BILLETS INDIA PVT. LTD.

REGD. OFF: JAGAT SATGURU INDUSTRIAL ESTATE,
2ND FLOOR, OFF AAREY ROAD, GOREGAON (EAST),
BOMBAY-400063. INDIA
☎ 8892958-81, 8893834, 8890382
FAX NO: (022) 8884847 TELEX: 011-70092 DEWL IN
GRAM: THREE PLUS

SPECTRUM OF 3D TERMINALS AND TEAM OF 3D CRIMPING TOOLS

Publication No. - 115 93'

A NEW ERA BEGINS FROM 21st JUNE 1990, BIRTH DATE OF THE BRAND **'3D'**. FOR THE RENAISSANCE OF ELECTRICAL INDUSTRIES WHO ARE KEPT AWAY FROM THE TECHNOLOGICAL ADVANCEMENT IN THE FIELD OF CABLE TERMINATION.

WITH AN INTENTION OF IMPARTING TECHNOLOGICAL SUPPORTS AND CATERING TO THE EXACT NEEDS OF **USERS,** THE **'3D'** RANGE OF PRODUCTS IS INTRODUCED.

A WIDE SPECTRUM OF CABLE TERMINALS & TOOLS ARE MADE AVAILABLE WITH THE LATEST INTERNATIONAL STANDARDS & SPECIFICATIONS.

EXHAUSTIVE EFFORTS ARE MADE TO PERFECT THIS PUBLICATION WITH ALL AVAILABLE LATEST TECHNICAL DATA.

WE PROUDLY PRESENT THIS **UNIQUE** PUBLICATION TO THE **USERS** WHO VALUE TECHNOLOGY.

QUALITY, THE FIRST DIMENSION FOR **'3D'** BRAND IS THE KEY TO THE SUCCESS OF OUR ACTIVITIES WITH DOMESTIC & OVERSEAS **USERS.**

AN INTENSE DEDICATION TO RESEARCH AND DEVELOPMENT IN ALL PHASES OF BUSINESS ACTIVITIES AND THE APPLICATION OF THE LATEST MANUFACTURING TECHNIQUES HAVE ENABLED US TO CONTINOUSLY REDUCE THE MANUFACTURING COSTS WHILE AT THE SAME TIME UPDATE THE QUALITY.

WE ASSURE THAT NO EFFORTS WILL BE SPARED IN MEETING OUR **USERS** REQUIREMENTS.

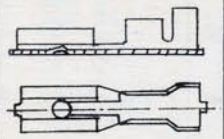
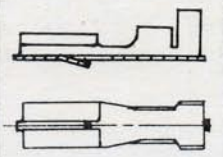
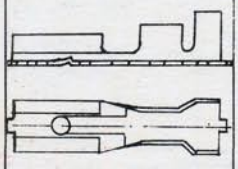
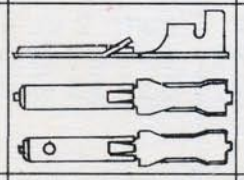
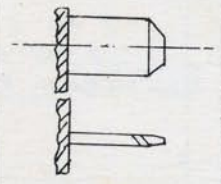
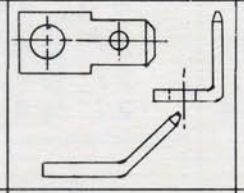
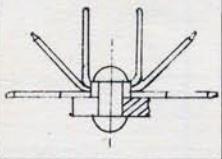
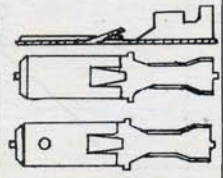
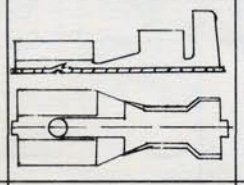
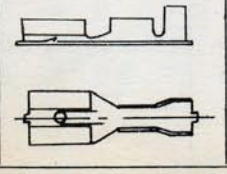
SINCERELY,

