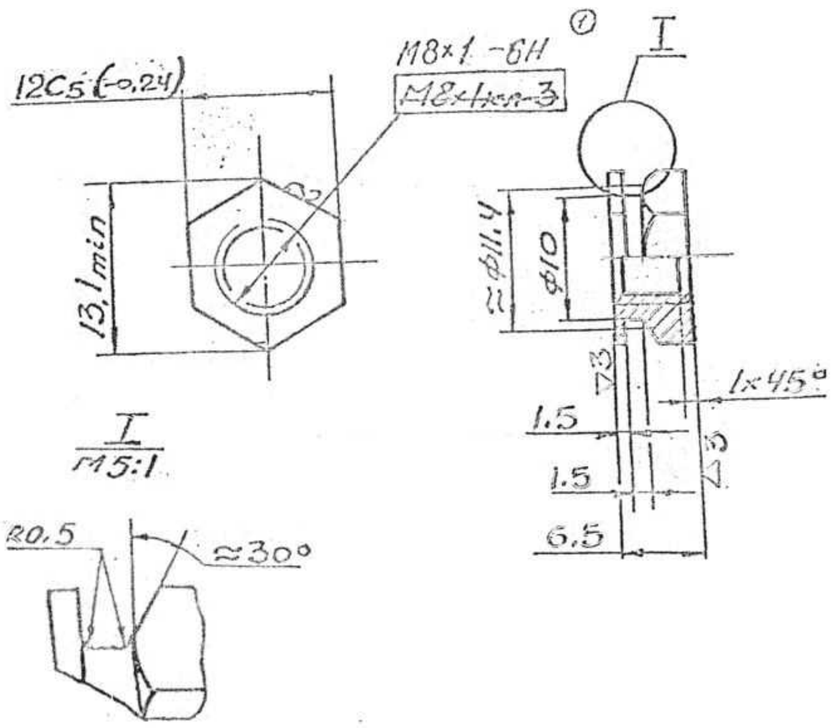
700-30-455

▽4(▽)



1. Alternate material is steel 5 GOST 380-71 and 25,30,35,40 GOST 1050-74.
2. H.B. 255 to 207 (φ3,8 to 4,2).
3. Unspecified limit deviations of dimensions are as follows: for holes-as per A7, shafts-as per B7.
4. Displacement of axis of hole from true position should not exceed 0,3mm.
5. Type of coating: Zinc plated, 9 microns thick, chromatisation. Remove hydrogen embrittlement.

700-30-455

SNO	SHT	DOC NO	SIGN	DATE
DRAWN		V.J.RAO		10.8.84
EDT & CHKD		D.K.JAIN		29.8.84
F/M, DC		S.R.NAIR		31.8.84
DIV.OFFR.		T.K.BANERJEE		1.9.84
		NAME	SIGN	DATE

NUT

45 FOCT 1050-74

SHEET	WEIGHT	SCALE
1	0,003	1/1

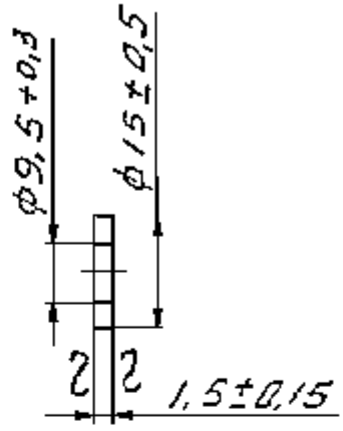
TOTAL SHEETS

ORDANANCE FACTORY
PROJECT
HYDERABAD

D82

Инв. № подл. | Подп. и дата | Взам. инв. № | Инв. № дубл. | Подп. и дата

700-31-267



1. Alternate material is steel Cm2, Cm3, GOST 380-71 and 08kn ƒ0,15,20,25, GOST 1050-74.
2. Coating. Zinc-plated, 9 microns thick, chromatized.

Ⓐ EQ. MATERIAL :- STEEL SHEET Gde.'O' QUARTER HARD TO IS : 513-86 OR Fe 410-1079 TO IS : 1079-73.

Ⓑ EQ. MATERIAL :- COLD STEEL STRIP GRADE `O` OR `D` TO IS : 4030-73.

DC(I)No. & DATE	ISSUE	AMENDMENTS
00814-ICV 03 OCT 00	Ⓑ	EQ. MATERIAL ADDED.
00605-ICV 21 APR 97	Ⓐ	EQ. MATERIAL ADDED. (2/97 N OF A)

APPROVED	
CHECKED	

700-31-267

CONTROLLERATE OF QUALITY ASSURANCE (ICV)

WASHER

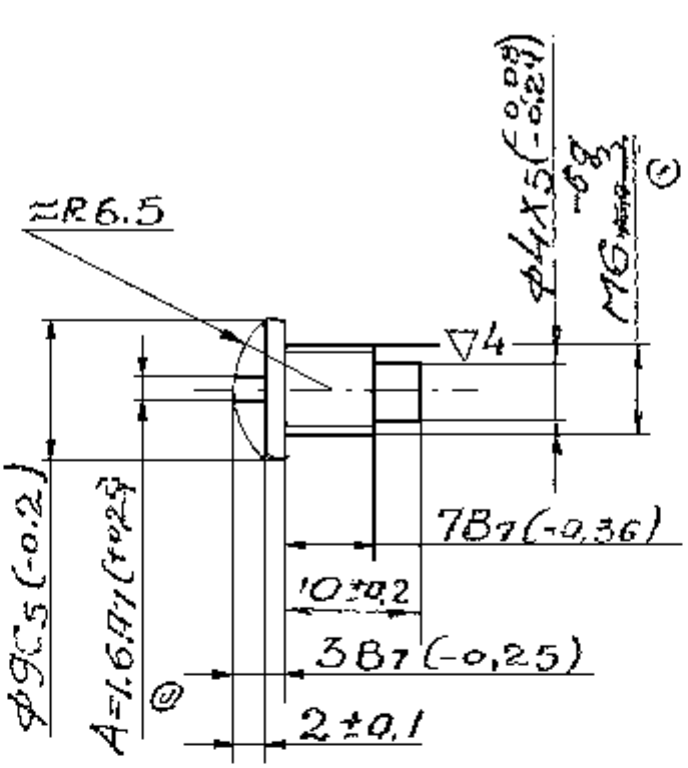
Cr 3KN GOST 380-71

WEIGHT	SCALE
0.003	1:1

SHT SHTS

A4

700-35-368



1. Alternate material is steel cm5, GOST 380-71, steel 40: 50, GOST 1050-74, and steel 40Г, GOST 4543-71.
2. HB 255 to 207 (Ø3,8 to 4,2).
3. Incomplete thread should not exceed 2 mm.
4. Displacement of slot with respect to axis of rod should not exceed 0,4 mm,
5. coating: MH 9.
6. It is allowed to perform dimension A equal to $16^{+0.25}_{-0.08}$

Ⓐ EQ. MATERIAL:- 45 CB TO IS:5517-93

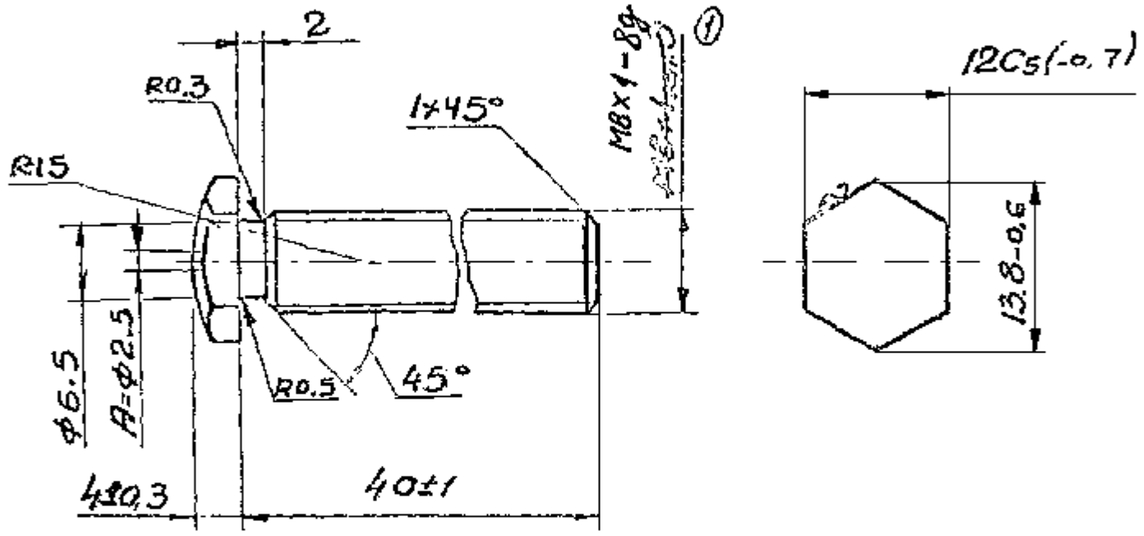
DC(I)No. & DATE	ISSUE	AMENDMENTS
00722-ICV V. Rama 07 SEP 99	Ⓐ	EQ. MATERIAL ADDED.

APPROVED	M. Vijay	700-35-368
CHECKED	D.S.KUMAR	
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	SCREW	WEIGHT 0.0028 SCALE 2:1
	45, GOST 1050-74	SHT 1 SHTS 1

A4

700-35-408

▽3(▽)



1) Alternate material is steel 40, GOST 1050-74.

2) HB 255 to 207 (Φ 3,8 to 4,2).

3) Unspecified limit deviations of dimensions of holes are as per A7.

4) Presence of area A is allowed on the face of sphere,.

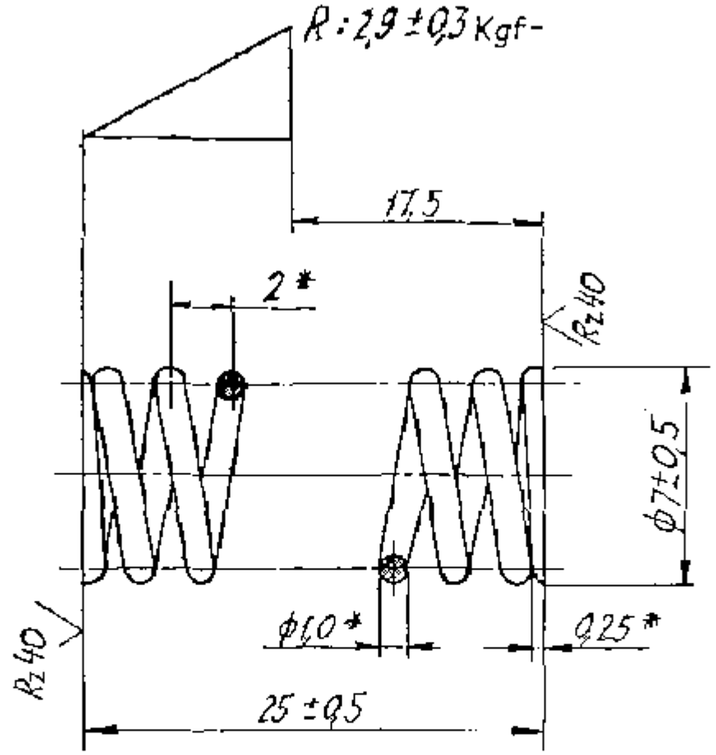
5) Coating :- Zinc plated , 9 microns thick, chromatized. Remove hydrogen embrittlement

(A) EQ. MATERIAL:- 45 C8 TO IS:5517-93 OR
(B) GRADE-C45 TO IS:1570

DC()No. & DATE	ISSUE	AMENDMENTS
00889-ICV 18 JUL 01	(B)	EQ.MATERIAL ADDED.
00722-ICV 07 SEP 99	(A)	EQ.MATERIAL ADDED.

APPROVED		700-35-408	
CHECKED	V.Rajendra		
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		SCREW	WEIGHT: 0.02 SCALE: 2:1 SHT SHTS 1
		45, GOST 1050-74	

700-38-1123



1 Shear modulus $G^*=8000\ Kgf/mm^2$

2 Tangential twisting stress (maximum) $\tau_3^*=56.8\ Kgf/mm^2$

3 After compressing the spring for 10times till the turns are in the contact one with another, no residual deformation is allowed.

4 Total length of the spring $L^*=266$ mm

5 Number of working turns $n=12$

6 Number of complete turns $n_1=14\pm0.75$.

7 Winding direction is right hand.

8 Machined surface of the butt-endsshould not be less than 5/8 of the turn

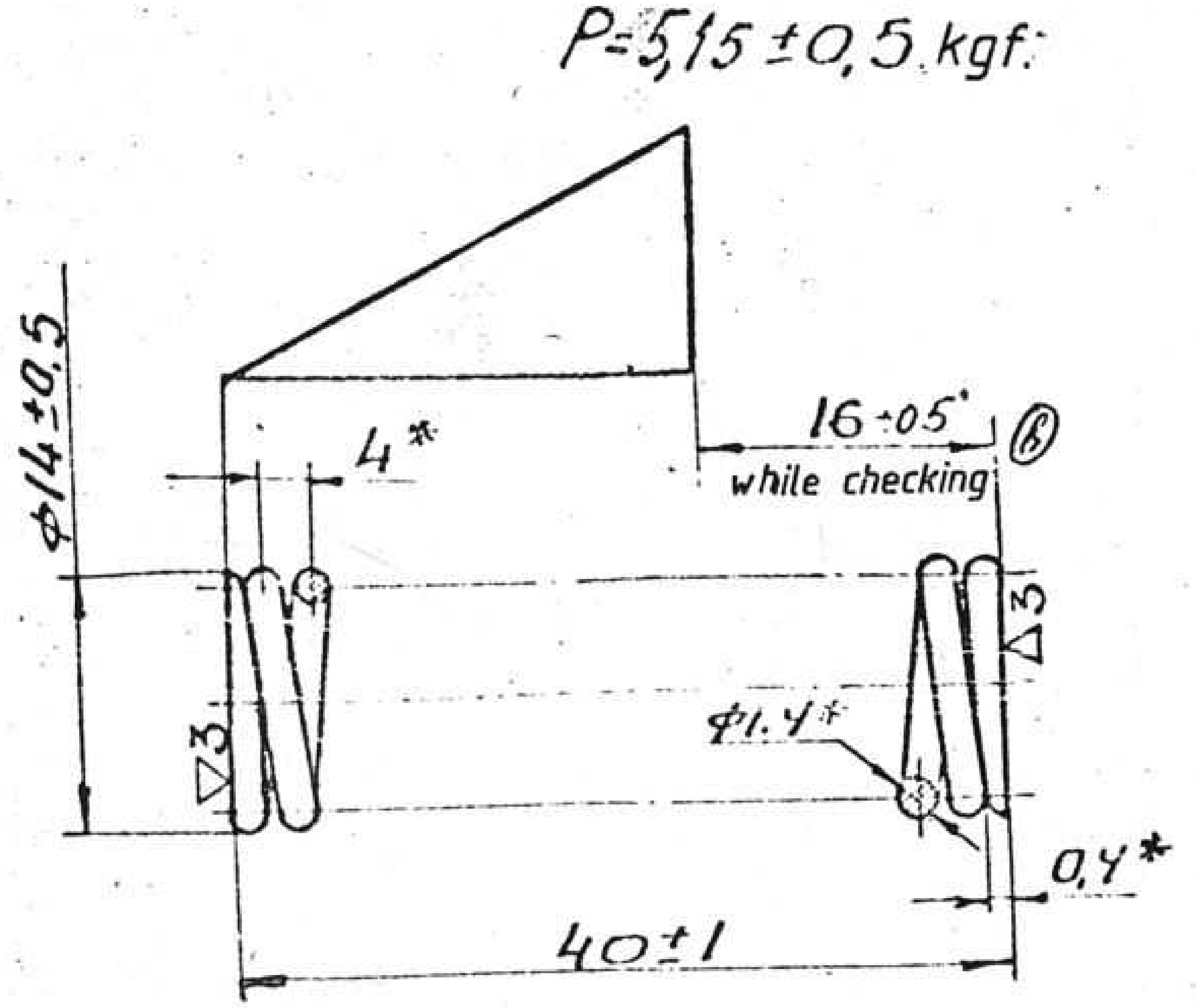
9 Non-squareness of the spring axis to the butt-ends should not exceed 0.5 mm

10 * Dimensions are given for reference

11 Coating Zinc-plated, 9 microns thick, chromatized cadmium-plated, 9 microns thick, chromatized Remove hydrogen embrittlement

APPROVED	N VASU	700-38-1123	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)		SPRING	WEIGHT 0.0016 / SCALE 5:1 / SHT 1 SHTS 1
		WIRE II-10, GOST 9389-75	

A3



1) Shear modulus is $G^* = 8{,}10^3$ kg/mm², max.

2) Tangential twisting stress. $\tau_3^* = 73$ kg/mm², max.

3) Total length of spring is $L^* \approx 450$ mm.

4) Number of working coils $n = 9$.
5) complete number of coils is $n_1 = 11 \pm 0.5$.
6) Direction of winding is arbitrary.

7) *Dimensions are given for reference.

8k) Coating : Chemically parkerized, chromatized, accelerated, oiled, with preservation oil k-17 GOST 10877-76 as per instructions 053,25289,00002 or with varnish k0-815 ГОСТ 11066-74.

8) Coating : chemically parkerized, chromatized, accelerated, oiled with varnish KO-815, GOST 11066-74.

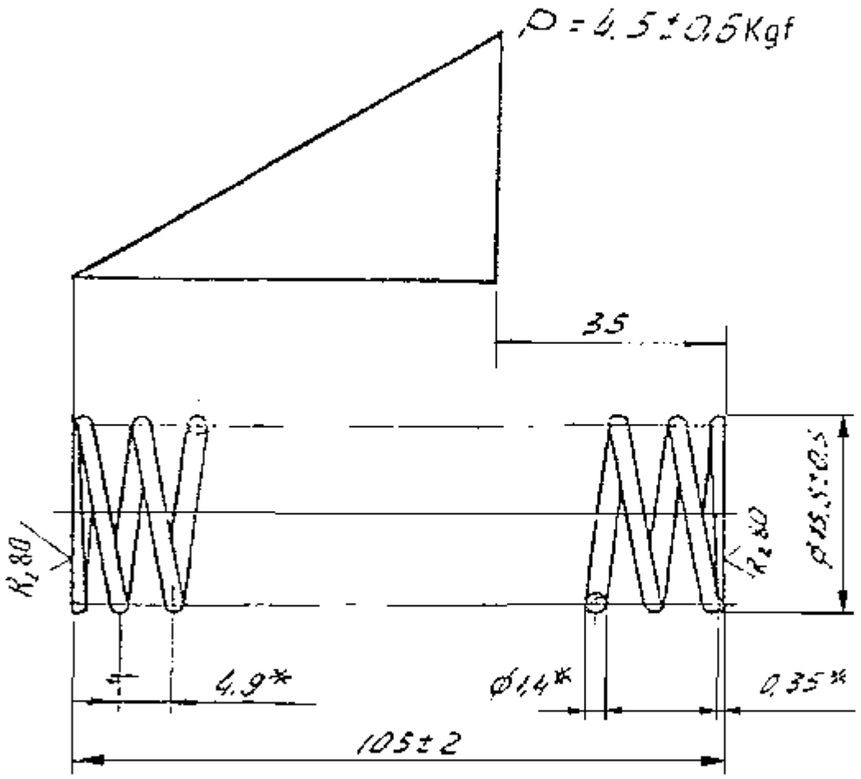
1'	–	765.237-82	[illegible]	21.4.82
1	-	765 Д 158-76	[illegible]	11.5.1
2	1	765.415-75	[illegible]	5.2.75
[illegible]	1	[illegible]	[illegible]	[illegible]
[illegible]		53/[illegible]	[illegible]	[illegible]
ST	SHT	DOC NO	SIGN	DATE
DRAWN		Y.R.Ganesh	[signature]	2.7.84
EDT.CHKD		D.K. JAIN	[signature]	4.7.84
F/M, DC.		S.R.NAIR	[signature]	4.7.84
D.V.OFFR.		[illegible]	[signature]	11.7.84
		NAME	SIGN	DATE

700-38-1495

SPRING	SHEET	WEIGHT	SCALE
		0,0053	2:1
	TOTAL SHEETS		
WIRE II. -1,4 ГОСТ 9389-75	ORDNANCE FACTORY PROJECT HYDERABAD		

700-38-1577

B/(✓)



1. Shear modulus G*=8000 Kgf/mm^2.
2. Tangential stress during twisting is (maximum) τ*=72 Kgf/mm^2
3. Total length of spring is L*=1100 mm
4. Number of working coils is n=21
5. Total number of coils is n_1=23±1
6. Direction of winding is arbitrary
7. Machined surface of butt-ends should not be less than 3/4 of a coil
8. Increase in external diameter of bearing coils is allowed upto 0.2 mm above tolerance
9. * Dimensions are given for references.
10. Coating: Cadmium-plated, 9 microns thick, chromatizing Remove hydrogen embrittlement.
11. Permissible coating: Zinc-plated, 9 microns thick, chromatizing Remove hydrogen embrittlement

DC(I)No. & DATE	ISSUE	AMENDMENTS
00886-ICV 28 JUN 01		DRAWING REVISED AND RETRACED.

