cone equivalent. Acceptance clause modified to introduce surveillance checking of clause 4.6		03.08.2010
DISTRIBUTION OF PRINTS					
	RMJ		✓		
	STANDARD SECTION		✓		
	MPIC		✓		
			निर्माणावधि WORKED BY	T DAVE	
			जांचकर्ता CHECKED BY	AKC	

(ALL DIMENSIONS ARE IN mm)



	DIMENSIONS IN mm													
S.NO.	Ø	A	B	C	D	E	F	G	H	$\frac{A-\varnothing}{2}$	SECTION Cm ²	VOLUME Dm ³	H1	VOL 1
1	30	55	40	42	38	40	6	5	200	12.5	7.1	0.333	100	0.17
2	40	65	50	52	48	50	6	5	200	12.5	12.6	0.412	100	0.21
3	50	75	62	64	60	62	6	5	200	12.5	19.7	0.491	100	0.25
4	60	85	72	74	70	72	6	5	200	12.5	28.3	0.570	100	0.285
5	70	100	85	87	83	85	6	5	200	15	38.5	0.802	100	0.40
6	80	110	95	97	93	95	6	5	200	15	50.3	0.896	100	0.45
7	90	125	107	110	104	107	8	7	300	17.5	63.6	1.774	100	0.59
8	100	140	120	123	117	120	8	7	300	20	78.5	2.262	100	0.754
9	120	165	142	145	139	142	8	7	300	22.5	113.1	3.023	100	1.01
10	150	200	175	178	172	175	8	7	300	25	176.7	4.126	100	1.71

TOLERANCE: $\pm 2\%$ OR $\pm 2\text{mm}$ WHICHEVER IS GREATER
ALL DIMENSIONS ARE IN MM

REV 04 DATE 10.4.02
MATERIAL REVISED

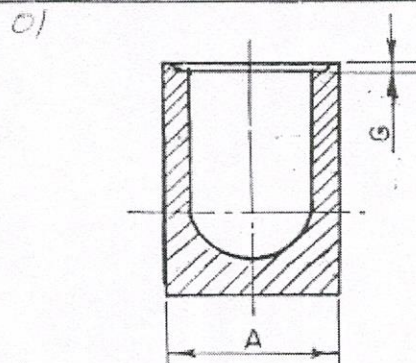
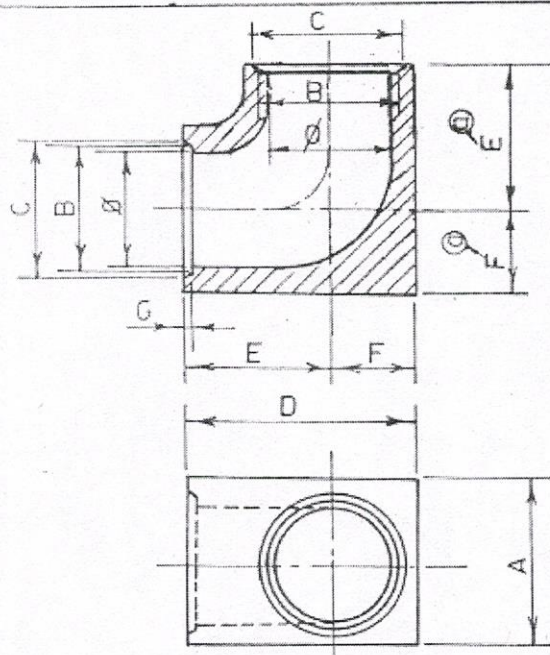
REV 03	DATE 6-3-01	ALTD. CHD	REV 02	DATE 18-9-98	ALTD. CHD	REV 01	DATE 30-5-96	ALTD. CHD
MATERIAL CHANGED			H1 AND VOL 1 ADDED			(i) MATERIAL GRADE ADDED. (ii) NOTE-SUPERSEDED WITH SAME DRG NO-ELIMINATED		



BHARAT HEAVY ELECTRICALS LTD.
UNIT: CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPTT. FDY-TECHY	SCALE NTS	WEIGHT (KGS)	MATERIAL-AS PER FF06010 REV 01			
TITLE REFRACTORY SLEEVES			DRAWN	NAME	SIGN.	DATE
			WORKED	ANIL SINGH.	AS	20-3-98
			CHECKED	A.K. CHAKRABORTY.		
			APPROVED	N. KHAN.		
			DRAWING NO 03/009/1 REV. 04			
			SHEET NO 01		NO OF SHEETS 01	

SIZE-A4

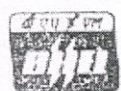


REV (a)	DATE 10.4.02	ALTD CHD
MATERIAL REVISED		
REV (b)	DATE 15.9.01	ALTD CHD.
MATERIAL GRADE MODIFIED.		

