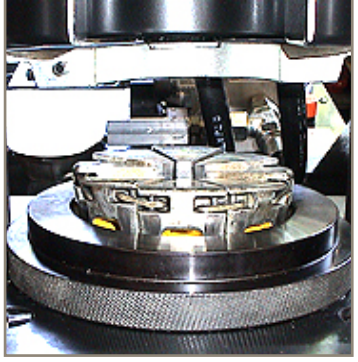
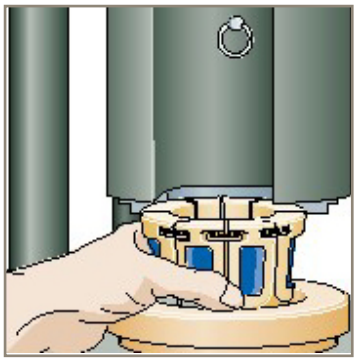
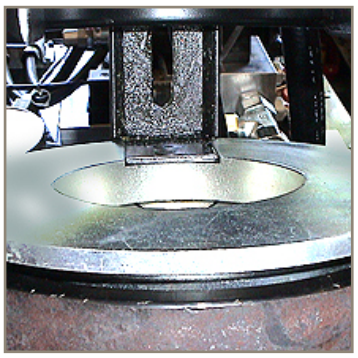




aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Parkrimp® 2 – 83CE-083U

Instruction Manual

Parker

ENGINEERING YOUR SUCCESS.

Translation of the original instruction manual

Hose Crimper Machine Parkrimp®2 83CE-083U

Manufacturer:

Uniflex-Hydraulik GmbH
Robert-Bosch-Straße 50-52

D-61184 Karben
Deutschland

Phone: +49 (0) 60 39 / 91 71 - 0
Fax: +49 (0) 60 39 / 91 71 41

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Contents

Contents

1 Introduction, Designated Use

1.1 Fundamentals

In this Instruction Manual the “Hose Crimper Machine Parkrimp®2 83CE – 083U“ is always designated as plant.

This instruction manual contains important information on how to operate your plant

- safely
- properly and
- most efficiently.

Observing these instructions helps

- to reduce dangers
- to minimise repair costs and downtimes and
- to increase the reliability and service life of the plant.

The plant has been designed in accordance with state-of-the-art standards.
Using the plant contrary to its designated use may, however, constitute a risk to life and limb of the user or cause damage to the plant.

Therefore use the plant only

- in technically perfect condition
- within the limits of its designated use
- with safety-consciousness and fully aware of the risks involved and
- in accordance with all instructions set out in this instruction manual

This instruction manual contains the rules and regulations for the designated use of your plant. Only if these rules and regulations are observed the plant is operated according to its designated use. Any risk of operation contrary to its designated use lies entirely with the user.

Read this instruction manual before

- switching the plant on
- switching the plant off
- servicing or
- repairing the plant

Only staff

- who have read this instruction manual, which must always be ready at hand, and
- understood the instructions and
- have been fully instructed
- are authorized to operate the machine.

1.2 Target groups

This instruction manual is intended for the following target groups:

- the user
- the operator

1.3 Designated use

- This plant is intended for industrial use, suitable only for crimping Parker hydraulic hose lines of
- size 4 (DN 6) to size 32 (DN 50).
- Use exclusively Parker fittings.
- Use exclusively colour-coded Parkrimp die sets with 8 segments.
- The hydraulic hose lines, the fittings and the die sets must be tuned to each other.
- Machining takes place in single strokes. The workpieces are loaded and unloaded manually.
- The maximum hydraulic pressure is 280 bar.
- Do not make any changes to the design of the plant.
- The operating temperature is between 10°C and 40°C.
- The plant must be operated in closed premises.
- Operation in hazardous locations is prohibited.

Any other use is considered contrary to its designated use.

The consequences of any misuse lie exclusively with the user.

Please note:

Operating the plant within the limits of its designated use involves also observing the prescribed

- instructions for switching-on
- instructions for switching-off
- operating instructions
- maintenance and servicing measures and
- disposal procedures

Only staff who have read and understood the – always accessible – instruction manual, and who have signed it in the appendix and who have been fully instructed are authorized to operate the machine.

Any person entrusted with the maintenance of or work on the plant must have read and understood the corresponding parts of this instruction

manual and in particular the chapter 2, “Safe Operation, Pollution Control“.

The user of the plant must inform the personnel about possible risks which may occur.

National regulations apply without restriction.

The user must be sure that the instruction manual has been understood. A copy of the instruction manual must always be available at the place of use of the plant in a place intended for this purpose.

2 Safe Operation, Pollution Control

2.1 General remarks

The plant has been built in accordance with state-of-the-art standards. This plant may constitute a risk if it is used incorrectly or not in accordance with its designated use.

The instruction manual serves for operating the plant in accordance with its designated use and for safety-conscious working on the plant.

Any person entrusted with work on the plant must have read and understood the operating instructions and in particular this chapter “Safe Operation, Pollution Control“.

Safety instructions serve industrial safety and accident prevention and must always be observed.

Therefore keep this instruction manual always in a place on the plant intended for this purpose so that it is always at hand at the place of use of the plant.

Your co-operation is vital to protect yourself and your colleagues from injury.

Set to work with circumspection always being aware of the fact that risks are mostly not "obvious“.

The following symbols are intended to draw your attention to instructions of particular importance in this manual.

	DANGER	This symbol stands next to all safety instructions in this manual where danger to life and limb may occur. Always observe these instructions and proceed with special caution in these situations. All other persons entrusted with work on the machine must be informed of all safety instructions. In addition to the instructions in this manual the general safety and accident prevention regulations must be observed.
	ATTENTION	This symbol stands at points in this instruction manual of particular importance for compliance with regulations and directives, for correct work flow and for the prevention of damage to and destruction of the plant.
	CRUSHING HAZARD	This symbol stands at points in this instruction manual where a crushing hazard to your hands may occur.
	SHEARING HAZARD	This symbol stands at points in this instruction manual where a shearing hazard to your hands may occur.
	IMPORTANT	Special information in the instruction manual on how to use the plant most efficiently.
➢		Working steps or operations to be carried out in the order stated.
•		General specifications.