APPROVED		700-38-1577	
CHECKED			
CONTROLLERATE OF QUALITY ASSURANCE (ICV)	SPRING	WEIGHT 0.014	SCALE 2:1
		SHT 1 SHTS 1	
	WIRE-II-1.4, GOST 9389-75		

A3

700-40-153

1). Alternate material is steel cm2, cm3, GOST 380-71 and steel 08nc, 10, 10kn, 15, 15kn, 20, 25 and 30 GOST 1050-74.

2). Coating: Zinc-plated, 9 microns thick, chromatized. Remove hydrogen embrittlement.

(A) EQ. MATERIAL :- Gde 'D' (OR) 'DD' (OR) EDD TO IS: 1079-88 OR

(B) GRADE - 'D' TO IS: 513-86

DC(I)No. & DATE	ISSUE	AMENDMENTS
00898-ICV 21 AUG 01	(B)	EQ. MATERIAL ADDED.
00272-ICV 07 SEP 99	(A)	EQ. MATERIAL ADDED.

APPROVED	M.VASU
CHECKED	

700-40-153

CONTROLLERATE OF QUALITY ASSURANCE (ICV)

GASKET

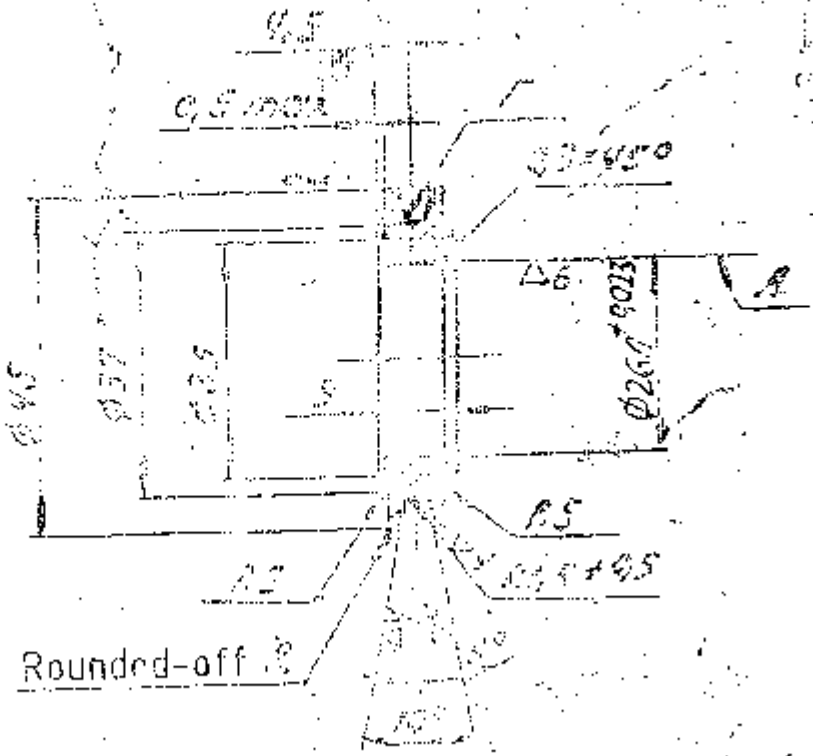
08Kn GOST 1050-74

WEIGHT	SCALE
0.0003	2:1

SHT SHTS

A4

Unless stated otherwise.



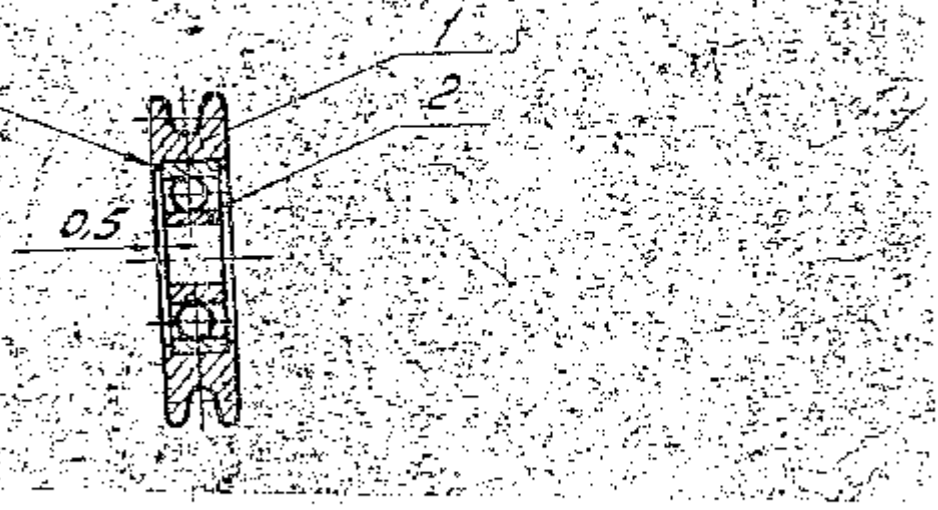
1. With respect to axis of surface A: runout of surface F should not exceed 0,15mm.
2. Perform dimensions without deviations as per accuracy class 7, ISO 1010.
3. Blunt sharp edges.
4. Coating: Anodic oxidation, chromatizing.

(A) EQ.MATERIAL:- 1. Al. ALLOY BAR GRADE 24534 TO IS: 733-83.
(B) 2. 45 DIA. BAR, GRADE 24345 TO IS: 1285-75, 'WP' CONDITION.

00852 -ICV 31-1-2001	(B)	EQ.MATERIAL ADDED	00826-ICV 09-11-2000	(A)	EQ.MATERIAL ADDED
DCN NO DATE	ISSUE	NATURE OF AMENDMENTS	DCN NO DATE	ISSUE	NATURE OF AMENDMENTS

APPROVED		765-08-363	278 OF 304
CHECKED	D.SEQUEIRA		
CONTROLLERATE OF INSPECTION (ICV)	ROLLER	WEIGHT 0.016	SCALE 1:1
		SHT	SHTS
	Pipe Mit 45x12.5xHA TOCT 18482-79		

765-08-59



1. The roller must rotate freely on the bearing.

DGDOI-LCV 28-08-2000	A	DS/CAT NO. ADDED IN THE DRAWING IN REF NO. 2.
DC(I) NO & DATE	ISSUE	NATURE
AMENDMENTS		

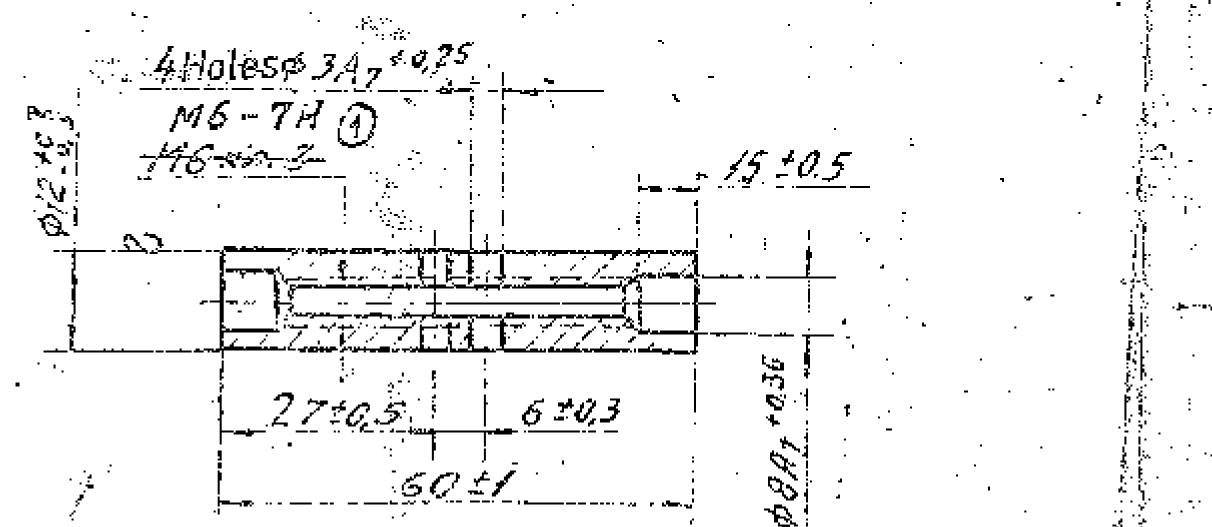
Ref No	Designation	Description	Qty	Remarks
2	A DS CAT NO. LVC/MT 7-3110-0906	Bearing 6-80029 GOST 7242-76 and ETY 500	1	To be purchased
1	765-08-363	Roller	1	

Инв. № подл. | Подп. и дата | Взам. инв. №

APPROVED	R.V.REDDY	765-08-cd 211	
CHECKED	G.V.L.B.MURTHY		
CONTROLLERATE OF INSPECTION (LCV)		ROLLER ASSEMBLY	WEIGHT 10.036 / SCALE 1:1 / SHT 1 / SHTS

765-10-428

∇3 - Unless otherwise specified



1) Blunt sharp edges.

2) Alternate material is steel cm3 cn GOST-380-71 and 10, 15, 25 and 30 GOST 1050-74.

3) Coating : Zinc-plated, 9 microns thick, oiled. Do not check holes for presence of coating. Remove hydrogen embrittlement. Calibrate thread after coating.

765-10-423

SNO	SHT	DOC NO	SIGN	DATE		SHEET	WEIGHT	SCALE
DRAWN		Y.R.GANESH		5.4.86	HANDLE			
EDT, CHKD		D.K.JAIN		5.4.87				
F/M. DC		S.A. NAIR		6.4.86		TOTAL SHEETS		
DIV.OFFR.		V.K.IYER		9.4.	20 ГОСТ 1050-74			
		NAME	SIGN	DATE				

765-10-428

EXPLANATORY NOTES TO TECHNICAL CODITIONS.

I) HANDLE SHOULD BE MANUFACTURED FROM STEEL GRADE 10,15,20,25 & 30 OF GOST 1050-74. THE CHEMICAL COMPOSITIONS ARE GIVEN BELOW.

CHEMICAL COMPOSITIONS CONTENTS OF ELEMENTS %	GRADES				
	10	15	20	25	30
CARBON	0.07 - 0.14	0.12 - 0.19	0.17 - 0.24	0.22 - 0.30	0.27 - 0.35
SILICON	0.17 - 0.37	0.17 - 0.37	0.17 - 0.37	0.17 - 0.37	0.17 - 0.37
MANGANESE	0.35 - 0.65	0.35 - 0.65	0.35 - 0.65	0.50 - 0.80	0.50 - 0.80
CHROMIUM (MAXIMUM)	0.15 %	0.25 %	0.25 %	0.25 %	0.25 %

II) MECHANICAL PROPERTIES OF STEEL GRADE 10, 15, 20, 25 & 30 OF GOST 1050-74 ARE GIVEN BELOW.

MECHANICAL PROPERTIES	GRADES				
	10	15	20	25	30
HEAT TREATMENT OF BLANKS	NORMALISING	NORMALISING	NORMALISING	NORMALISING	NORMALISING
YIELD POINT - kgf/mm² (MIN)	21	23	25	28	30
ULTIMATE TENSILE STRENGTH - kgf/mm² (MIN.)	34	38	42	46	50
PERCENTAGE ELONGATION - % (MIN.)	31	27	25	23	21
REDUCTION OF AREA - % (MIN)	55	55	55	50	50
IMPACT STRENGTH - kgf m/cm² (MIN)	—	—	—	9	8

THE RECOMMENED HEATING TEMPERATURE DURING HEAT TREATMENT OF BLAKS FOR CARRYING OUT THE TESTS OF MECHANICAL PROPERTIES AS GIVEN BELOW.

HEATING TEMPERATURE - C°

STEEL GRADE	NORMALISING
15	900
20	900
25	890
30	880
10	920

RECOMMENDED MINIMUM HOLDING PERIOD :-

INCASE OF NORMALISING OR HARDENING - 30 MINUTES
COOLING MEDIUM IN CASE OF HARDENING - WATER.

HARDNESS :-

GRADE OF STEEL	BHN (MAXIMUM) (WITHOUT HEAT TREATMENT)
10	143
15	149
20	163
25	170
30	179

SURFACE FINISH :-

∇3 :- REPRESENTS THE SURFACE FINISH (i.e. Ra 20) MICRONS ON THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED.

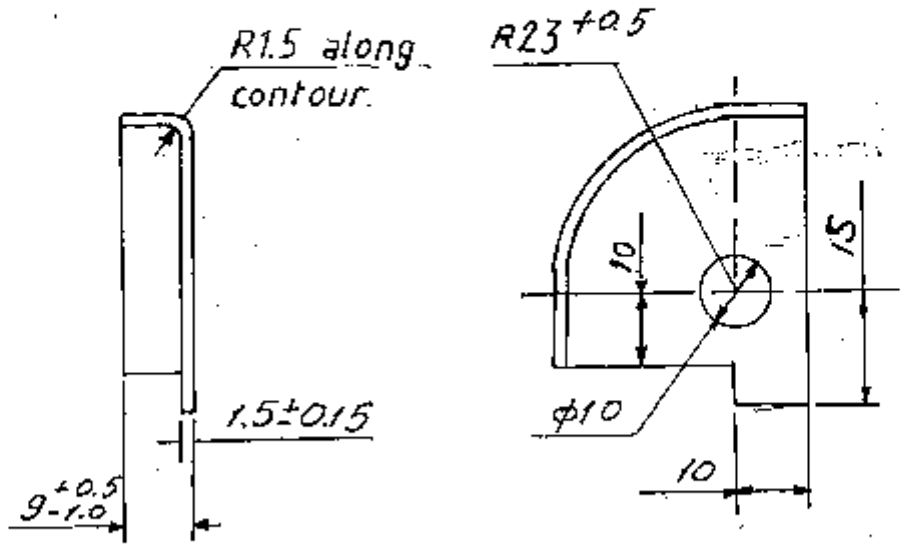
∽ :- REPRESENTS SURFACE FINISH OF Ra 80 MICRONS.

INSCRIBED		DRG NOT TO BE SCALED	PERTAINS TO
CHECKED		ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF	
APROVED		ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED	
DATE	31.7.86	HANDLE 1-4-A1	765-10-428
TOLERANCE UNLESS OTHERWISE SPECIFIED		SCALE :-	
GEN [DEC] ANG		CONTROLLERATE OF INSPECTION FIRE FIGHTING EQUIPMENT	

D.C(I)	D.T	ZONE	BRIEF RECORD	SIGN

765-10-445

DCQ No. DATE	ISSUE	NATURE OF AMENDMENTS
00852 ICV 21-1-2001	(B)	EQ. MATERIAL ADDED.
00837 ICV 04-12-2000	(A)	EQ. MATERIAL ADDED.



(A) EQ.MATL:- HOT ROLLED CARBON STEEL STRIP GRADE 'D', 'DD' OR St-34 TO IS:1079-73.

1). Blunt sharp edges.

2). Perform dimensions without deviations with an accuracy of ± 0.5 mm.

3). Alternate material is steel 08Kn and 08nc, GOST 1050-74.

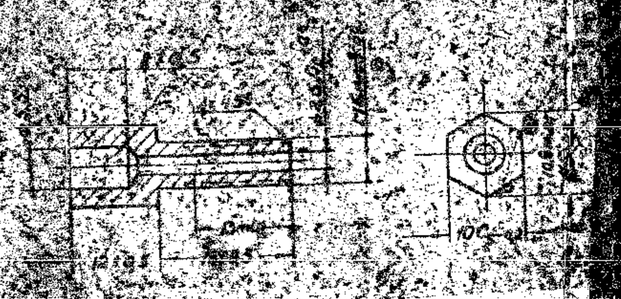
4). Coating: Chemically-parkerized, accelerated, chromatized, oiled with preservation oil K-17, GOST 10877-76, as per instructions 053.25289.00002. or with varnish Ko-815, GOST 11066-74.

(B) EQ.MATERIAL:- CRS TO IS: 513-86 ('D' CONDITION)

APPROVED	M.VPSD	765-10-445	349 of 379
CHECKED	DSK/VMHD		
CONTROLLERATE OF INSPECTION (ICV)	LIMITER	WEIGHT: 0.016	SCALE: 1:1
		SHT: -	SHTS
	10 FOCT 1050-74	08	

765-56-57

± 0·3 unless otherwise specified.



1. Perform dimensions without deviations as per accuracy class 7, GOST 1010.
2. Coating: zinc-plated, 9 microns thick oiled. Remove hydrogen embrittlement. Dimensions are to be checked before the part is coated.
3. Alternate material is steel 40, GOST 1050-74.
4. Internal surfaces may be free from coating.

SL NO	SHEET	DOCN	SIGN	DATE
DRAWN BY	V.J.RAO			29.3.96
CHECKED				
APPROVED				
DATE				

TIP

Steel 45 IOCT 1050-74

765-56-57

SHEETS | WEIGHT

1 | 1.00

ORDNANCE FACTORY MEDAK

765-56-57

EXPLANATORY NOTES TO TECH. CONDITIONS

I) TIP SHOULD BE MANUFACTURED FROM STEEL GRADE 40, 45 TO GOST 1050-74 HAVING THE FOLLOWING CHEMICAL COMPOSITION

STEEL GRADE	CARBON %	SILICON %	MANGANESE %	CHROMIUM (MAXIMUM)
40	0·37-0·45	0·17-0·37	0·50-0·80	0·25
45	0·42-0·50	0·17-0·37	0·50-0·80	0·25

II) MECHANICAL PROPERTIES OF STEEL GRADE 40, 45 CONFORMS TO GOST 1050-74 ARE AS GIVEN BELOW.

STEEL GARDE	YIELD POINT Kgf/MM² (MIN)	ULTIMATE TENSILE STRENGTH (Kgf/mm²) (MIN)	PERCENTAGE ELONGATION % (MIN)	REDUCTION OF AREA % (MIN)	IMPACT STRENGTH Kgf/cm² (MIN)
40	34	58	19	45	6
45	36	61	16	40	5

III) HARDNESS OF STEEL GRADES 40 & 45 ARE AS GIVEN BELOW. (WITHOUT HEAT TREATMENT)

GRADE OF STEEL	40	45
BHN (MAX)	217	229

RECOMMENDED HEATING TEMPERATURE DURING HEAT TREATMENT OF BLANKS FOR CARRYING OUT THE TESTS OF MECHANICAL PROPERTIES ARE GIVEN BELOW.

STEEL GRADE	NORMALISING
40	870 °C
45	860 °C

RECOMMENDED MINIMUM HOLDING PERIOD

IN CASE OF NORMALISING OR HARDENING - 30 MINUTES.
HOLDING PERIOD

SURFACE FINISH :-

∇2 - SURFACE FINISH OF 50 MICRONS (ie Ra·50)

∇3 - INDICATE SURFACE FINISH OF ∇3 (ie Ra-20) MICRONS ON THOSE SURFACES WHERESURFACE FINISH-NOT SPECIFIED.

ALTERNATIVELY CHROMATISING COATING IS AS PER IS - 1068 - 1968.

D.CO	D.T.	ZONE	BRIEF RECORD	SIGN

INSCRIBED		DRG NOT TO BE SCALED
CHECKED	AM	ALL SHARP EDGES & CORNERS TO BE ROUNDED OF
APPROVED		ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED
DATE	30.9.96	TIP
TOLERANCE UNLESS OTHERWISE SPECIFIED GEN TOL C LANG		SCALE

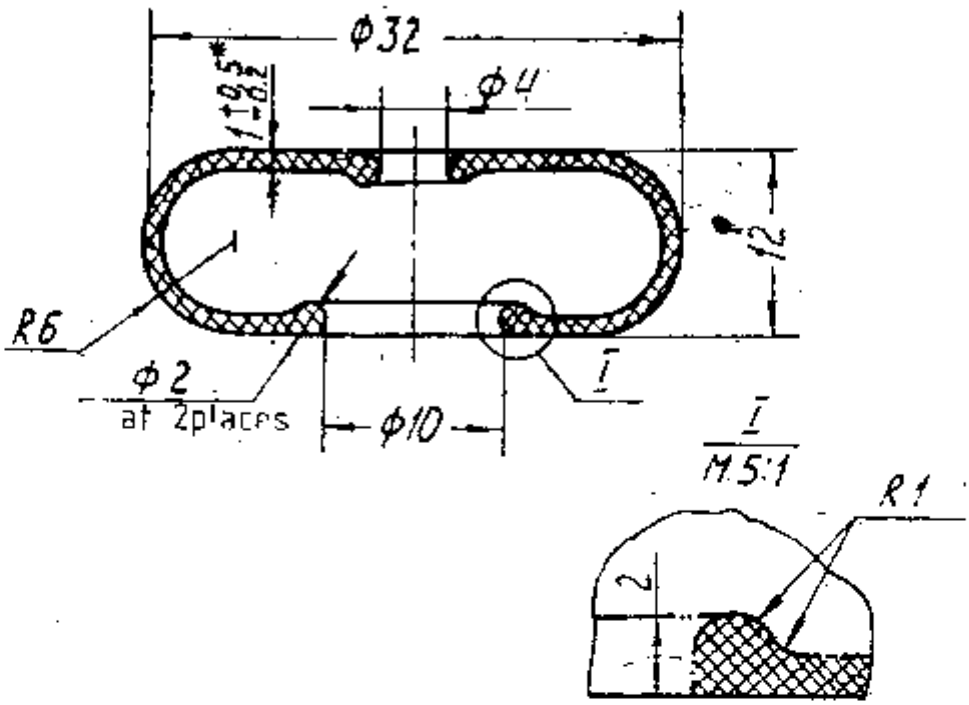
PERTAINS TO

765-56-57

CONTROLLERATE OF INSPECTION FIRE FIGHTING DEPT PUNE

1-4-A2

66H-79-591



00948-ICV		
DCCU NO.	ISSUE	A
DATE	AMENDMENTS	EQ. MATERIAL ADDED

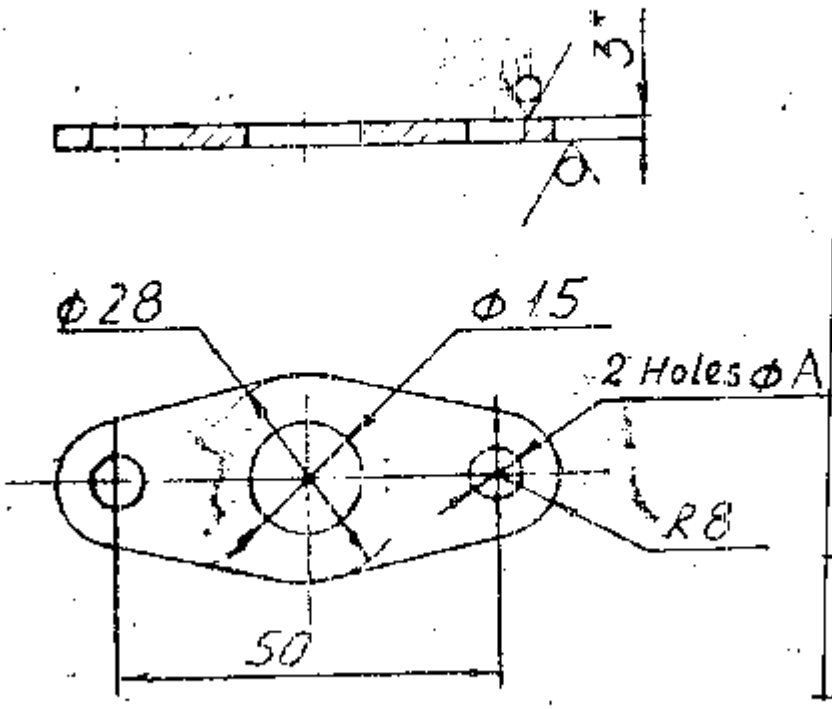
1. All dimensions except for those marked with * should be provided by tool.
2. Flash along the parting line of die to height and width 0,5mm is allowed.
3. Part may be made as per conventional dotted line.
4. Variation in wall thickness within the limits of tolerance is allowed.
5. Mark on tag.
6. Other requirements are to be as per technical specifications TY 005216-75. for articles, code 253151.

