

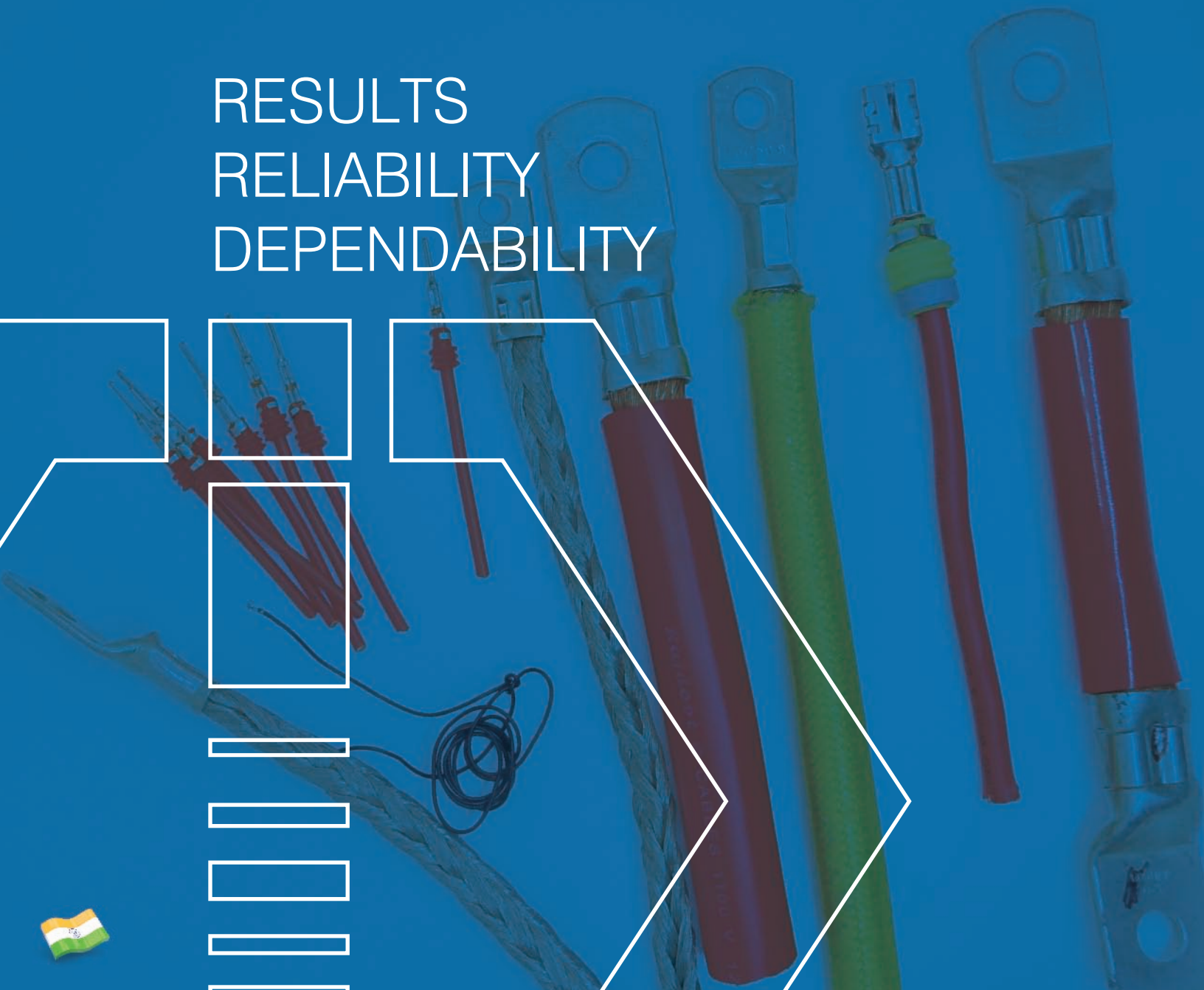
25
YEARS
1995-2020



Smart Crimping Solutions

COMPETENT CRIMPING
MACHINERY PVT. LTD.

RESULTS
RELIABILITY
DEPENDABILITY



Competent Crimping Machinery (P) Ltd.

CCMPL is one of India's most preferred suppliers of crimping related equipment and applicators. OEMs and Wiring Harness Manufacturers across the world trust us for meeting their complex crimping requirements.

Our machinery stands apart in the industry because of our high attention to micro-precision, innovative design approach and application of advanced technology.

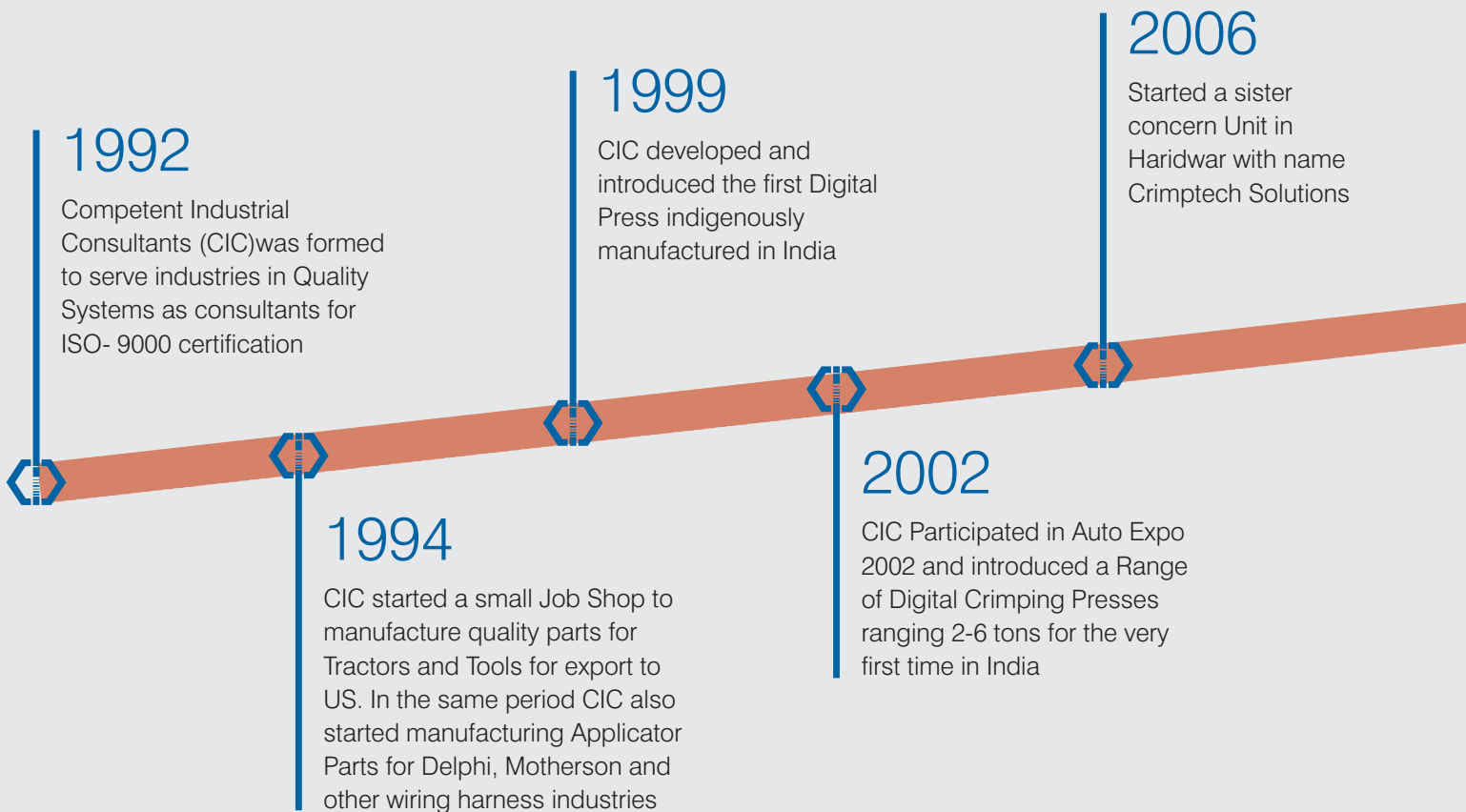
We at Competent are outcome oriented and go beyond customer expectations to provide optimal products as per requirements and full technical support as and when required.