G. S. Patel

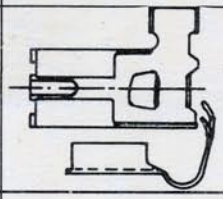
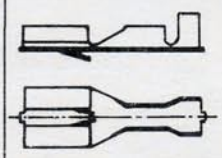
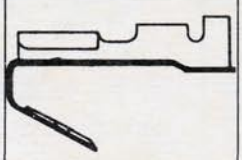
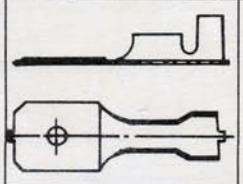
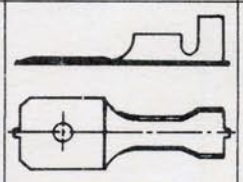
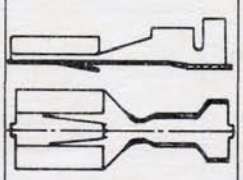
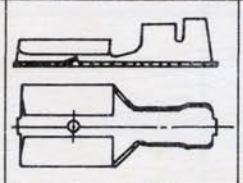
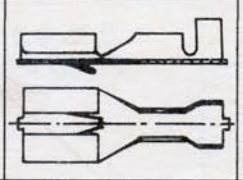
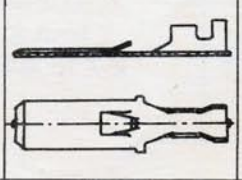
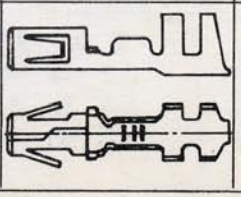
G.S. PATEL
MANAGING DIRECTOR

Mr. G.S. PATEL, the founder of DOWELL's brand was born in 1929. After his education in East Africa & India he started manufacturing CYCLE RICKSHAWS in 1950, STARDELTA STARTERS in 1954, SWITCH GEARS in 1958, and finally founded DOWELL'S in 1961. Started with Time Switches, Centrifugal switches for F.H.P. Motors, Components of KWH Meters. For the first time in India, he introduced Push Button Switches for Table & Ceiling Fans. In 1963 he began designing-manufacturing and marketing Terminals & Crimping Tools. His hard work, leadership qualities and business acumen, has helped DOWELL'S to be a leading brand during the last 30 Years and also helped it win the All India Engineering Export Excellence Award continously. during the last Six Years.

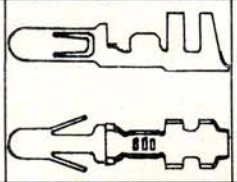
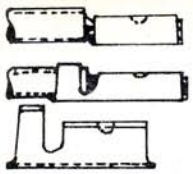
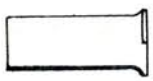
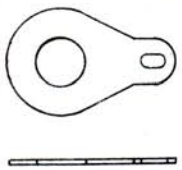
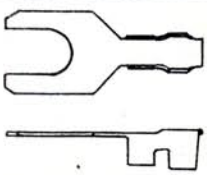
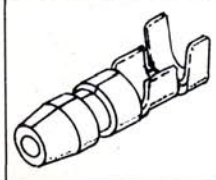
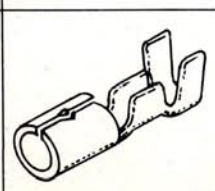
SPECTRUM OF 3D TERMINALS

