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SACMA GROUP

GUIDE TO THE SYSTEM

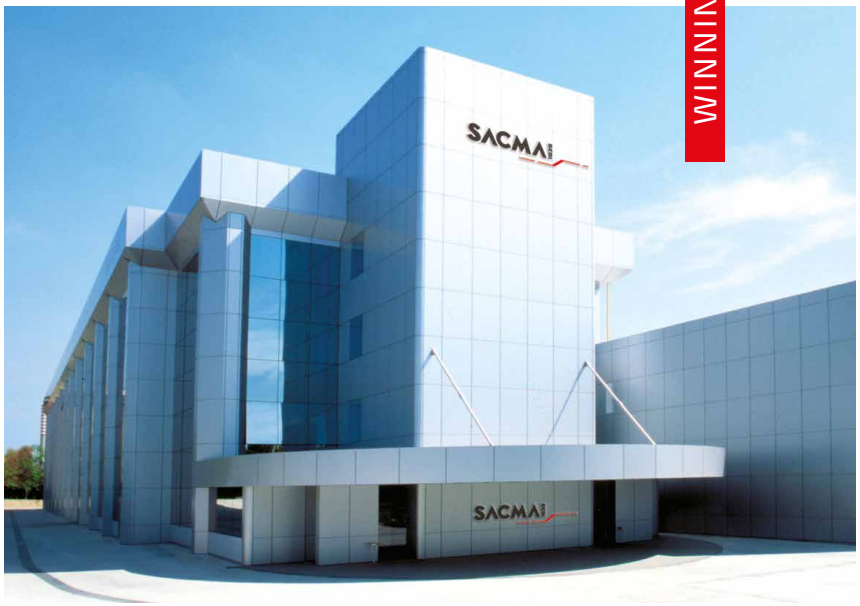
SACMA 1939

THE **WINNING TECHNOLOGIES**®

CONTENTS

SACMA GROUP

WINNING TECHNOLOGIES®



CHOOSE EXCELLENCE TO MAKE THE DIFFERENCE

A constant focus on the future

SACMA GROUP is the ideal technology partner for the development and manufacturing of headers, thread rollers, CNC machines for post-heading and tapping operations, right through to loading and handling systems.

Customised, high-tech solutions to redefine the canons of excellence in the world of fasteners.

All the companies of the group are linked by a common philosophy and processes that allow each component to be designed and manufactured in-house. A choice that makes the difference.

THE **WINNING TECHNOLOGIES®**

- FORMING / HEADING
- ROLLING / THREADING
- TAPPING / MACHINING
- LOADING / MOVING

- 5 Production Sites
- 24 Sales Agencies
- 5 Sales & Technical Service Centers

Welcome to the SACMA world
so much more than just numerous dots on a map.

Our company is an international strategic network with technical centers in the USA, China, Taiwan, and Brazil, and a growing sales network across 18 countries. We have a strong presence in key European markets as well as in regions such as Canada, Argentina, Japan, India, Iran, and South Korea. Because truly being there means being reliable, not just visible.

SACMA GROUP | SACMA 1939 | INGRAMATIC | HS ASPE | TECNO LIFT

Every industry follows a unique path, shaped by challenges, ambitions, and constant change. SACMA is always there with machines designed to turn ideas and projects into reliable, long-lasting components. Our know-how, born from experience and vision, allows us to provide solutions that adapt to every need and support manufacturers worldwide in achieving excellence.

SECTORS

- AUTOMOTIVE OEM
- AUTOMOTIVE TIER ONE
- AEROSPACE
- INDUSTRIAL VEHICLES
- CONSTRUCTION
- ELECTRONICS
- WHITE GOODS
- AMMUNITION AMTEC
- OTHERS

FORMING / HEADING
ROLLING / THREADING
TAPPING / MACHINING
LOADING / MOVING

Founded in 1939, SACMA designs automatic cold headers used worldwide to transform steel into fasteners and special parts. With over 7,000 machines in operation, SACMA offers cold heading advantages like high resistance, precision, low waste, and energy efficiency. SACMA's machines are reliable, efficient, and supported by global service networks.