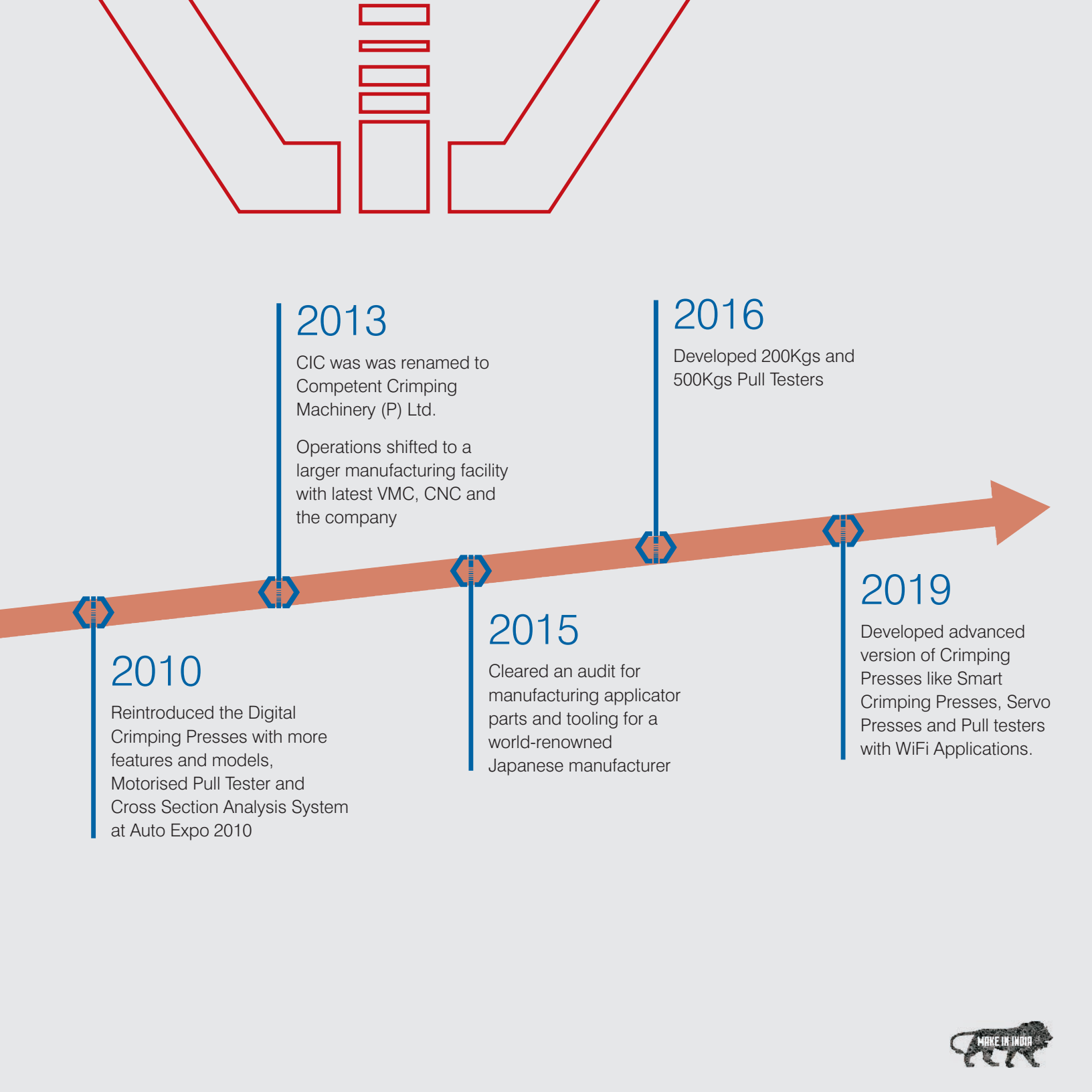
CCMPL has been industry trend setters serially and have stayed ahead of the curve consistently.

The first Digital Crimping Press was developed indigenously at our facility and introduced to the Indian market in 1999.



The Journey and the Milestones



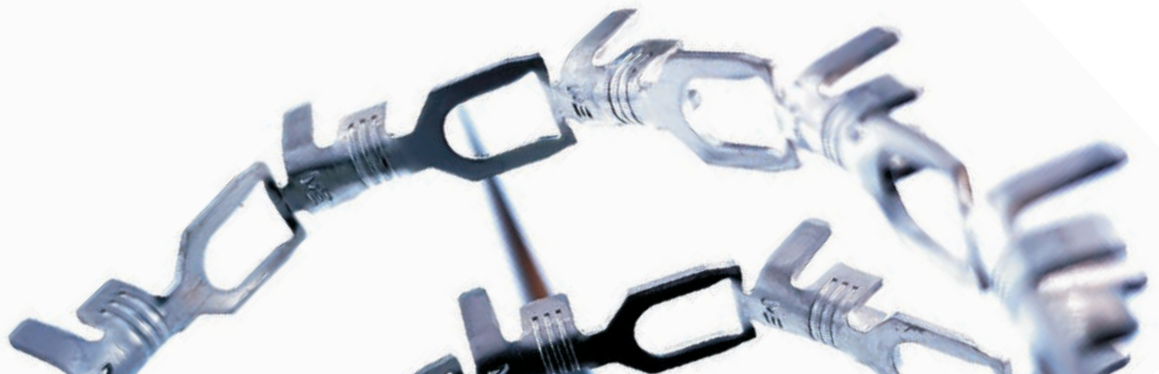




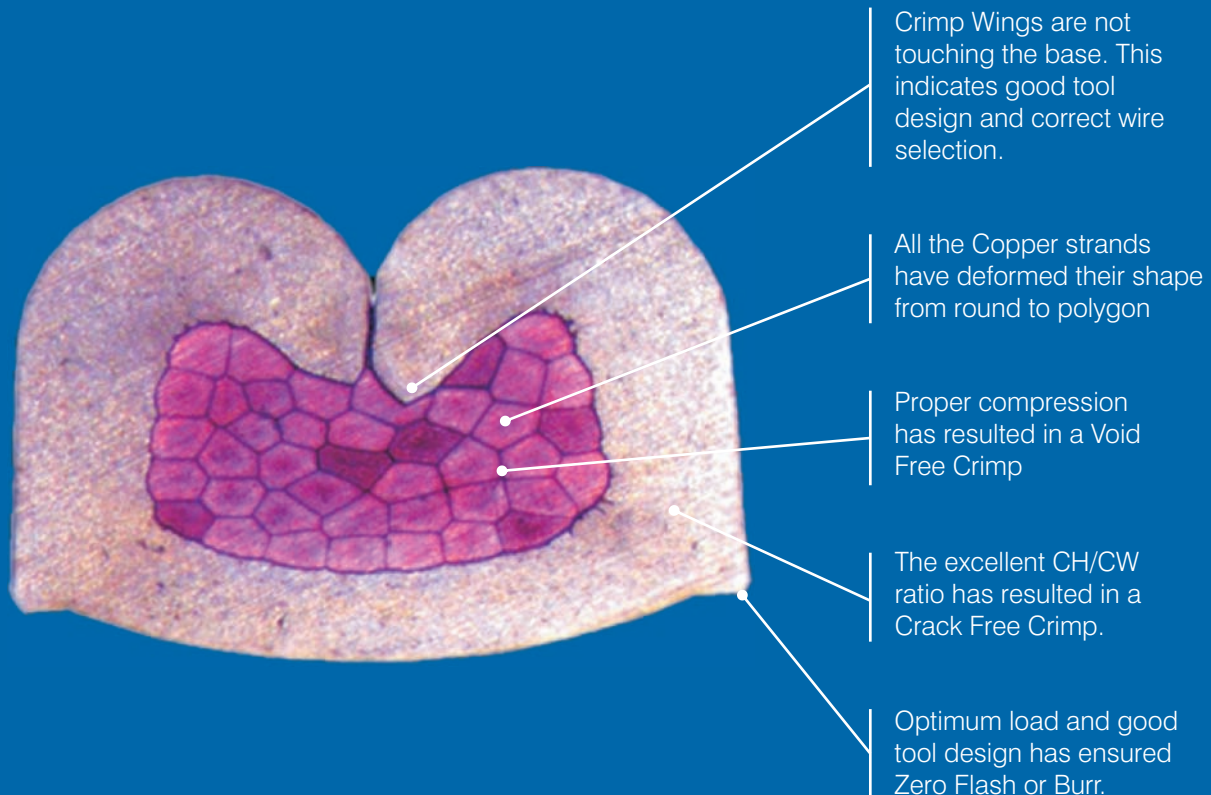
A Good Crimp equals A Reliable Product

A reliable crimp is an imperative part of any industry requiring good connectivity and harnessing of wires with no short circuits on continuous usage.

These include Automobile Industry, Electronic Manufacturing, Aeronautics Manufacturing, Wire Harnessing Manufacturers, Energy and Power Systems, Electro-mechanical Systems, among others.



What is a Good Crimp?



At Competent, we endeavour to give the best crimping solutions to our customers, consistently.

Complete Crimping Solutions Under One Roof

Digital Crimping Presses

Applicators

Motorized Pull Testers

Cross-Section Analysis Lab Equipment

Wire Processing Machines

NEW PRODUCTS

SMART Crimping Presses and Applicators with APTS™ Software

Smart Presses is a unique concept where we use IOT enabled technology, to manage all the information under one system. This is an expendable system which can be modified, as per customers' requirement to some extent.