Sr. No.	PRODUCT FIG.	PRODUCT DESCRIPTION	CONDUCTOR CROSS SECTION	For flexible insulated cables. Nominal Cross-Section mm²	For flexible insulated cables. Diameter over Insulation
1.		Short receptacles without insulating sleeve for tab size 2.4 As per Din 46 330 Part 1	0.5 1 1.5	0.25 to 0.5 0.5 to 1 2.05 to 2.075	1.2 to 2.1 2 to 3.3 2×1.5 to 2×2
2.		Snap-in receptacles for tab, size 2, 8 As per DIN 46 340 Teil 1	0.5 1	0.25 to 0.5 Over 0.5 to 1	1.2 to 2.1 2 to 3.3
3.		Receptacles for tabs size 2.8 without insulating sleeve As per DIN 46 247 Blatt 1	0-.25 0-.5 1	0.1 to 0.25 0.25 to 0.5 0.5 to 1	1 to 2 1.2 to 2.1 2. to 3.3
4.		Snap-in tabs for receptacles size 2.8 As per DIN 46 244 Part 3	0.5 1	From 0.25 to 0.5 Over 0.5 to 1	1.2 to 2.1 2 to 3.3
			NOMINAL	SIZE	
5.		Tabs without snap-in hole As per DIN 46 244 Part 3	2.8— 0.5 2.8— 0.8 4.8— 0.8 6.3— 0.8 9.5— 1.2		
6.		Tabs, straight and angled, for receptacles As per DIN 46 342 Blatt 1	2.8— 0.5 2.8— 0.8 4.8— 0.8 6.3— 0.8 9.5— 1.2		
7.		Tabs in pairs, straight and angled with mounting hole, for receptancles As per DIN 46 342 Teil 2	2.8— 0.5 2.8— 0.8 4.8— 0.8 6.3— 0.8 9.5— 1.2		
8.		Snap-in tabs for receptacles size 4.8 As per DIN 46 343 Part 2	1 2.5	from 0.5 to 1 Over 1 up to 2.5	2 to 3.3 2.7 to 4.3
9.		Receptacles for tab Size 4.8 without insulating sleeve As per DIN 46 247 Part 2	1 2.5	0.5 to 1 Over 1 upto 2.5	2 to 3.3 2.7 to 4.3
10.		Receptacles for tabs size 6.3 without insulating sleeve As per DIN 46 247 Part 3	1 2.5 4 6	0.5 to 1 Over 1 to 2.5 2.5 to 4 Over 2.5 to 6	2 to 3.3 2.7 to 4.3 3.8 to 5.1 3.8 to 5.1

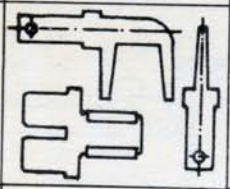
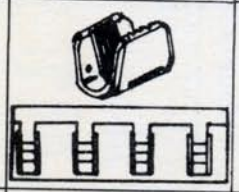
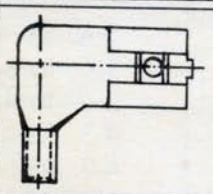
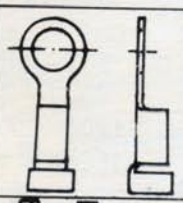
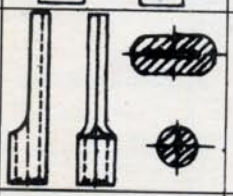
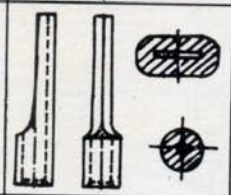
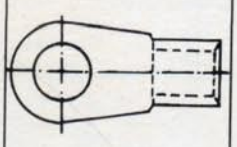
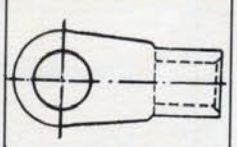
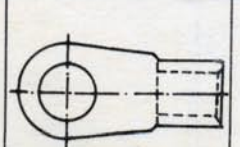
SPECTRUM OF 3D TERMINALS