SNO	Ø	A	B	C	D	E	F	G	$\frac{A-\phi}{2}$	SECTION Cm ²	VOLUME Cm ³
1	30	60	40	42	70	45	25	5	15	7.1	0.200
2	40	70	50	52	85	55	30	5	15	12.6	0.309
3	50	80	62	64	108	70	38	5	15	19.7	0.479
4	60	90	72	74	118	75	43	5	15	28.3	0.622
5	70	100	85	87	135	85	50	5	15	38.5	0.810
6	80	110	95	97	145	90	55	5	15	50.3	1.003
7	90	125	107	110	163	100	63	7	17.5	63.6	1.466
8	100	140	120	123	175	105	70	7	20	78.5	2.005
9	120	165	142	145	203	120	83	7	22.5	113.1	3.165
10	150	200	175	178	250	150	100	7	25	176.7	5.489

TOLERANCE $\pm 2\%$ OR ± 2 mm WHICHEVER IS GREATER. ALL DIMENSIONS ARE IN MM.

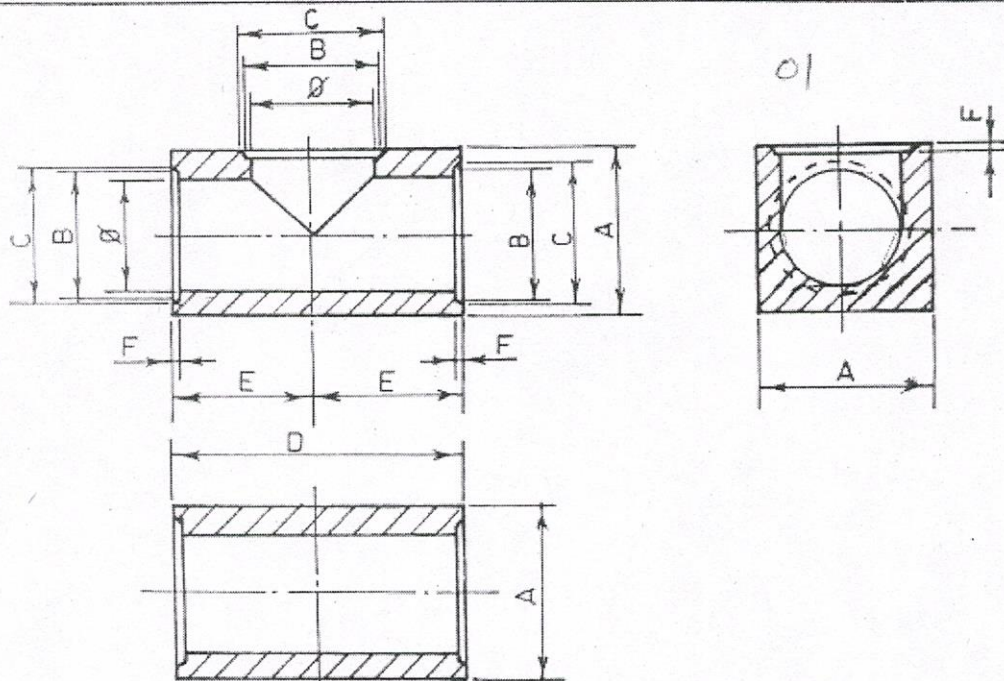
REVISIONS
 1. DATE 10.4.02 BY 9129 CHECKED BY 9129
 MISSING DIMENSIONS PROVIDED



BHARAT HEAVY ELECTRICALS LTD. UNIT : CENTRAL FOUNDRY FORGE PLANT. HARDWAR.

DEPTT FDY TECHY	SCALE NTS	WEIGHT (KGS)	MATERIAL GRADE: FF06010, REV 01			
TITLE REFRACTORY KNEES			DRAWN	NAME	SIGN.	DATE
			WORKED	AJIT SINGH.	<i>Ajit Singh</i>	18.3.97
			CHECKED	Y.N.V. RAO	<i>Y.N.V. Rao</i>	18.3.97
			APPROVED	N. KHAN.	<i>N. Khan</i>	18.3.97
			DRAWING NO. 03/009/2 REV.-C			
			SHEET NO. 01		NO. OF SHEETS 01	

(ALL DIMENSIONS ARE IN mm)



