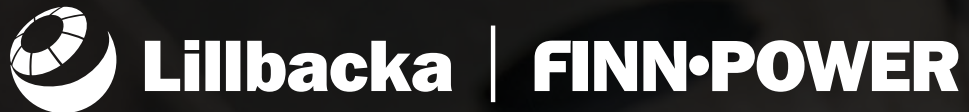




SIDE FEED, NUT & CABLE MACHINES

FOR DEMANDING CRIMPING REQUIRING SPECIAL MACHINERY

 Lillbacka | FINN•POWER



HIGH QUALITY CRIMPING WITH OVER 40 YEARS OF EXPERIENCE

Each year Lillbacka Powerco Oy manufactures thousands of different types of crimping machines, as well as hose cutting and nut crimping machines. Approximately 95% of Powerco's production is exported through an international distributor network to more than 60 countries from the company factory in Finland. Finn-Power is known everywhere for its quality and long-lasting crimping machines, which are produced by Lillbacka Powerco with more than 40 years of manufacturing experience. We offer reliable, durable and accurate crimping machines to meet the requirements of different industries.

Finn-Power products offer the highest and most dependable quality thanks to the many years of experience in product design, engineering, development and manufacturing. Each machine is carefully tested and there's minimal need for calibration. The driving force behind the success of Finn-Power products lies in the many skilled professionals with customer service oriented attitude. Finn-Power machines represent high-quality Finnish engineering work at its best.

We make the quality for you!

Dreams came true

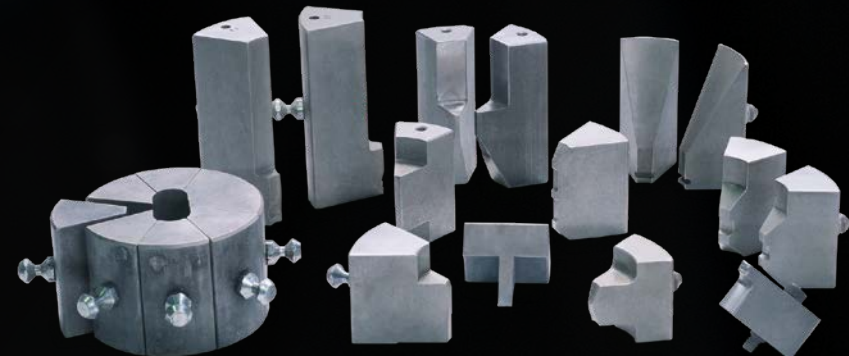
Jorma Lillbacka, who grew up in the spacious nature of Ostrobothnia, has never gone with the flow. Already from childhood, Jorma has determinedly carried out his own dreams and built everything from powerful industrial machines to airplanes. Lillbacka's entrepreneurial spirit has made innovation, quality and service more than just words: they are a way of life. Lillbacka Group is strongly Finnish company whose main pillar of operations is the high quality of products. For over 40 years Lillbacka has proven to be successful, creative and diverse. At Lillbacka, dreams can indeed become reality.





FINN-POWER NUT AND CABLE CRIMPERS

Finn-Power nut and cable crimping machines are fast and accurate in crimping the nut/ ferrule/ bush set on the ends of hydraulic hoses. These powerful machines are intended for serial production. Nut and cable crimping machines provide accurate and consistent results. The Finn-Power NC crimping machines have proven to be the most reliable and widely used nut crimpers in the industry.





NC20, NC30, NC40, NC60

FAST NUT CRIMPING FOR SERIAL PRODUCTION

Finn-Power NC series nut crimping machines provide fast, accurate operation in crimping the nut / ferrule / bush set on ends of hydraulic hoses. These models are intended for use in serial manufacturing. A special centering pin, selected according to ferrule size is used during the crimping. NC series has proven to be the most reliable and widely used nut crimping machines in the industry. NC machines have been developed to fasten the rotating nut of the hydraulic connector and to crimp together one-piece fitting parts. NC machines are also used for crimping, connecting and calibrating small, short parts, eg. connectors, small hoses, tubes and pins.