Table 3-1 Symbols and their signification

2.2 Definition of terms

Residual hazards

Residual hazards are non-obvious risks which result from the use of the plant. Although the plant has been developed, designed and built in accordance with state-of-the-art standards and the generally accepted technical guidelines and regulations, residual hazards cannot entirely be excluded – not even during designated use.

User

The user is any natural person or legal entity that utilises the plant for itself or on whose behalf it is utilised. The user may appoint a representative to exercise all rights and to perform all duties of the user by proxy.

Supervisor

A supervisor is a person appointed by the user to train and instruct the operator in the correct operation of the plant in accordance with the designated use. In addition, the supervisor has to ensure that maintenance and servicing work and regular inspections are carried out, unless different provisions have been made.

Competent and qualified personnel

Competent and qualified personnel are persons who, by reason of their special training and experience, possess adequate knowledge in a special field and who are familiar with the relevant industrial safety and accident prevention regulations together with the generally acknowledged technical guidelines and regulations.

Instructed personnel

Instructed personnel are persons who have been instructed, and where necessary trained, by a qualified person in the particular tasks entrusted to them, who have been informed about possible risks resulting from improper behaviour and about the necessary safety devices and protective measures.

Operator

The operator is a person commissioned by the user, or any other appointed person who holds the power to do so, to operate the plant in accordance with its designated use.

Setter

Setters of hydraulic presses must be at least 18 years old and trained for the job, i.e. must have taken part in a specific training.

Protective clothing

Protective clothing is a personal protective equipment intended to protect the body against residual hazards resulting from the work process. It is the user's responsibility to ensure that the personal protective equipment used complies with the legal regulations for appliance safety.
The relevant accident prevention regulations applicable to the work or workplace concerned specify in detail when personal protective equipment must be used.

2.3 Operational safety instructions
2.3.1 Safety signs at the site

2.3.2 Recommended working area

- Keep the working area clear of obstacles.
- Install lines and cables in ducts, if possible.
- Provide for adequate lighting at the workplace.
- Provide for free access to the hydraulic supply system.

There is one workplace at the plant covering the following working area:

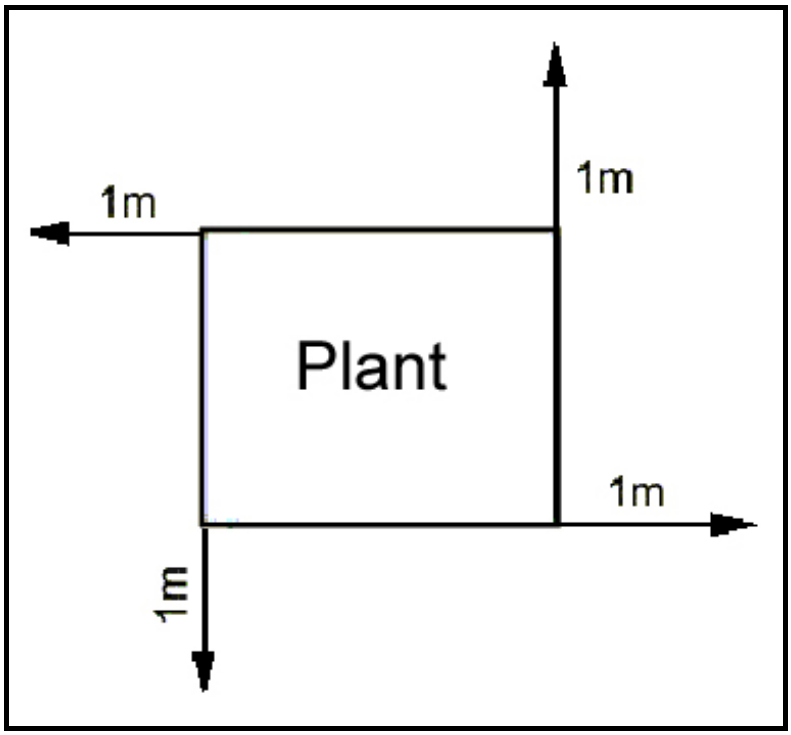


Figure 2-1 Working area

Workplace for manual operation

2.3.3 Noise emissions

The sound level meter according to IEC 804, class 2, was calibrated prior to measuring.
During operation of the plant noise emissions of Leq = 73.7 dBA occur at the workplace. No noise protection measures are necessary.

Date Time=10/06/18 08:41:00
Sampling Time=1
Record Num= 17
Leq Value=73.7; SEL Value=85.8
MAX Value=83.7; MIN Value=68.2
Freq Weighting=A; Time Weighting=Fast

76.7,08:41:00,	69.0,08:41:09,
69.6,08:41:01,	71.7,08:41:10,
70.5,08:41:02,	75.6,08:41:11,
69.7,08:41:03,	74.2,08:41:12,
69.6,08:41:04,	74.0,08:41:13,
69.9,08:41:05,	75.2,08:41:14,
70.1,08:41:06,	75.8,08:41:15,
68.7,08:41:07,	72.4,08:41:16,
70.2,08:41:08,	

In connection with other machines higher noise emissions may occur at the workplace. In this case the plant user must provide for suitable protective measures, e.g.

- prescribe ear protections
- information/briefing on the hazards
- marking of the hazardous area
- medical checks

2.4 To be observed

2.4.1 Prior to switching-on or restoring of power

Provide for sufficient lighting in the working area of the plant.

The operating personnel must be informed about the location and operation of the fire alarm and fire fighting equipment.

This equipment must be freely accessible.

Suitable tools are attached to the plant.

Perform

- switching-on,
- switching-off or
- restoring of power

always according to this instruction manual.

2.4.2 During operation

Production

- Observe the safety instructions on the plant.
-  Crimpers are dangerous machines – they can easily cut off parts of your body – always be aware of this risk during work.
-  To protect your hands always observe the safety distance of 120 mm minimum to the crimping tool.

Figure 2-2 Safety distance 120 mm minimum

- Check each gesture (motor activity) with your eyes (sensory function). Controlled movements must always be monitored by the sensory system.
- Ensure that no other person is in the working area.
- Do not eat, drink and smoke at the workplace.

End of work

➢ Switch off the plant on the main switch.

➢ Thoroughly clean your hands after the end of work.

2.4.3 In case of maintenance and repair

Work on the hydraulic system

The plant is equipped with a hydraulic station including a pump and a motor.

Any maintenance and repair work on the hydraulic station of the plant or any components may only be carried out by expert staff of UNIFLEX-HYDRAULIK GmbH!