SNO	Ø	A	B	C	D	E	F	$\frac{A-\phi}{2}$	SECTION Cm ²	VOLUME Dm ³
1	30	60	40	42	90	45	5	15	7.1	0.247
2	40	70	50	52	110	55	5	15	12.6	0.381
3	50	80	62	64	140	70	5	15	18.7	0.530
4	60	90	72	74	150	75	5	15	28.3	0.748
5	70	100	85	87	170	85	5	15	38.5	1.026
6	80	110	95	97	180	90	5	15	50.3	1.170
7	90	125	107	110	200	100	7	17.5	63.6	1.672
8	100	140	120	123	210	105	7	20	78.5	2.211
9	120	165	142	145	240	120	7	22.5	113.1	3.430
10	150	200	175	178	300	150	7	25	176.7	5.588

TOLERANCE $\pm 2\%$ OR $\pm 2\text{mm}$ WHICHEVER IS GREATER.
ALL DIMENSIONS ARE IN MM.

REV 02	DATE 10-4-02	REV 02	DATE 6-3-01	ALTD. CHD.	REV 01	DATE 30-6-96	ALTD. CHD.
MATERIAL REVISED		MATERIAL CHANGED		MATERIAL GRADE ADDED NOTE SUPERSEDED WITH SAME DRS NO ELIMINATED			

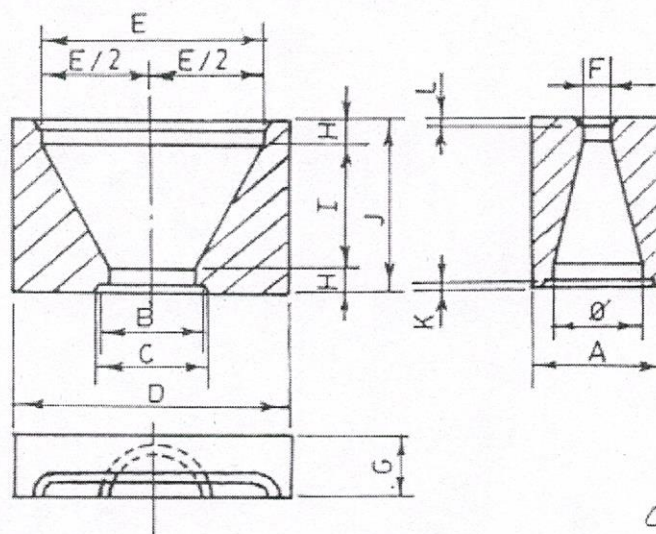


BHARAT HEAVY ELECTRICALS LTD.
UNIT : CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPTT. FDY-TECHY.	SCALE NTS	WEIGHT (KGS.)	MATERIAL- AS PER FF06010. REV 01			
TITLE REFRACTORY TEES			DRAWN	NAME	SIGN.	DATE
			WORKED	AJIT SINGH	Ajit	20-3-96
			CHECKED	A.K. CHAKRABORTY	A.K.	12-2-96
			APPROVED	N.K. KHAN	N.K.	11/4/96
			DRAWING NO. 03/009/3			
			SHEET NO. 01		NO OF SHEETS 01	

SIZE-A4

(ALL DIMENSIONS ARE IN mm)



Rp	Ø	A	B	C	D	E	F	G	H	I	J	K	L	AREA Cm ²	VOLUM Cm ³	WT Kg	TO BE USED BY
1	30	50	40	42	125	90	9	25	15	55	85	5	3	7.9	0.461	0.876	STEEL FOY.
2	40	60	50	52	140	115	13	30	15	65	95	5	4	14.5	0.661	1.256	"
3	50	75	62	64	160	130	18	37.5	18	69	105	5	5	22.7	1.024	1.946	"
4	60	85	72	74	190	160	21	42.5	18	89	125	5	6	32.7	1.616	3.068	"
5	70	100	85	87	215	175	26	50	20	105	145	5	8	43.9	2.487	4.725	"
6	80	110	95	97	246	200	30	55	20	120	160	5	10	58.1	3.298	6.266	"
7	90	125	107	110	260	210	36	62.5	22	131	175	7	12	73.0	4.413	9.385	"
8	100	140	120	123	270	220	43	70	22	136	180	7	15	90.6	5.174	9.830	"
9	120	165	142	145	300	240	56	82.5	25	150	200	7	18	128	7.867	15.137	"
10	150	200	175	178	350	270	78	100	30	175	225	7	20	198	11.734	22.290	"