CONTROL

ICC TOUCHSCREEN, ADVANCED QUALITY CONTROL AND QUICK SET UP

UC STRAIGHTFORWARD CRIMPING CONTROL

AVAILABLE MODELS

Z SEPARATED CRIMPING HEAD AND BODY

STANDARD FEATURES

- Foot pedal
- Mechanical backstop device
- Counter

OPTIONS

- Auto greasing G3
- Remote control unit
- A3 signal option* (standard for ICC)
- Oil Cooler
- Bar Code Reader
- Connectivity pack (ethernet)
- Pressure crimping (UC1, ICC1)
- Step crimping (UC2, ICC2)
- Quality crimping (UC3, ICC3)
- Graphical quality crimping (ICC4)

* ICC 7"

DIE SET NC20

Pno	Crimp. range	D	L
18546/12	12.0 - 16.0	12	3
18546/16	16.0 - 22.0	16	4
18546/22	22.0 - 27.0	22	4.5
18546/27	27.0 - 34.0	27	5
18546/34	34.0 - 41.0	34	5
18546/41	41.0 - 49.0	41	5

DIE SET NC30

Pno	Crimp. range	D	L
702044/12	12.0 - 14.0	12	3
702044/14	14.0 - 16.0	14	3
702044/16	16.0 - 19.0	16	4
702044/19	19.0 - 22.0	19	4
702044/22	22.0 - 26.0	22	4.5
702044/26	26.0 - 30.0	26	4.5
702044/30	30.0 - 34.0	30	5
702044/34	34.0 - 39.0	34	5
702044/39	39.0 - 45.0	39	5
702044/45	45.0 - 51.0	45	5
702044/51	51.0 - 57.0	51	5
702044/57	57.0 - 63.0	57	5

DIE SET NC40

Pno	Crimp. range	D	L
703955/63	63.0 - 69.0	63	5
703955/69	69.0 - 73.0	69	5
703955/73	73.0 - 81.0	73	6
703955/81	81.0 - 93.0	81	7
703955/93	93.0 - 105.0	93	7



NC20 - FAST

NC30 - FASTEST

NC40 - STRONG

NC60 - STRONGEST

FEATURES

NC20 is fast and accurate for crimping and connecting smaller hoses, tubes and pins.

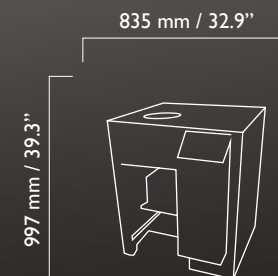
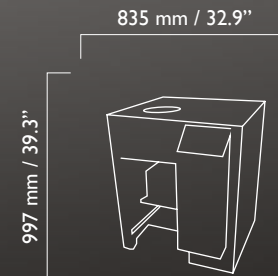
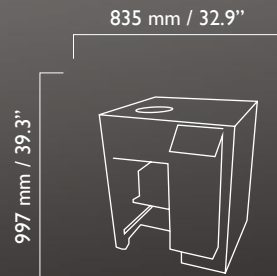
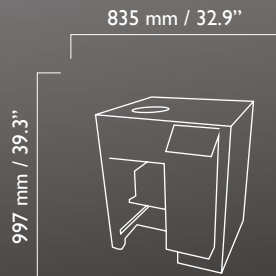
NC30 has slightly more speed, is ideal for little larger parts and has a bit more power than NC20.

NC40 is strong and perfect for crimping bigger tubes, connectors and pins.

The most powerful nut crimping machine with largest crimping range available on the market. NC60 is ideal for the largest connectors and applications.

DIE SETS	NC20	NC30	NC20, NC30, NC40	NC20, NC30, NC40
CRIMPING RANGE (MM) ¹⁾	12 - 49	12 - 63	12 - 105	12 - 160
CRIMPING RANGE (INCH) ¹⁾	0.47 - 1.93	0.47 - 2.48	0.47 - 4.13	0.47 - 6.30
MAX OPENING (MM)	+18	+26	+26	+29
MAX CRIMPING FORCE (KN)	500	660	930	1 300
MAX CRIMPING FORCE (TON.)	50	66	93	130
NUMBER OF CRIMPS/HOUR ²⁾	2 100	2 400	1 900	1 600
MOTOR (KW)	3	4	4	4
MOTOR (HP)	4.0	5.5	5.5	5.5
WEIGHT (KG)	220	240	240	430
WEIGHT (LBS)	485	529	529	948

MEASUREMENTS



1) With standard dies. Crimping range can be increased with special dies.
 2) Theoretical with 10 mm cycle.