Welding, cutting and grinding work

Welding work

cutting work and

grinding work

on and in the plant or in its surroundings require express permission – **there is risk of fire**.

Even if the work is permitted, the plant must be cleaned from dust and combustible materials.

Sufficient ventilation must be ensured.

2.5 Emergency measures

In case of emergency immediately switch off the plant on the main switch.

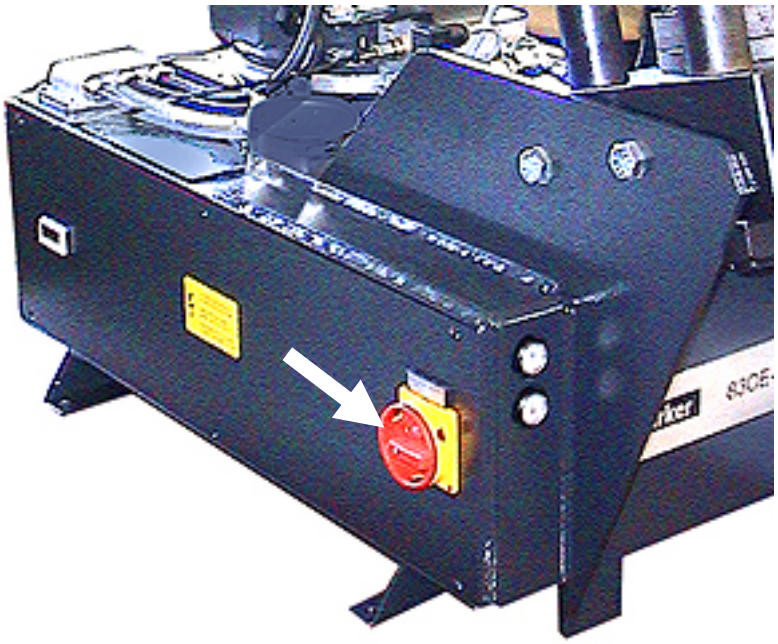


Figure 2-3 Main switch

Before restarting the plant remove the cause of the emergency stop.

2.6 Operating and waste materials

- It is the plant user's duty to follow the pollution control and waste removal regulations applying to his company and his region.
- It is the plant user's duty to disclose necessary legal regulations to the operating personnel, and inform about necessary amendments resulting from the function of the plant.
- It is the plant user's duty to point to the improper use of operating and waste materials.
- Ensure that appropriate measures are taken in the event of accidents and fires.
- Return hydraulic oil to the supplier – because it is hazardous waste.

3 Construction and Function

3.1 Construction

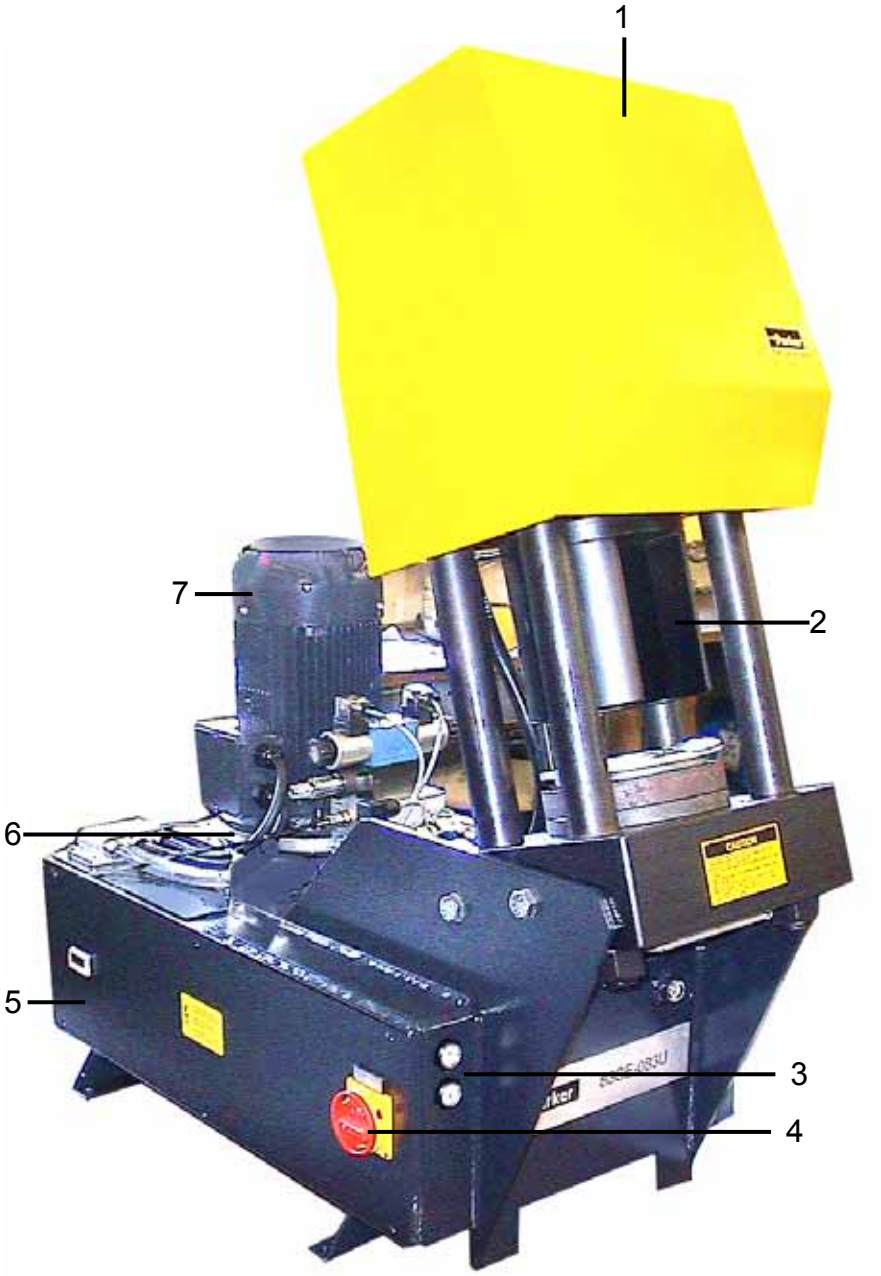


Figure 3-1 Construction of the plant

1 Guard hood
2 Pusher
3 Control panel
4 Main switch
5 Housing
6 Internal hydraulic pump
7 Electric motor with internal hydraulic pump