Sr. No.	PRODUCT FIG.	PRODUCT DESCRIPTION	CONDUCTOR CROSS SECTION	For flexible insulated cables. Nominal Cross-Section mm²	For flexible insulated cables. Diameter over insulation
11.		Flag receptacles for tab size 6.3 FORM A & FORM B As per DIN 46 346	1 A 2.5 B 1 2.5	0.5 to 1 over 1 to 2.5 0.5 to 1 over 1 to 2.5	2 to 3 2.7 to 4.3 2 to 3.3 2.7 to 4.3
12.		Snap-in receptacles for tab size 6.3 As per DIN 46 340 Part 3	1 2.5 6	0.5 to 1 over 1 upto 2.5 over 2.5 upto 6	2 to 3.3 2.7 to 4.3 3.8 to 5.1
13.		Receptacle with tab for tab size 6.3 As per DIN 46 345	1 2.5	0.5 to 1 over 1 upto 2.5	2 to 3.3 2.7 to 4.3
14.		Tab, without insulating sleeve tab size 6.3 As per DIN 46 248 Part 3	A 1 A B 2.5 A B 6	from 0.5 to 1 over 1 upto 2.5 over 2.5 upto 6	from 2 to 3.3 from 2.7 to 4.3 from 3.8 to 5.1
15.		Snap-in tabs for receptacles size 6.3 As per DIN 46 343 Part 3	1 2.5 6	from 0.5 to 1 from 1 to 2.5 from 2.5 to 6	2 to 3.3 2.7 to 4.3 3.8 to 5.1
16.		Snap-in receptacles for tab size 7.7 TYPE A & TYPE B As per DIN 46 340 Part 5	A 1 2.5 B 2.5 4	0.5 to 1 Over 1 upto 2.5 1 to 2.5 over 2.5 upto 4	2 to 3.3 2.7 to 4.3 2.7 to 4.3 2.7 to 4.3
17.		Receptacles for tab size 9.5 without insulating sleeve As per DIN 46 247 Part 4	6	4 to 6	3.8 to 5.1
18.		Snap-in receptacle for tab size 9.5 without insulating sleeve As per DIN 46 247 Part 4	6 10	4 to 6 over 6 upto 10	3.8 to 5.1 4.6 to 7.7
19.		Snap-in tabs for receptacles size 9.5 As per DIN 46 343 Part 4	6 10	from 2.5 to 6 over 6 upto 10	from 3.8 to 5.1 from 4.6 to 7.7
20.		Circular connectors snap-in receptacle for 3.5 mm, snap-in pin As per DIN 46 268 Teil 1	1 2.5 4	0.5 to 1 over 1 to 2.5 over 2.5 to 4	2 to 3 2.5 to 4.5 2.5 to 4.5

SPECTRUM OF 3D TERMINALS

Sr. No.	PRODUCT FIG.	PRODUCT DESCRIPTION	CONDUCTOR CROSS SECTION	For flexible insulated cables. Nominal Cross-Section mm^2	For flexible insulated cables. Diameter over insulation
21.		Circular connectors, snap-in pin for 3.5 mm snap-in receptacles As per DIN 46 268 Teil 2	1 2.5 4	0.5 to 1 over 1 to 2.5 over 2.5 to 4	2 to 3 2.5 to 4.5 2,5 to 4.5
22.		Stamped Terminals with insulation clamp for insulated cables ring & fork type As per DIN 46 225	1 2.5 6 10	from 0.5 to 1 over 1 to 2.5 over 2.5 to 6 over 6 to 10	
23.		END-SLEEVES FOR CABLES, CRIMP-TYPE, WITH AND WITHOUT INSULATION GRIP As per DIN 46 228 Part 2	1 1.5 2.5 4 6	0.5 to 1 1 and 1.5 1.5 and 2.5 2.5 and 4 4 and 6	2.6 to 3 3.1 to 3.5 3.6 to 4.2 4.3 to 4.6 4.9 to 6.3
24.		Tubular end-sleeves without insulation grip As per DIN 46 228 Part 1	mm^2 0.5 2.5	mm^2 mm^2 2.5 16 4 25 6 35 10 50	mm^2 mm^2 70 185 95 120 150
25.		Cable & Sleeves encircling conductor without gripping insulation. As per DIN 46 228 Part 3	1 1.5 2.5	0.5 — 1 1.5 2.5	
26.		Stamped solder lugs with hole As per DIN 46 215	STUD HOLE 2 2.5 3 4	STUD HOLE 5 6	
27.		Terminals for plastic insulated telecommunication cord As per DIN 46 252	1.5 2.2		
28.		Sockets, Connecting Sleeve, for telecommunication cords As per DIN 46 257			
29.		Circular Connectors; (bullet-type) snap-in pin type for copper conductors			
30.		Circular Connector (Female type) snap-in receptacle for copper conductors.			