(A) EQ.MATERIAL :-TYPE 'A' GRADE 2, IS: 5192-75.

APPROVED	M YASU	765-64-499		161 of 188
CHECKED				
CONTROLLERATE OF INSPECTION (ICV)		CUP	WEIGHT 0.0035	SCALE 2:1
			SHT	SHTS
		1847 TY00521 6-75		

765-71-364

Rz 160 V(V)



©	DSTAT No: ADDED FOR 765-71-364-01	(B)	EQUIVALENT MATERIAL ADDED FOR 765-364-01.	(A)	St 34 TO IS:1079-73 ADDED AS EQ.MATERIAL FOR 765-71-364-01	ISSUE	NATURE AMENDMENT
		4818-IV 11.10.2000		0063 (CV)		DCN No DATE	

Designation	Ø A,mm	Weight kg.	EQ.MATERIAL
765 - 71 - 364	5	0,010	—
© - 01	8	0,010	St 34 To IS:1079-73 (A)(B)

(B) EQUIVALENT MATERIAL :- COLD ROLLED STEEL STRIP GRADE 6 TO IS :4030-73

1) Unspecified limit deviations of dimensions are ±0,5mm.

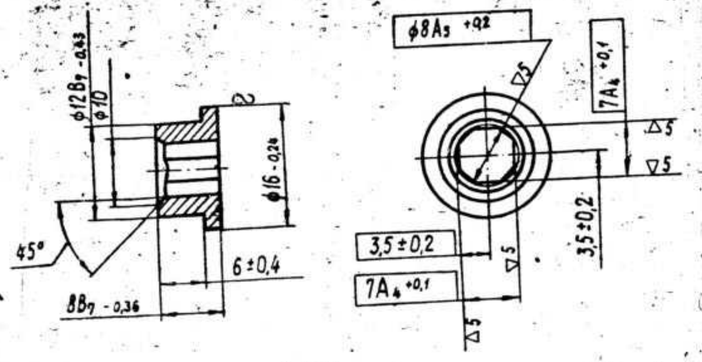
2) Coating : Zinc-plated 9 microns thick, chromatized.

3) Dimension with (*) is given for reference.

4) Alternate material is 45, GOST 1050-74.

APPROVED	H VASU	765-71-364
CHECKED	V	
CONTROLLERATE OF INSPECTION (CV)	FLANGE	WEIGHT: SCALE: 1:1
	PLATE:- B-n H-O-3 GOST 19903-74 / 3-11-Cm.3cn GOST 16523-70	SHT 1 SHTS

765-71-391



1. Blunt sharp edges.
2. Provide dimensions given in [ ] in assembly.
3. Alternate material is 10 and 15 GOST 1050-74.

▽3 Unless otherwise specified.

SNO	SHT	DOC NO	SIGN	DATE
DRAWN		V.J.RAO		22.8.84
EDT & CHKD		B. Srinivas		28.8.84
F/M, DC		S.R.NAIR		29.8.84
DIV.OFFR.		T.K.BANERJEE		31.8.84

BUSH	SHEET	WEIGHT	SCALE
		0,006	2:1
	TOTAL SHEETS		
20 FOCT 1050-74	ORDANANCE FACTORY PROJECT HYDERABAD		

765-71-391

765-71-391

EXPLANATORY NOTES TO TECHNICAL CONDITIONS.

1) BUSH SHOULD BE MANUFACTURED FROM STEEL GRADE 20 OF GOST 1050-74. THE CHEMICAL COMPOSITIONS IS AS GIVEN BELOW

CARBON	0.17 – 0.24 %
SILICON	0.17 – 0.37 %
MANGANESE	0.35 – 0.65 %
CHROMIUM	0.25 % (MAXIMUM)

2) MECHANICAL PROPERTIES OF STEEL GRADE 20 OF GOST 1050-74 IS AS GIVEN BELOW.

HEAT TREATMENT OF BLANKS	NORMALISING
YIELD POINT (MIN)	25 KGF/MM²
ULTIMATE TENSILE (MIN) STRENGTH	42 KGF/MM²
PERCENTAGE ELONGATION (MIN)	25 %
REDUCTION OF AREA (MIN)	55 %

HARDNESS WITHOUT HEAT TREATMENT
BHN – 163 (MAXIMUM)

3) ALTERNATE MATERIAL IS STEEL GRADE 10 AND 15 OF GOST 1050-74 THE CHEMICAL COMPOSITIONS IS AS GIVEN BELOW.

CHEMICAL COMPOSITION	GRADE 10	GRADE 15
CARBON %	0.07 – 0.14	0.12 – 0.19
SILICON %	0.17 – 0.37	0.17 – 0.37
MANGANES %	0.35 – 0.65	0.35 – 0.65
CHROMIUM (MAX)	0.15 % (MAX)	0.25 % (MAX)

4) MECHANICAL PROPERTIES OF STEEL GRADE 10 AND 15 OF GOST 1050-74 ARE AS GIVEN BELOW

MECHANICAL PROPERTIES	GRADE 10	GRADE 15
HEAT TREATMENT OF BLANKS	NORMALISING	NORMALISING
YIELD POINT	21 KGF/MM² (MIN)	23 KGF/MM² (MIN)
ULTIMATE TENSILE STRENGTH	34 KGF/MM² (MIN)	38 KGF/MM² (MIN)
PERCENTAGE ELONGATION	31 % (MIN)	27 % (MIN)
REDUCTION OF AREA	55 % (MIN)	55 % (MIN)

▽ HARDNESS WITHOUT HEAT TREATMENT
STEEL GRADE 10 – 143 BHN (MAXIMUM)
STEEL GRADE 15 – 149 BHN (MAXIMUM)

5) HEATING TEMPERATURE :–
THE RECOMMENDED HEATING TEMPERATURE DURING HEAT-TREATMENT OF BLANKS (SPECIMEN) FOR CARRYING OUT THE TESTS OF MECHANICAL PROPERTIES IS AS FOLLOWS.

STEEL GRADE	HEATING TEMPERATURE (NORMALISING)
20	900°C
10	920°C
15	900°C

RECOMMENDED MINIMUM HOLDING PERIOD IN CASE OF NORMALISING IS 30 MINUTES.

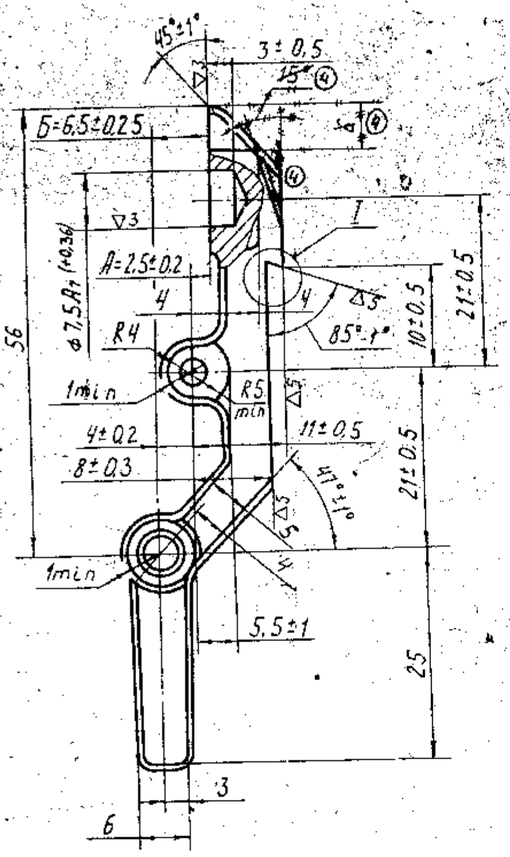
SURFACE ROUGHNESS :
▽3 – REPRESENTS THE SURFACE FINISH OF ▽3 (i.e Ra 20) MICRONS ON THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED
▽5 – SURFACE FINISH VALUE Ra 5 MICRONS
~ – SURFACE FINISH VALUE Ra 80 MICRONS

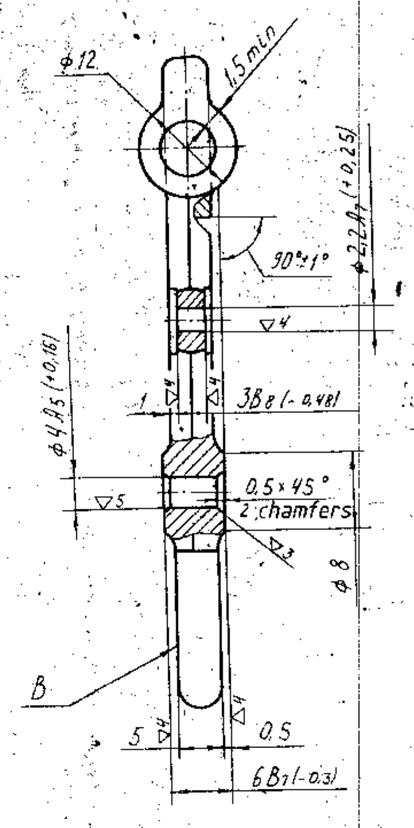
D.CN	D.T.	ZONE	BRIEF RECORD	SIGN

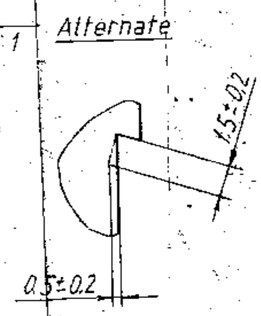
INSCRIBED		DRG NOT TO BE SCALED
CHECKED	8/84	ALL SHARP EDGES & CORNERS TO BE ROUNDED OF
APPROVED		ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED
DATE	31.7.86	BUSH
TOLERANCE UNLESS OTHERWISE SPECIFIED GEN: DEC: ANG:		SCALE :-

PERTAINS TO
765-71-391

CONTROLLERATE OF INSPECTION FIRE FIGHTING EQPT PUNE







1) *Unspecified stamping radii should not exceed 3,0 mm.*

2) *Other requirements for forging are asper class II, GOST 7505-74.*

4) *HB 285 to 229 (3,6 to 4,0).*

5) *Alternate material is steel 40, GOST 1050-74.*

7) *Cut not exceeding 0,3 mm is allowed on surface B.*

8) *Coating : Zinc-plated, 9 microns thick chromatized. Remove hydrogen embrittlement. Do not check coating, in holes.*

9) *Local recesses not exceeding 0,5 mm are allowed on unmachined surfaces.*

10) *Retainer may be made as per alternate.*

11) *Dimension Б may be provided instead of dimension A.*

765 - 71 - 812

SNO	SHT	DOC NO	SIGN	DATE
DRAWN		Y.R.Ganesh		28.8.84
EDT & CHKD				
F/M. DC		S.R.NAIR		31.8.84
DIV.OFFR		T.K.BANERJEE		3.9.84
		NAME	SIGN	DATE

RETAINER

45 FOCT 1050-74

SHEET	WEIGHT	SCALE
	00.4	2:1

TOTAL SHEETS

D9C

765 - 71 - 812

EXPLANATORY NOTES TO TECHNICAL CONDITIONS

1) RETAINER SHOULD BE MANUFACTURED FROM STEEL GRADE 45 TO GOST 1050-74 HAVING FOLLOWING CHEMICAL COMPOSITIONS AND MECHANICAL PROPERTIES

I)

CHEMICAL COMPOSITION	CONTENTS OF ELEMENTS %
CARBON	0·42 - 0·50 %
SILICON	0·17 - 0·37 %
MANGANESE	0·50 - 0·80 %
CHROMIUM	0·25 % (MAXIMUM)

II) MECHANICAL PROPERTIES

HEAT TREATMENT OF BLANK	NORMALISING
YIELD POINT	36 kgf/mm² (MIN)
ULTIMATE TENSILE STRENGTH	61 kgf/mm² (MIN)
PERCENTAGE OF ELONGATION	16 % (MIN)
REDUCTION OF AREA	40 % (MIN)
IMPACT STRENGTH	5 kgf M/cm² (MIN)

III) HARDNESS BHN (MAX) = 229 (WITHOUT HEAT TREATMENT)

2) ALTERNATE MATERIAL IS STEEL GRADE 40 TO GOST 1050-74 HAVING THE CHEMICAL COMPOSITION AND MECHANICAL PROPERTIES

I) CHEMICAL COMPOSITION

CARBON	0·37 - 0·45 %
SILICON	0·17 - 0·37 %
MANGANESE	0·50 - 0·80 %
CHROMIUM	0·25 (MAX)

II) MECHANICAL PROPERTIES

HEAT TREATMENT	NORMALISING
YIELD POINT	34 kgf/mm² (MIN)
ULTIMATE TENSILE STRENGTH	58 kgf/mm² (MIN)
PERCENTAGE ELONGATION	19 % (MIN)
REDUCTION OF AREA	45 % (MIN)
IMPACT STRENGTH	6 kgf M/cm²

III) HARDNESS BHN (MAX) = 217 (WITHOUT HEAT TREATMENT)

3) RECOMMENDED HEATING TEMPERATURES DURING HEAT TREATMENT OF BLANKS FOR CARRYING OUT THE TESTS OF MECHANICAL PROPERTIES ARE GIVEN BELOW :-

STEEL GRADE	HEATING TEMPERATURE °C (NORMALISING)
40	870
45	860

RECOMMENDED MINIMUM HOLDING PERIOD IN CASE OF NORMALISING IS 30 MINUTES

4) SURFACE FINISH

a) ∇5 ∇4 ∇5 - INDICATES SURFACE FINISH IN Ra VALUE SHOULD BE 20 MICRONS, 10 MICRONS AND 5 MICRONS RESPECTIVELY.

b) ∇ ∇ - INDICATES SURFACE FINISH TO BE OBTAINED WITHOUT REMOVAL OF MATERIAL ON THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED.

D.C.(I)	DATE	ZONE	BRIEF RECORD	SIGN
			EXPLANATORY NOTES RETRACED	

DRN	
TCD	
CHD	Sd/- Sd/-
PSD	
APPD	Sd/-
DATE	31·7·86

TOLERANCE UNLESS OTHERWISE SPECIFIED: GEN | DEC | ANG

DRG NOT TO BE SCALED
ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF.
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED

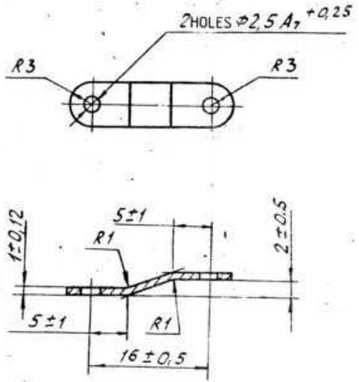
RETAINER

PERTAINS TO 765 - 71 - 812

SCALE :-

CQA(FD) AUNDH CAMP PUNE-411 027

JOB NO.	AUTHENTICATION	TCD	CHD	PSD	DATE	DRG BASED ON	W/O. NO.
		NVM. NM-III					



1. Burrs are not allowed.
2. Alternate material is steel cm3cn, GOST 380-71, Steel 08kn, 10, 10kn, GOST 1050-74.
3. Coating: Zinc-plated, 9 microns thick, chromatized. Remove hydrogen embrittlement.

765-71-813

SNO	SHT	DOC NO	SIGN	DATE
DRAWN		V.J.RAO		23.8.84
EDT & CHKD				
F/M, DC		S.R.NAIR		28.8.84
DIV. OFFR.		T.K.BANERJEE		31.8.84
		NAME	SIGN	DATE

SHACKLE

SHEET WEIGHT	SCALE
0.001	2:1

TOTAL SHEETS

Steel cm3kn FOCT 380-71

765-71-813

EXPLANATORY NOTES TO TECHNICAL CONDITIONS

① SHACKLE SHOULD BE MANUFACTURED FROM RIMMED CARBON STEEL OF ORDINARY QUALITY OF GRADE CM3KΠ OF GOST 380-71 OR FROM CARBON STRUCTURAL OF GRADES 08KΠ, 10, 10KΠ OF GOST 1050-74 ∠ STEEL.

② MECHANICAL PROPERTIES OF STEEL GRADE CM3KΠ AS PER GOST 380-71 ARE GIVEN BELOW.

a) ULTIMATE STRENGTH ——— 37-49 KgF/MM²
b) STRESS AT YIELD POINT ——— 24 KgF/MM² (MIN)
c) RELATIVE ELONGATION ——— 27% (MIN)

③ CHEMICAL COMPOSITION OF STEEL GRADE 08 KΠ, 10, 10 KΠ AS PER GOST 1050-74 ARE GIVEN BELOW

STEEL GRADE	CONTENT OF ELEMENT %			
	CARBON	SILICON	MANGANESE	CHROMIUM (MAX)
08 KΠ	0.05 – 0.11	0.03 (MAX)	0.25 – 0.50	0.10
10	0.07 – 0.14	0.17 – 0.37	0.35 – 0.65	0.15
10KΠ	0.07 – 0.14	0.07 (MAX)	0.25 – 0.50	0.15

④ MECHANICAL PROPERTIES OF STEEL GRADE 10 AS PER GOST 1050-74

a) HEAT TREATMENT OF BLANKS ——— NORMALISING
b) YIELD POINT STRESS ——— 21 KgF/MM² (MIN)
c) ULTIMATE TENSILE STRENGTH ——— 34 KgF/MM² (MIN)
d) PERCENTAGE ELONGATION ——— 31% (MIN)
e) REDUCTION OF AREA ——— 55% (MIN)

⑤ HARDNESS

STEEL GRADE	BHN (MAX) (WITHOUT HEAT TREATMENT)
10	143

⑥ THE RECOMMENDED HEATING TEMPERATURE DURING HEAT TREATMENT OF BLANKS FOR CARRYING OUT THE TESTS OF MECHANICAL PROPERTIES OF STEEL ARE GIVEN BELOW.

STEEL GRADE	NORMALISING
10	920°C

RECOMMENDED MINIMUM HOLDING PERIOD IN CASE OF NORMALISING — 30 MINUTS
COOLING MEDIUM IN CASE OF HARDENING — WATER

SURFACE FINISH

① ∼ :- REPRESENTS THE SURFACE FINISH R_a VALUE 80 MICRONS ON THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED.

D.CN	D.T.	ZONE	BRIEF RECORD	SIGN

INSCRIBED	
CHECKED	
APPROVED	
DATE	18.11.84
TOLERANCE UNLESS OTHERWISE SPECIFIED GEN. DEC. ANG.	

DRG NOT TO BE SCALED
ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF.
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED

PERTAINS TO

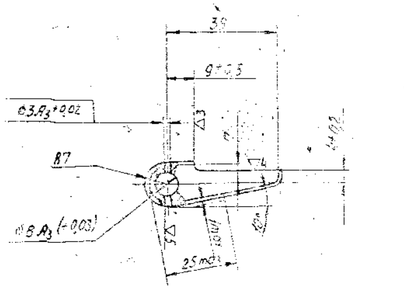
SHACKLE

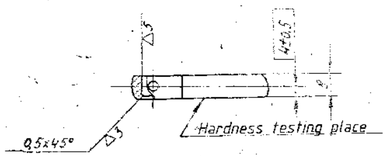
765-71-813

SCALE :-

CONTROLLERATE OF INSPECTION FIRE FIGHTING EQPT PUNE

765-71-814





Unless otherwise specified

1) Stamping radii should be R 3.