NC20Z, NC30Z, NC40Z

DIVERSE AND HIGH-QUALITY NUT CRIMPING

Finn-Power NC20Z, NC30Z and NC40Z nut crimping machines provide fast and accurate operation in crimping the nut, ferrule and bush set on ends of hydraulic hoses. A special centering pin, which is selected according to ferrule size, is used during the crimping. These machines produce accurate and consistent results. Z-models' crimping head and body are separated, which enables various constructions and interfaces with automated cells.

CONTROL

ICC TOUCHSCREEN, ADVANCED QUALITY CONTROL AND QUICK SET UP

UC STRAIGHTFORWARD CRIMPING CONTROL

AVAILABLE MODELS

Z SEPARATED CRIMPING HEAD AND BODY

STANDARD FEATURES

- Mechanical backstop device
- Counter

OPTIONS

- Foot pedal
- Auto greasing G3
- Remote control unit
- A3 signal option* (standard for ICC)
- Oil Cooler
- Bar Code Reader
- Connectivity pack (ethernet)
- Pressure crimping (UC1, ICC1)
- Step crimping (UC2, ICC2)
- Quality crimping (UC3, ICC3)
- Graphical quality crimping (ICC4)

* ICC 7"

DIE SET NC20

Pno	Crimp. range	D	L
18546/12	12.0 - 16.0	12	3
18546/16	16.0 - 22.0	16	4
18546/22	22.0 - 27.0	22	4.5
18546/27	27.0 - 34.0	27	5
18546/34	34.0 - 41.0	34	5
18546/41	41.0 - 49.0	41	5

DIE SET NC30

Pno	Crimp. range	D	L
702044/12	12.0 - 14.0	12	3
702044/14	14.0 - 16.0	14	3
702044/16	16.0 - 19.0	16	4
702044/19	19.0 - 22.0	19	4
702044/22	22.0 - 26.0	22	4.5
702044/26	26.0 - 30.0	26	4.5
702044/30	30.0 - 34.0	30	5
702044/34	34.0 - 39.0	34	5
702044/39	39.0 - 45.0	39	5
702044/45	45.0 - 51.0	45	5
702044/51	51.0 - 57.0	51	5
702044/57	57.0 - 63.0	57	5

DIE SET NC40

Pno	Crimp. range	D	L
703955/63	63.0 - 69.0	63	5
703955/69	69.0 - 73.0	69	5
703955/73	73.0 - 81.0	73	6
703955/81	81.0 - 93.0	81	7
703955/93	93.0 - 105.0	93	7



NC20Z - FAST

FEATURES

NC20 provides fast and high-quality crimping for serial manufacturing. Suitable for crimping the nut, ferrule and bush set on the ends of hydraulic hoses.



NC30Z - FASTEST

Fast and accurate crimping for serial manufacturing. Offers also straightforward crimping control.



NC40Z - STRONG

Intended for use in automatic lines or applications for serial manufacturing.

DIE SETS

NC20

NC30

NC20, NC30, NC40

CRIMPING RANGE (MM) ⁽¹⁾

12 - 49

12 - 63

12 - 105

CRIMPING RANGE (INCH) ⁽¹⁾

0.47 - 1.93

0.47 - 2.48

0.47 - 4.13

MAX OPENING (MM)

+18

+26

+26

MAX CRIMPING FORCE (KN)

500

660

930

MAX CRIMPING FORCE (TON.)