SPECTRUM OF 3D TERMINALS

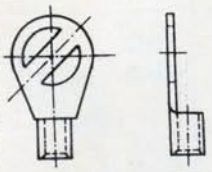
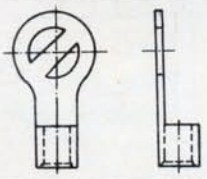
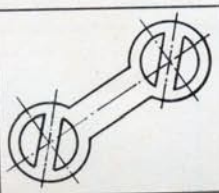
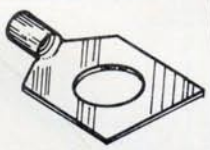
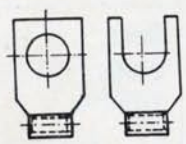
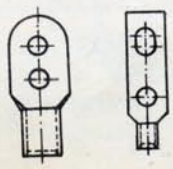
Sr. No.	PRODUCT FIG.	PRODUCT DESCRIPTION	CONDUCTOR CROSS SECTION	For flexible insulated cables. Nominal Cross-Section mm²	Diameter over insulation
31.		Tubs in straight, pairs, and angled for receptacles			
32.		Chain terminal central spicay			
33.		Receptacle side Flag type for tab size 6.3	2.5		
34.		Terminal ends for solderless connections; Ring type with encircling conductor insulation for copper conductors	2 2.5		
35.		Terminal ends for solderless connections; pin type, without insulating sleeve, for copper conductors As per DIN 46 230	mm² 0.5 1 2.5 6	mm² 10 16	
36.		Terminal ends for solderless connections; pin type, without insulating sleeve, for copper conductors	mm² 0.5 1 2.5 4.6	mm² 10 16 25 36	mm² 50
37.		Stamped cable sockets for copper conductors As per DIN 46 211	1 D 1.4 2.3 3.4 4.3	1.D 5.4 6.8 8.2 9.5	1.D 11.2 13.5 15 16.5
38.		Terminal ends for solderless connections; ring type without insulating sleeve for Copper conductors	mm² 1.5 2.5 4 6	mm² 10 16 25 35	mm² 50 70 95 120
39.		Terminal ends for solderless connections; ring type, without insulating sleeve, for copper conductors As per DIN 46 234	mm² 0.5 1 2.5 6	mm² 10 16 25 35	mm² 50 70 95 120
40.		Terminal ends for solderless connections; ring type, without insulating sleeve for copper conductors	mm² 0.5 0.75 1 1.5	mm² 2.5 4.6 6 10	mm² 16 25 35 50

mm²	mm²
150	400
185	500
240	625
300	

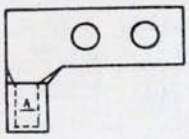
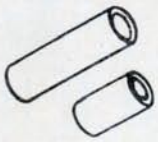
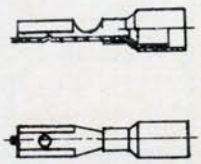
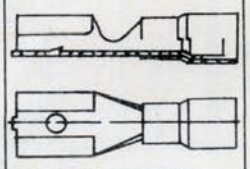
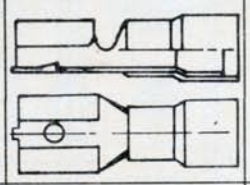
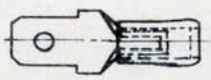
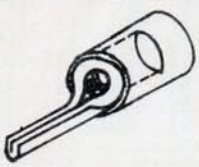
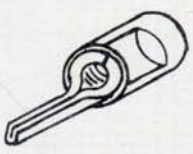
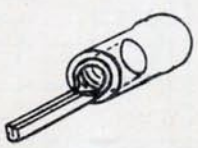
mm²
150
185
240