2) Unspecified requirements for forging are as per accuracy class II, GOST 7505-4.

3) Local recesses not exceeding 1,0 mm are allowed on unmachined surfaces.

4) Brinell hardness should be 341 to 285 (Ø3,3 to 3,6).

5) Carry out machining as per dimensions given in [ ] in assembly.

6) Lever may be made as per conventional dotted line.

7) Lever may be made by precision investment casting, in this case :
   a) Casting radii should not exceed 2,0 mm.
   b) Pattern drafts should not exceed 2°.
   c) Displacement along parting line should not exceed 0,3 mm.
   d) Alternate material is casting II OST 3-4365-79
      40xn - GOST 977-75.
   e) Other requirements for casting are as per OST 3-4365-79.
   f) Surface finish should not be less than the value specified in drawing.
   g) Depth of grinding at the hardness testing place should not exceed 1,0 mm.

765-71-814

DRAUGHT	DOC NO	E.C.	DATE	LEVER	SHEET WEIGHT 0,015 SCALE 1:1
DRG. NO	Y.R.Ganesh		23.8.84		
CHKD					
S/M. DC	S.R.NAIR			45 X FOCT 4543-71.	
DIV. OFFR.	T.K.BANERJEE		1.9.84		

765-71-814

EXPLANATORY NOTES TO TECH. CONDITION.

1) LEVER SHOULD BE MANUFACTURED FROM CONSTRUCTIOAL ALLOY STEEL OF GRADE 45 X OF GOST - 4543 - 71 AND HAVING THE CHEMICAL COMPOSITION AS GIVEN BELOW

STEEL GROUP	- CHROMIUM
CARBON	- 0·41 - 0·49 %
SILICON	- 0·17 - 0·37 %
MANGANESE	- 0·50 - 0·80 %
CHROMIUM	- 0·80 - 1·10 %

2) MECHANICAL PROPERTIES OF CONSTRUCTIONAL ALLOY STEEL GRADE 45X ARE AS GIVEN BELOW TO GOST 4543 - 71

STEEL GROUP	STEEL GRADE	HEAT TREATMENT OF BLANKS. HARDENING TEMPERATURE °C. HARDENING OR NORMALIZING	COOLING	TEMPERING TEMP °C	TEMPERING COOLING MEDIUM	YIELD POINT kgf/mm² (NOT LESS THAN)	TENSILE STRENGTH kgf/mm² (NOT LESS THAN)	PERCENTAGE ELONGATION % (NOT LESS THAN)	REDUCTION OF CROSS SECTIONAL AREA % (NOT LESS THAN)	IMPACT STRENGTH kgf m/cm² (NOT LESS THAN)
CHROMIUM	45 X	840	OIL	520	WATER OR OIL	85	105	9	45	5

3) ALTERNATE MAIERIAL IS STRUCTURAL STEEL & ALLOY STEEL OF GRADE 40 x n OF GOST 977 - 75 HAVING THE CHEMICAL COMPOSITION AS GIVEN BELOW.

CARBON	- 0·35 - 0·45 %	SULPHUR	- 0·040 % (MAX)
MANGANESE	- 0·40 - 0·90 %	CHROMIUM	- 0·80 - 1·10 %
SILICON	- 0·20 - 0·40 %	NICKEL	- 0·30 % (MIN)
PHOSPHROUS	- 0·040 % (MAX)	COPPER	- 0·30 % (MIN)

4) MECHANICAL PROPERTIES OF STEEL GRADE 40 x n OF GOST 977-75 ARE AS GIVEN BELOW.
   a) YIELD POINT - 50 kgf/mm² (MIN)
   b) ULTIMATE STRENGTH - 65 kgf/mm² (MIN)
   c) RELATIVE ELONGATION - 12 % (MIN)
   d) RELATIVE REDUCTION - 25 % (MIN)
   e) IMPACT STRENGTH - 4·0 kgf m/cm² (MIN.)

5) SURFACE FINISH
   ① ~ - INDICATE SURFACE FINISH VALUE IS Ra 80 MICRONS ON THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED.
   ② ∇_3 - INDICATES SURFACE FINISH VALUE IS Ra 20 MICRONS
   ③ ∇_4 - INDICATES SURFACE FINISH VALUE IS Ra 10 MICRONS.
   ④ ∇_5 - INDICATES SURFACE FINISH VALUE IS Ra 5 MICRONS.

										INSCRIBED	
										CHECKED	
										APPROVED	
										DATE	31.7.86
										TOLERANCE UNLESS OTHERWISE SPECIFIED	
DC(1)	DT.	ZONE	BRIEF RECORD		SIGN	GEN	DEC	ANG		SCALE	

DRG NOT TO BE SCALED
ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF
ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED

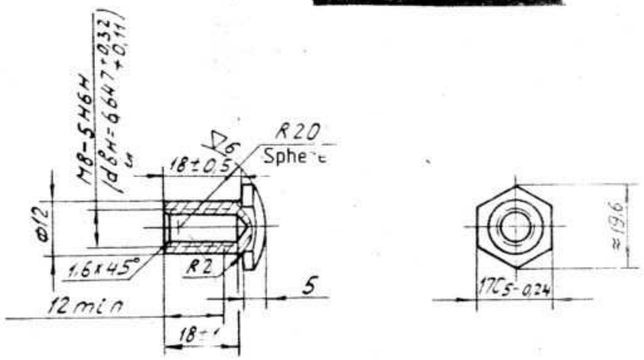
LEVER

PERTAINS TO 765-71-814

CONTROLLERATE OF INSPECTION FIRE FIGHTING EQPT. PUNE.

765-71-815

▽3 Unless otherwise specified



1. Blunt sharp edges.
2. Provide dimensions without deviations as per accuracy class7, OST 1010.
3. Perform heat treatment HB 302 to 255 (ø3,5 to 3.6.
4. Alternate material is 30x13, GOST 5632-72.
5. Surfaces of hexahedron may be ground to ≈.

27-1-84

765-71-815

SNO	SHT	DOC NO	SIGN	DATE
DRAWN		V.J.RAO		23.8.84
EDT, CHKD		A.A.BUSY		30.8.84
F/M, DC		S.R.NAIR		31.8.84
DIV.OFFR.		T.K.BANERJEE		11.9.84
		NAME	SIGN	DATE

PUSHER

20X13 ГОСТ 5632-72

SHEET	WEIGHT	SCALE
	0.015	1:1

TOTAL SHEETS

765-71-815

EXPLANATORY NOTES TO TECH CONDITIONS

I) PUSHER SHOULD BE MANUFACTURED FROM MARTENSITIC CLASS STEEL GRADE 20X13 OR GRADE 30X13 CONFORMING TO GOST-5632-72 HAVING CHEMICAL COMPOSITON AS FOLLOWS

CONTENTS OF ELEMENTS %							
STEEL GRADE	CARBON	SILICON	MANGANESE	CHROMIUM	IRON	SULPHUR	PHOSPHORUS
		NOT MORE THAN				NOT MORE THAN	
20x13	0·16 – 0·25	0·8	0·8	12·0 – 14·0	BASE	0·025	0·030
30x13	0·26 – 0·35	0·8	0·8	12·0 – 14·0	BASE	0·025	0·030

II) TOLERANCE :-

ø72 :- $^{+0.740}_{0.0}$

L5 :- $^{-0.3}_{0.0}$

III) SYMBOL :-

≈19·6 = 19·6 APPROXIMATELY

IV) SURFACE FINISH :-

▽6 :- REPRESENTS SURFACE FINISH TO BE OBTAINED IN Ra VALUE 2·5μ max

▽3 :- REPRESENTS SURFACE FINISH TO BE OBTAINED IN Ra VALUE 20μ max ON THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED.

Dc(i)	DATE	ZONE	BRIEF RECORD	SIGN

INSCRIBED	Bodke	DRG NOT TO BE SCALED
CHECKED		ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF
APPROVED		ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED
DATE	30.08.84	PUSHER
TOLERANCE UNLESS OTHERWISE SPECIFIED	GEN DEC ANG	SCALE :- —

PERTAINS TO

765-71-815

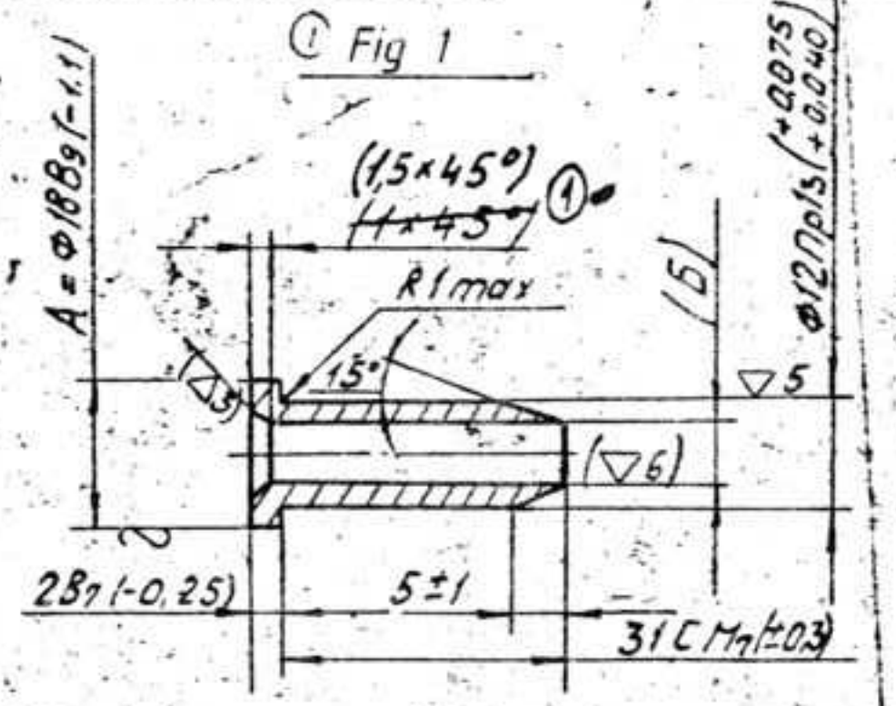
CONTROLLERATE OF INSPECTION FIRE FIGHTING EQPT, PUNE

1-2-A2

618-71-79L

▽3(▽)

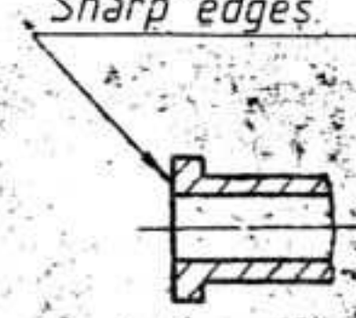
① Fig 1



② Fig 2

Other data Fig 1

③ Sharp edges.



Designation.	Figure	(5)
765-71-819	Fig 1	(ΦBA3(+0.03))
-01	Fig 2	(ΦB5A5(+0.2))

1) Alternate material is Bronze Бр АМЦ 9-2 GOST 18175-78, in this case use Φ17B7-0.43 instead of dimension A, and Brozne БрА✱ 9-4, GOST 18175-78.

2) Dimensions and roughness of surfaces given in brackets are after assembly.

765-71-819

SNO	SHT	DOC NO	SIGN	DATE
DRAWN		BHUSHAN		24.8.84
EDT & CHKD		B. Sankaran		28.8.84
F/M, DC		S.R.NAIR		29.8.84
DIV.OFFR.		T.K.BANERJEE		31.8.84
		NAME	SIGN	DATE

BUSH

Brozne БрАЖМЦ 10-3-1.5 GOST 18175-78.

SHEET	WEIGHT	SCALE
	0.010	1:1

TOTAL SHEETS

618-71-79L

EXPLANATORY NOTES TO TECH. CONDITION.

BUSH SHOULD BE MANUFACTURED FROM TIN FREE PRESSURE WORKED ALUMINIUM BRONZE GRADE БрАЖНМ TS 10-3-1.5 OR GRADE БрАМТS 9-2 OR GRADE БрАZH 9-4 CONFORMING TO GOST 18175-78 HAVING THE CHEMICAL COMPOSITION AS GIVEN IN TABLE BELOW

CHEMICAL COMPOSITION.

BASIC COMPONENT % (BY WEIGHT.	GRADES		
	БрАZHMTS10-3-1.5	БрАM TS 9-2	БрАZH 9-4
ALUMINUM	9.0 - 11.0	8.0 - 10.0	8.0 - 10.0
IRON	2.0 - 4.0	-	2.0 - 4.0
MANGANESE	1.0 - 2.0	1.5 - 2.5	-
COPPER	REST	REST	REST
IMPURITIES % (BY WEIGHT) MAX.			
TIN	0.1	0.1	0.1
SILICON	0.1	0.1	0.1
LEAD	0.03	0.03	0.01
PHOSPHORUS	0.1	0.01	0.01
IRON	-	0.5	-
ZINC	0.5	1.0	1.0
MANGANESE	-	-	0.5
TOTAL	0.7	1.5	1.7

NOTE :-
NICKEL UP TO 0.5% (PART BY WEIGHT) WITHOUT CONSIDERING IT IN TOTAL IMPURITIES, IS ALLOWED IN ABOVE GRADES OF BRONZE

SURFACE ROUGHNESS :-
▽3(▽) : REPRESENT THE SURFACE FINISH OF Ra VALUE OF 20 MICRONS BY ANY PRODUCTION METHOD ON THOSE SURFACES WHERE SURFACE FINISH IS NOT SPECIFIED.

▽5 — SURFACE FINISH VALUE Ra 5 MICRON.

▽6 — SURFACE FINISH VALUE Ra 2.5 μ.

∼ — SURFACE FINISH VALUE Ra 80 μ.

DC(1)	DATE	ZONE	BRIEF RECORD	SIGN.

INSCRIBED		
CHECK	[illegible]	
APPROVED	[illegible]	
DATE	31.7.86	
TOLERANCE UNLESS OTHERWISE SPECIFIED	GEN DEC ANG	

DRG NOT TO BE SCALED
ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED

BUSH

PERTAINS TO

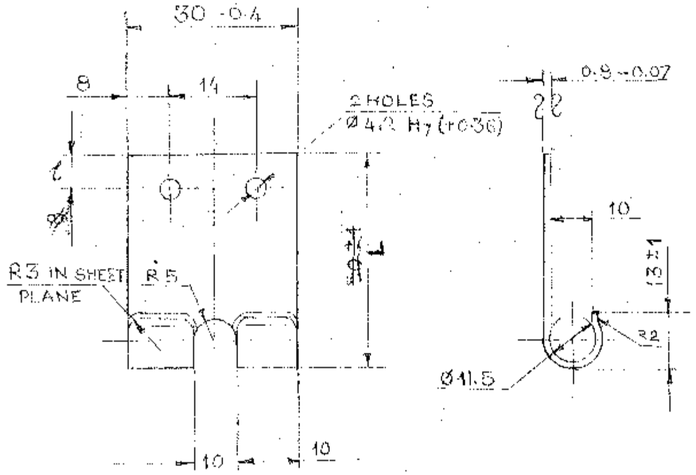
765-71-819

SCALE

CONTROLLER OF INSPECTION FIRE FIGHTING EQPT. PUNE

1-2-A2

765-71-1120-



1 HRA 68 TO 54-5
2 UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS ARE ±0.5 mm.
(A) 3 ZINC COATING 9 MICRONS THICK CROMATIZED ELIMINATE HYDROGEN EMBRITTLEMENT

	DESIGNATION	L	λ	USED ON	QTY
(B)	765-71-1120	$50^{\pm 1}$	8 MM	675-71-CB247	1
	-DC- -01	$38^{\pm 1}$	6 MM	675-71CB4	1

765-71-1120-

	DOC NO	SIGN	DATE
DRAWN	BHUSHAN		23/7/86
EDT. CHKD	DK JAIN	Sd-	23/7/86
F/M, DC.	SR SAIN	Sd-	25/7/86
DIV. OFFR	TK BANERJI	Sd-	30/7/86
	NAME	SIGN	DATE

CLIP

65 F GOST 14959-79

SHEET	WEIGHT	SCALE
	0.01	1:1

TOTAL SHEET

ORDNANCE FACTORY PROJECT HYDERABAD

765-71-1120-

EXPLANATORY NOTES TO TECHNICAL CONDITIONS

CLIP SHOULD BE MANUFACTURED FROM MANGANESE STEEL GRADE 65F TO GOST 14959-69.
CHEMICAL COMPOSITION AS GIVEN BELOW

		TOLERANCE
CARBON	0·62 – 0·70 %	± 0·01
SILICON	0·17 – 0·37 %	± 0·02
MANGANESE	0·90 – 1·20 %	± 0·02
CHROMIUM	NOT MORE THAN 0·25 %	± 0·02
SULPHUR & PHOSPHORUS	MAX 0·025	

SURFACE FINISH

(▽) INDICATES ROUGHNESS TO BE OBTAINED BY WITHOUT REMOVAL OF MATERIAL.

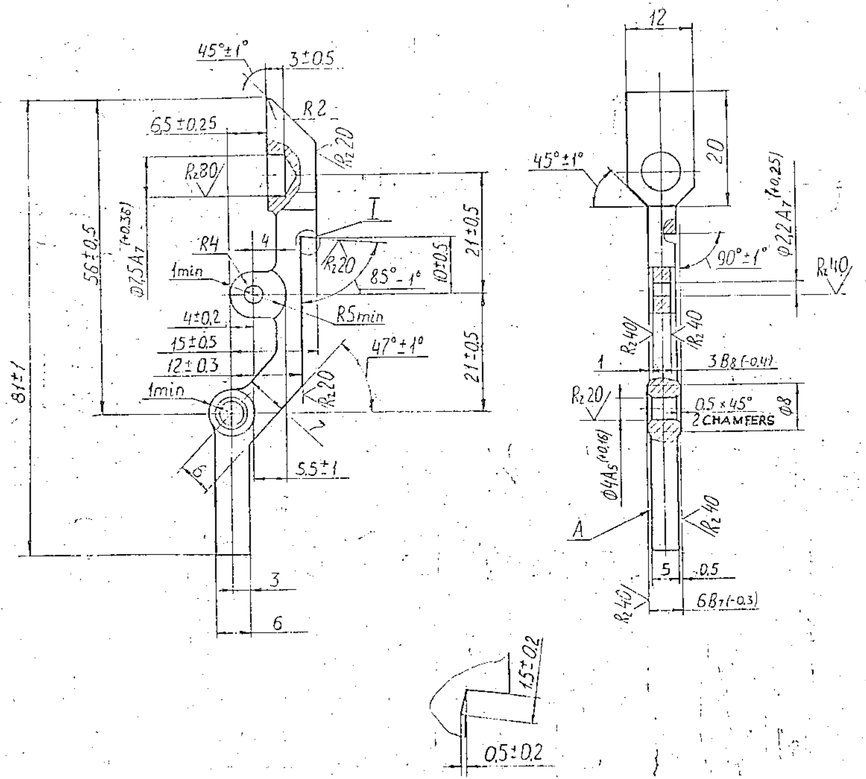
INDICATES SURFACE ROUGHNESS VALUE Ra 80 MICRONS.

(B)	ES/K7/130 18-3-86		PER NO 765-71-1120-01- NEWLY INTRODUCED		INSCRIBED		DRG NOT TO BE SCALED	PERTAINS TO
					CHECKED	Sd-	ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF	
						Sd-	ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED	765-71-1120-
(A)	ES/K7/71 24-10-90		IN TECH CONDITION No 3 IS ADDED		APPROVED	Sd-	CLIP	
					DATE	31-7-86		
					TOLERANCE UNLESS OTHERWISE SPECIFIED			
DC(I)	DT	ZONE	BRIEF RECORD	SIGN	GEN	DEC ANG	SCALE -	
							CONTROLLERATE OF INSPECTION - FIRE FIGHTING EQPT. PUNE	

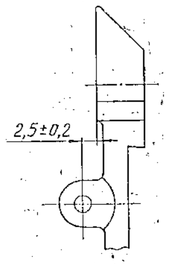
1-3-A2

765-71-1773

$R_z 80$ (V)



I
SCALE-5:1 VERSION



VERSION

TECHNICAL CONDITIONS

1. HB 229 . . . 285 (Φ4.0 TO 3.6).
2. UNSPECIFIED STAMPING RADII SHOULD NOT EXCEED 3 mm.
3. STAMPING DRAFTS SHOULD NOT EXCEED 2°.
4. UNSPECIFIED LIMIT DEVIATIONS OF DIMENSIONS OF SURFACES, OBTAINED BY STAMPING AS PER ACCURACY CLASS II, GOST 7505-74, OBTAINED BY REMOVING THE LAYER OF METAL AS PER CM7.
5. CUTTING NOT MORE THAN 0.3 MM IS ALLOWED ON SURFACE 'A'.
6. COATING: ZINC PLATED 9 MICRONS THICK, CHROMIUM PLATED., REMOVE HYDROGEN EMBRITTLEMENT. DON'T CHECK THE COATING IN HOLES.
7. OTHER REQUIREMENTS AS PER TY B3-22-85.