50

66

93

NUMBER OF CRIMPS/HOUR ⁽²⁾

2 100

2 400

1 900

MOTOR (KW)

3

4

4

MOTOR (HP)

4.0

5.5

5.5

WEIGHT (KG)

220

125 / 117

164 / 118

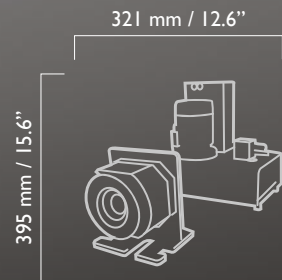
WEIGHT (LBS)

485

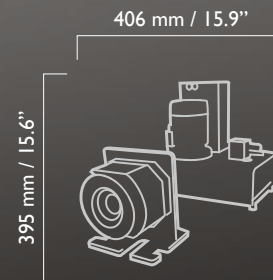
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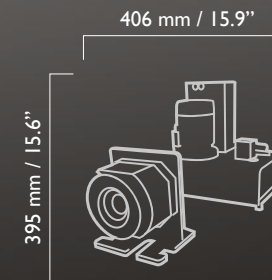
MEASUREMENTS



597/651 mm / 25.6/23.5"



597/651 mm / 25.6/23.5"



653/711 mm / 25.7/27.9"

- 1) With standard dies. Crimping range can be increased with special dies.
- 2) Theoretical with 10 mm cycle.



CC22, CC24

MAXIMUM PRODUCTIVITY

Finn-Power CC22 and CC24 crimping machines maximize productivity through an optimal force / speed ratio. Outside high-pressure hydraulics there are numerous hose applications where relatively low crimping force is required. These are commonly found in automotive technology, low-pressure water systems, household equipment etc.

CONTROL

ICC TOUCHSCREEN, ADVANCED QUALITY CONTROL AND QUICK SET UP

UC STRAIGHTFORWARD CRIMPING CONTROL

AVAILABLE MODELS

Z SEPARATED CRIMPING HEAD AND BODY

STANDARD FEATURES

- Electric backstop device

OPTIONS

- Foot pedal
- Mechanical backstop device
- Auto greasing G3
- Remote control unit
- A3 signal option* (standard for ICC)
- Bar Code Reader
- Connectivity pack (ethernet)
- Pressure crimping (UC1, ICC1)
- Step crimping (UC2, ICC2)
- Quality crimping (UC3, ICC3)
- Graphical quality crimping (ICC4)

* ICC 7", 12"

DIE SET CC22

Pno	Crimp. range	D	L
18315/10	10.0 - 12.0	10	50
18315/12	12.0 - 14.0	12	50
18315/14	14.0 - 16.0	14	50
18315/16	16.0 - 19.0	16	50
18315/19	19.0 - 23.0	19	50
18315/23	23.0 - 27.0	23	50
18315/27	27.0 - 31.0	27	50
18315/31	31.0 - 36.0	31	50
18315/36	36.0 - 41.0	36	50
18315/41	41.0 - 47.0	41	50
18315/47	47.0 - 54.0	47	50

DIE SET P20

Pno	Crimp. range	D	L
18013/10	10.0 - 12.0	10	55
18013/12	12.0 - 14.0	12	55
18013/14	14.0 - 16.0	14	55
18013/16	16.0 - 19.0	16	55
18013/19	19.0 - 23.0	19	55
18013/23	23.0 - 27.0	23	55
18013/27	27.0 - 31.0	27	70
18013/31	31.0 - 36.0	31	70
18013/36	36.0 - 41.0	36	75
18013/41	41.0 - 47.0	41	75
18013/47	47.0 - 54.0	47	85
18013/54	54.0 - 61.0	54	85



CC22 - FASTER



CC24 - STRONGER

FEATURES

Perfect choice for automotive technology, low-pressure water systems, household equipment etc. where precise crimping operation is needed.

Stronger CC24 has wider crimping range and is therefore better choice for bigger tubes, connectors and bushings.

DIE SETS

CC22

P20

CRIMPING RANGE (MM) ¹⁾

10 - 54

10 - 61

CRIMPING RANGE (INCH) ¹⁾

0.39 - 2.12

0.39 - 2.40

MAX OPENING (MM)

+25

+25

MAX CRIMPING FORCE (KN)

680

1 300

MAX CRIMPING FORCE (TON.)

68

130

NUMBER OF CRIMPS/HOUR ²⁾

1 700

1 280

MOTOR (KW)

3

4

MOTOR (HP)

4.0

5.5

WEIGHT (KG)

125

178

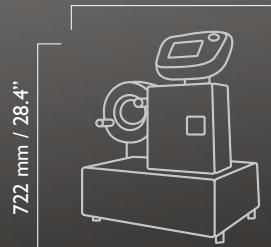
WEIGHT (LBS)

276

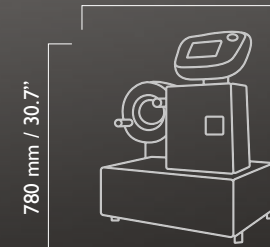
393

MEASUREMENTS

597 mm / 23.6"



597 mm / 23.6"



- 1) With standard dies. Crimping range can be increased with special dies.
- 2) Theoretical with 10 mm cycle.