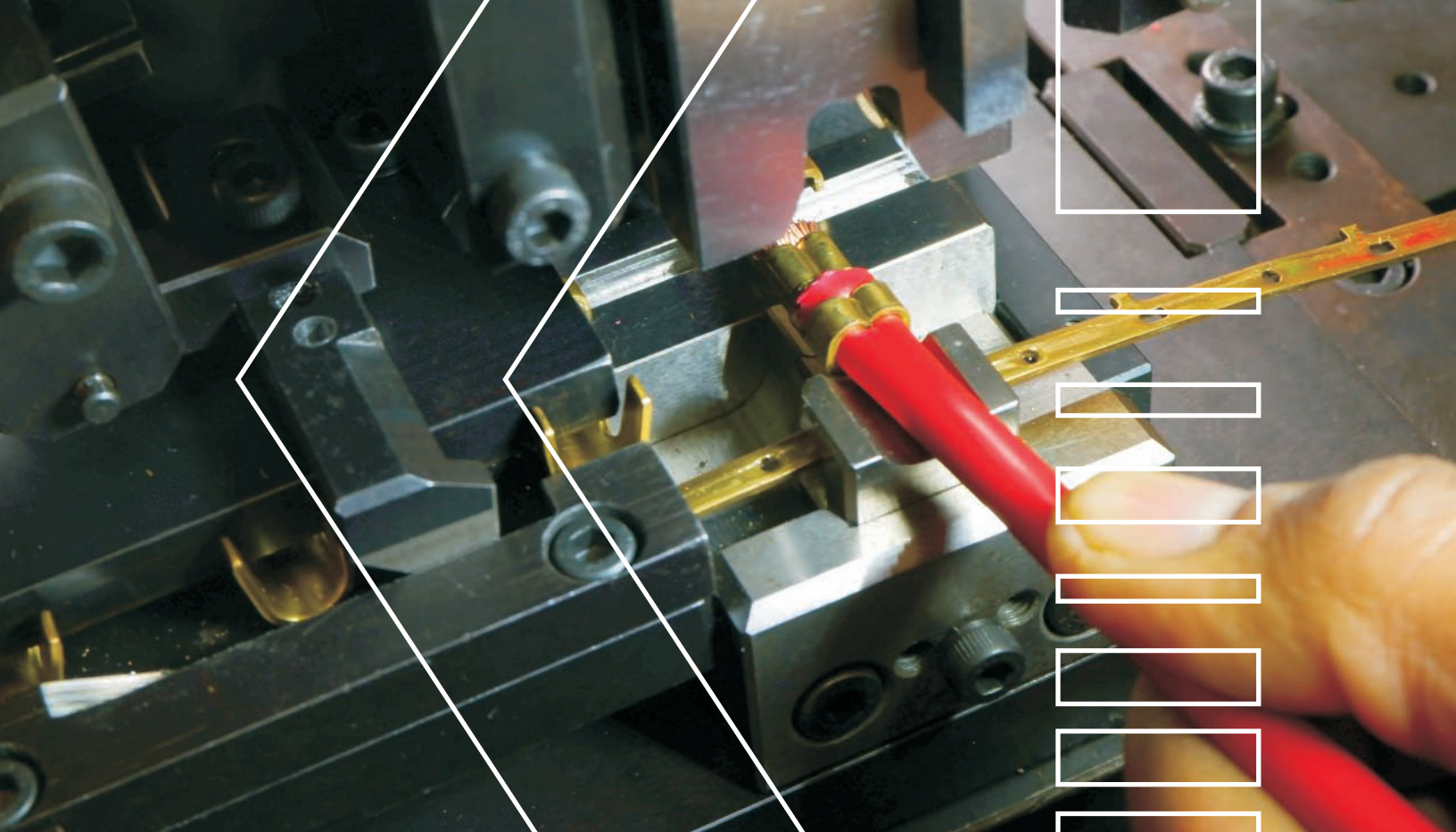
Uses proprietary APTS™ Software

SERVO Crimping Presses and Applicators with intelligent features

Servo Press is an advanced version of Smart Press having additional features like Microsetting of crimp height with press, and easy selection of shut height without any mechanical adjustments.

Uses proprietary APTS™ Software





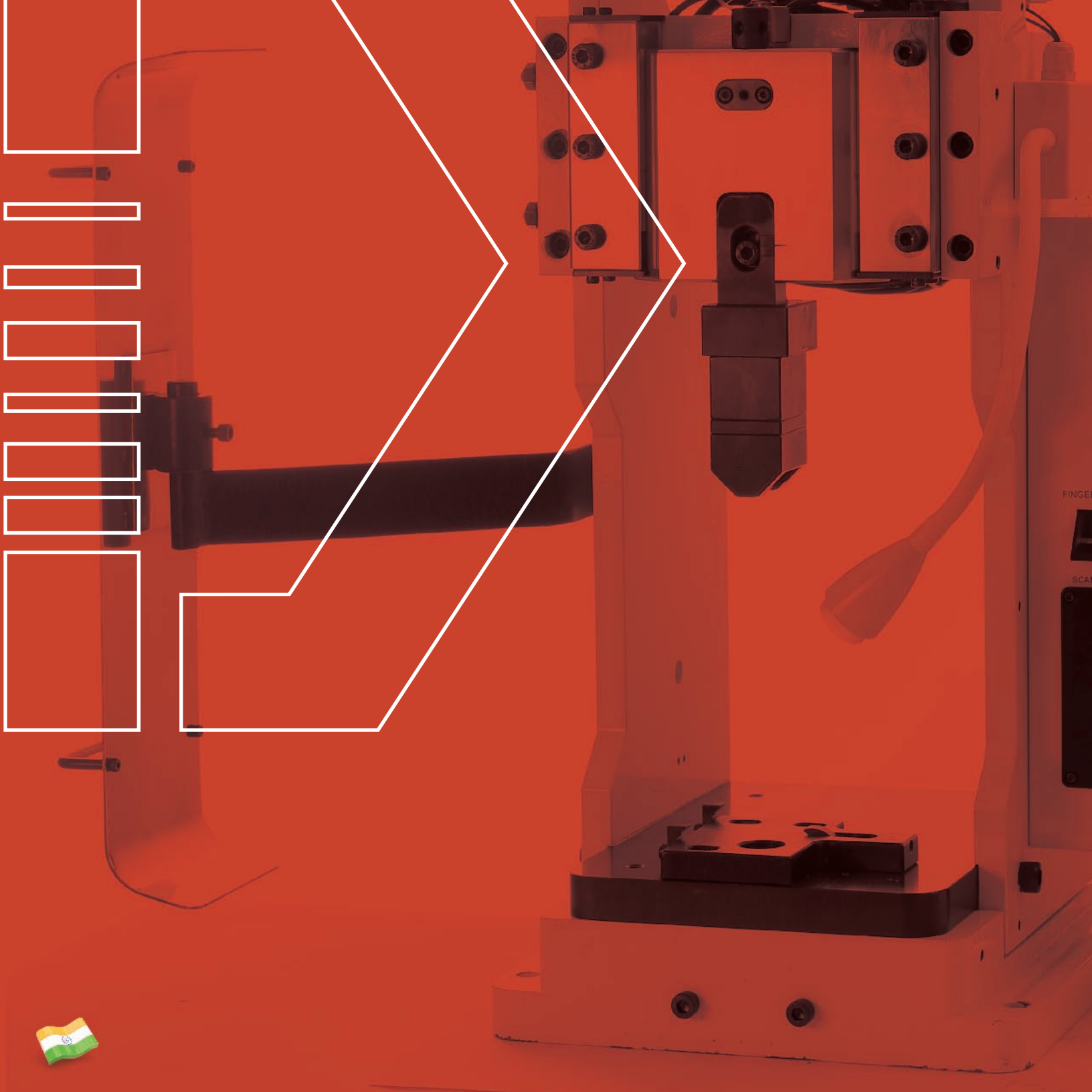
WiFi enabled Pull Testers

Our standard Pull Testers have been upgraded to being Wi-Fi based, allowing the Pull Tester to connect with our Software to save test results. The Controller card is now upgraded to a 32Bit microprocessor reduced processing time and increased accuracy. Users can now save up to 250 test results in offline mode and additional experimental mode to select recipe for each terminal.

Hydraulic Crimping Machines

These machines use a compact hydraulic powerpack to give extreme loads up to 40 tons. Interchangeable tools can crimp a variety of loose terminals.





Digital Crimping Presses

India's first Bench Type **"Digital"** Crimping Press was developed by us in the year 1999. Since then, we have developed a range of Digital Crimping Presses ranging between 2 and 15 tons. We ensure that all our models are highly rigid and stable by using materials of the highest quality. Also, due to very little variance in their strokes, our presses perform commendably on tests run by a Crimp Force Analyzer.

Furthermore, CFA can be installed on all our models.