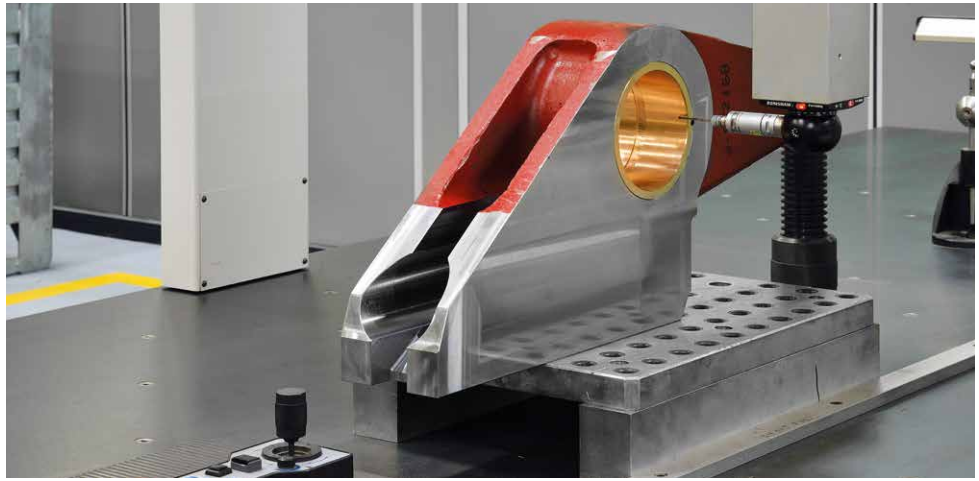
UNI EN ISO
9001:2015

TECHNICAL DEPARTMENT

Our engineers strive every day to find the best solutions to meet our customers' machine personalisation requests.
An accurate analysis of those requests is transformed into a rational design that will then take shape in our production departments, without losing sight of the concept of modularity that guarantees the greatest possible interchangeability of components and therefore the subsequent availability of spare parts.

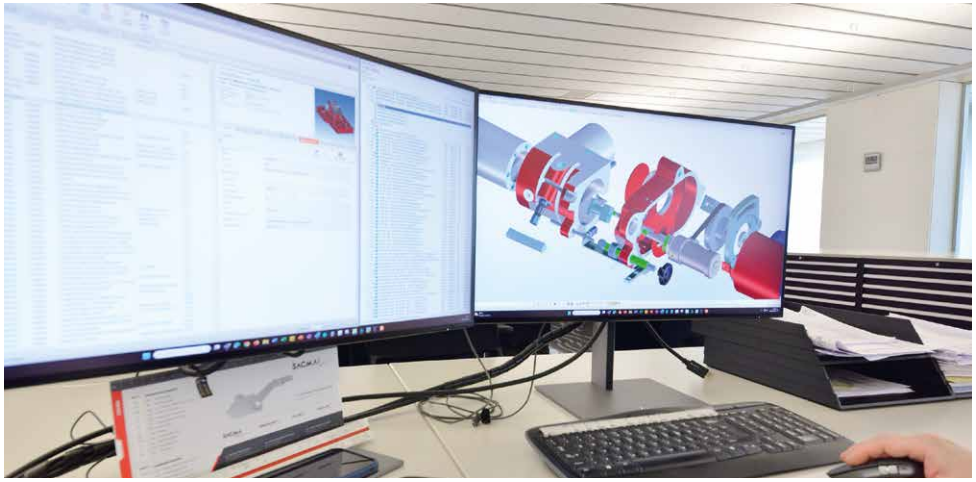
QUALITY

All the mechanical parts of our machines are produced in-house on modern systems that use advanced technology. Every phase is closely monitored in terms of quality, right up to the final inspection prior to storage. The various workpieces are picked up from the main warehouse and sent to the assembly department, or directly to our customers as spare parts. The modular design system allows us to reduce the number of mechanical components of the machines and therefore the number of codes, thereby enhancing not only production efficiency but also the availability of spare parts, all to the benefit of our customers.