mm²	mm²
70	185
95	240
120	300
150	400

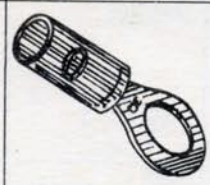
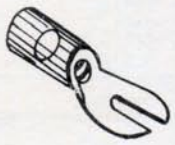
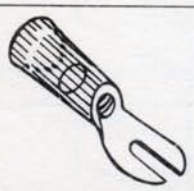
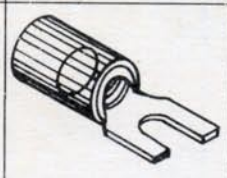
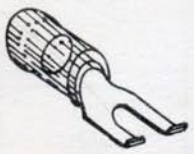
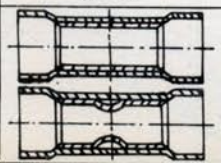
SPECTRUM OF 3D TERMINALS

Sr. No.	PRODUCT FIG.	PRODUCT DESCRIPTION	CONDUCTOR CROSS SECTION	For flexible insulated cables. Nominal Cross-Section mm²	Diameter over insulation
41.		Terminal ends for solderless connections; ring fork type without insulating sleeves, for copper conductors.	mm² 1.5 2.5 4 10 16		
42.		Terminal ends for solderless connection, Fork type, without insulating sleeve, for copper conductors.	1.5 2.5 4.6 10 16		
43.		Terminal ends for solderless connections, Fork hook type, without insulating sleeve for copper conductors.	0.75 1.5 2.5 4, 6 10		
44.		Terminal ends for solderless connections, slotted hole type connecting to Terminal Boards of flame proof equipment for copper conductors DIN 46295 Teil 3	1 2.5 4 6, 16 35		
45.		Terminal ends for solderless connections slotted hole type connecting to Terminal Boards of Flame proof equipment for copper conductors.	mm² 1.5 2.5 4 6	mm² 10 16 25 35	mm² 50 70 95 120
46.		Link for Terminal board, square shaped with six slit bolts; As per Din 46 295 Teil 2	Centre distance 23 24 28 35 45		
47.		Terminal ends for solderless connections, Two holed type connecting to Terminal Board of flame proof equipment for copper conductors.	mm²	mm²	mm²
48.		Terminal ends for solderless connections, square palm type without insulating sleeves for copper conductors	mm² 8 11 17 23	mm² 7·7 19 45	
49.		Terminal ends for solderless connections, side flag type, for copper conductors.	1.5 2.5 4.6 16		
50.		Terminal ends for solderless connection, ring/square type double hole for copper conductors.	Square Tongue 2.5 4 6, 16 25	Ring Tongue 250 325	

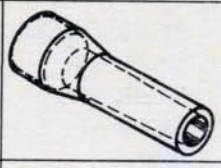
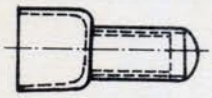
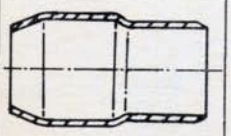
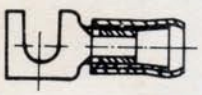
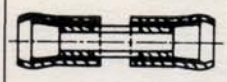
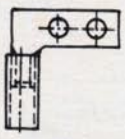
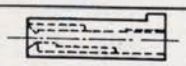
SPECTRUM OF 3D TERMINALS

Sr. No.	PRODUCT FIG.	PRODUCT DESCRIPTION	CONDUCTOR CROSS SECTION	For flexible insulated cables. Nominal Cross-Section mm²	Diameter over insulation
51.		Terminal ends for solderless connections; side flag 2 holed type for copper conductors	16		
52.		Solderless connectors, without insulating sleeve, for copper conductors As per Din 46341 Teil 1	mm² 1 2.5 6 10	mm² 16 25 35 50 / mm² 70 95 120 150	
53.		Receptacles for tab size 2.8 with insulating sleeve As per Din 46 245 Part 1	0.5 0.8	0.5 to 1. 0.5 to 1	Red 1.5 Red
54.		Receptacles for tab size 4.8 with insulating sleeve As per DIN 46245 Part 2	1 2.5	0.5 to 1 over 1 upto 2.5	Red Red
55.		Receptacles for tab size 6.3 with insulating sleeve As per DIN 46 245 Part 3	1 2.5 6	0.5 to 1 Over 1 to 2.5 Over 2.5 to 6	Red Blue Yellow
56.		Tab with insulating sleeve tab size 6.3	2.5		
57.		Pin type cable-terminal connections, insulated for copper conductors As per Din 46 231	1 2.5 6		Red Blue Yellow
58.		Pin type cable-terminal connections, insulated for copper conductors	mm² 1.5 2.5 4.6 10	mm² 16 25 35 50	
59.		Pin type cable-terminal connections, insulated with metal reinforcement for copper conductors	1.5 2.5 4.6		Red Blue Yellow
60.		Insulated Ring tongue crimp-type terminals for the solderless connection of copper conductors As per DIN 46 237	1 2.5 6		Red Blue Yellow