Noise free operation

Quick change Applicator
fixing arrangement

Three speed options

Repeatability of the press
stroke is assured in few
microns

...and host of other features

SMART Features

Uses APTS™ Software to track usage of Applicator and Presses in real time

Recognizes Applicator/ Press/ Terminal by the help of Bar Code

Maintains and Alerts complete PM Schedule of Presses and Applicator

Responsibility based Bio metric Approval system for Supervisor/Inspector

Provision of Data Saving in main server of the company

Provision to link presses with Wi-Fi

SERVO Features

Servo based 2 Ton crimp machine using high quality Japanese motors and controls

Possible to configure different strokes without changing mechanical parts

User friendly for easy setting and operation

Servo operation ensures crimp height adjustments in microns through presses

Sequence Crimping also possible

Possibility of Crimp Height Matching with Digital Micrometer reading



Crimping Presses



RTF-2C



RTF-2M



RTF-2i



RTF-4M

Digital	✓	✓	✓	✓
Smart	×	×	✓	×
APTS™ Software	×	×	✓	×
WIFI	×	×	✓	×
Biometric User Control	×	×	✓	×
Touch Screen	×	×	✓	×
Bar Code Scanning	×	×	✓	×
Power Input	Single Phase, 220V AC 50Hz	Single Phase, 220V AC 50Hz	Single Phase, 220V AC 50Hz	Single Phase, 220V AC 50Hz
Motor (KW)	0.75	0.75	0.75	1.5
Control	Electronics	Electronics	Electronics	Electronics
Tonnage	2 Ton	2 Ton	2 Ton	4 Ton
Terminal Sheet thickness [max] (mm)	0.5	0.5	0.5	1
Wire Size [max] (sqmm)	5	5	5	10
Stroke (mm)	30/35/40	30/35/40	30/35/40mm	30/40
Shut Height (mm)	Std:135.78	Std:135.78 Max: 190	Std:135.78 Max: 190	Std:135.78 Max: 190
Weight (kg)	80	95	95	120
Dimension (mm)	300x300x600	300x300x700	300x300x700	400x400x700





RTF-4i



RTF-6M



RTF-6i



RTF-8M



RTF-8i

✓	✓	✓	✓	✓
✓	×	✓	×	✓
✓	×	✓	×	✓
✓	×	✓	×	✓
✓	×	✓	×	✓
✓	×	✓	×	✓
✓	×	✓	×	✓
Single Phase, 220V AC 50Hz	Three Phase, 415V AC 50Hz	Three Phase, 415V AC 50Hz	Three Phase, 415V AC 50Hz	Three Phase, 415V AC 50Hz
1.5	3	3	4	4
Electronics	Electronics	Electronics	Electronics	Electronics
4 Ton	6 Ton	6 Ton	8 Ton	8 Ton
1	1.5	1.5	2	2
10	25	25	35	35
30/40	40	40	40/50	40/50
Std:135.78 Max: 190	Std:135.78 Max: 190	Std:135.78 Max: 190	Std:135.78 Max: 190	Std:135.78 Max: 190
120	150	150	180	180
400x400x700	400x400x800	400x400x800	400x400x800	400x400x800

Crimping Presses



SCP-02i



SCP-06



SCP-10



SCP-15

Smart	✓	×	×	×
Servo	✓	✓	✓	✓
APTS™ Software	✓	×	×	×
WIFI	✓	×	×	×
Biometric User Control	✓	×	×	×
Touch Screen	✓	✓	✓	✓
Bar Code Scanning	✓	×	×	×
Power Input	Single Phase, 220V AC 50Hz	3 Phase, 415Volts	3 Phase, 415Volts	3 Phase, 415Volts
Motor (KW)	0.75	1.5	2	3
Control	Electronics	Electronics	Electronics	Electronics
Tonnage	2 Ton	6 Ton	10 Ton	15 Ton
Terminal Sheet thickness [max] (mm)	0.6	1.8	3	5
Wire Size [max] (sqmm)	6	90	150	240
Stroke (mm)	Adjustable	Adjustable	Adjustable	Adjustable
Shut Height (mm)	135.78	135.78/160/190	135.78/160/190	160/190/212
Weight (kg)	120	340	480	565
Dimension (mm)	300X300X600	550x650x900	650X730X1000	680X750X1100



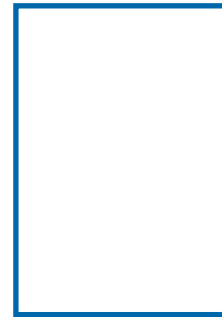
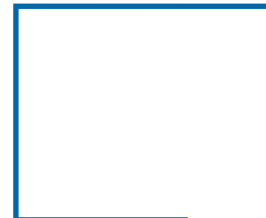


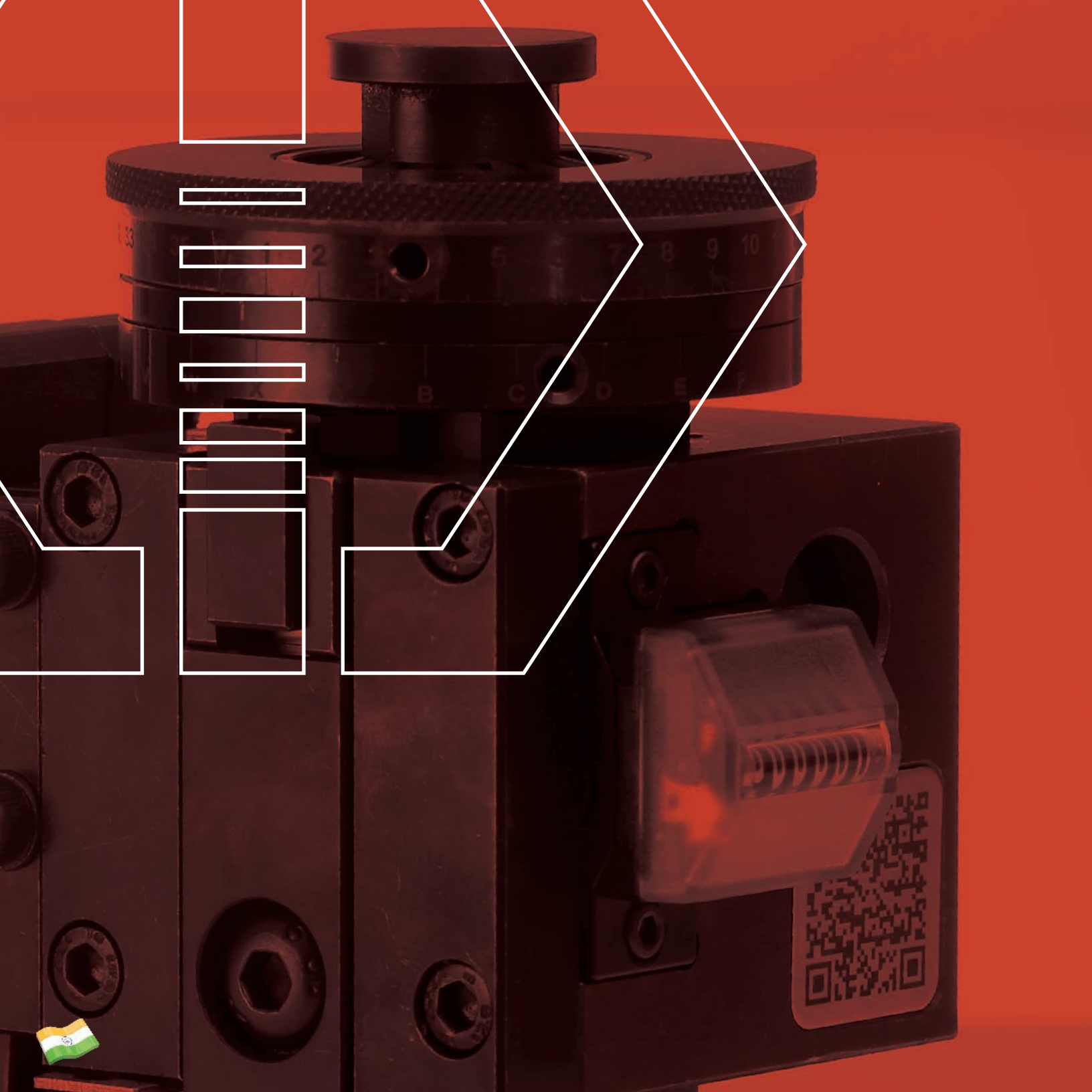
HCP-15



RTH-20

Smart	×	×
Servo	✓	×
APTS™ Software	×	×
WIFI	×	×
Biometric User Control	×	×
Touch Screen	✓	×
Bar Code Scanning	×	×
Power Input	Single phase, 220V 50Hz	220V 50Hz/60Hz
Motor (KW)	2.3	NA
Control	Electronics	Electrical
Tonnage	15 Ton	40 Ton
Terminal Sheet thickness [max] (mm)	3	6
Wire Size [max] (sqmm)	120	300
Stroke (mm)	NA	Adjustable
Shut Height (mm)	NA	NA
Weight (kg)	130	95
Dimension (mm)	500X450X480	600X280X700

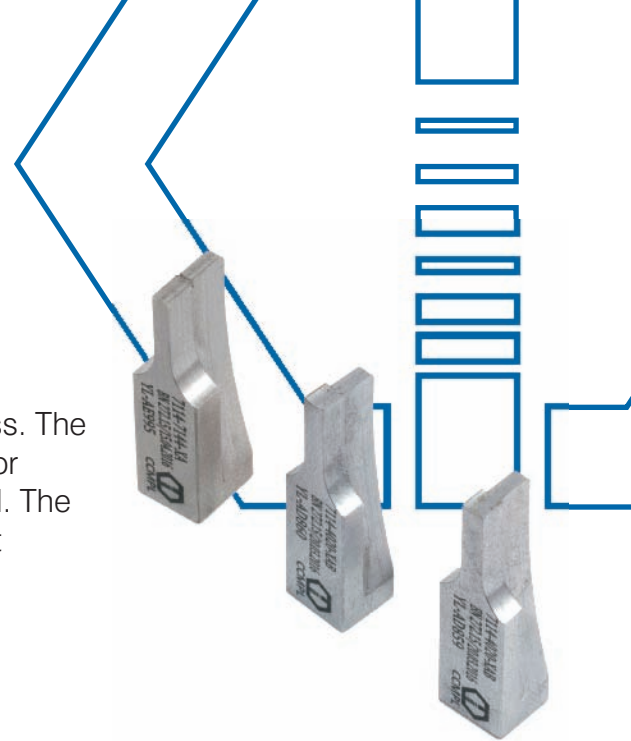




Applicators

The crimp applicators are at the heart of the crimping process. The applicator folds the terminal wings and presses the conductor wire. Another function of the applicator is to feed the terminal. The feeding arrangement has to be good since the terminal must position itself correctly on the anvil to get a good crimp.