3.2 Function

Figure 3-2 Safety distance 120 mm minimum

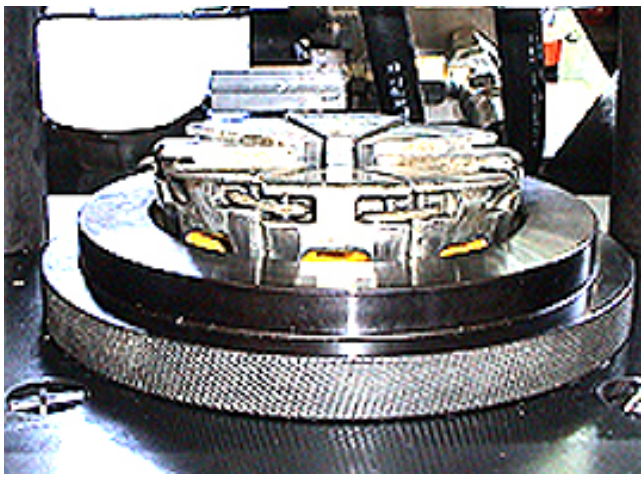


Figure 3-3 Adapter cone and die set

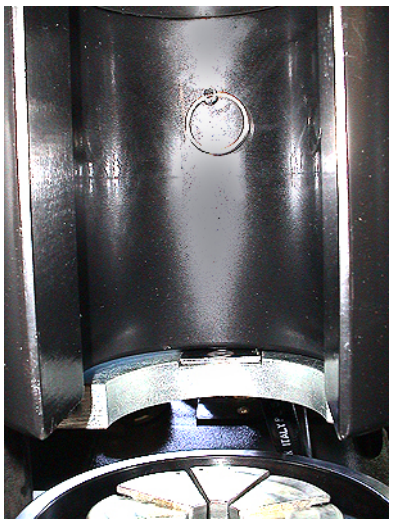


Figure 3-4 Eyelet ring and rear crimp ring half

Crimpers are dangerous machines – they can easily cut off parts of your body – always be aware of this risk during work.

Always check the movements of your hands with your eyes when loading and unloading the workpieces – to ensure that you only perform controlled movements.

To protect your hands always observe the safety distance of 120 mm minimum to the crimping tool.

The minimum requirements for correct crimping include:

- Fitting and tool have been tuned to each other.
- The correct spacer ring, the correct adapter cone and the correct die set have been mounted.

➢ Mark the hose insertion depth on the hose.

➢ Push the hose into the fitting up to the marked insertion depth.

➢ Put a preassembled workpiece into the tool from the bottom (safety distance of your hands 120 mm minimum).

➢ Unlock the rear crimp ring half using the eyelet ring.

➢ Mount the front crimp ring half.

➢ Position the workpiece in the tool (safety distance 120 mm minimum).

➢ Start the crimping cycle (pusher down) on the control panel and lower the pusher to the stop.

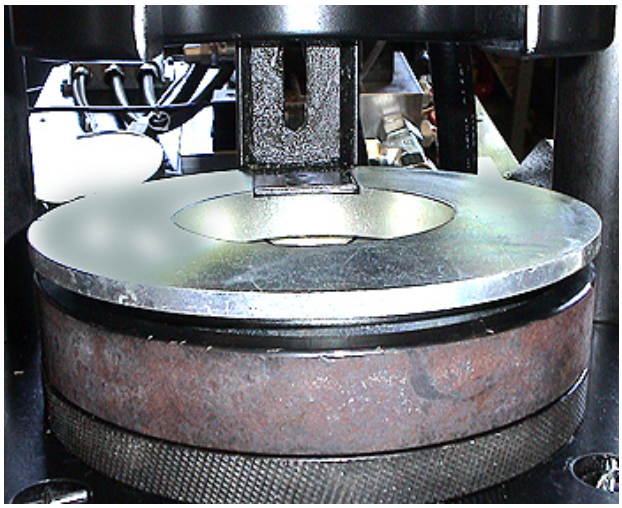


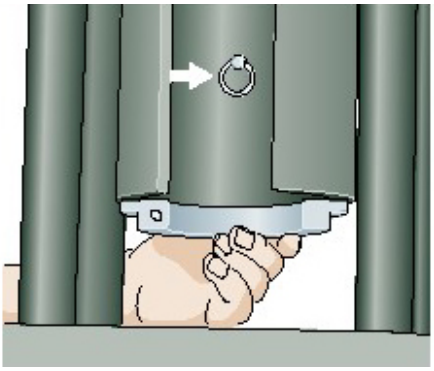
Figure 3-5 Front crimp ring half mounted

- Move the pusher up (lift pusher).
- Remove the front crimp ring half.
- Remove the workpiece from the tool (safety distance 120 mm minimum).
- Check the correct seat of the fitting and the correct dimension.

Figure 3-6 Control panel

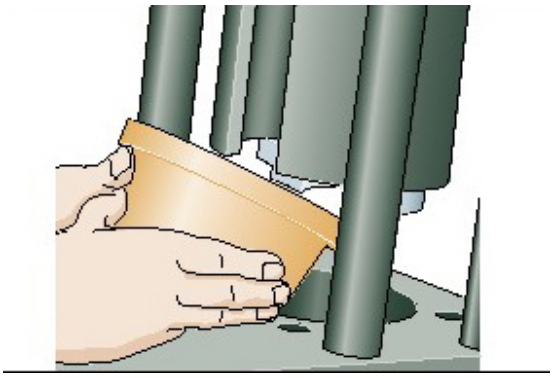
1 Lift pusher
2 Lower pusher

3.2.1 Assembly instructions



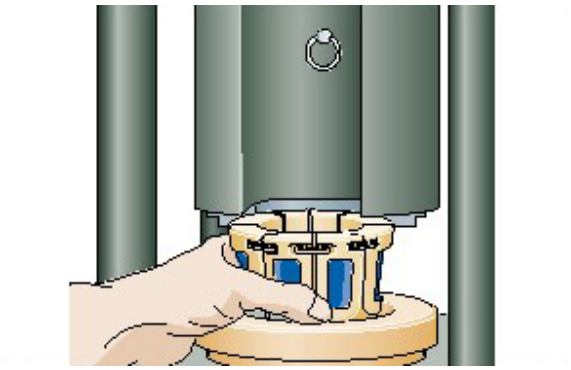
- Move cylinder and pusher fully up.
- Push rear die ring half up and lock it using a pin.