COMPROMISE/
NOT AN
OPTION



INNOVATIVE SIDE FEED MACHINES

Hose assemblies in the automotive industry are often comprised of odd shapes and sharp angles. The traditional pass through head structure of most hose crimping machines does not accommodate such assemblies. This is why Finn-Power has introduced an open head structure, which allows the hose to be fed from the side. This innovative structure makes crimping of any odd shaped hose assemblies easier and more accurate than ever before.



SP350, SP350S, SP350Z

UNSURPASSED ACCURACY, REPEATABILITY AND VERSATILITY

Finn-Power SP350 side feed crimping machine has many great features including ease of use and versatile control unit with a movable swing arm. It also has an adjustable angle of crimping head for easier part orientation and visibility. SP350 has unsurpassed accuracy and repeatability and is simple to install and start up. SP350 is also available as a D-model, which means it has double machine bar installation.

CONTROL

- ICC** TOUCHSCREEN, ADVANCED QUALITY CONTROL AND QUICK SET UP
- UC** STRAIGHTFORWARD CRIMPING CONTROL

AVAILABLE MODELS

- S** MORE SPEED IN REDUCED CRIMPING TIME
- Z** SEPARATED CRIMPING HEAD AND BODY
- D** DOUBLE MACHINE BAR INSTALLATION

OPTIONS

- Tool base with quick-change tool
- Foot pedal
- Auto greasing G3
- Remote control unit
- A3 signal option* (standard for ICC)
- Bar Code Reader
- Connectivity pack (ethernet)
- Pressure crimping (UC1, ICC1)
- Step crimping (UC2, ICC2)
- Quality crimping (UC3, ICC3)
- Graphical quality crimping (ICC4)

* ICC 7", 12"

DIE SET CC22

Pno	Crimp. range	D	L
18315/10	10.0 - 12.0	10	50
18315/12	12.0 - 14.0	12	50
18315/14	14.0 - 16.0	14	50
18315/16	16.0 - 19.0	16	50
18315/19	19.0 - 23.0	19	50
18315/23	23.0 - 27.0	23	50
18315/27	27.0 - 31.0	27	50
18315/31	31.0 - 36.0	31	50
18315/36	36.0 - 41.0	36	50
18315/41	41.0 - 47.0	41	50
18315/47	47.0 - 54.0	47	50



SP350 - ACCURATE

SP350 has unsurpassed accuracy and repeatability and it is easy to use.



SP350S - FASTEST

SP350S is the fastest of these three models.



SP350Z - VERSATILE

SP350Z machine's construction enables implementation to automated cells.

FEATURES

DIE SETS

CC22

CC22

CC22

CRIMPING RANGE (MM) ⁽¹⁾

10 - 54

10 - 54

10 - 54

CRIMPING RANGE (INCH) ⁽¹⁾

0.39 - 2.12

0.39 - 2.12

0.39 - 2.12

MAX OPENING (MM)

+25 / +48

+25 / +48

+25 / +48

MAX CRIMPING FORCE (KN)

350

350

350

MAX CRIMPING FORCE (TON.)

35

35

35

NUMBER OF CRIMPS/HOUR ⁽²⁾

480

950

480

MOTOR (KW)

3

4

3

MOTOR (HP)

4.0

5.5

4.0

WEIGHT (KG)

930

1 100

410 / 100

WEIGHT (LBS)

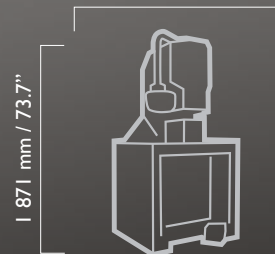
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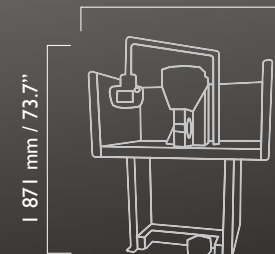
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MEASUREMENTS