All applicators manufactured by us have a micro setting arrangement for achieving the desired crimp height.



Applicators for Special Applications

Some terminals have typical designs and the applicators have to be specially designed for crimping them. This involves designing and manufacturing many unique parts. Some special terminals are mentioned below:



Double Carrier Terminal



Splice Terminal



Center Carrier Terminal



Flag Receptacle Terminal



Plastic Insulated Terminal



Fuse Terminal



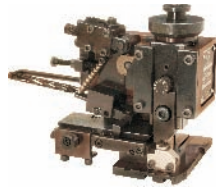
Joint Terminal



Spark Plug Terminal



Applicators



Side Feed
Dial Type



End Feed
Dial type



Side Feed
Spiral type



End Feed
Spiral type

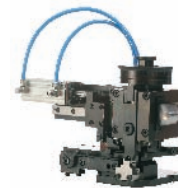
Shut Height (mm)	135.78	135.78	135.78	135.78
Compatibility	3 point adaption	3 point adaption	3 point adaption	3 point adaption
Feed	Mechanical	Mechanical	Mechanical	Mechanical
Least Count (microns)	20	20	20	20
Maximum Pitch (mm)	24	28	24	28
Maximum length (mm)	40	26	40	26
Terminal Sheet Thickness (mm)	0.8	0.8	0.8	0.8



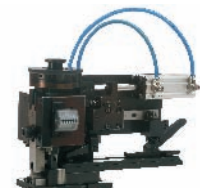
Side Feed
EM Type



End Feed
EM Type



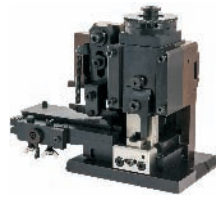
Side Feed
Silver Series



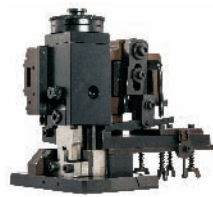
End Feed
Silver Series

Shut Height (mm)	135.78	135.78	135.78	135.78
Compatibility	3 point adaption	3 point adaption	3 point adaption	3 point adaption
Feed	Mechanical	Mechanical	Pneumatic	Pneumatic
Least Count (microns)	20	20	20	20
Maximum Pitch (mm)	25	25	30	30
Maximum length (mm)	40	24	40	28
Terminal Sheet Thickness (mm)	0.8	0.8	0.8	0.8

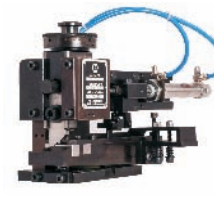




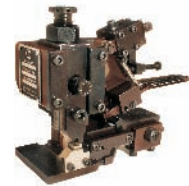
Side Feed
Large



End Feed
Large

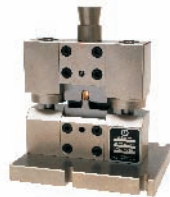


End Feed
Flag



Joint/
Splice

Shut Height (mm)	190	190	135.78	135.78
Compatibility	NA	NA	3 point adaption	3 point adaption
Feed	Mechanical	Mechanical	Pneumatic	Mechanical
Least Count (microns)	20	20	20	20
Maximum Pitch (mm)	40	40	30	25
Maximum length (mm)	45	40	28	23
Terminal Sheet Thickness (mm)	3	3	0.8	2



Loose
Large DP



Loose
Extra Large DP



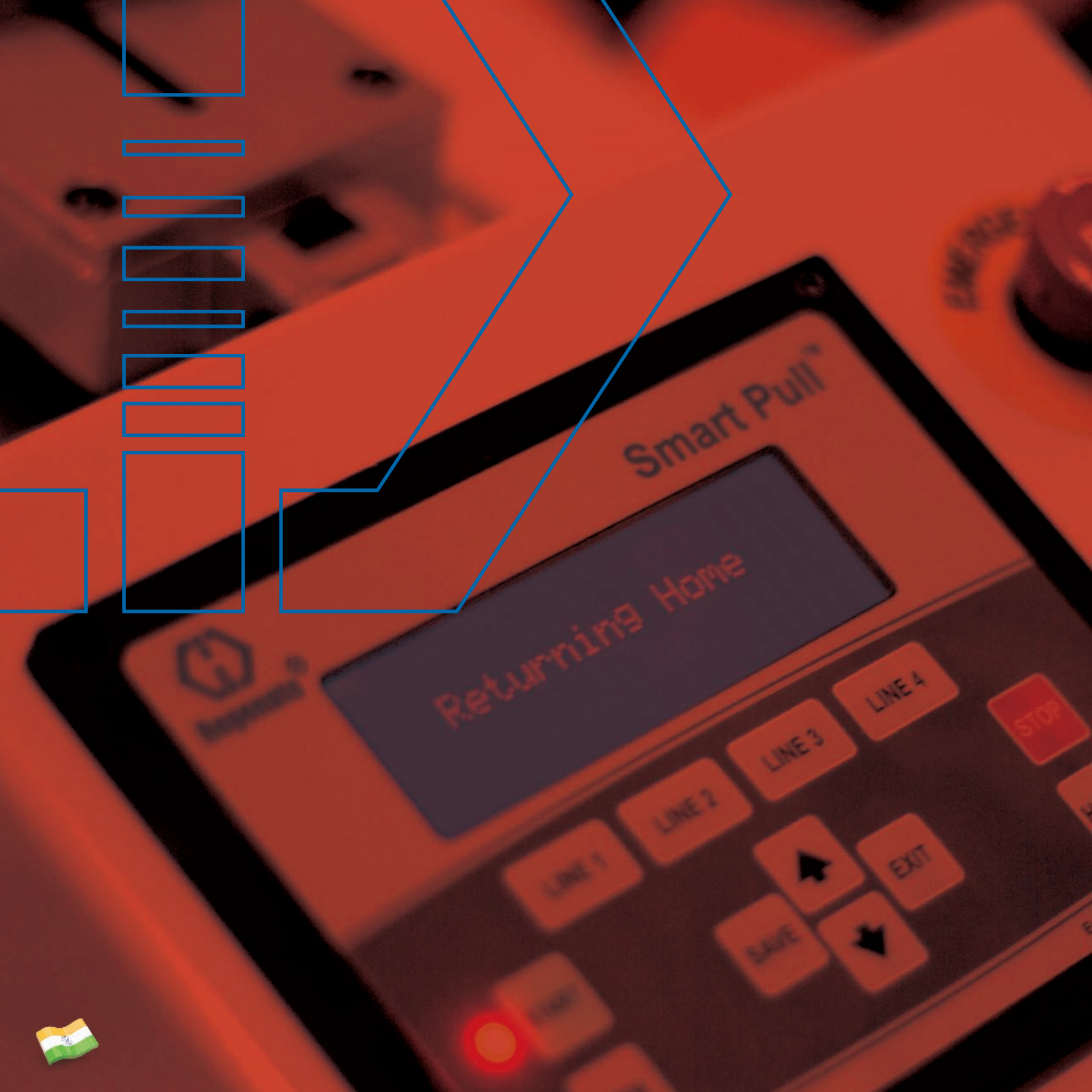
4 Edge
Applicator



Loose
Normal

Shut Height (mm)	190	190	160	135.78
Compatibility	NA	NA	NA	3 point adaption
Feed	Loose	Loose	Loose	Loose
Least Count (microns)	NA	NA	20	20
Maximum Pitch (mm)	NA	NA	NA	NA
Maximum length (mm)	NA	NA	50mm	NA
Terminal Sheet Thickness (mm)	3	4	2	1.5





Motorized Pull Testers

It is essential to perform pull testing of the crimp to find the joining strength between the terminal and the wire. Earlier pull testers used to rely on manual pulling of wire, which was unreliable due to jerks in the pulling.

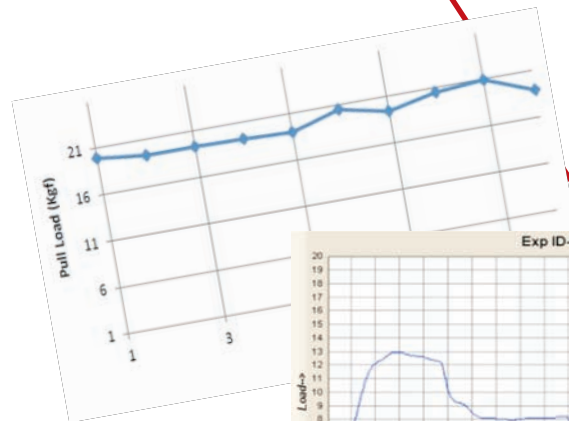
Motorized Pull tests has been found to be more popular and reliable.