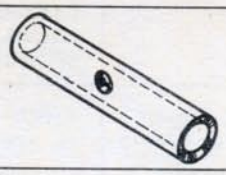
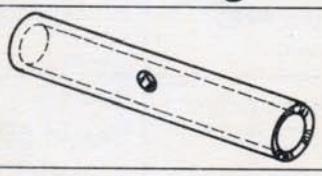
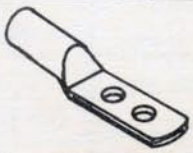
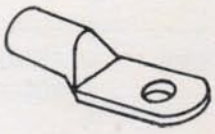
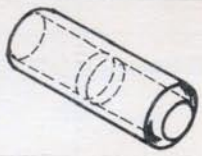
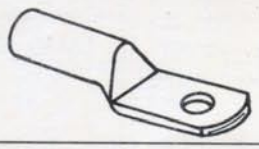
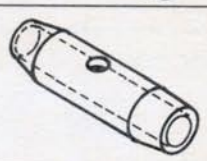
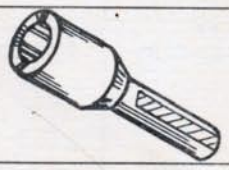
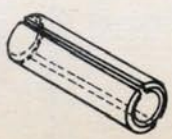
SPECTRUM OF 3D TERMINALS

Sr. No.	PRODUCT FIG.	PRODUCT DESCRIPTION	CONDUCTOR CROSS SECTION	For flexible insulated cables. Nominal Cross-Section mm²		Diameter over insulation
61.		Insulated Ring tongue crimp-type terminals for solderless connection of copper conductors	mm² 1.5 2.5 4 6	INSULATION Red Blue Yellow Yellow	m² 16,25 35 50 70	INSULATION COLOR Black Black Black Black
62.		Insulated with metal reinforcement ring tongue crimp-type terminals for solderless connection of copper conductors	1.5 2.5 4			Red Blue Yellow
63.		Insulated ring fork tongue crimp type terminals for solderless connection of copper conductors	1.5 2.5 4			Red Blue Yellow
64.		Insulated with metal reinforcement Ring fork tongue, crimp type terminals for solderless crimping to copper conductors	1.5 2.5 4			Red Blue Yellow
65.		Insulated fork tongue crimp type terminals for the solderless connecting copper conductors	1.5 2.5 4			Red Blue Yellow
66.		Insulated with metal reinforcement Fork tongue crimp type terminals for solderless connections to copper conductors	1.5 2.5 4			Red Blue Yellow
67.		Insulated Fork hook tongue, crimp type, terminals for solderless connections to copper conductors	1.5 2.5 4.6			Red Blue Yellow
68.		Insulated with metal reinforcement fork hook tongue, crimp type terminals for solderless connectors to copper conductors	1.5 2.5 4.6	Yellow		Red Blue
69.		Insulated with metal reinfocement slotted ring tongue, crimp type, terminals for solderless connection to copper conductors	2.5 4 6 10			Black Black Black Black
70.		Solderless connectors with plastic sleeve for copper conductors As per Din 46 341 Teil 2	0.4 1 2.5 6			Yellow Red Blue Yellow