R&D

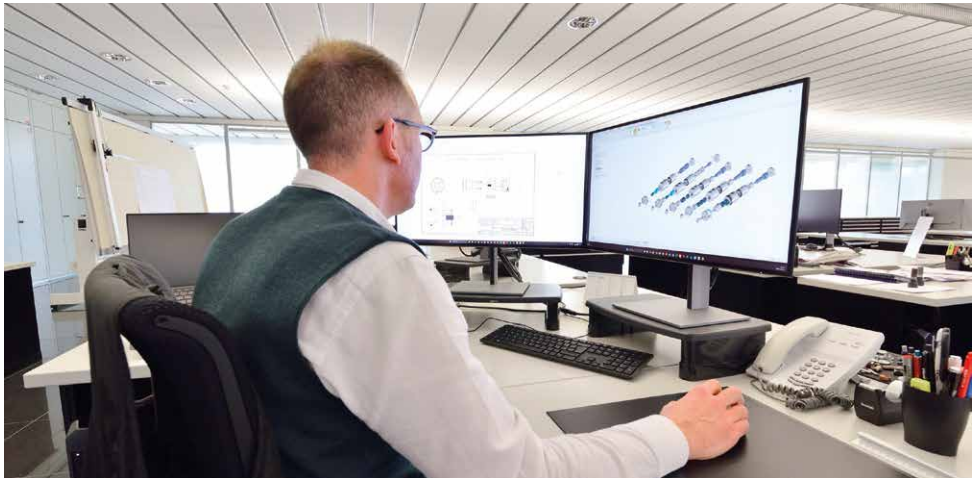
When it comes to building its machines, the philosophy of SACMA GROUP has always been one of continuous improvement to optimise every single component. We're constantly working towards a production process that guarantees the best in terms of not only precision and reliability but also materials that provide the best performance. Alongside this unceasing task, the R&D department never loses sight of all the possibilities to incorporate the latest and most advanced technologies into our machines. The result of this strategy is evident in the multitude of functions of SACMA headers built with mechatronic solutions.



CO-ENGINEERING

All companies say they are customer-orientated. Actions speak louder than words though, and in fact we are constantly investing in a global presence via the exclusive service of technical design and heading simulation to develop new tailor-made tools. In a word: S-Tooling.

This means not only being able to create ever more complex products but also to identify - together with the customer - the best solutions to industrialise them in the most efficient way.



ASSEMBLY DIVISION

It's written as "Assembly Division" but it's read as "product reliability". No components from third-party manufacturers: at SACMA we produce every single piece of our machines in-house and, before assembling them on the header, we carry out a pre-assembly operation to ensure the quality of the unit that will then be installed on the machine. We do this by verifying the precision of the couplings, reducing tolerances to a minimum and perfectly calibrating the movements of the various mechanical elements. Because reliability can't be seen, but it has to be felt.

STORAGE WAREHOUSE AND LOGISTICS

To guarantee the maximum efficiency of every single machine at all times, the quality of the materials and production processes alone isn't enough. Our machines have a long working life, during which it's vital to ensure that spare parts are always available. That's why, while most of our competitors are trying to cut back on storage, SACMA keeps its warehouses well stocked to make sure its spare parts management is fast, efficient and able to respond promptly to the needs of any customer, anywhere. A winning strategy, every time.

PROGRESSIVE HEADERS

SACMA's progressive headers offer up to 33mm diameter cut-off capacity, advanced controls, and speeds up to 350 ppm. Key features include monoblock spheroidal cast iron frames, alloy steel slide units, forged crankshafts for stability, and the Desmodrive transfer unit for low maintenance and flexibility. It also offers precise wire feeding and optional controls for accuracy.

CHARACTERISTICS		SP160	SP260	SP270	SP360	SP370	SP460	SP470	SP570	SP570-C
QUICK TOOL CHANGE HEADING LOAD		•	•	•	•	•	•	•	•	•
Heading load	kN	500	800	800	1.400	1.400	2.200	2.200	3.200	3.600
Number of dies	No.	5	5	6	5	6	5	6	6	6
Cut-off diameter (600N/mm²)	mm	8	11,5	11,5	15	15	20	20	24	24
Cut-off length (max)	mm	65	85	85	127	127	165	165	250	160
Die kick-out (max)(max)	mm	45	65	65	90	90	120	120	200	110
Punch knock-out (max)	mm	14,2	20	20	29,3	29,3	43,5	43,5	46,5	46,5
Speed Range up to (rpm)°	No.	350	275	275	200	200	160	160	120	130
Main Motor	kW	30	30	30	45	45	75	75	100	100
TOOL POCKET SIZE										
Die - ØxL	mm	45x70	54x110	54x110	75x125	75x125	100x195	100x195	110x225	110x225
Punch (fixed) - ØxL	mm	38x85	45x100	45x100	60x125	60x125	75x179	75x170	85x170	85x170
Knife - Ø	mm	20	31	31	38	38	55	55	60	60
Quill - Ø	mm	21	32	32	39	39	68	68	78	78
WEIGHTS										
Net mass	kg	9.500	15.000	15.500	23.500	24.000	44.000	45.000	50.000	50.000