Calibrated Sensor

Uniform pulling speed

Multiple options for speed

Result storage memory



Graph for Peak Load



Graph for Sample Test



Pull Testers



SP-01N



SP-01W

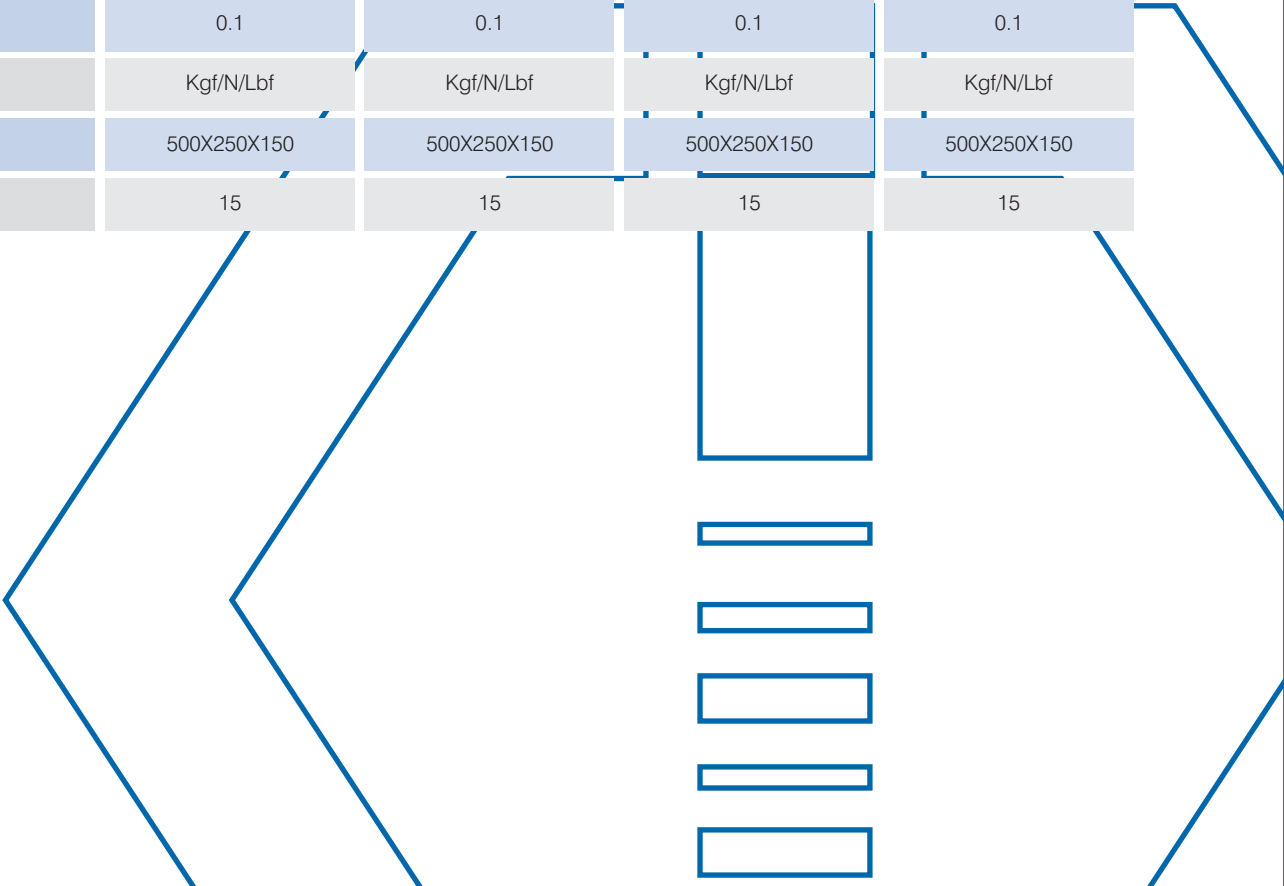


SP-02N



SP-02W

Capacity (kg)	50	50	100	100
WIFI	×	✓	×	✓
Speed (mm/min)	25/50/75/100	25/50/75/100	50/100/150/200	50/100/150/200
Computer Connectivity/ Report	×	✓	×	✓
Least Count (kgf)	0.1	0.1	0.1	0.1
Units	Kgf/N/Lbf	Kgf/N/Lbf	Kgf/N/Lbf	Kgf/N/Lbf
Dimension (mm)	500X250X150	500X250X150	500X250X150	500X250X150
Weight (kg)	15	15	15	15





SP-03N



SP-03W



SP-04



SP-01LN



SP-02LW

200	200	500	50	100
×	✓	×	×	✓
50/100/150/200mm/min	50/100/150/200	50/100/150/200	25/50/75/100	50/100/150/200
×	✓	×	×	✓
0.1	0.1	0.1	0.1	0.1
Kgf/N/Lbf	Kgf/N/Lbf	Kgf/N/Lbf	Kgf/N/Lbf	Kgf/N/Lbf
610x360x150	610X360X150	800X450X260	610X250X150	610X250X150
35Kgs	35	70	19	19

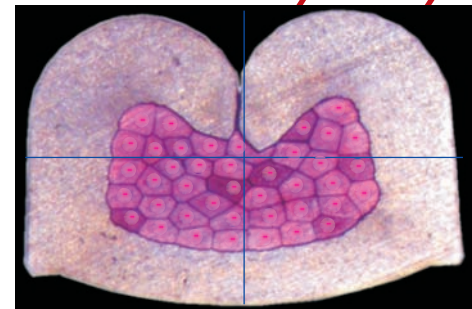




Cross-section Analysis Lab

Crimp Cross-section Lab consists of crimp cutting arrangement, special crimp holding arrangement, microscope with camera and a computer with screen for the software to analyze crimps.

The specialised software provided with the equipment can measure crimp width, crimp height, relief angle and also the cross-section area of copper after crimping. It will calculate the compaction as well. Other than this a number of things like voids, uniformity of the bending of wings, damage by tooling etc. are also displayed. The report is automatically generated. An example of the report is given below.



Cross-Section

Technical Documentation - Cut Section Report

		Date	
		05 - 09 - 2019. 12:17	
Crimping Area	NA	Target Crimp Height	2.45 +/- 0.05
Terminal Part Number	LA206ZNTP	Actual Crimp Height	2.450
Applicator Number	AA-01	Target Crimp Width	3.60 +/- 0.10
Description	STD. TESTING	Actual Crimp Width	3.620
Counter Reading	NA	CH / CW Ratio	67.68 %
Operator	PRAMOD	Wire Gauge	FLRYB 3.0 sq mm
Wire Combination	SINGLE	Area Before Crimping	3.0164
Target Strand Count	41	Area After Crimping	2.154873133
Actual Strand Count	41	Crimp Compression	28.56 %

Model CS-01

LED Ring Light	Special Grinding Machine
Specimen Holder	Specimen Cutting Arrangement
Computer System	MicroSaw
Software "Easy Crimp"	Microscope with Sliding Table
Calibration Glass	USB Camera



Model CS-01A

Special Cutting & Grinding Machine	Specimen Holder
Microscope with Sliding Table	Computer System
USB Camera	Software "Easy Crimp"
LED Ring Light	Calibration Glass





COMPETENT CRIMPING MACHINERY PVT. LTD.
Plot No. 8/52, Sector-65
Noida, G.S. Nagar, Uttar Pradesh
INDIA-201302, Ph. +91-120-4637663 / 4547865

Technical Documentation - Cut Section Report

Report Date & Time : 11/24/2018 11:08

GENERAL INFORMATION

Order No. : 3830

Operator : ANUS

Customer Name : AG Mexico

APCR No. : AGM 019

Terminal ID : 32060224

Comm. Board/len : 32030214

Wire ID : 17.000

Subway type : LAR QTYM

Ter. Sheet Thickness : 0.40 mm

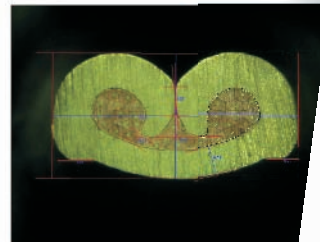
Length of 1 crimp : 1.61 mm

Strands Count : 32

Target Pull Force : 66

Target Pull Force : 66

Remarks :