SPECTRUM OF 3D TERMINALS

Sr. No.	PRODUCT FIG.	PRODUCT DESCRIPTION	CONDUCTOR CROSS SECTION	For flexible insulated cables. Nominal Cross-Section mm²		Diameter over Insulation
71.		Tubular plastic end sleeves for cables As per DIN 46 228 Part 4	mm² 0.5 0.75 1 1.5	mm² 2.5 4 6 10	mm² 16 25 35 50	
72.		Insulated closed end connector for solderless connections of copper conductors	1.5 2.5 4			Translucent Translucent Translucent
73.		Plastic wire end caps for electrical wire end connections	mm² 1.5 2.5 4 6	mm² 10 16 25 35	mm² 50 70 95 120	mm² 150 185 240 300
74.		Plastic Boots for receptacles connections to copper conductors				
75.		Side flag type-Terminal connections, Insulated for copper conductors	2.5			
76.		Knife-disconnect type-terminal connections Insulated for copper conductors		1.5 2.5		
77.		In line type-terminal connections Insulated for copper conductors	2.5			
78.		Terminal ends for solderless connections double holed insulated for copper condcutors	4 6			
79		Terminal ends for solderless connections, fork lock type for copper conductors	4.6 7.12 18.24			
80.		Terminal ends for solderless connections side flag type insulated for copper conductors	16			
81.		Plastic housing for receptacles/Tabs				
82.		Skatch lock insulated joints crimping type for copper conductors	1.5 2.4 4			

SPECTRUM OF 3D TERMINALS

SR NO.	PRODUCT FIG	PRODUCT DESCRIPTION	CONDUCTOR CROSS SECTION mm²
13		Non Tension-Proof Compression Joints for Copper Conductors. As per DIN 46 267 Teil 1.	6^2 to 1000 mm²
14		Non-Tension-Proof Compression Joints for Aluminium conductors. As per DIN 46 267 Teil 2.	25^2 to 500^2
15		Cable Lugs Compression Connections, Extra long Palm and Barrel for Aluminium Conductors.	to $63O^2$
16		Copper Cable Terminals (Commercial series) for compression connections cover plate type for Aluminium conductors	2.5^2 to 1000^2
17		Non-Tension Compression Joints with Barrier 10-30 KV For Aluminium Conductors	300^2
18		Aluminium Cable Terminals (Commercial Series) for compression connections cover plate type for Aluminium conductors	2.5^2 to 1000^2
19		Non-Tension Copper Compression Joints with Barrier For Copper Conductors	300^2
20		Non-Tension Copper Compression Joints For Copper Conductors	185^2
21		Reducer Type Terminal Connections To Aluminium in Conductors	mm² 2.5, 4, 6, 10 / mm² 16, 25, 35, 50 / mm² 70, 95, 120, 150 / mm² 185, 240, 300, 400
22		Solid End Connections Solderless Type For Copper Conductors	mm² 6.75, 8.25, 9.5, 14.5 / mm² 19.3, 25.8, 38.8, 64.5 / mm² 97, 129, 161, 194 / mm² 258, 323, 388, 484 / mm² 548, 645
23		Weak Back Type Soldering Connections To Copper Conductors	25^2 to 625
24		Weak Back Type Soldering In a Connections To Aluminium Conductors	25^2 to 625

3D BLUE CHIP OF CRIMPING TECHNOLOGY

BILLETS INDIA PVT. LTD.
COPCOILS INDIA PVT. LTD.
AUTOMAT WERKE
KUPFER WERKE
PFERD WERKE
IDEAL ELEKTRO WERKE
PRESSEN WERKE
AERO AUSLAND
METALL WERKE
DO SURE WERKE

DESIGNERS & MAKERS OF CRIMPING TERMINALS & TOOLS

BILLETS INDIA PVT. LTD.

REGD. OFF: JAGAT SATGURU INDUSTRIAL ESTATE, 2nd FLOOR,
OFF AAREY ROAD, GOREGAON (EAST), BOMBAY-400 063 INDIA
GRAM: THREEPLUS TELE: 8892958/81, 8893834, 8890382 FAX NO.: (022) 8884847