Figure 3-7 Rear die ring half



- Insert adapter element into die holder. Tilt it slightly and position correctly.

Figure 3-8 Adapter element



- Insert die set into lubricated tool holder ensuring that the individual segments are distributed evenly. The die sets are colour-coded according to hose size.

Figure 3-9 Die set

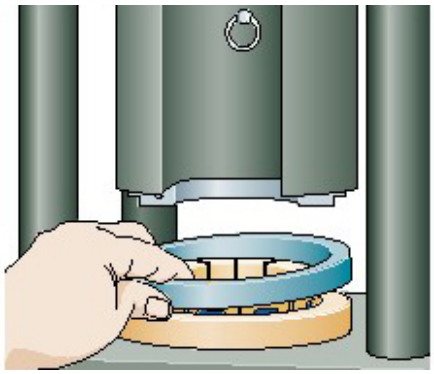


Figure 3-10 Spacer ring

- Insert spacer ring.

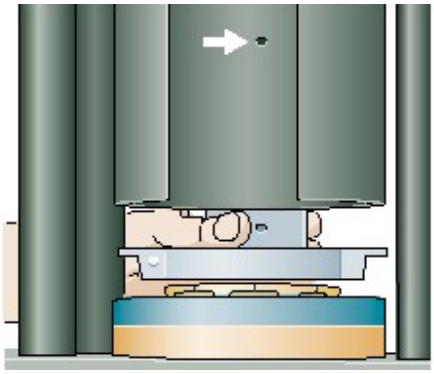


Figure 3-11 Two-part die ring

- Remove locking pin and lower two-part die ring onto die.
- Ensure that the tongue and groove ring is positioned correctly.

Figure 3-12 Other half of the die ring

- Insert the other half of the die ring. Tongue and groove ring serves to align the two halves.

4 Transport, Dimensions, Installation, Intermediate Storage

4.1 Transport

4.1.1 Weights

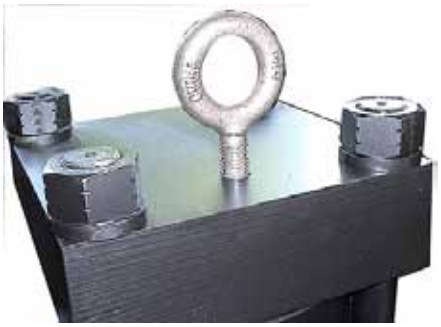


Figure 4-1 Transport lugs in cylinder block

- The weight of the plant amounts to about 450 kg.
- The plant may be unloaded and transported only by fork-lift truck, lift truck or crane.
  In case of crane transport turn the transport lug into the cylinder block up to the stop.
- Be aware of the centre of gravity of the plant during unloading and transport – the plant is top-heavy.
- No persons must stand under suspended loads.
- Provide for sufficiently wide transport routes from the place of unloading to the place of installation.
- Mark place of installation and transport routes.
- Preclude risks by order and overview.

4.2 Dimensions

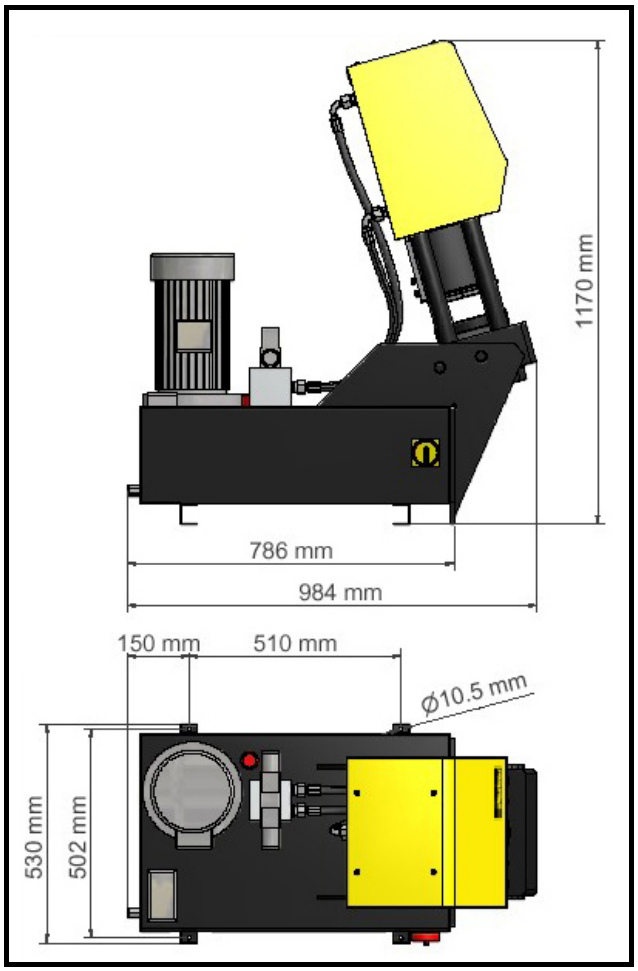


Figure 4-2 Dimensions

4.3 Installation

Figure 4-3 Attachment point

Install the plant on a sturdy workbench and fix it at the four attachment points using M 10 screws.

Adjust the working height to the operator's height.

4.3.1 Structural requirements

Permanent floor load	approx. 0.07 kg/mm^2
Floor bearing capacity	min. 2,500 kg/m^2
Floor quality	B25
Evenness	Waviness max. 5 mm/m
Gradient	max. 5 mm/m

Table 4-1 Floor conditions

4.3.2 Energy required

Ensure that the following energy is available when the plant is delivered::

Voltage	400 V~ ±10% 50 – 60 Hz	three phases, mid-point conductor, protective conductor (earth)
Power	4.4 kW	
Prefuses	3 x 16 A	

Table 4-2 Electric supply

4.3.3 Ambient conditions

Ambient temperature	10°C - 40 °C
Air moisture	45% - 65%

Table 4-3 Ambient conditions

4.4 Intermediate storage of the plant

If the plant cannot be installed immediately after delivery, you must protect the plant against:

- soiling
- atmospheric influence and
- mechanical damage.
- Store the plant parts exclusively in closed rooms.
- The temperature must be between +10°C and +45°C.
- The relative air moisture must not exceed 80% (not condensing).
- Never clean the plant or plant parts by means of steam or water jet. Dirt and water may enter the plant and cause serious damage.