Page 1 of 2

Cross-Section Analysis Report

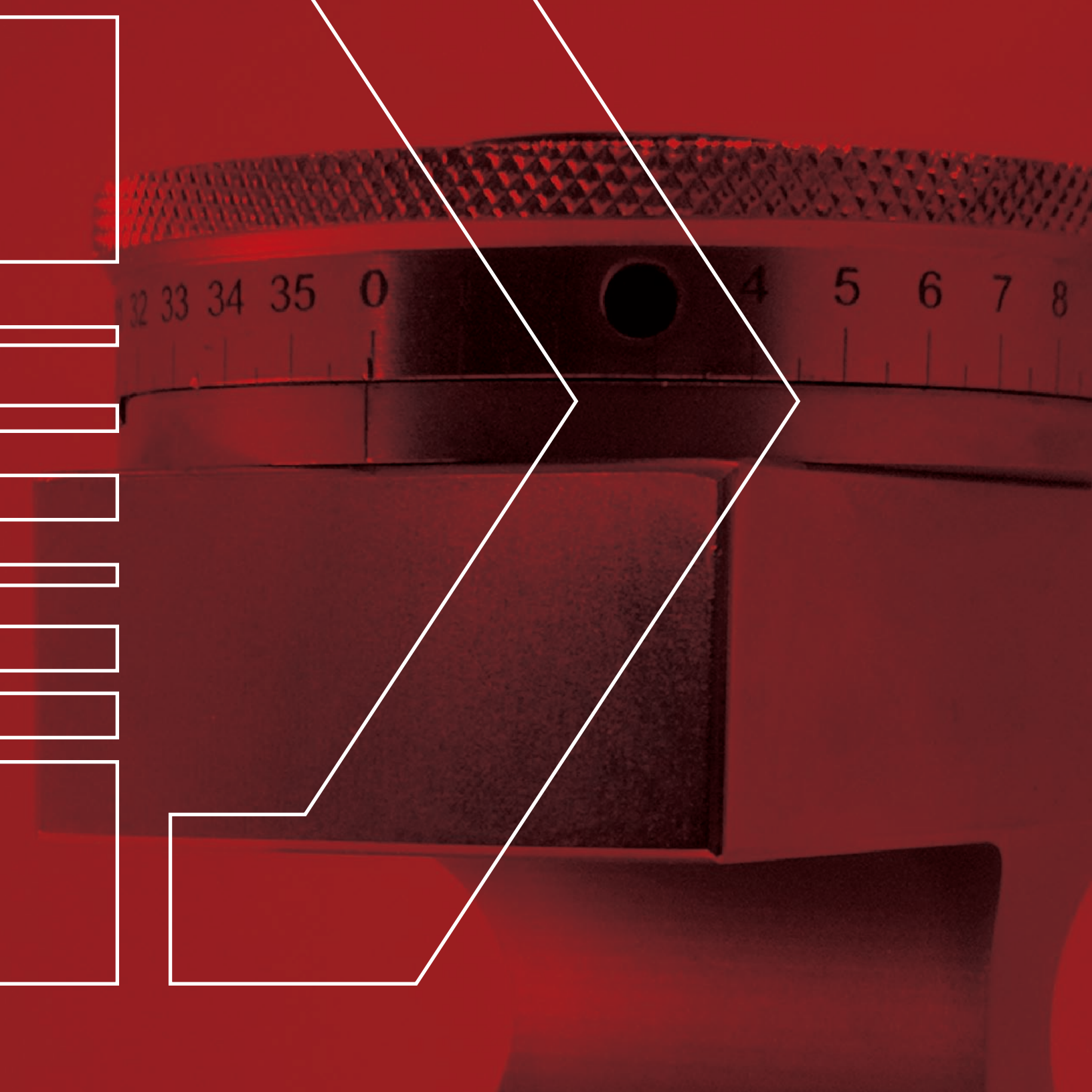
MEASUREMENT DETAILS				
Name	Value	Unit	Adjustment	Reference
Actual Strand Count	32	Nos.	GOOD	
Actual Crimp Height	1.61	mm	GOOD	X >= 2 x Original
Actual Crimp Width	2.83	mm	GOOD	X >= Target + / - 0.05 mm
Ch / CW Ratio	56.89	%	GOOD	X >= Target + / - 0.05 mm
Area After Crimping	0.78	Sq. mm		
Crimp Compression	20.6	%		
Vacuum Area	0	Sq. mm	GOOD	
Vacuum Area Total	0.88	Sq. mm		10% <= X <= 10%
Vacuum Rate	0	%		
Face End Clearance	0.18	mm	GOOD	
Crimp Face End X1	0	mm	BAD	X <= 2%
Crimp Face End X2	0	mm		X >= 0.5 x Sheet Thickness
Distance Between CTE	0.02	mm	GOOD	
Burr Left	0.01	mm		
Burr Right	0.01	mm		X <= 0.5 x Sheet Thickness
Base Thickness	0.39	mm	GOOD	
Support Angle Left	5	Deg.	GOOD	X >= 0.75 x Sheet Thickness
Support Angle Right	0	Deg.		X <= 30 Deg.
Support Height	0.37	mm		X <= 30 Deg.
Wing Symmetry	0	mm	BAD	X >= 1.0 x Sheet Thickness
				X <= 0.5 x Sheet Thickness

Prepared By:	Checked By:	Approved By:
PANJALI CHAUDHARI	SUDHANSHU PRADHAN	SANJAY ARORA

Page 2 of 2

The Cross Section Analysis Reports generated helps study and analyse The crimps and gauge the crimping parameters based on customers requirements or specifications.