SP160

SP260

SP270

SP360

SP370

SP460

SP470

SP570

SP570-C

PROGRESSIVE HEADERS
LONG STROKE SERIES

The L and EL progressive headers, with enhanced stroke and die kick-out, are perfect for producing long screws, pins, stud bolts, and special parts. However, they can also make shorter workpieces thanks to a motorized wire feeder. With flexible design, they can produce a wide range of products from standard parts to very special components.

CHARACTERISTICS		SP260-EL	SP270-EL	SP360-EL	SP360-SL	SP460-L	SP451-EL
QUICK TOOL CHANGE CR*				•	•	•	
Heading load	kN	700	800	1.400	1.250	2.200	2.500
Number of dies	No.	5	6	5	5	5	5
Cut-off diameter (600 N/mm²)	mm	10,5	11,5	15	12,5	20	22
Cut-off length (max)	mm	115	115	165	190	200	350
Die kick-out (max)	mm	25-90	25-90	20-135	50-160	50-160	60-300
Punch knock-out (max)	mm	20	20	29,3	29,3	43,5	43,5
Speed Range up to (rpm)°	No.	220	220	150	140	130	70
Main motor	kW	30	30	45	45	75	75
TOOL POCKET SIZES							
Die - ØxL	mm	54x110	54x110	75x160	75x180	100x195	100x345
Punch (fixed) - ØxL	mm	45x100	45x100	60x125	60x125	75x170	75x170
Knife - Ø	mm	29	31	38	38	55	55
Quill - Ø	mm	30	32	39	39	68	68
WEIGHTS							
Net mass	kg	15.000	16.000	24.000	24.500	45.000	50.000

SP260-EL

SP270-EL

SP360-EL

SP360-SL

SP460-L

SP451-EL

COMBINED HEADERS

SACMA combined headers, designed for bolts from M3 to M24, offer high productivity, efficient space use, and simplified material flow. They perform heading, pointing, and threading in one machine, producing high-quality fasteners directly from wire. Modular, versatile, and quick to changeover, they also make stud bolts and stainless steel parts with optional pre-heating units.

CHARACTERISTICS		KSP12	SP18	SP28	SP38	SP39	SP48	SP58	SP59-C	SP59
QUICK TOOL CHANGE CR*					•	•	•	•	•	•
Heading load	kN	270	500	800	1.400	1.400	2.200	3.200	3.600	3.200
Number of dies	No.	1D2B	5	5	5	6	5	5	6	6
Cut-off diameter (600 N/mm²)	mm	7,2	8	11,5	15	15	20	24	24	24
Cut-off length (max)	mm	80	65	85	127	127	165	250	160	250
Die kick-out (max)	mm	60	45	65	90	90	120	200	110	200
Punch knock-out (max)	mm	8,7	14,2	20	29,3	29,3	43,5	46,5	46,5	46,5
Thread diameter (max 8.8/12.9)	mm	M8/M6	M6	M10/M8	M14/M12	M14/M12	M20/M18	M24/M22	M24/M22	M24/M22
Thread length (max)	mm	57	38	65	90	90	100	100	100	100
Shank length (min÷max)	mm	10÷60	10÷45	14÷65	20÷90	20÷90	25÷120	50÷200	35÷110	50÷200
Speed Range up to (rpm)°	No.	300	350	275	200	200	160	120	130	120
Main motor	kW	15	30	30	45	45	75	100	100	100
TOOL POCKET SIZE										
Die - ØxL	mm	45x80	45x70	54x110	75x125	75x125	100x195	110x225	110x225	100x225
Punch (fixed) - ØxL	mm	35x116	38x85	45x100	60x125	60x125	75x170	85x170	85x170	85x170
Knife - Ø	mm	16	20	31	38	38	55	60	60	60
Quill - Ø	mm	20	21	32	39	39	68	78	78	78
BOLTMAKER DIES										
Thread roll die moving X Y Z	mm	101,6x60x20,64	106x41x13	146x68x16	216x92x21	216x92x21	254x105x22	305x105x25	305x105x25	305x105x25
Thread roll die stationary X Y Z	mm	88,9x60x20,64	89x41x13	127x68x16	191x92x21	191x92x21	229x105x22	280x105x25	280x105x25	280x105x25
Comparable Sizes	W/TR	W1015/TR0	W1015/TR0	TR3	W30/TR5	W30/TR5	W40/TR6	W50/TR7	W50/TR7	W50/TR7
WEIGHTS										
Net mass	kg	13.000	13.500	18.500	26.500	27.000	53.000	57.000	59.000	59.000