4.5 Installation

Installation of the plant is carried out by expert personnel of the customer.

5 Operation

5.1 First commissioning

Figure 5-1 Mounting the guard hood

- Remove the transport lug.
- Mount the guard hood using the four screws in the fastening holes.
- Fill in 40 litres of hydraulic oil HLP 46 DIN 51524 (5μ) – the oil level is then in the centre of the level indicator.
- Connect the plant to the power supply.
- Check the direction of rotation of the motor – if necessary reverse two phases.
- Ventilate the plant – move the pusher several times up and down.

Figure 5-2 Oil

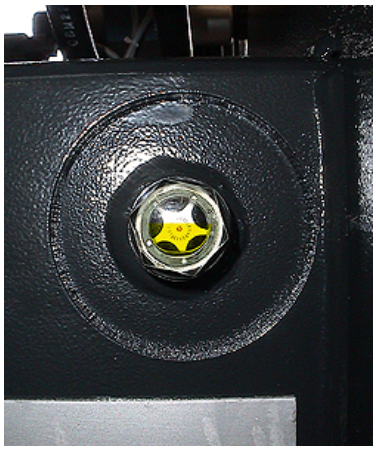


Figure 5-3 Level indicator

Figure 5-4 Direction of rotation of motor

5.2 Switching-on

The following requirements must be fulfilled before the plant can be switched on:

- The plant has been properly installed and first commissioning has been performed by expert personnel (setter and skilled electrician). The direction of rotation of the motor has been checked.
- The plant has been equipped with the suitable Parkrimp die set. Die set, fitting and hose have been properly selected.
- All tools and auxiliary equipment have been removed from the plant.
- Only the operator is allowed to stay in the working area of the plant.
- All emergency stop situations must have been rectified.
- The operator has read and understood the instruction manual. He has received the instruction manual from the user and follows the instructions set out therein.
- The operator is familiar with the safety regulations.

Figure 5-5 Main switch On

➢ Switch on the main switch.

The plant is now on.

5.3 Switching-off

Figure 5-6 Main switch Off

➢ Finish the crimping cycle completely.

➢ Deposit the workpiece outside the plant.

➢ Switch off the main switch.

The plant is now off.

5.4 Restoring of power

Restoring of power is the same operating sequence as switching-on (chapter 5.1).

5.5 Operating mode

The plant features one operating mode:

- manual mode

In the **Manual** mode

- lift or
- lower the pusher

using the buttons

- lift pusher (1),
- lower pusher (2)

When the respective button is released the pusher stops.

Figure 5-7 Control panel

1 Lift pusher
2 Lower pusher

5.6 Emergency stop

In case of emergency immediately switch off the plant via the main switch.

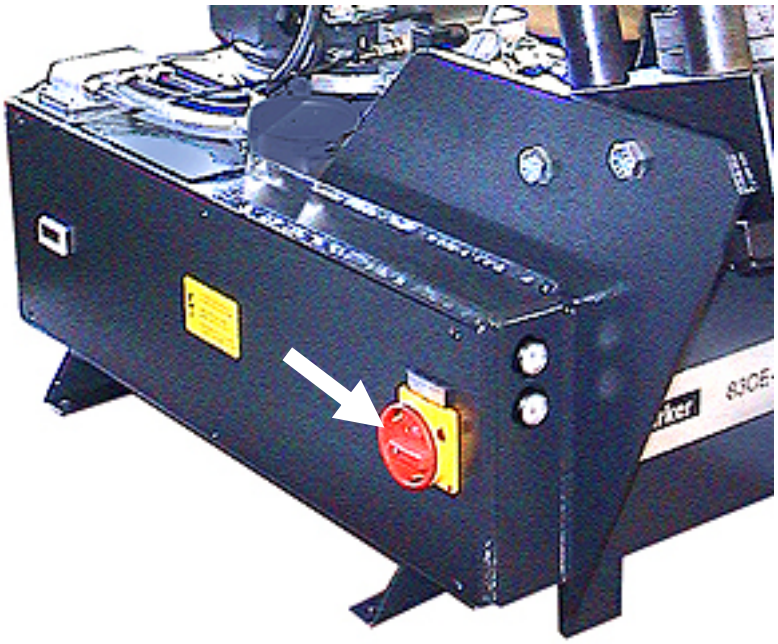


Figure 5-8 Main switch

Remove the cause of the emergency stop before restoring of power.

6 Maintenance

You must switch off the plant for all maintenance work:

Figure 6-1 Main switch Off

- Finish the crimping cycle completely.
- Deposit the workpiece outside the plant.
- Switch off the main switch.

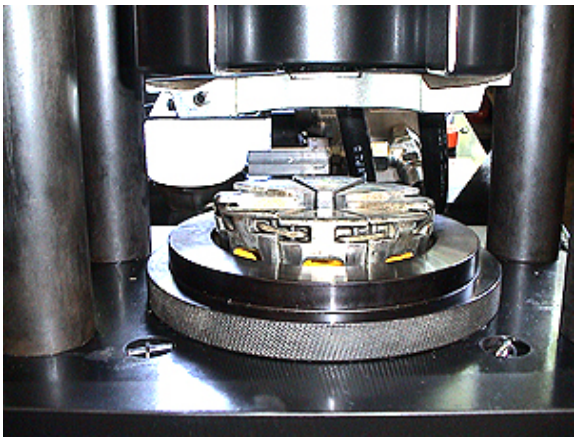
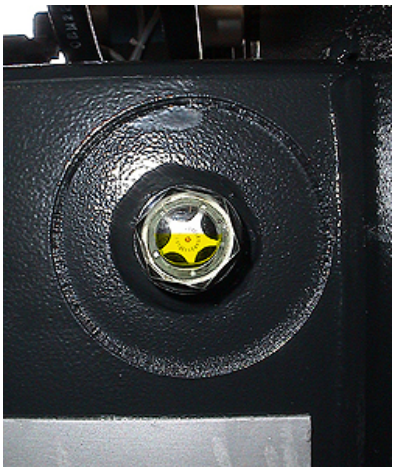
The plant is now off.