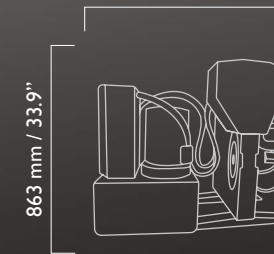
970 mm / 38.2"



1 505mm / 59.3"



580 mm / 22.8"



653/711 mm / 25.7/28"

- 1) With standard dies. Crimping range can be increased with special dies.
- 2) Theoretical with 10 mm cycle.



SP100, SP1200, SP2000, SP5000

PERFECT FOR AUTOMOTIVE INDUSTRY AND OEM PRODUCTION

Finn-Power SP series offer productivity and functionality from serial to heavy-duty production. These side feed crimping machines are reliable, efficient and easy to use. The open head structure enables crimping challenging hose assemblies that have an unusual shape. It allows the hose to be fed from the side, which makes crimping of odd shaped hose assemblies easier and more accurate. SP machines have an excellent repeatability, accuracy and versatile control unit. They are also easy to use and simple to install.

CONTROL

- ICC** TOUCHSCREEN, ADVANCED QUALITY CONTROL AND QUICK SET UP
- UC** STRAIGHTFORWARD CRIMPING CONTROL

AVAILABLE MODELS

- S** MORE SPEED IN REDUCED CRIMPING TIME **
- Z** SEPARATED CRIMPING HEAD AND BODY ***
- D** DOUBLE MACHINE BAR INSTALLATION ***

OPTIONS

- Foot pedal
- Auto greasing G3
- Remote control unit
- A3 signal option* (standard for ICC)
- Oil Cooler
- Bar Code Reader
- Connectivity pack (ethernet)
- Pressure crimping (UC1, ICC1)
- Step crimping (UC2, ICC2)
- Quality crimping (UC3, ICC3)
- Graphical quality crimping (ICC4)

* ICC 7", 12"

** S model available for SP100 machines.

*** Z and D models are not available for SP2000 and SP5000 machines.

For more information visit: www.powerco.lllbacka.com

DIE SET SP100

Pno	Crimp. range	D	L
701817/10	10.0 - 12.0	10	40
701817/12	12.0 - 14.0	12	40
701817/14	14.0 - 16.0	14	40
701817/16	16.0 - 19.0	16	40
701817/19	19.0 - 23.0	19	40
701817/23	23.0 - 27.0	23	40
701817/27	27.0 - 31.0	27	40
701817/31	31.0 - 36.0	31	40
701817/36	36.0 - 41.0	36	40
701817/41	41.0 - 47.0	41	40
701817/47	47.0 - 54.0	47	40

DIE SET CC22

Pno	Crimp. range	D	L
18315/10	10.0 - 12.0	10	50
18315/12	12.0 - 14.0	12	50
18315/14	14.0 - 16.0	14	50
18315/16	16.0 - 19.0	16	50
18315/19	19.0 - 23.0	19	50
18315/23	23.0 - 27.0	23	50
18315/27	27.0 - 31.0	27	50
18315/31	31.0 - 36.0	31	50
18315/36	36.0 - 41.0	36	50
18315/41	41.0 - 47.0	41	50
18315/47	47.0 - 54.0	47	50

DIE SET P20

Pno	Crimp. range	D	L
18013/10	10.0 - 12.0	10	55
18013/12	12.0 - 14.0	12	55
18013/14	14.0 - 16.0	14	55
18013/16	16.0 - 19.0	16	55
18013/19	19.0 - 23.0	19	55
18013/23	23.0 - 27.0	23	55
18013/27	27.0 - 31.0	27	70
18013/31	31.0 - 36.0	31	70
18013/36	36.0 - 41.0	36	75
18013/41	41.0 - 47.0	41	75
18013/47	47.0 - 54.0	47	85
18013/54	54.0 - 61.0	54	85