KSP12

SP18

SP28

SP38

SP39

SP48

SP58

SP59-C

SP59

COMBINED HEADERS
LONG STROKE SERIES

The L and EL combined headers, with enhanced stroke and die kick-out, are ideal for producing long screws, pins, stud bolts, and special parts. They also make short workpieces thanks to a motorized wire feeder. With flexible design, they can produce a wide range of products from standard parts to very special components.

CHARACTERISTICS		SP28-EL	SP38-EL	SP38-SL	SP48-L
QUICK TOOL CHANGE CR*			•	•	•
Heading load	kN	800	1.400	1.250	2.200
Number of dies	No.	5	5	5	5
Cut-off diameter (600 N/mm²)	mm	11,5	15	12,5	20
Cut-off length (max)	mm	115	165	190	200
Die kick-out (max)	mm	25-90	20-135	50-160	50-160
Punch knock-out (max)	mm	20	29,3	29,3	43,5
Thread diameter (max 8.8/12.9)	mm	M10/M8	M14/M12	M12/M10	M20/M18
Thread length (max)	mm	65	90	100	100
Shank length (min÷max)	mm	25-90	20-135	50-160	50-160
Speed Range up to (rpm)°	No.	220	150	140	130
Main motor	kW	30	45	45	75
TOOL POCKET SIZE					
Die - ØxL	mm	54x110	75x160	75x180	100x195
Punch (fixed) - ØxL	mm	45x100	60x125	60x125	75x170
Knife - Ø	mm	31	38	38	55
Quill - Ø	mm	32	39	39	68
BOLTMAKER DIES					
Thread roll die moving X Y Z	mm	146x68x16	216x92x21	216x103x21	254x105x22
Thread roll die stationary X Y Z	mm	127x68x16	191x92x21	191x103x21	229x105x22
Comparable Sizes	W/TR	TR3	W30/TR5	W30/TR5	W40/TR6
WEIGHTS					
Net mass	kg	18.500	27.000	27.000	53.000

SP28-EL

SP38-EL

SP38-SL

SP48-L

LARGE PART FORMERS

SACMA's Series 6 progressive headers, with six dies and a wire diameter capacity of up to 33mm, are designed for large components. With up to 650 tonnes of heading force, they form complex parts efficiently. These machines offer easy operation, ergonomic features, and refeeding options.

CHARACTERISTICS		SP670-AL	SP670-AS
QUICK TOOL CHANGE HEADING LOAD		•	•
Heading load	kN	5.500	6.500
Number of dies	No.	6	6
Cut-off diameter (600N/mm²)	mm	33	33
Cut-off length (max)	mm	300	200
Die kick-out (max)(max)	mm	40-240	160
Punch knock-out (max)	mm	62,5	62,5
Speed Range up to (rpm)°	No.	80	100
Main Motor	kW	150	150
TOOL POCKET SIZE			
Die - ØxL	mm	150x295	150x295
Punch (fixed) - ØxL	mm	120x235	120x260
Knife - Ø	mm	80	80
Quill - Ø	mm	112	112
WEIGHTS			
Net mass	kg	115.000	115.000

SP670-AL

SP670-AS

1D/2B COMBINED HEADER

The KSP12 produces screws from M3 to M8 with up to 60mm shank length. With the 1D/2B forming station and the threading station, it combines reliable mechanics and advanced mechatronics for user-friendliness. Features include a rigid monoblock cast iron frame, motorized setup adjustments, S-Feed wire feeder, and quality management with K-Loadmatic system.