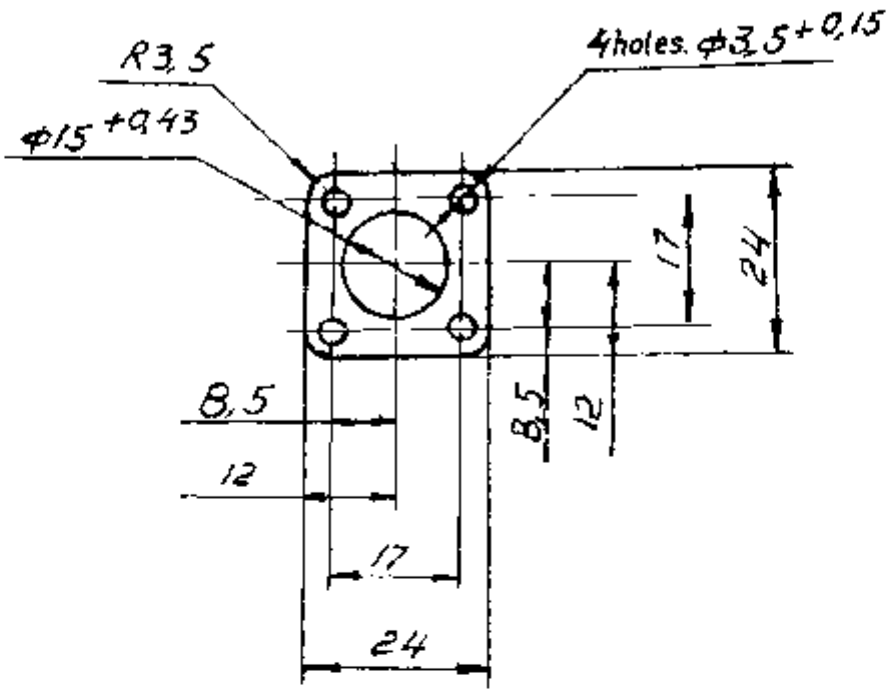
NOTE:

1. ALL DIMENSIONS ARE IN MM.
2. THE ABBRIVIATIONS AND SYMBOLS ARE BASED ON RUSSIAN SPECIFICATIONS.

STEEL 40 H2 Mn TY B3-22-85			
ORGL MATERIAL	DCUING & DATE	ISSUE	AMENDMENTS
ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF.	ALL THREADS TO CONFORM TO SPECIFICATION.		STAMP OR ETCH, PART NO. MANUFACTURER'S NAME & YEAR OF MFR.
DRG. NOT TO BE SCALED			
SCALE:- 2:1	TOLERANCE ON DIMENSIONS UNLESS OTHERWISE SPECIFIED		USED ON:- 765-71-68 356 765-71-68 230
DATE :- 24.12.[illegible]			
DRN.	WT:-(Kg)	LOCK	
TCD.	0,035		
CHD.		DRAWING NO 765-71-1773	PART NO
APD.			

CONTROLLERATE OF QUALITY ASSURANCE
(INFANTRY COMBAT VEHICLES)

765-96-15



Thickness 1 ± 0,1.

Ⓐ 3. EQUIVALENT MATERIAL IS JSS 5640 OR B15 OR B10 TO IS:2712

1. Perform dimensions without deviations with accuracy ± 0,5 mm.

2. Deviation of centres of holes should not exceed 0,1 mm for φ3,5: 0,25 mm for φ 15 from their true position.

DRG'D-ICV 18-7-07	Ⓐ	DS CAT No ADDED
DRG'D NO' DATE	ISSUE	NATURE OF AMENDMENT

APPROVED	M VASU	765-96-15 Ⓐ
CHECKED	M.Mishra	DS CAT No: LV2/ICVS 5330-366528

CONTROLLERATE OF QUALITY ASSURANCE (ICV)

GASKET

WEIGHT	SCALE
0.0007	1:1

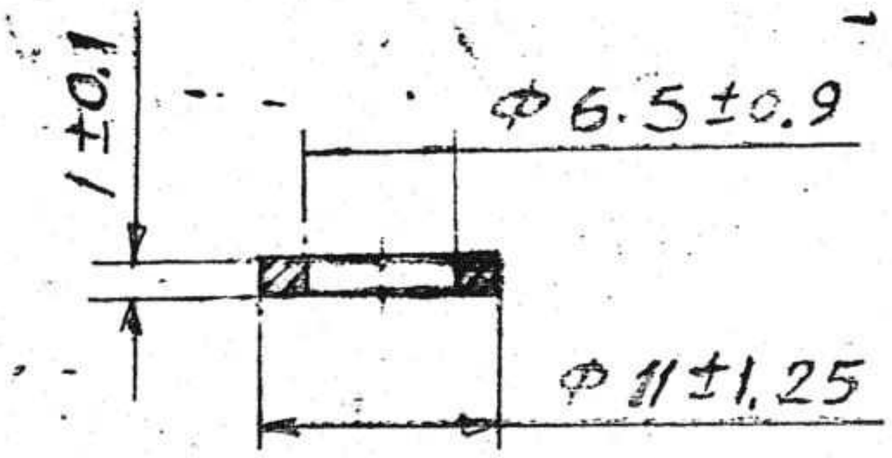
SHT SHTS

Paronite ПОН 1.0 ГОСТ-481-80

A4

765-96-16

~ All over,



SNO	SHT	DOC NO	SIGN	DATE
DRAWN		P.R.BABU.		11.7.84.
EDT/CHKD		A.K DUBEY		12.7.84
F/M, DC.		S.R.NAIR		12.7.84
DIV.OFFR				
		NAME	SIGN	DATE

GASKET

Rubberised asbestos fabric
MOH-1,0
ГОСТ 481-80.

SHEET	WEIGHT	SCALE.
765-96-16.		

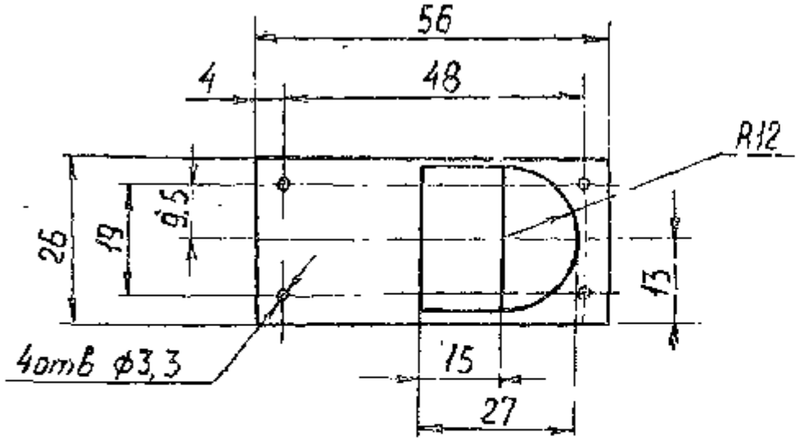
TOTAL SHEETS

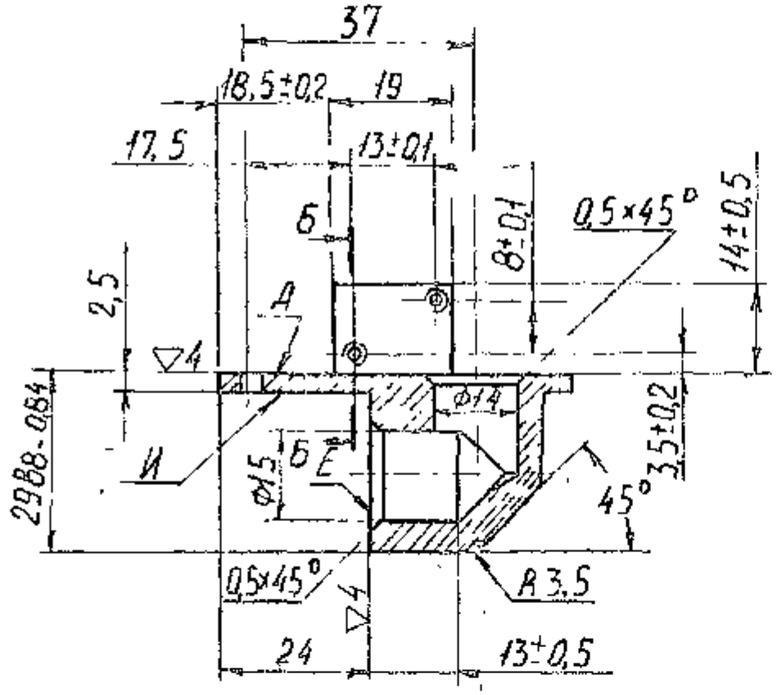
ORDNANCE FACTORY
PROJECT
HYDERABAD

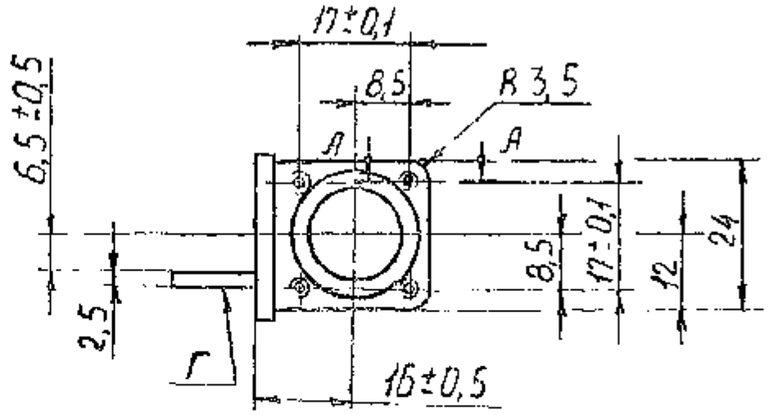
ГОСТ 481-80 1-5-2-24

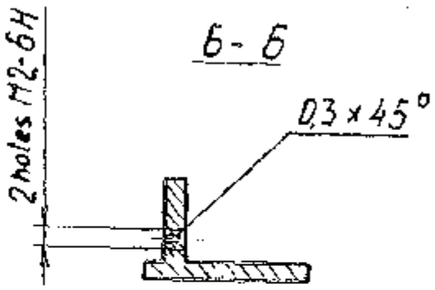
765-96-73

∇_3 Unless otherwise specified.



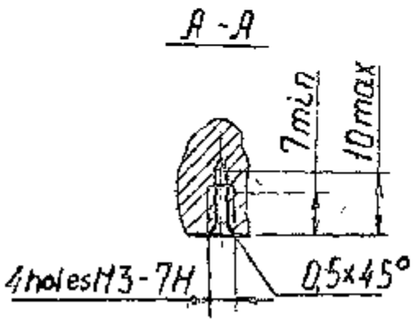






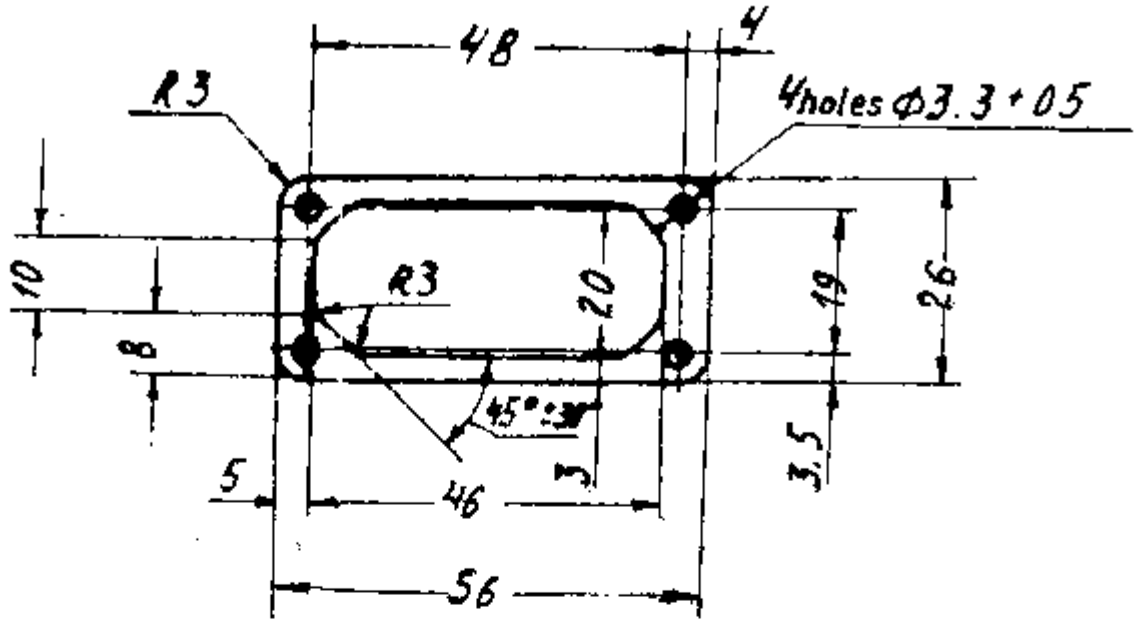
1. Blunt sharp edges.
2. Displacement of hole centres from true position should not exceed 0,2 mm.
3. Provide dimensions without deviations as per accuracy class 7, OST 1010.
4. Alternate material are А16 and АК4 GOST 4784-74
5. Coating: Anodically oxidized, chromatized or chemically parkerized blue, chromatized,
6. Apply primer ФЛ -03 ж, GOST 9109-81 all over, except holes jaw Г and surfaces А, and Е and paint with enamel ПФ -223, dark grey, GOST 14923-78 or enamel МЛ-12Н, grey, GOST 9754-76 and enamel МЛ-165, silver, GOST 12034-77.
7. Steps with in the limits of tolerance are allowed on surface Ц.
8. Partial paint coating is allowed on surface Е

Ⓐ EQ. MATERIAL :- Al. ALLOY Gde.2285, CONDITION 'WP' TO IS: 617.



90605-ICV 21-4-97	Ⓐ	EQ. MATERIAL ADDED. (2/97 N OF A)
DC (I) No. & DATE	ISSUE	NATURE
AMENDMENTS		

APPROVED	M.V.RAO	765-96-73
	H.M.Shirole	325 of 342
CONTROLLERATE OF INSPECTION (IEV)	COVER	WEIGHT 0.035 SCALE 1:1
	Д1 ГОСТ 4784-74	SHT SHTS 114



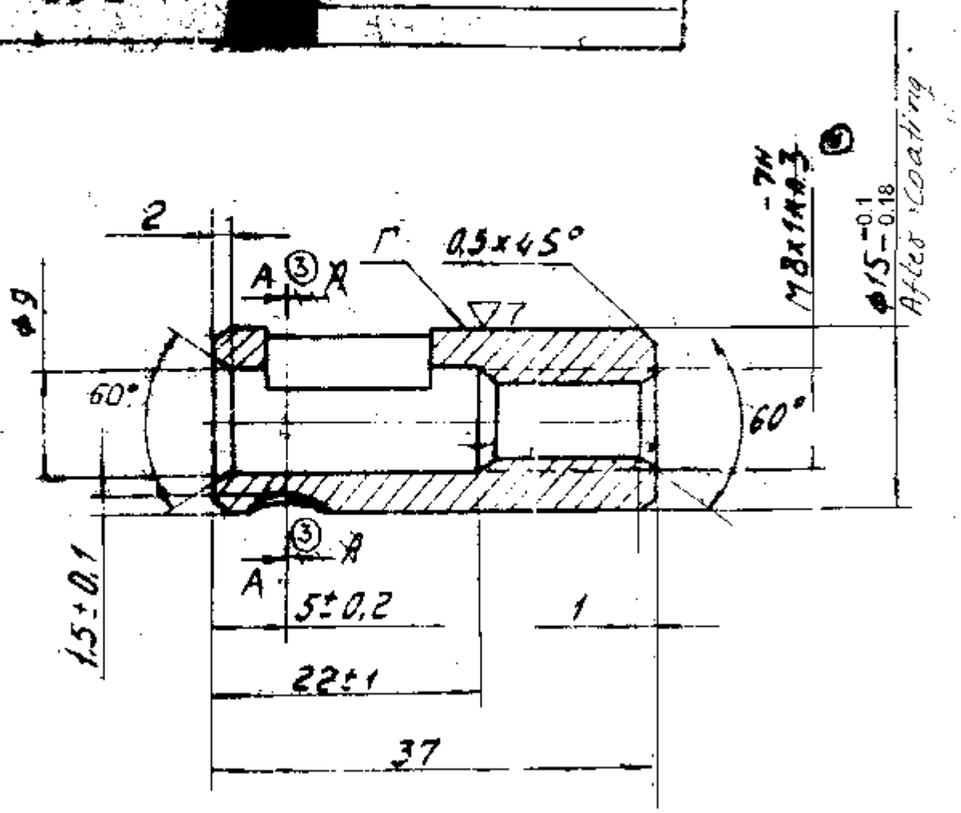
Thickness 0,5 ± 0,05

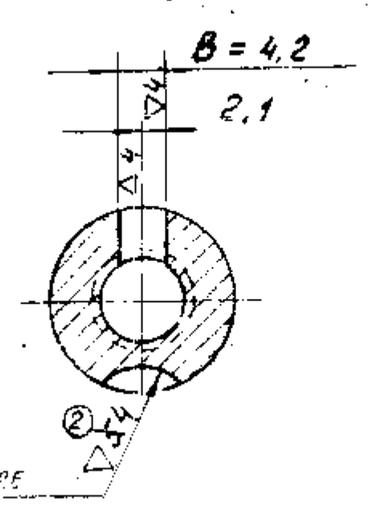
1. Deviation of centres of holes from their true position should not exceed 0,2 mm.
2. Perform dimensions without deviations with accuracy ± 0,5 mm.

0042 ICV FEB 94 DRG'D NO & DATE	(A) ISSUE	D.S.CAT. PART No. ADDED AMENDMENT

APPROVED	M. WASU	765-96-74	LV2/RCV- (A) 5330.009541
CHECKED			WEIGHT 0.0007 / SCALE 1:1
CONTROLLERATE OF INSPECTION (ICV)		GASKET	SMT / SMTS
		Electric insulation board grade3B ГОСТ 2824-75	

765-96-59L



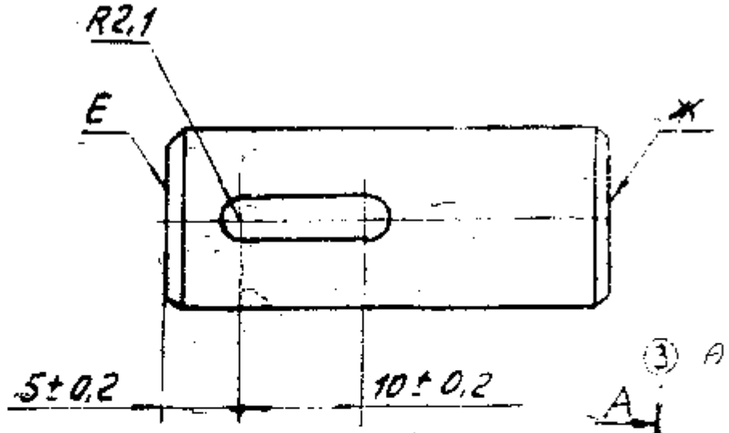


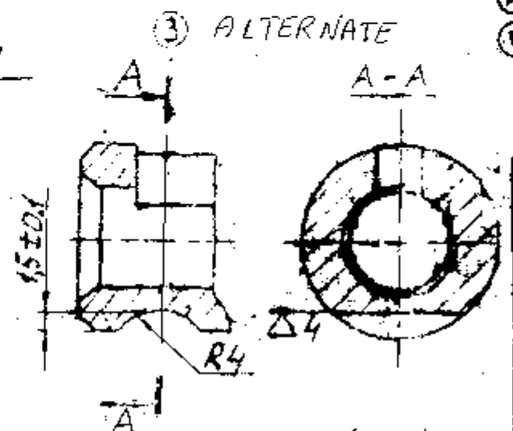
▽3 Unless otherwise specified

1. Blunt sharp edges.
2. Provide dimensions without deviations as per accuracy class 7, OST 1010.
3. Brinell hardness is 302 to 255 (ø3,5 to 3,8).
4. Eccentricity of crescent Б and slot В should not exceed 0,1mm (qualified tolerance).
5. Coating of surfaces Б,Г,Е,Ж and chamfers 0,5 is chrome-plating 18 to 24 white hard.

   Other surfaces may be free of chrome-plating. Protect the thread from coating.
6. Check the dimensions of slot В after coating. Steps are not allowed.
7. Displacement of crescent Б and slot В with respect to the axis of surface Г should not exceed 0,1mm (qualified tolerance).

Ⓐ 8. EQ. MATERIAL:- STEEL 40 G4 TO IS: 5517-93
Ⓑ EQ. MATERIAL:- STEEL GRADE 42Cr4 M02 TO IS: 5517-95





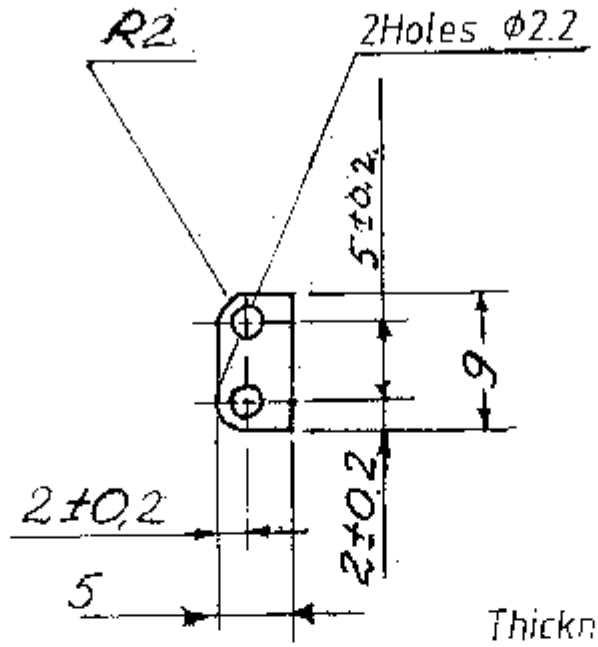
00757-ICV 17-1-2000	Ⓑ	STEEL GRADE 42Cr4 M02 TO IS:5517-95 ADDED AS EQ.MA-TERIAL
00643-SBD ICV 13-7-98	Ⓐ	STEEL GD.Cr4 TO 1S:5517-93 ADDED AS EQ.MATERIAL
DC(D)NO Date	ISSUE	NATURE AMENDMENT

APPROVED		765-96-119	167 OF 180
CHECKED		ROD	WEIGHT 0.032 / SCALE 2:1
CONTROLLERATE OF INSPECTION (ICV)		45X GOST 4543-71	SMT / SMTS

124

765-96-121

2



Thickness 0,25

1, Blunt sharp edges.