DIE SET P32

Pno	Crimp. range	D	L
18506/10	10.0 - 12.0	10	55
18506/12	12.0 - 14.0	12	55
18506/14	14.0 - 16.0	14	55
18506/16	16.0 - 19.0	16	55
18506/19	19.0 - 22.0	19	55
18506/22	22.0 - 26.0	22	70
18506/26	26.0 - 30.0	26	70
18506/30	30.0 - 34.0	30	70
18506/34	34.0 - 39.0	34	75
18506/39	39.0 - 45.0	39	75
18506/45	45.0 - 51.0	45	90
18506/51	51.0 - 57.0	51	90
18506/57	57.0 - 63.0	57	100
18506/63	63.0 - 69.0	63	110
18506/69	69.0 - 75.0	69	110
18506/74	74.0 - 80.0	74	110
18506/78	78.0 - 87.0	78	110

DIE SET FP160

Pno	Crimp. range	D	L
18852/84	84.0 - 92.0	84	116
18852/92	92.0 - 100.0	92	116
18852/100	100.0 - 108.0	100	116
18852/108	108.0 - 116.0	108	116
18852/116	116.0 - 126.0	116	116
18852/126	126.0 - 136.0	126	116
18852/136	136.0 - 146.0	136	116
18852/146	146.0 - 156.0	146	116
18852/156	156.0 - 166.0	156	116
18852/166	166.0 - 178.0	166	116
18852/178	178.0 - 190.0	178	116
18852/190	190.0 - 202.0	190	116



SP100 - FASTEST



SP1200 - STRONG



SP2000 - STRONGER



SP5000 - UNIQUE

FEATURES

Designed especially for crimping short and bent fittings, like automotive hose assemblies.

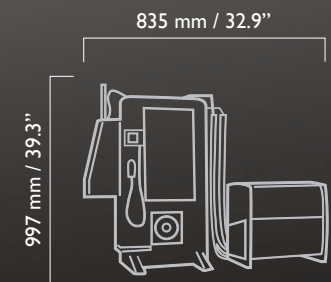
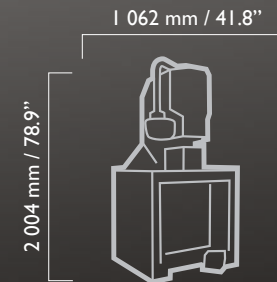
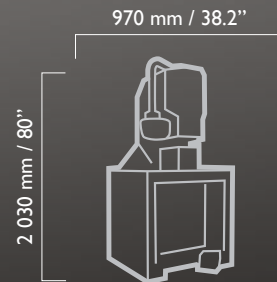
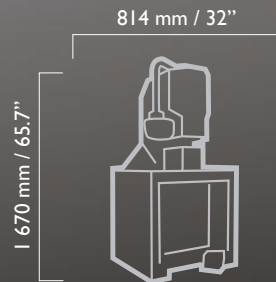
Designed for thick hydraulic hoses, which can be fed from the side. Enables crimping of any odd shaped hose assemblies.

Ideal for crimping long and demanding heavy-duty assemblies for automotive parts.

The most unique crimping machine on the market. It has a crimping force of 5000 kN to handle any thick wall, industrial hose or pipe. For tough environments.

DIE SETS	SP100	CC22	P20	P32 / FP160
CRIMPING RANGE (MM) ¹⁾	10 - 46	10 - 54	10 - 54	10 - 210
CRIMPING RANGE (INCH) ¹⁾	0.39 - 1.81	0.39 - 2.12	0.39 - 2.12	0.39 - 8.26
MAX OPENING (MM)	+11 / +62	+25 / +63	+25 / +63	+46 / +215
MAX CRIMPING FORCE (KN)	100	1 200	2 000	5 000
MAX CRIMPING FORCE (TON.)	10	120	200	500
NUMBER OF CRIMPS/HOUR ²⁾	520	420	258	NA
MOTOR (KW)	3	4	5.5	7.5
MOTOR (HP)	4.0	5.5	7.5	10
WEIGHT (KG)	383	1 350	1 785 / 185	3 650 / 220
WEIGHT (LBS)	844	2 976	3 936 / 408	8 650 / 485

MEASUREMENTS



- 1) With standard dies. Crimping range can be increased with special dies.
- 2) Theoretical with 10 mm cycle.

713/1060 mm / 28/41.7"

713/1060 mm / 28/41.7"



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