CHARACTERISTICS		KSP12
Heading Load	kN	270
Number of Dies	No.	1D2B
Cut-Off Diameter (600 N/mm²)	mm	7,2
Cut-Off Length (max)	mm	80
Die Kick-out (max)	mm	60
Punch knock-out (max)	mm	8,7
Thread diameter (max 8.8-12.9)	mm	M8/M6
Self tapping screws	mm	7
Thread length	mm	57
Speed Range up to (rpm)°	No.	300
Main motor	kW	15
TOOL POCKET SIZES		
Die - ØxL	mm	45x80
Punch - ØxL	mm	35x116
Knife Diameter	mm	16
Quill Diameter	mm	20
BOLTMAKER DIES		
Thread roll die-moving	mm	101,6x60x20,64
Thread roll die-stationary	mm	88,9x60x20,64
Comparable Sizes	mm	W1015
WEIGHTS		
Net mass	kg	13.000

KSP12

WARM FORMERS

SACMA's Warm Formers, used in aerospace and automotive industries, feature advanced technology for exceptional performance. With a monoblock cast iron bed for rigidity, S-Feed system for precise wire management, and induction coils to heat materials up to 900°C (1652°F), they ensure reliable, high-quality production with advanced cooling, pyrometers, and automatic adjustments.

									LONG STROKE SERIES		
CHARACTERISTICS		**SP260-WF**	**SP270-WF**	**SP360-WF**	**SP370-WF**	**SP460-WF**	**SP470-WF**	**SP570-WF**	**SP570-C-WF**	**SP260-EL-WF**	**SP270-EL-WF**	**SP360-EL-WF**
S-FEED SERVOMOTOR WIRE FEED		•	•	•	•	•	•	•	•	•	•	•
Heading load	kN	800	800	1.400	1.400	2.200	2.200	3.200	3.600	700	800	1.400
Number of dies	No.	5	6	5	6	5	6	6	6	5	6	5
Cut-off diameter (600 N/mm²)	mm	11,5	11,5	15	15	20	20	24	25	10,5	11,5	15
Cut-off length (max)	mm	85	85	127	127	165	165	250	160	115	115	165
Die kick-out (max)	mm	65	65	90	90	120	120	200	110	90	90	135
Punch knock-out (max)	mm	20	20	29,3	29,3	43,5	43,5	46,5	46,5	20	20	29,3
Speed Range up to (rpm)°	No.	275	275	200	200	160	160	120	130	220	220	150
Main motor	kW	30	30	45	45	75	75	100	100	30	30	45
TOOL POCKET SIZES												
Die - ØxL	mm	54x110	54x110	75x125	75x125	100x165	100x195	110x225	110x225	54x110	54x110	75x160
Punch - ØxL	mm	45x100	45x100	60x125	60x125	75x170	75x170	85x170	85x170	45x100	45x100	60x125
Knife - Ø	mm	31	31	38	38	55	55	60	60	29	32	38
Quill - Ø	mm	32	32	39	39	68	68	78	78	30	31	39
Heating power	kW	25+25	25+25	25+50	25+50	150	150	150	150	25+25	25+25	25+50
Max temperarure	°C (°F)	900 (1.652)	900 (1.652)	900 (1.652)	900 (1.652)	900 (1.652)	900 (1.652)	900 (1.652)	900 (1.652)	900 (1.652)	900 (1.652)	900 (1.652)
WEIGHTS												
Net mass	kg	15.000	15.500	23.500	24.000	41.000	45.000	50.000	50.000	15.000	16.000	24.000


SP260-WF


SP270-WF


SP360-WF


SP370-WF


SP460-WF


SP470-WF


SP570-WF


SP570C-WF


SP260-EL-WF


SP270-EL-WF


SP360-EL-WF

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