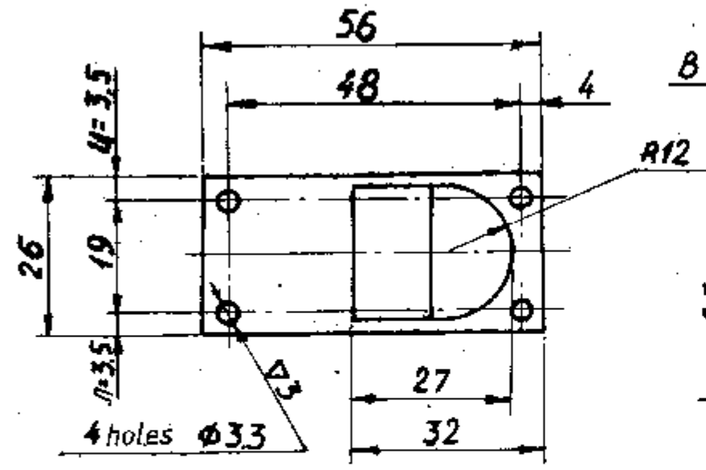
2, Perform dimensions without deviations with accuracy class 7, OST 1010.

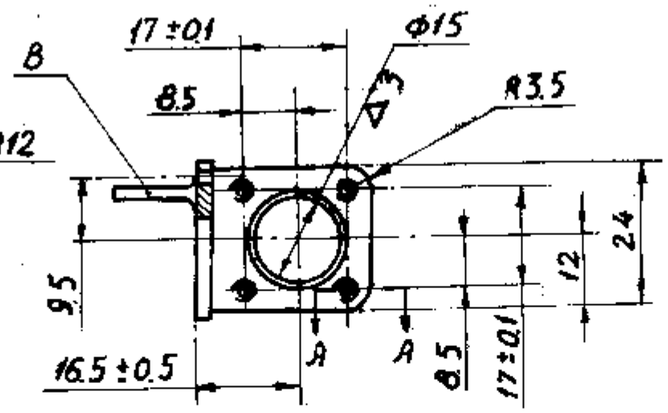
Ⓐ EQ.MATERIAL - CB 101 TO BS:2870-68 W(H) CONDITION

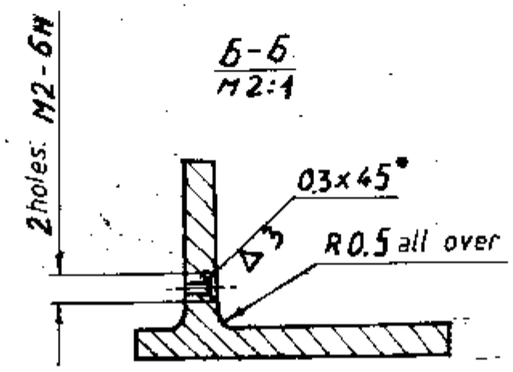
0757-ICV 17-1-2000 DCO NO DATE	Ⓐ ISSUE	EQ.MATERIAL IS ADDED IN THE DRAWING NATURE OF AMENDMENTS

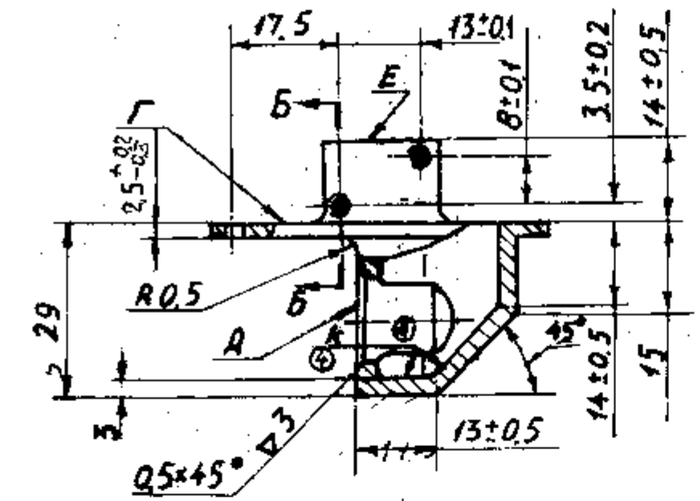
APPROVED	M.VASU	765-96-121	
CHECKED	DSKUMAR		
CONTROLLERATE OF INSPECTION (ICV)	GASKET	WEIGHT 0.00006	SCALE 2:1
	BAND 0.25-BpБ 2T. ГОСТ 1789-70	SHT 10	SHTS 371 OF 413

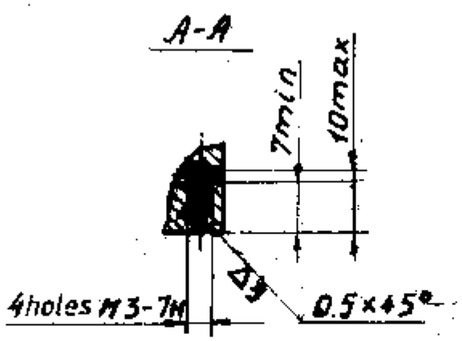
765-96-143

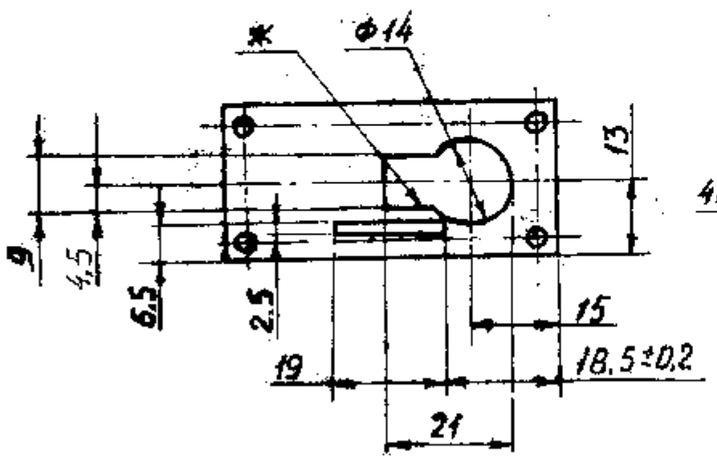








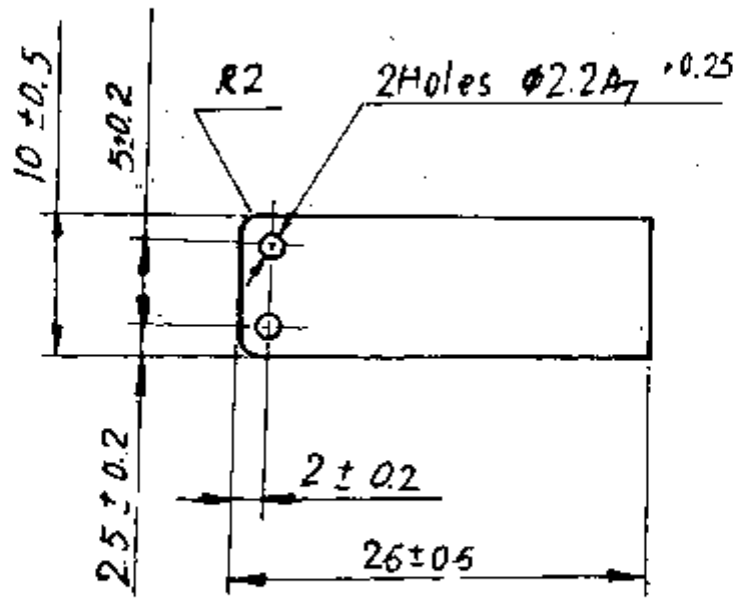




2 Unless otherwise specified.

1. Unspecified casting radii should not exceed 1,5 mm.
2. Pattern drafts should not exceed 1° towards the body increase beyond tolerance.
3. Blunt sharp edges.
4. Provide dimensions without deviations as per accuracy class 7, OST 1010.
5. Displacement of axes of holes from true position should not exceed 0,2 mm.
6. Other requirements for casting are as per Technical requirements TT AЛ-370.
7. Alternate material is AЛ 9. GOST 2685-75.
8. Coating: Anodically oxidized, chromatized or chemical parkerized, blue.
9. Apply primer ФЛ-03 Ж, GOST 9109-81, all over, except holes of jaw B and surfaces Г and А, paint with enamel МЛ-12, grey GOST 9754-76, and enamel МЛ-165 (former МЛ-25) silver, GOST 12034-77.
10. Knock-out traces of depth upto 0,5 mm are allowed on surfaces Г and Е and on surfaces Г atleast 2mm from edges.
11. Drafts not exceeding 3° may be provided on surfaces of hole Ж.
12. Dimension Л may be provided instead of dimension Ц.
13. Bulging of surface Г should not exceed 0,25 mm.
14. Partial paint coating is allowed on surface А.
15. Knurling to a height not exceeding 0,2 mm is allowed on surface К.

APPROVED	M.VASU	765-96-143		
CHECKED			WEIGHT	SCALE
CONTROLLERATE OF INSPECTION (I C V)		COVER	0.035	1:1
			SHT	SHTS
		АЛ2 ГОСТ 2685-75	10	368 to 413



Thickness 0.25

1. Blunt sharp edges

2. Hardness as per Vicker is 350

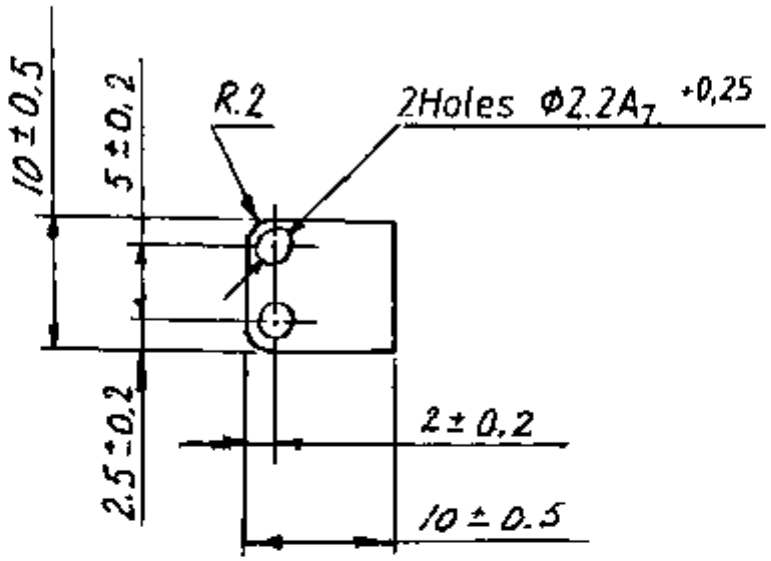
(A) EQ.MATERIAL:- CB 101 TO BS: 2870-68 W(H) CONDITION

DCN NO & DATE	ISSUE	NATURE OF AMENDMENTS
00757-16 V Rao 17-1-2006	(A) Cam	EQ.MATERIAL IS ADDED IN THE DRAWING

317 OF 332

APPROVED	M.VASU	765-96-151	330 of 342
CHECKED			
CONTROLLERATE OF INSPECTION (ICV)		PLATE	WEIGHT: 0.0004 kg. SCALE: 2:1
		BAND 0.25_EpB2_T TOCT 1789-70	SHT: SH:

765-96-152



Thickness 0.25

1. Blunt sharp edges.

2. Hardness as per Vicker test is 350 min.

Ⓐ EQ.MATERIAL:- CB 101 TO BS:2870-68 W(H) CONDITION

DOT/ST/ICV V Rama 17.1.2000	Ⓐ	EQ.MATERIAL IS ADDED IN THE DRAWING
DOCTRNO DATE	ISSUE	NATURE OF AMENDMENT

APPROVED	M VASU	765-96-152
CHECKED	DSKUMAR	

CONTROLLERATE OF QUALITY ASSURANCE (ICV)

PLATE

STRIP 0.25-GPG 2.T
FOCT 1789-70

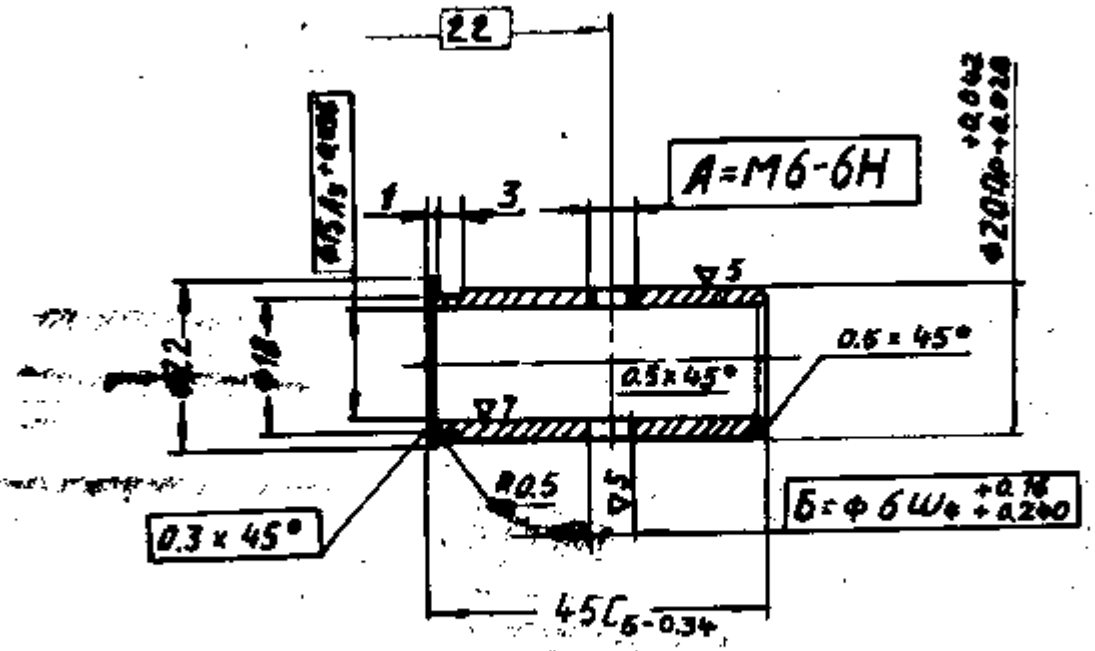
WEIGHT	SCALE
0.00013	2:1
SHT 1	SHTS 1

A4

191 - 96 - 594

▽3 Unless otherwise specified

DCO NO	ISSUE	NATURE OF AMENDMENTS	DATE
	(A)	EQ MATERIAL IS ADDED.	17-1-2000

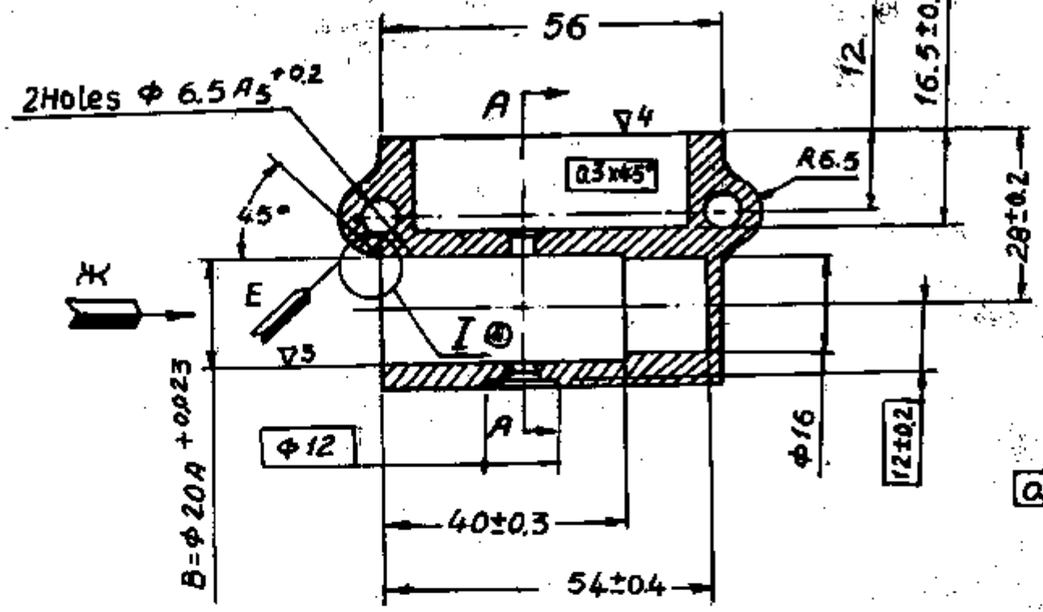


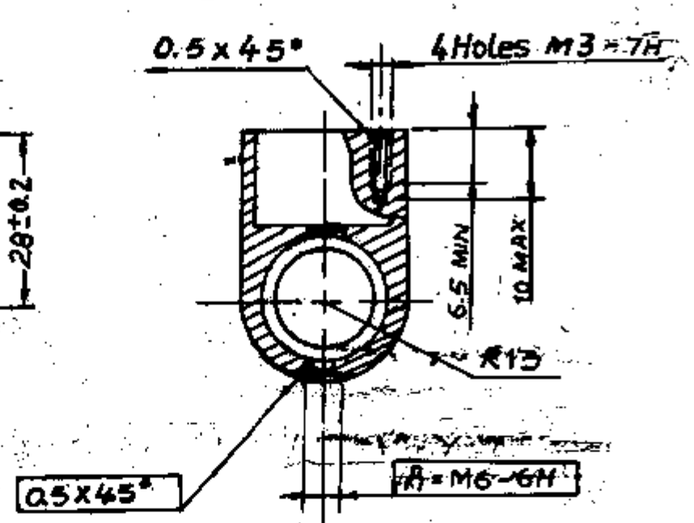
1. Blunt sharp edges.
2. Perform dimensions without deviations with accuracy class 7, OST 1010.
3. Machine to dimensions and item given in [ ] in assembly.
4. Misalignment of holes A and Б should not exceed 0.1 max. (Qualified tolerance).
5. Alternate material is Бр. АМц 9-2, GOST 18175-78.

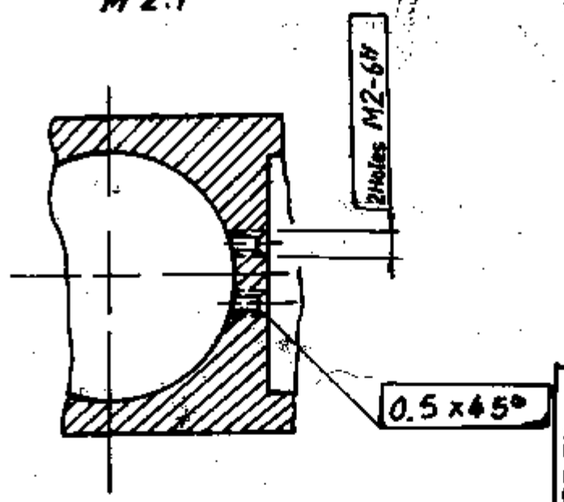
(A) EQ MATERIAL :- AL. BRONZE GRADE AB1 TO IS:305-81

APPROVED	M VASU	765-96-161	LTI of 180
CHECKED	VKafle		
CONTROLLERATE OF INSPECTION (ICV)		BUSHING	WEIGHT 0.056 / SCALE 1:1
		Бр. АЖ9-4 GOST 18175-78	SHT / SHTS

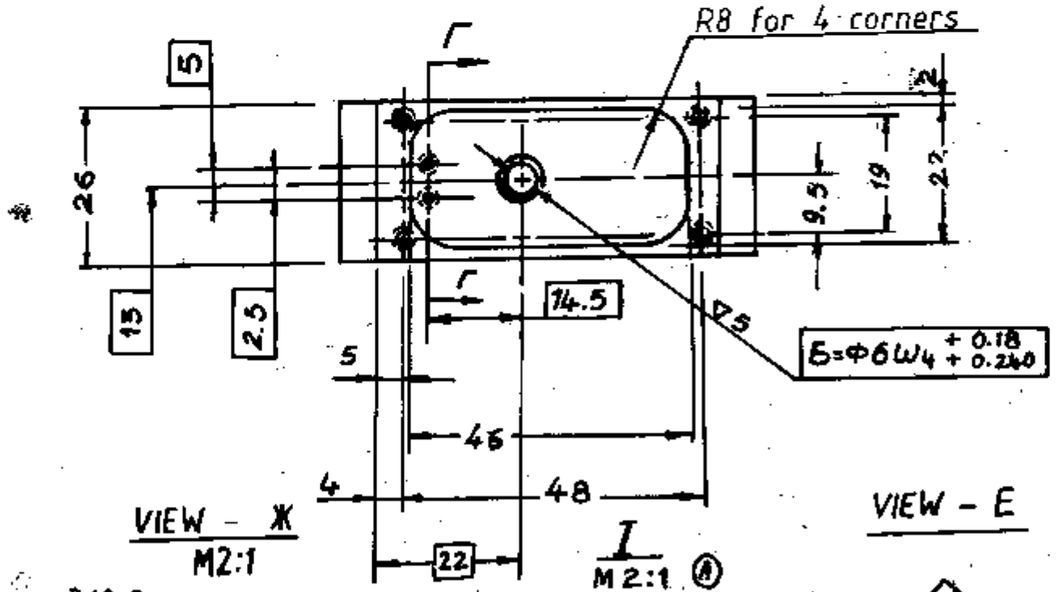
591-96-592 [redacted]

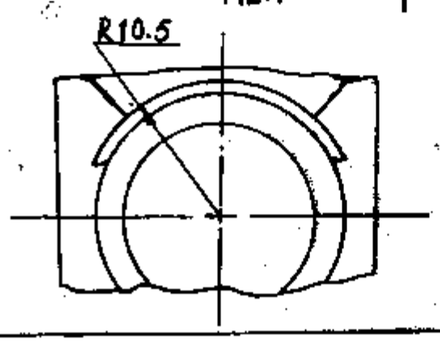


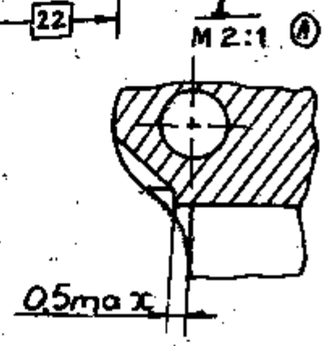


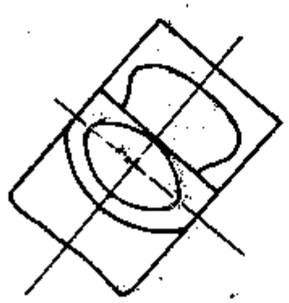


▽3 Unless otherwise specified









(A) EQ. MATERIAL:- Gr 24345, 'W' CONDITION TO IS: 733-74.