Proper functioning of the plant requires regular inspections of selected plant parts.

This chapter describes maintenance measures to be performed by the operator at regular intervals to ensure correct operation of the plant.

If you work in 2 shifts, duplicate the frequency of the intervals. If you work in 3 shifts, proceed in the same way as for 2-shift operation.

6.1 Daily maintenance

Maintenance objects	Actions (to be performed by operator)
 Figure 6-2 Plant	Perform a visual inspection of the plant for • cleanliness • leaks • outside damage
 Figure 6-3 Crimping tool	Perform a visual inspection of the crimping tool for • cleanliness • proper condition
 Figure 6-4 Level indicator	• Check the hydraulic oil level on the level indicator. • The oil level is in the centre. • Remove oil, dirt dust and chips using a vacuum cleaner.

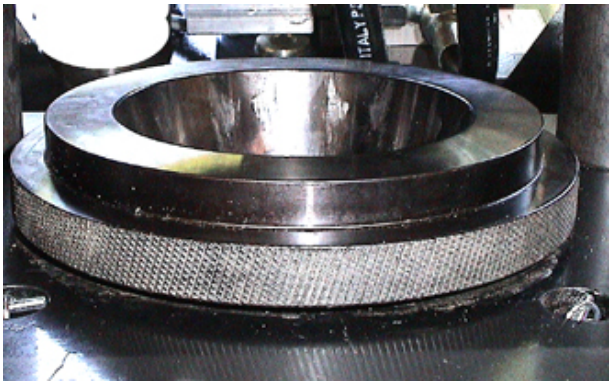
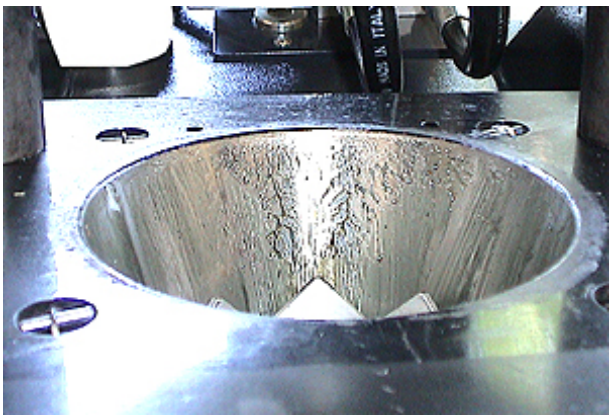
Maintenance objects	Actions (to be performed by operator)
 Figure 6-5 Die cone  Figure 6-6 Main cone	➢ Clean and ➢ grease the • die cone and the • main cone using high-pressure-resistant, lithium-saponified grease

Table 6-1 Daily maintenance

6.2 Monthly maintenance

Monthly maintenance work may only be carried out by trained maintenance personnel (setters).

Setters of hydraulic presses must be at least 18 years old and trained for the job, i.e. must have taken part in a specific training.

The setter must **not** carry out any repair work on the plant!

Maintenance objects	**Actions (to be performed by operator)**
Hydraulic energy lines	Check • the hoses for porosity and leaks • the screw couplings and clamps for tightness
Hydraulic oil	• Check the hydraulic oil level in the hydraulic station (see figure 6-4). • Use only clean and filtered hydraulic oil type HLP 46 DIN 51524 (5µ) for oil changes. •  Ventilate the plant after the hydraulic oil change: open and close the tool several times.!
Crimping tool	• Check the crimping tool for proper condition and wear.

Table 6-2 Monthly maintenance

6.3 Yearly maintenance

Yearly maintenance work may only be carried out by trained maintenance personnel (setters).

Setters of hydraulic presses must be at least 18 years old and trained for the job, i.e. must have taken part in a specific training.

The setter must **not** carry out any repair work on the plant!

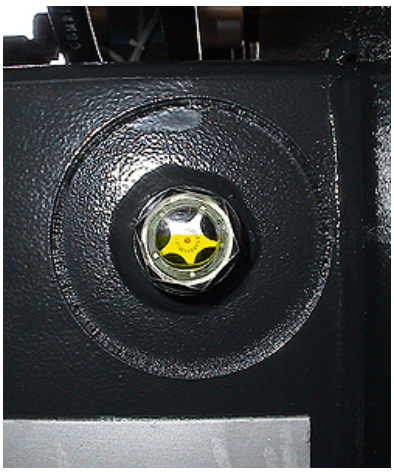
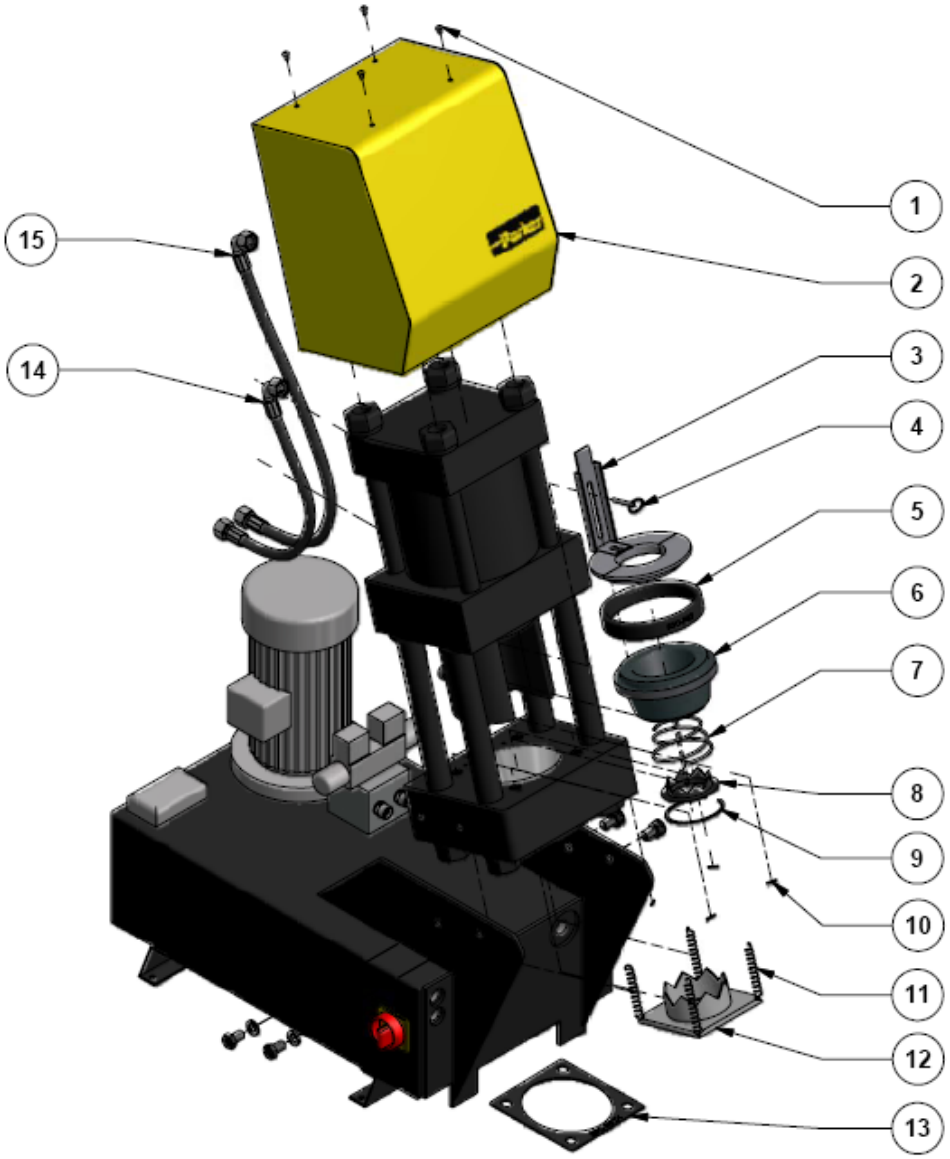
Maintenance objects	**Actions (to be performed by operator)**
Hydraulic oil change  Figure 6-7 Oil drain screw  Figure 6-8 Level indicator	• Use only clean and filtered hydraulic oil HLP 46 DIN 51524 (5µ). • The filling volume is 40 litres. • The oil level is then in the centre. Ventilate the plant after the hydraulic oil change: open and close the tool several times.!