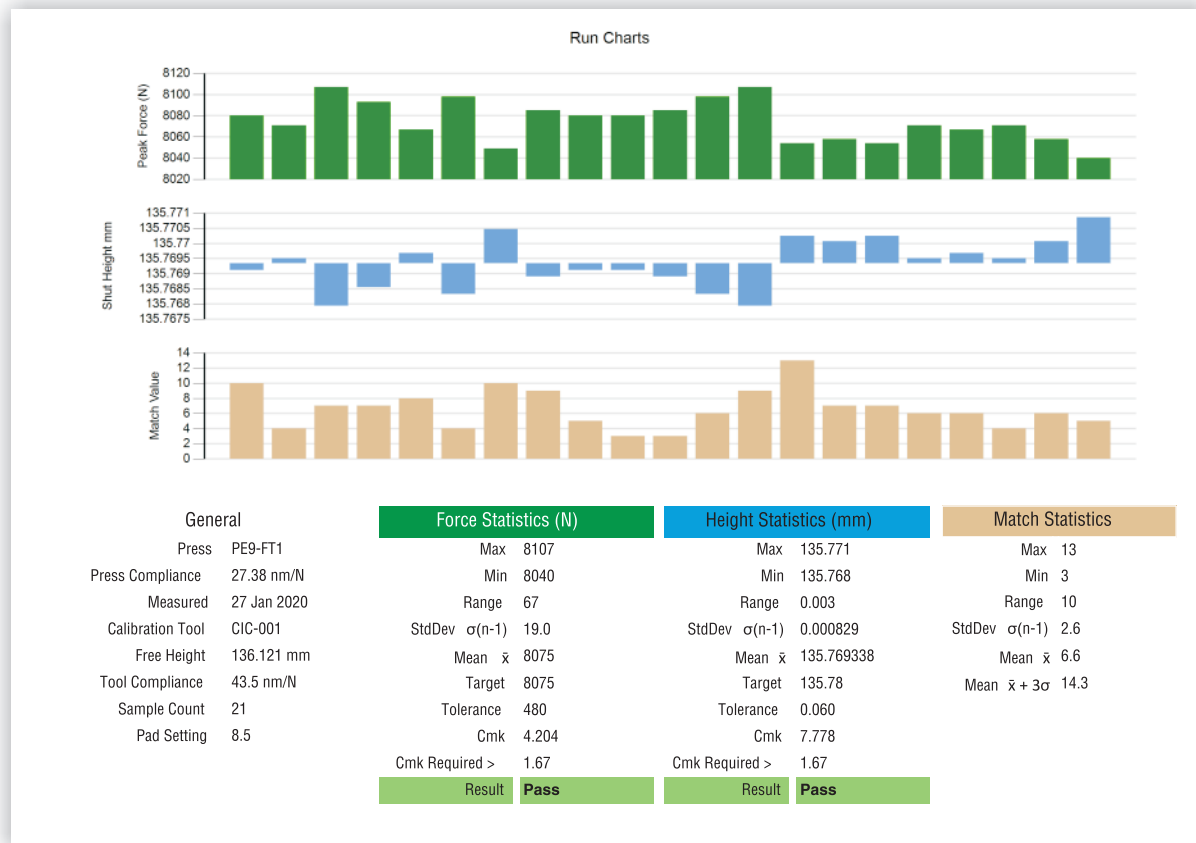
Press Analyzer

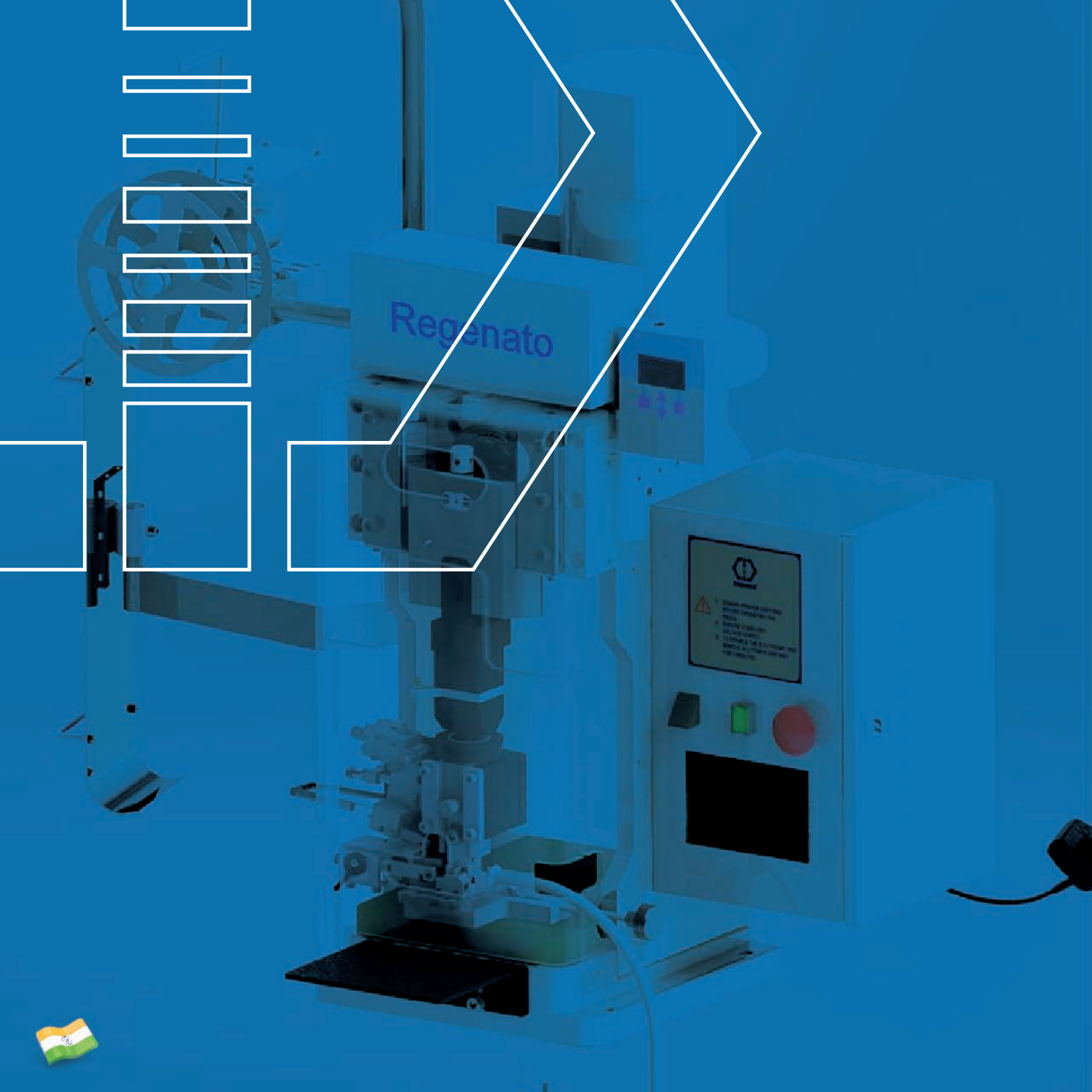
Press Analyzer is used to examine the repeatability of the press stroke and shut height

Press Shut Height Repeatability


After considerable usage of the presses, the play between the moving parts increase. This increases the Shut Height variation which results in Crimp Height Variation on Account of the Crimping Press.

Below is an example of a report for an ideal crimping press.





Regenato


1. READ MANUAL CAREFULLY
BEFORE OPERATING THE
MACHINE
2. ALWAYS WEAR SAFETY
GLASSES OR A FLYSCREEN
3. TO STOP THE ELECTRIC MOTOR
PUSH THE RED STOP BUTTON

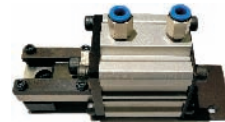


Accessories



Crimp Force Monitor

These evaluate force curve against 'reference' force curve that allows engineers to observe exactly how the crimp is being performed.



Chip Cutter

Attached to presses, its functionality is to dispose of the chips formed during the crimping process by setting it as per user requirements (after 2,4,6 crimps depending on the user).



Shut height Gauge

Helps set the same shut height on different presses with ease thus conserving time and reducing errors.



Paper Winder

helps remove the paper wound to the terminal reel in an uncomplicated manner thus making waste management easy and reducing cluttering of paper near the workstation.



Safety Guard

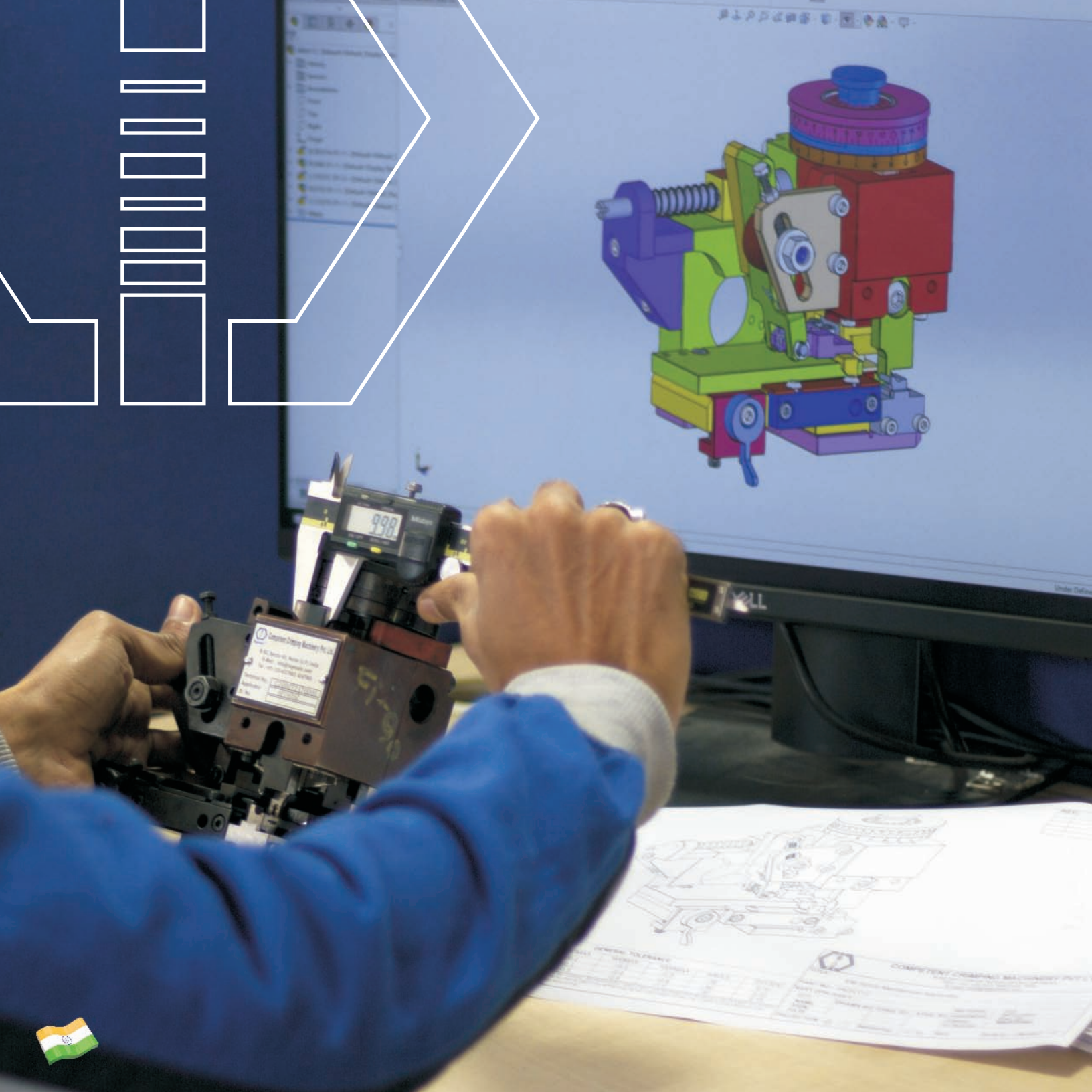
To safeguard operators against accidents.



Press Light

Helps provide better vision for placement of wires on small terminals.





Ensuring Quality, Leveraging Performance

Excellence in Quality and Precision serves as a hallmark for us here at Competent. Our Innovative and Responsive designs ensure superior deliverables to our customers.

We have two world class facilities located in Noida and Haridwar. With areas sprawling 20,000 sqft and 12,000 sqft respectively, these units are equipped with the latest state-of-the-art CNC and conventional machines for all our machining operations.

Our workforce consists of a team of skilled & experienced workmen, some who have been engaged with us since the beginning of our journey.

We follow the best industrial practices
for precision manufacturing

Lean Manufacturing

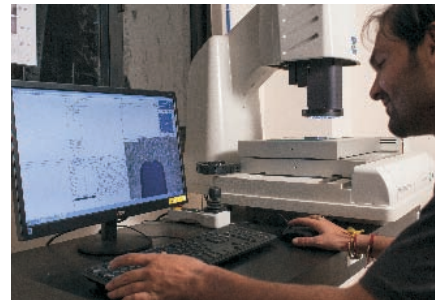
Total Quality Control (TQM)

Statistical Process Control (SPC)

Kaizen

Industry 4.0

Kanban



Customer First...

...defines us here at Competent. We are committed through every minute of the day to continuously improve service quality to customers, sharpening responses and flexibility to achieve the customer's objectives. Better always can be made the best.

Numerous awards and appreciation from our clients, as well as reputable customers from the industry, reflect our unwavering focus on customer relationship.



“

... all applicators are good functioning and suit with our fully automatic Komax Machines.

AQ Mechanical & Electrical Manufacturing India Pvt. Ltd.

The applicators are perfect, absolutely top quality and work very well. We are in the field of wiring harness since 1980 ...

Nuova Gamma Srl, ITALY

”



Our clientele is vastly diversified
and spread across the globe
including countries like USA,
Germany, South Africa, Brazil,
Mexico, Canada, etc.



Smart Crimping Solutions

25
YEARS
1995-2020



Factory in Noida



Factory in Haridwar



Competent Crimping
Machinery Pvt. Ltd.

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