1. Blunt sharp edges.
2. Provide dimensions without deviations as per accuracy class 7, OST 1010.
3. Unspecified radii are R5.
4. Displacement of axis of hole Б with respect to axis of hole B should not exceed 0.1 mm.
5. Eccentricity of holes Б and Д should not exceed 0.1 mm (Qualified tolerance).
6. Unspecified displacement of axes of holes from true position should not exceed 0.2 mm.
7. Non-squareness of axis of hole Б with respect to axis of hole B should not exceed 0.1 mm.
8. Machine to dimensions and per items given in [ ] in assembly.
9. Perform heat treatment upto condition T.
10. Coating: Anodically oxidized, chromatized.
11. Alternate material is AK4 GOST 4784-74.

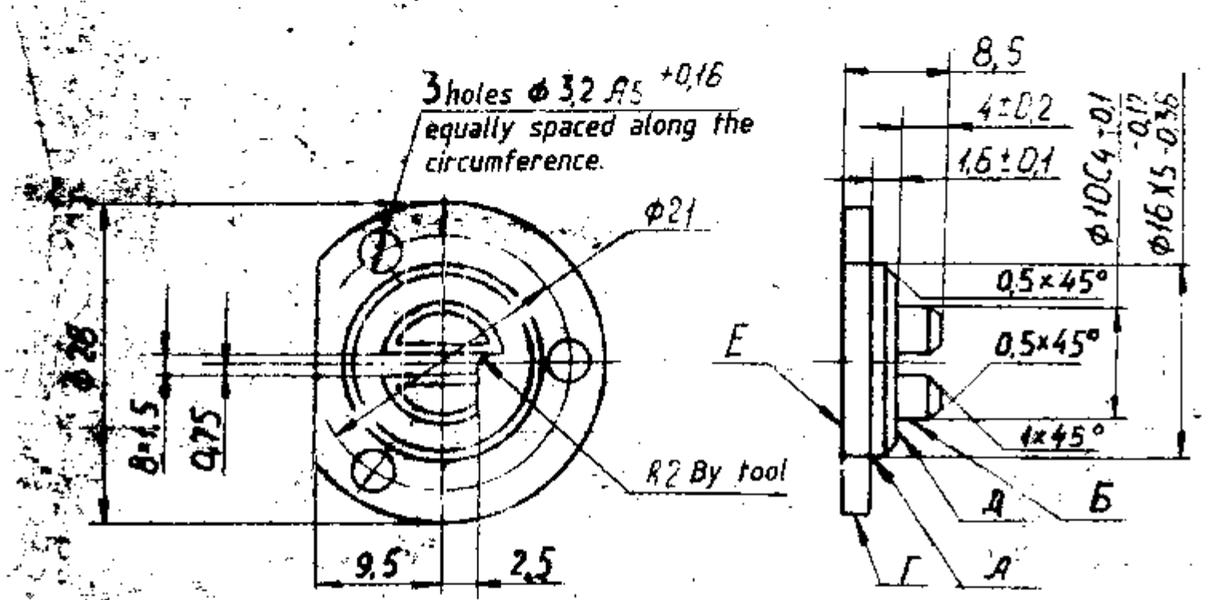
NATURE OF AMENDMENTS	ISSUE No.	DATE	DC(I) No.
EQ. MATERIAL ADDED.	(A)	15-9-99	00728-IM

X20*
52

APPROVED	M VASU	765-96-165	172 OF 180
CHECKED	V Rajendra		
CONTROLLERATE OF INSPECTION (ICV)		BODY	WEIGHT 0.086 / SCALE 1:1
		A1 GOST 4784-74	SMT SHTS

24

765-96-168

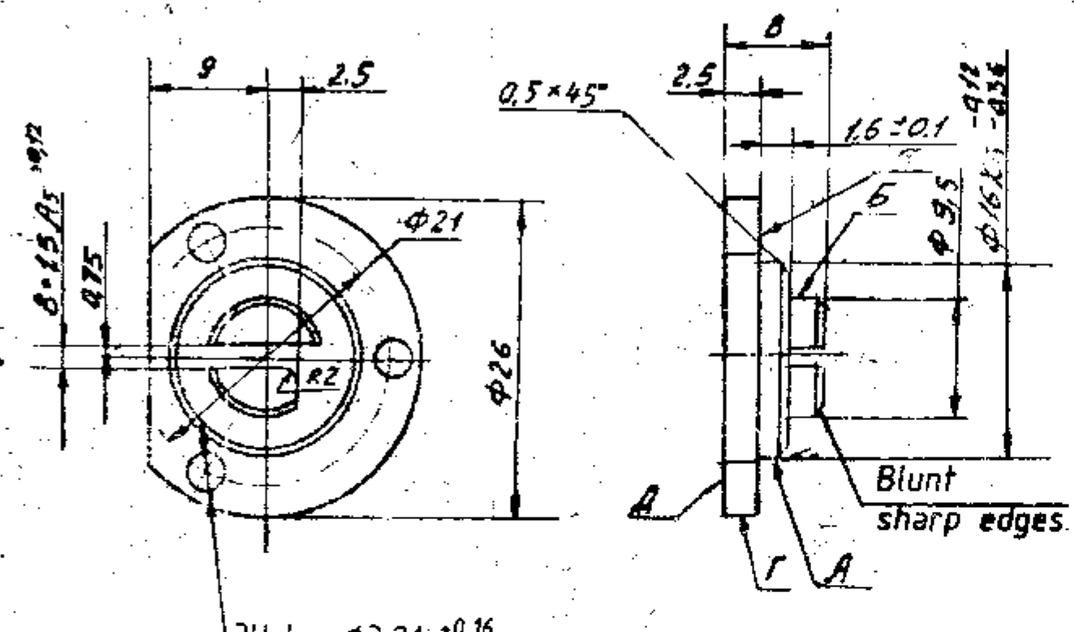


1. Blunt sharp edges.
2. Displacement of axes of holes from true position should not exceed 0,2 mm.
3. Provide dimensions without deviations as per accuracy class 7, OST 1010.
4. Eccentricity of surfaces A with respect to surface Б should not exceed 0,1 mm,
5. Displacement of axis of slot B with respect to axis of surfaces Б should not exceed 0,1 mm (qualified tolerance).
6. Steps not exceeding 0,2 mm are allowed on surface А.
7. Coating: Anodically oxidized, chromatized.
8. Apply primer ФЛ-03К, GOST 9109-81 on surfaces E and Г and paint with enamel-ПФ-223, dark-grey, GOST 14923-78
9. Unspecified rounding-off radii should not exceed R 0.5
10. Alternate material is round bar А16Т, GOST 21488-76.
Ⓐ EQ.MATERIAL:-GRADE 24345 TO 16:733-83 'W' CONDITION.

DCN NO.	ISSUE	NATURE OF AMENDMENT
00848-ICV	Ⓐ	EQ.MATERIAL ADDED

APPROVED		765-96-168	
CHECKED	H.M. Sl...h		
CONTROLLERATE OF INSPECTION (ICV)		RETAINER	WEIGHT 0·005 / SCALE 2:1
		AIT ROCT 4784-74	114

911-96-591



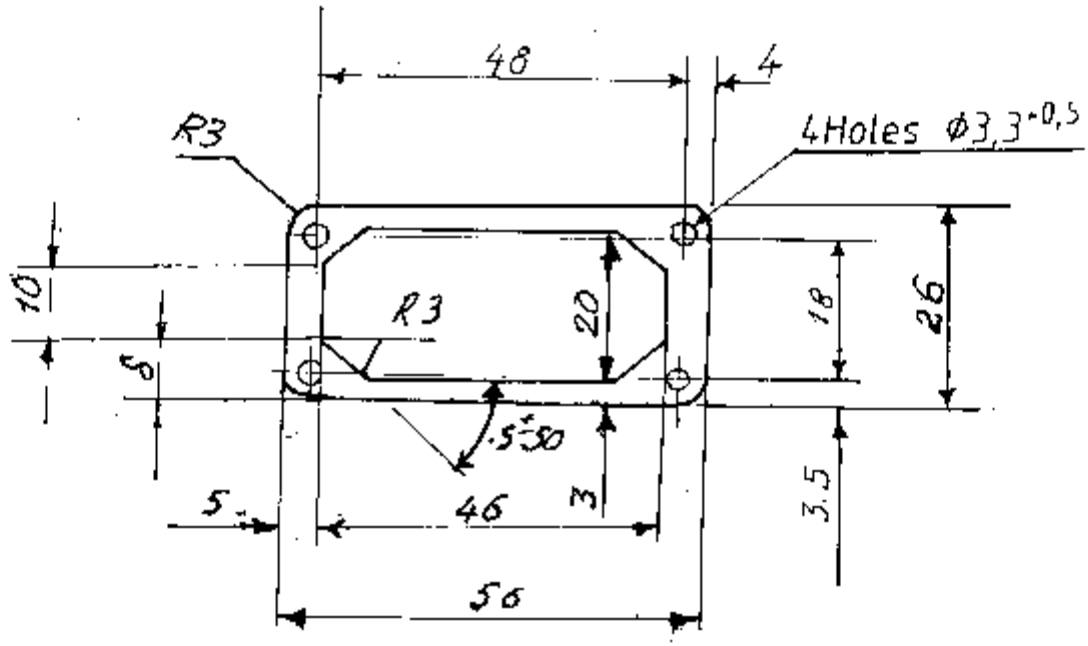
Alternate
M1:1

1. Displacement of axes of holes from true position should not exceed 0.25 mm.
2. Provide dimensions without deviations as per accuracy class 7, OST 1010.
3. Eccentricity of surfaces A with respect to surfaces B should not exceed 0.1 mm.
4. Displacement of slot axis B with respect to the part axis should not exceed 0.1 mm.
5. Pattern drafts should not exceed 1° towards the increase of the body.
6. Other requirements for casting are as per Technical requirements TTA/1-370.
7. Alternate material is AЛ10B GOST 2685-75.
8. Coating: Anodically oxidized, chromatized or chemically parkerized blue, chromatized.
9. Apply primer ФЛ-03Ж GOST 9109-76 onto surfaces Г and Д and paint with grey enamel МЛ-12, GOST 9754-76 and silver enamel МЛ-165, GOST 12034-77.
10. Partial paint coating on surface E is allowed.

(A) EQ.MATERIAL (i) Gr: 4600 IS:617-75 OR,
(ii) Gr: 4600A IS: 617-75
(B) (iii) Gr: 4600A TO IS: 617-94.

00848-IC 11.1.2001	(B)	EQ.MATERIAL ADDED
00735-ICV V. Ramesh 23.9.99	(A)	EQ.MATERIAL ADDED IN THE DRAWING.
DC(I) NO DATE:	ISSUE	NATURE OF AMENDMENT

APPROVED		165-96-176	
CHECKED			
CONTROLLERATE OF INSPECTION (ICV)	RETAINER	WEIGHT 0.006	SCALE 2:1
		SHT	SHTS
	AЛ2 ГОСТ 2685-75		



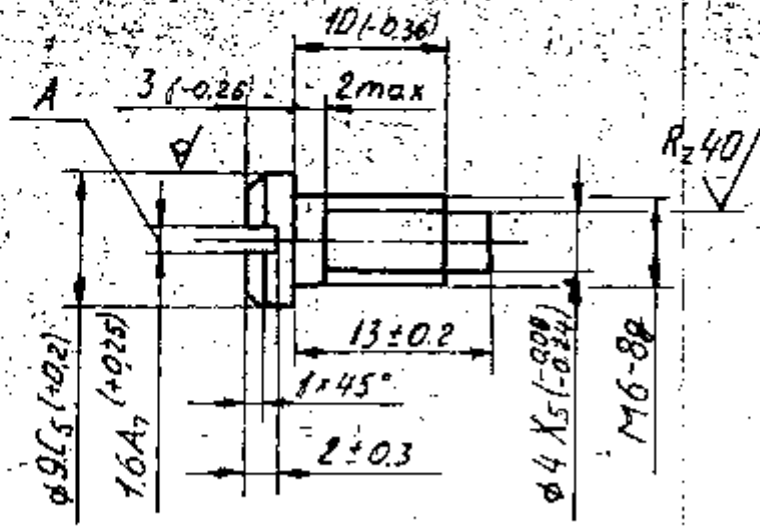
Thickness 0.3±0.05

1. Deviation of centres of holes from their true position should not exceed 0.2 mm.
2. Perform dimensions without deviations with accuracy ±0.5 mm.
3. Alternate material is packing board of grade Б, GOST9347-74.

APPROVED	M.VASU	765-96-195		
CHECKED	D.SKUMAR			
CONTROLLERATE OF INSPECTION (ICV)		GASKET	WEIGHT 0.0006	SCALE 1:1
			SHT	SHTS
		ELECTRICAL INSULATION BOARD GRADE Б FOCT 2824-75	10	378 OF 413

055-96-591

$R_z 80$ ▽ (M)



	EQ. MATERIAL ADDED	EQ. MATERIAL ADDED	NATURE OF AMENDMENT	
(B)		(A)	ISSUE	
00852 ICV	31-1-2006	00732 ICV	DC (I) No	
		V. Ramos 22-9-98	DATE	

1. Coating: Zinc-plated, 9 microns thick.
2. Displacement of slot with respect to axis of screw body should not exceed 0,4 mm.
3. Dimension A may be performed equal to $1,6\ ^{+0,25}_{-0,08}$.

(A) EQ. MATERIAL:- Gr, 4, 45C8 TO IS:9550-80 OR
(B) 2. CLASS 4, 45C8 TO IS: 2004-91, 'N' CONDITION.

APPROVED	M VASU
RELEASED	NM SL — 10/

765-96-350 337 of 342

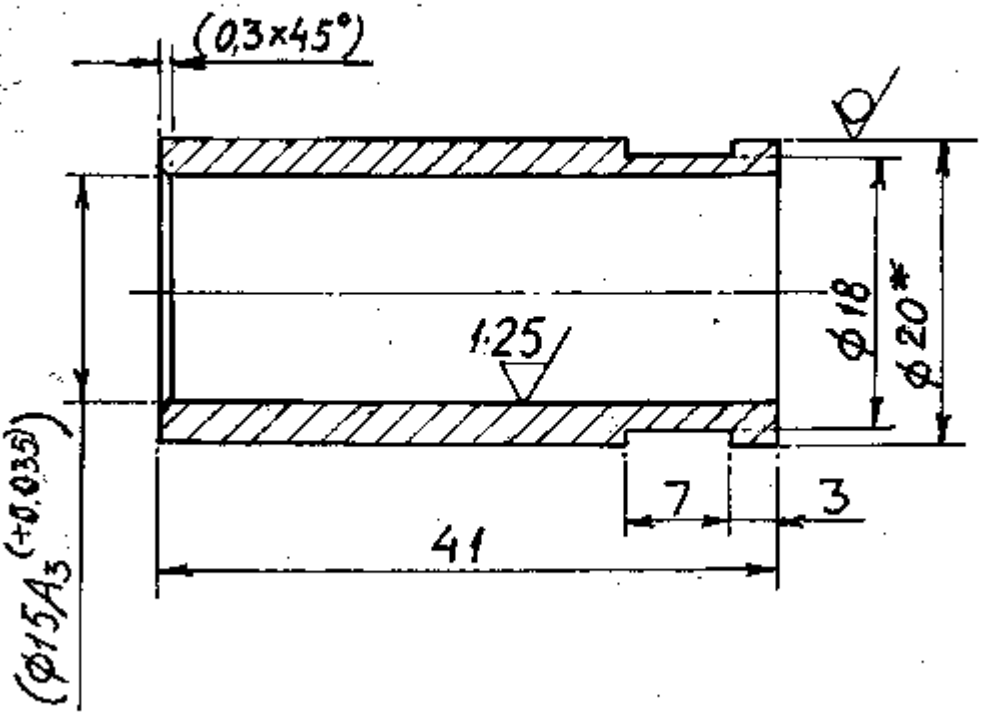
CONTROLLERATE OF INSPECTION (IEV)

SCREW

	0.0035	2:1
SHT	SHTS	

ROUNDBAR 9-5 ГОСТ 7417-75 / 45 В ГОСТ 1051-73

R=80



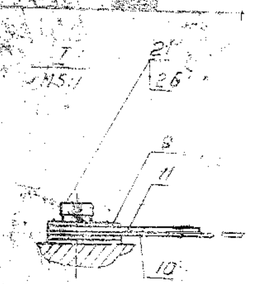
NATURE OF AMENDMENTS	ISSUE		
EQ. MATERIAL ADDED	Ⓐ	00755-ICV V. Ramesh	25-01-2000
		DECN No	DATE

1. Alternate material is Бр. (Bronze) АЖ9-4 GOST 18175-78.
2. Unspecified limit deviations of dimensions are :
   for holes -as per A_7 and
   for shafts -as per B_7.
3. Dimensions given in brackets are after assembly.
4. * Dimension is given for reference.

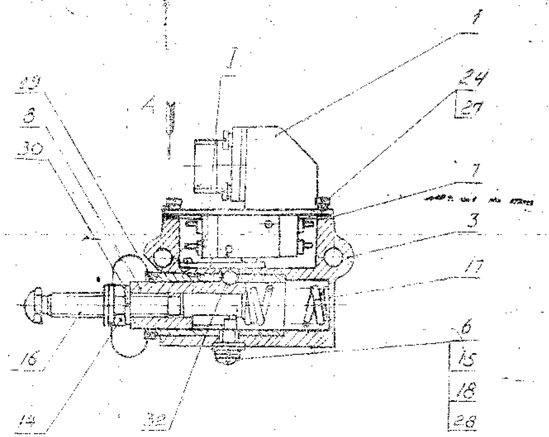
Ⓐ EQ. MATERIAL : AL. BRONZE GRADE AB1 To IS: 305-81

APPROVED	N VASU	765-96-351	
CHECKED			
CONTROLLERATE OF INSPECTION (ICV)		BUSHING	WEIGHT 9045 / SCALE 2:1
		ROUND BAR АКРНП 20.0НД Бр.АМц 9-2, GOST 1628-78	SHT SHTS 82

99/12-96-56



View A
M 2 : 1



1. Rod should move smoothly without jamming.

2. Set plate , Ref. No. 10, in such a way that ball in depressed position does not deform the plate . Adjust with gasket Ref. No. 9.

4. When the rod travels to a distance of 2.5 ± 0.5 microswitch contacts 1 & 2 should be opened and 3 & 4 closed. When the rod returns to initial position, micro-switch contacts 1 and 2 should be closed ,3 and 4 should be open. Adjust with gaskets, Ref. No. 7.

5. Lubricant and foreign particles on the parts of limit switch are not allowed . If necessary , wash the metal parts in hydrolisis alcnol.

6. After final assembly and adjustment of limit switch coat screws of cover, Ref. No. 1 and screw , Ref. No. 15, with red enamel ПФ -223 , Gost 14923-78 according to view A.

7. Other requirements are as per 765-96-TT101 .

8. Before assembling, lubricate thread connections with a thin layer of lubricant AMC-3, GOST 2712-75 or MC-70., GOST 9762-76.

9. In case the screws, Ref. No. 21, project into cavity of bushing, mount required number of gaskets, Ref. No. 9 on plate, Ref. No. 11.