Table 6-2 Yearly maintenance

7 Spare Parts List



	description	item number	qty
1	screw 1/4-20x3/8" BHCS	-	4
2	guard	832155	1
3	split die ring assembly	83C-R12	1
4	slide pin assembly	832195	1
5	spacer ring	83C-R02	1
6	adapter bowl assembly	83C-0CB	1
7	spring	822012	1
8	die separator small	822011	1
9	retaining ring	822031	1
10	spring pin 1/8"x3/4"	-	4
11	die separator spring	832166	4
12	large die separator	832151	1
13	spacer plate	83C-R02H	1
14	hose assembly 1	4621CC916168-640	1
15	hose assembly 2	4621CC916168-850	1

8 Declaration of Conformity

EC Declaration of Conformity according to EC Machinery Directive (2006/42/EC)

The manufacturer (Uniflex-Hydraulik GmbH, Robert-Bosch-Straße 50-52, D-61184 Karben Germany) hereby declares that the following machine

- type: Hose Crimper Machine Parkrimp®2 83CE-083U

is in conformity with the EC Machinery Directive (2006/42/EC).

The person authorized to compile the technical documentation is:

Mr. Carsten Baumgartner, Uniflex-Hydraulik GmbH, Robert-Bosch-Straße 50-52, D-61184 Karben

Standards applied:

DIN EN	Date of issue	Title	Type
ISO 12100-2	2004-04	Safety of machinery	A
982	1996+A1:2008	Safety requirements for fluid power systems and their components. Hydraulics	B2
60204-1	2006	Electrical equipment of machinery	B

DIN EN standards applied

Karben, 25th of june 2011

Place, Date

Harald von Waitz, Managing Director

Parker Worldwide

Europe, Middle East, Africa

AE – United Arab Emirates,
Dubai
Tel: +971 4 8127100
parker.me@parker.com

AT – Austria, Wiener Neustadt
Tel: +43 (0)2622 23501-0
parker.austria@parker.com

AT – Eastern Europe, Wiener Neustadt
Tel: +43 (0)2622 23501 900
parker.easteurope@parker.com

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/LU – Belgium, Nivelles
Tel: +32 (0)67 280 900
parker.belgium@parker.com

BY – Belarus, Minsk
Tel: +375 17 209 9399
parker.belarus@parker.com

CH – Switzerland, Etoy
Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CZ – Czech Republic, Klecany
Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup
Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid
Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa
Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Athens
Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budapest
Tel: +36 1 220 4155
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

KZ – Kazakhstan, Almaty
Tel: +7 7272 505 800
parker.easteurope@parker.com

NL – The Netherlands, Oldenzaal
Tel: +31 (0)541 585 000
parker.nl@parker.com

NO – Norway, Asker
Tel: +47 66 75 34 00
parker.norway@parker.com

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal, Leca da Palmeira
Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest
Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow
Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Spånga
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SK – Slovakia, Banská Bystrica
Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

UA – Ukraine, Kiev
Tel +380 44 494 2731
parker.ukraine@parker.com

UK – United Kingdom, Warwick
Tel: +44 (0)1926 317 878
parker.uk@parker.com

ZA – South Africa, Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario
Tel: +1 905 693 3000

US – USA, Cleveland
Tel: +1 216 896 3000

Asia Pacific

AU – Australia, Castle Hill
Tel: +61 (0)2-9634 7777

CN – China, Shanghai
Tel: +86 21 2899 5000

HK – Hong Kong
Tel: +852 2428 8008

IN – India, Mumbai
Tel: +91 22 6513 7081-85

JP – Japan, Tokyo
Tel: +81 (0)3 6408 3901

KR – South Korea, Seoul
Tel: +82 2 559 0400

MY – Malaysia, Shah Alam
Tel: +60 3 7849 0800

NZ – New Zealand, Mt Wellington
Tel: +64 9 574 1744

SG – Singapore
Tel: +65 6887 6300

TH – Thailand, Bangkok
Tel: +662 186 7000-99

TW – Taiwan, Taipei
Tel: +886 2 2298 8987

South America

AR – Argentina, Buenos Aires
Tel: +54 3327 44 4129

BR – Brazil, Sao Jose dos Campos
Tel: +55 800 727 5374

CL – Chile, Santiago
Tel: +56 2 623 1216

MX – Mexico, Apodaca
Tel: +52 81 8156 6000

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