TOLERANCE $\pm 2\%$ OR $\pm 2\text{mm}$ WHICHEVER IS GREATER
ALL DIMENSIONS ARE IN MM

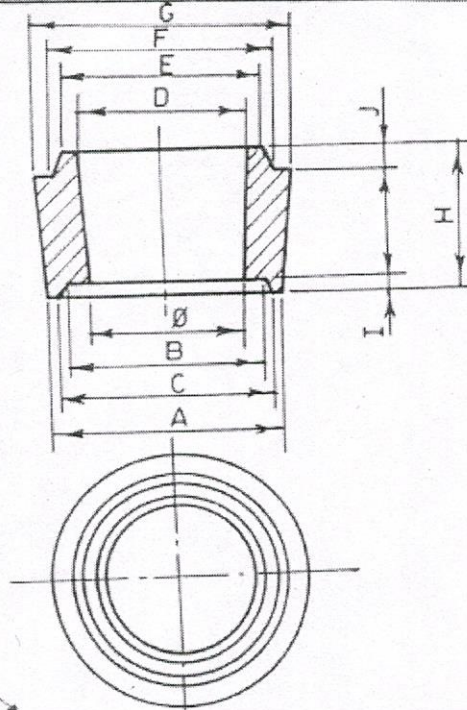
REV	DATE	ALTD.	REV	DATE	ALTD.	REV	DATE	ALTD.
03	10-4-02	CHD	02	6-3-01	CHD	01	30-5-96	CHD
		MATERIAL REVISED			MATERIAL CHANGED	(i)		MATERIAL GRADE ADDED.
						(ii)		NOTE-SUPERSEDED WITH SAME DRG.NO-ELIMINATED



BHARAT HEAVY ELECTRICALS LTD.
UNIT: CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPT FDY-TECHY.	SCALE NTS	WEIGHT (KGS)	MATERIAL - AS PER FF 06010 REV-01
TITLE REFRACTORY INGATE	DRAWN	NAME	SIGN.
	WORKED	ANIT SINGH.	20-3-80
	CHECKED	AK-CHAKRIBORTY.	22-2-80
	APPROVED	N-KHAN.	31/4/80
	DRAWING NO	03/009/4	REV-03
	SHEET NO	01	NO OF SHEETS 01

(ALL DIMENSIONS ARE IN mm)



S NO	Ø	A	B	C	D	E	F	G	H	I	J	$\frac{A-\delta}{2}$	$\frac{G-D}{2}$	VOLUME DM ³
1	30	55	40	42	40	48	50	65	50	5	6	12.5	12.5	0.081
2	40	65	50	52	50	60	62	75	50	5	6	12.5	12.5	0.113
3	50	75	62	64	60	70	72	85	50	5	6	12.5	12.5	0.132
4	60	85	72	74	70	83	85	100	50	5	6	12.5	15	0.170
5	70	100	85	87	80	93	95	110	50	5	6	15	15	0.212
6	80	110	95	97	90	104	107	125	50	5	6	15	17.5	0.258
7	90	125	107	110	100	117	120	140	50	7	8	17.5	20	0.334
8	100	140	120	123	120	139	142	165	50	7	8	20	22.5	0.440
9	120	165	142	145	150	172	175	200	80	7	8	22.5	25	0.950
10	150	200	175	178	200	222	225	250	130	7	8	25	25	2.042

TOLERANCE: $\pm 2\%$ OR $\pm 2\text{mm}$ WHICHEVER IS GREATER
ALL DIMENSIONS ARE IN MM

REV 03	DATE 10-4-02	ALTD CND	REV 02	DATE 6-3-07	ALTD CHD	REV 03	DATE 30-5-96	ALTD CHECKED
MATERIAL REVISED			MATERIAL CHANGED			(i) MATERIAL GRADE ADDED. (ii) NOTE SUPERSEDED WITH SAME DRC NO ELIMINATED		



BHARAT HEAVY ELECTRICALS LTD.
UNIT: CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPTT FDY. TECHY.	SCALE NTS	WEIGHT (KGS)	MATERIAL - AS PER FF06010 REV 01			
TITLE REFRACTORY REDUCERS			DRAWN	NAME	SIGN.	DATE
			WORKED	ASIT SINGH.	ASIT	20-3-96
			CHECKED	A.K. CHAKRABORTY.	A.K.	27-3-96
			APPROVED	N. KHAN.	N.K.	11/4/96
			DRAWING NO 03/009/8			
SHEET NO. 01			NO. OF SHEETS 01			

SIZE-A4