REF. NO.	DESIGNATION	DESCRIPTION	QNTY	REMARKS
1.	765-96-CC 143	Cover	1	
2.				
3.	765-96-CC 162	Body	1	
4.				
5.				
6.	765-96-16	Gasket	1	
7.	765-96-74	Gasket		4 max.
8.	765-96-119	Rod	1	
9.	765-96-121	Gasket	1	1 min, 6 max.
10.	765-96-151	Plate	1	
11.	765-96-152	Plate	1	
12.				
13.				
14.	700-30-455	Nut	1	
15.	700-35-368	Screw	1	
16.	700-35-408	Screw	1	
17.	700-38-1495	Spring	1	
18.	700-40-153	Gasket	1	
19.	765-64-489	Cup	1	
20				
22				
23.				
21.	Screw M 2.6g x 6.48 .016 GOST 17473-72		2	
24.	Screw M 3.8h,6h x 8.48.016 GOST 17473-72 OR M 3.8H.6h. x 8.66.016 GOST 1491-72.		4	
26.	Washer 2T 65Г 05 . GOST 6402-70		2	
27.	Washer 3T 65Г 05 . GOST 6402-70		4	
28.	Washer 6T 65Г 06 . GOST 6402-70		1	
32.	Ball 5.5√6mm N. GOST 3722-60 and ETY 500-65		1	Commercial
30.	Washer 8H 65 Г 06. GOST 6402-70		1	

765-96-CC 166

	NAME	SIGN	DATE
DRAWN	R.H.Prasad.		17.10.84
TRCD			
CHKD	Rajasekharan		18.10.84
P/M, D.C.	S.R.Nair.		18.10.84
DIV.OFFR	T.K.BANERJEE		19.10.84

LIMIT SWITCH
(PUSH TYPE)

CIFE PUNE

SHEET | WEIGHT | SCALE

TOTAL SHEETS

FACTORY

4-4-3

765-96-503

Wires and plug connectors are conventionally not shown.

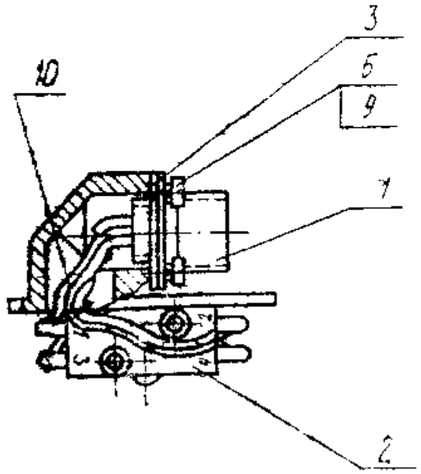


Fig. 1

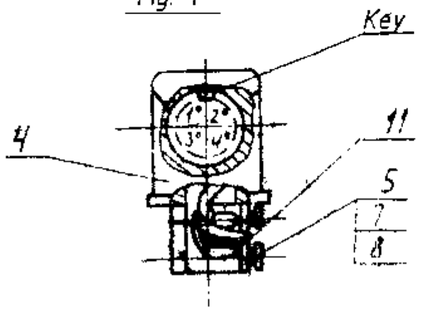


Fig 2
The rest see in Fig1

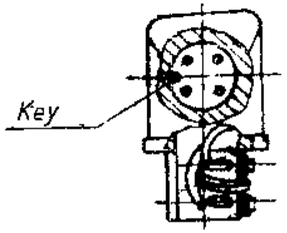
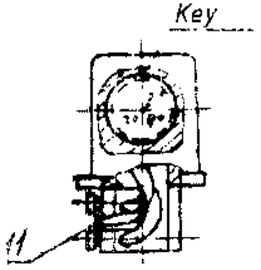


Table for soldering conductors.

Micro-switch.	Plug connector.
1	1
2	2
3	3
4	4

Fig 1 Alternate.



1. Termination of wires is as per РД 700-88-ТТ2.
2. Braze using solder ПОС 61, ПР3, GOST 21931-76.
3. Slip PVC sleeves Ref. No. 13 over wire ends to micro-switch and sleeves Ref. No. 12 over wire ends to plug connector.
4. Secure sleeves with bakelite varnish of grade ЛБС-1, GOST 901-78.

Designation	Fig. No.
765-96-503143	1
-01	2

REF. NO.	Designation.	Description	qty.	Remarks
		Bakelite varnish of grade ЛБС-1, GOST 901-78		
13	Sleeve III ТВ-50-355-3.5, colourless			
	GOST 19034-73.	ℓ=8	4	
12	Sleeve III ТВ-50-355-2.5, colourless			
	GOST 19034-73.	ℓ=20	4	
7	Washer 2x1 01.019 or 2x1.02.019			
	GOST 11371-78.		2	
6	Screw M3.8h6hx8.48.016 GOST 17473-72			
	or M3.8h6hx8.66.016 GOST 1491-72.		4	
8	Washer 2Т 65 Г 05, GOST 6402-70.		2	
	Solder ПР3 ПОС-61 GOST 21931-76.			
2	Micro switch А1-703 НО.360.011.		1	Commercial
14	РП 42/1		8	
11	Wire МГШВ-0.35 mm² ТУ 16-505.437-73		2	
	ℓ=90			
10	Wire МГШВ-0.35 mm² ТУ 16-505.437-73		2	
	ℓ=60			
9	Washer 3Т65Г 05 GOST 6402-70.		4	
5	Screw M2. 6gx18.48.016 GOST 17473-72 or		2	
	M2. 6gx18,66.016 GOST 1491-72.			
1	Plug 2РМ 14 Б 4Ш 1В1 ГЕО.364.126ТУ		1	Commercial
4	765-96-73 or	Cover	1	
	765-96-143.			REF DOCU No: 0101-015-V
3	765-96-15	Gasket	1	

765-96-503143

COVER

WEIGHT	SCALE
0.065	1:1

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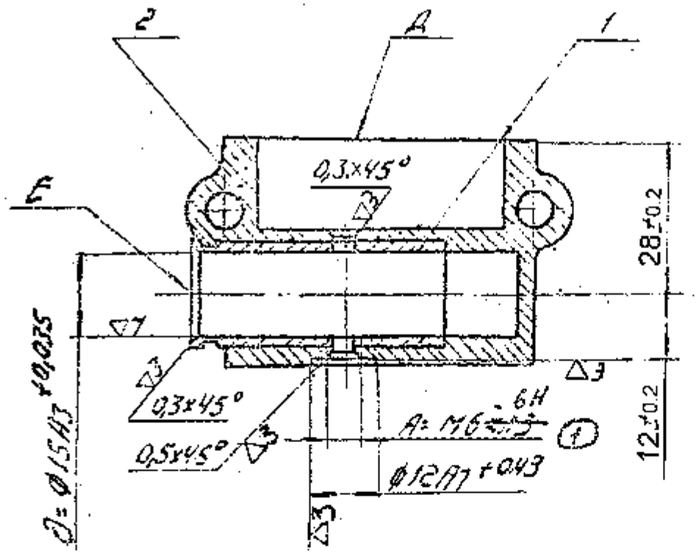
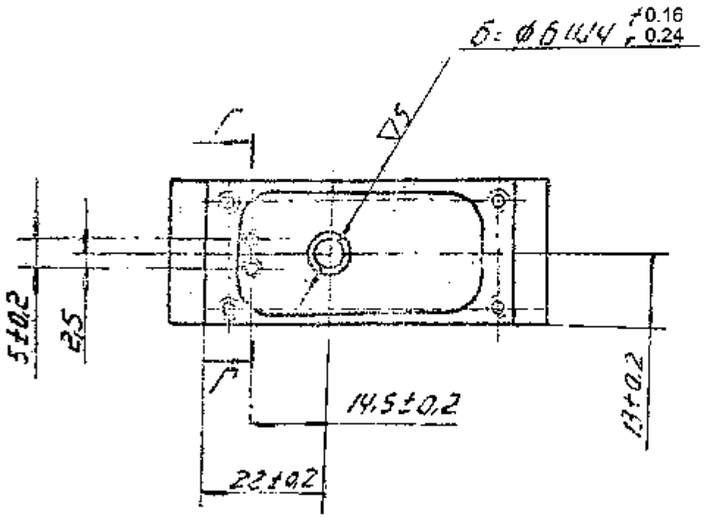
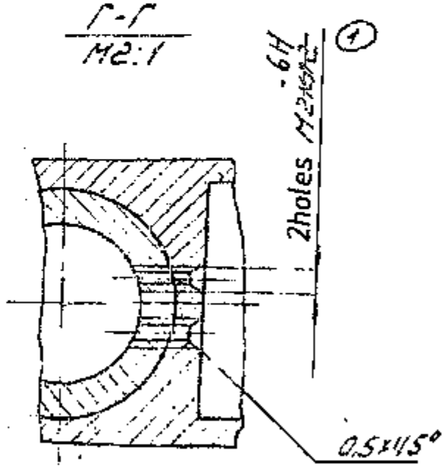






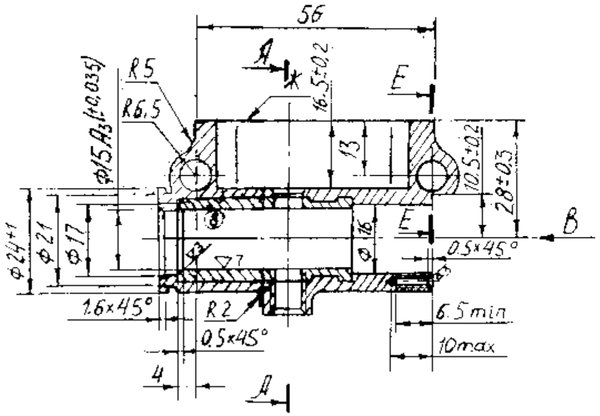
1. Blunt sharp edges.
2. Eccentricity of holes A and Б should not exceed 0.1mm (Qualified tolerance).
3. Displacement of axis of hole Б with respect to axis of hole B should not exceed 0.1mm.
4. Non-squareness of axis of hole Б with respect to axis of hole B should not exceed 0.1mm.
5. Press-in the bushing upto the stop.
6. Coat the external surface except holes and plane Д with Primer ФЛ-03-Ж, GOST 9109-76, paint with grey enamel МЛ-12 GOST 9754-76 and with silver enamel МЛ-165 GOST 12034-77.
7. Bushing may be cooled in liquid nitrogen before pressing.
8. Protect surface E from paint.
9. Surface Д may be free from Anodized layer.

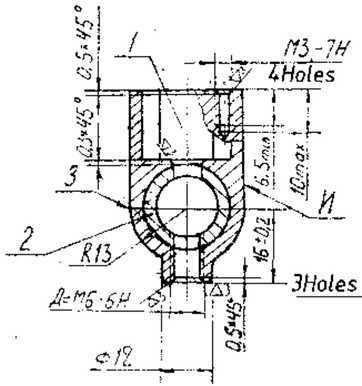
REF. NO	DESIGNATION	DESCRIPTION	Q.ty	REMARKS
2	765-96-165	Body	1	
1	765-96-161	Bushing	1	

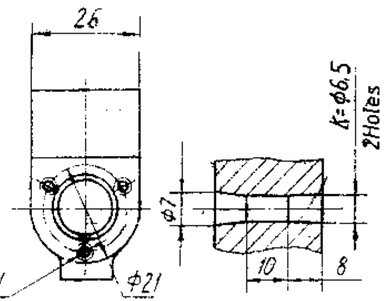
APPROVED	H. VAEN	765-96-CБ 162	61 OF 180
CHECKED		BODY	WEIGHT 0·148 / SCALE 1:1
CONTROLLERATE OF INSPECTION IICV			SHT / SHTS

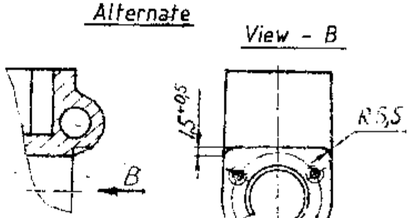
		DESIGNATION	DESCRIPTION	QTY	REMARKS
			Technical papers		
13		765-96-cб177СБ	Assembly drawing		
			Parts		
6	1	765-96-202	Body	1	W/O DRG.
11	2	765-96-351	Bush	1	
			Materials		
	3		Primer ФЛ-03-Ж GOST 9109-76		
	4		Enamel МЛ-12, Grey. GOST 9754-76		
	5		Enamel МЛ-165, Silver, GOST 12034-77		

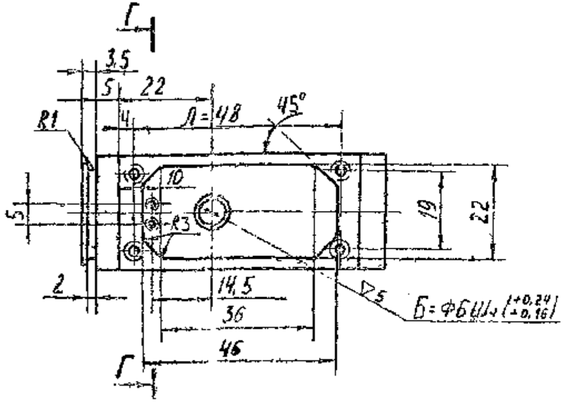
APPROVED	M VASU	765-96-C8177	
CHECKED	D. Kadivel		
CONTROLLERATE OF INSPECTION (I C V)		BODY	WEIGHT / SCALE SHT / SHTS 1/1

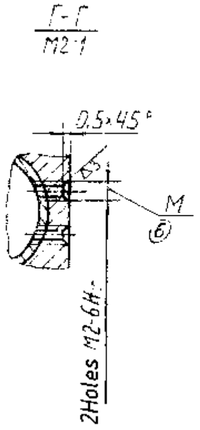


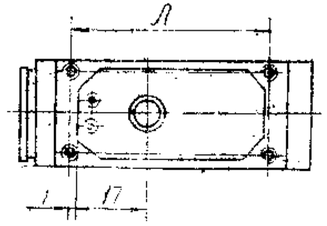












1) Body Ref.no:1 should be made of material АЛ-2 GOST 2685-75, Mass 0.14, in this case:
   a) Alternate material for body, Ref.no:1, АЛ-9 and АЛ-9В, GOST 2685-75.
   b) Coating: Anodically, oxidized, chromatized or chemically parkerized, chromatized, blue except part, Ref.no:2.

2) Coat external surface except holes and surface Ж with primer, Ref.no:3, and enamels, Ref.no:4 and Ref.no:5.

3) Unspecified limit deviations of dimensions are as follows: For holes -as per A_1 and for shafts -as per B_1.

4). Unspecified casting radii should not exceed 0.5 mm.

5) Pattern drafts should not exceed 1° towards the increase of body beyond tolerance.

6). Other requirements for casting are as per Technical requirements ТТАЛ-370.

7). Displacement of axes of holes К from true position should not exceed 0.25mm . of other holes, it should not exceed 0.2 mm

8). Misalignment of holes Б and Д with respect to common axis should not exceed 0.1mm (qualified tolerance).

9). Knock-out traces not exceeding 1mm, in depth are allowed on surfaces 3 and И.

10). For holes М it is allowed to screw-in a no-go gauge upto bushing, Ref.No.2.

APPROVED	N. VASU	765-96-СБ 177СБ	
CHECKED			
CONTROLLERATE OF INSPECTION (IEV)		BODY ASSEMBLY DRAWING	WEIGHT 0.156 / SCALE 1:1
			SHT / SHTS

ITEM NO	ZONE	REF NO	DESIGNATION	DESCRIPTION	QTY	REMARKS
				Technical papers		
13			765-96-c5178C6	Assembly drawing		
			765-96-TT101	Technical requirements for mounting and checking of limit switches		
				Assembly units		
12		1	765-96-c6143	Cover	1	
13		2	765-96-c6177	Body	1	
				Parts		
Ⓐ		5	765-96-74 LV2 RCV-5330-009541	Gasket	3	Max qty
12		6	765-96-119	Rod	1	
		7	765-96-121	Gasket	5	Max qty.

APPROVED	H VASU	765-96-c6178	57 of 180
CHECKED			WEIGHT / SCALE
CONTROLLERATE OF INSPECTION (ICV)		LIMIT SWITCH (PUSH TYPE)	SHT 1 SHTS 3

		SL NO	DESIGNATION	DESCRIPTION	QTY	REMARKS
		8	765-96-151	Plate	1	
		9	765-96-152	Plate	1	
12		10	765-96-168 or	Retainer	1	
			765-96-176			
		11	765-96-195	Gasket	1	
		13	700-30-455	Nut	1	
		14	765-96-350	Screw	1	
		15	700-35-408	Screw	1	
		16	700-38-1495	Spring	1	
		17	700-40-153	Gasket	1	
		18				
		19	765-64-499	Cup	1	
				Standard items		
		21	Ⓐ	Screw M2.6g x 6.48.016 GOST 17473-80	2	
		22	Ⓐ	Screw M3.8h6h x 8.48.016 GOST 17473-80 Or M3.8h6h x 8.66.016 GOST 1491-80	7	2 Off

Ref. No. 21 & 22 1st Year of Specifications GOST 17473 & GOST 1491 WAS 72

AMENDMENT	ISSUE	NATURE
	Ⓐ	

00299-ICV 19 NOV. 81 DCD No. & DATE

APPROVED	H VASU	765-96-CB178 58 of 180
CHECKED		
CONTROLLERATE OF INSPECTION (ICV)	LIMIT SWITCH (PUSH TYPE)	WEIGHT SCALE SHT 2 SHTS 3

ITEM NO	DESIGNATION	DESCRIPTION	QTY	REMARKS
		Washers as per		
		GOST 6402-70		
23		2T65Г05	2	
24		3T65Г05	7	2 Off
25		6T65Г06	1	
26		8T65Г06	1	
		Other items		
28		Ball Б $\bar{V}$ 6 mm H		Commercial
		GOST 3722-60 and		
		ETY 500-65	1	

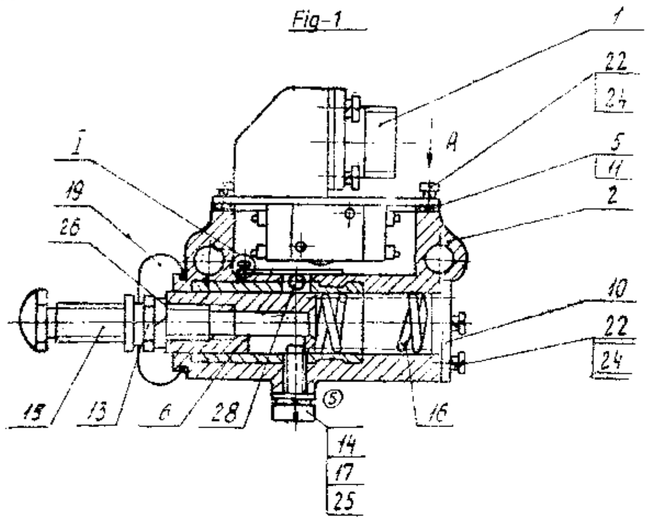
Difference in execution of 765-96-cб178СБ and 765-96-cб178СБ-01 are in accordance with Assembly drawing.

D.C.(I) NO & DATE	ISSUE	AMENDMENT
DQA21-IC/V FEB 94	(A)	PART LIST REF. NO. 5, D.S.CAT PART NO. LV2/RCV-5330-009541 ADDED

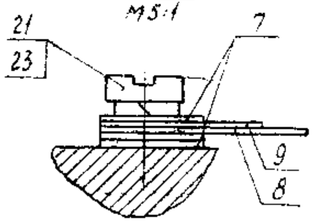
APPROVED	M VASU	765-96-cб178	59 of 180
CHECKED			WEIGHT / SCALE
CONTROLLERATE OF INSPECTION (ICV)		LIMIT SWITCH (PUSH TYPE)	SHT 3 SHTS 3

765-96-C6178C6

Fig-1

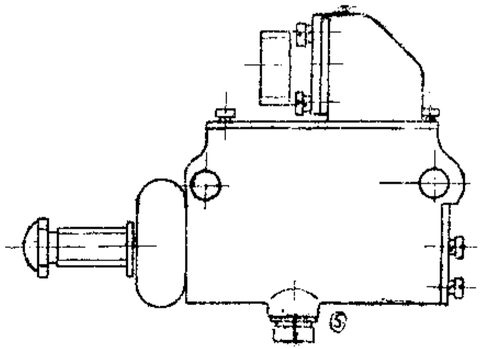


I
M5:1



View-A.
M2:1

Fig 2



765-96-C6178C6	Fig 1
-01	Fig 2

1) The rod should move smoothly without jamming.

2) Set plate, Ref.No.8, in such a way so that the ball in depressed position does not deform it. Adjust using washers Ref.No 7

3) Set required number of gaskets, Ref No 7 on plate, Ref No.9, in case screws, Ref.No.21, project into the cavity of bush

4) Micro switch contacts 1 and 2 should be open while 3 and 4 closed during movement of rod by 2.5±0.5mm When the rod restores to the initial position micro-switch contacts 1 and 2 should be closed and 3 and 4 disconnected. Adjust with gaskets, Ref No.5 and Ref.No 11.

5) Lubricant and foreign bodies are not allowed on the parts of limit switch.

6) After final assembly and adjustment of limit switch, coat the cover screws, Ref.No.1 and screw, Ref No.14 with red enamel пФ-223, GOST 14923-78, in compliance with view A.

7) Other requirements are as per technical requirements 765-96-TT101

APPROVED	M VASU	765-96-C6178C6
CHECKED		
CONTROLLERATE OF INSPECTION (ICV)	LIMIT SWITCH(PUSH TYPE) ASSEMBLY DRG.	WEIGHT 0.275 / SCALE 1:1
		SHT / SHTS