KarryFlare

Portable flaring device for Triple-Lok fittings

For your safety!

Under certain circumstances, tube fittings can be subjected to extreme loadings such as vibration and uncontrolled pressure peaks. Only by using genuine Parker Components and following Parker assembly instructions can you be assured of the reliability and safety of the products and their conformity to the applicable standards.
Failure to follow this rule can adversely affect the functional safety and reliability of products, cause personal injury, property damage, and result in loss of your guarantee rights.

1. For your safety

Correct Use

Only use the KarryFlare for 37° tube flaring for hydraulic fittings which are specified by the manufacturer. Any other application may be dangerous. The manufacturer is not liable for damage resulting from improper use or operation.

Technical Safety

Before setting up and transport of the machine, read the operation instructions carefully. Check the KarryFlare for any externally visible damage. Do not use a damaged machine.

The machine is built in accordance with current safety requirements. Unauthorised repairs or modifications could result in unforeseen dangers for the user for which the manufacturer cannot accept responsibility. Repairs should only be undertaken by skilled engineers and in accordance with the maintenance instructions of the manufacturer.

Faulty components must only be exchanged for Parker original spare parts. Only when these parts are fitted the safety standards of the device can be guaranteed.

Accessory parts or driving units may only be fitted when expressly approved by Parker. If other parts are used, guarantee, performance and product liability claims may be invalidated.

During transportation safety shoes with toe protection have to be worn.

As hand protection during operation, the KarryFlare design keeps automatically both hands of the user in action on the tube and the hand pump lever. Take care that other people do not help in the area of the tools or hand pump during operation.

The pressure gauge shows a red range for the hydraulic pressure, starting at 400 bar. Make sure that this pressure is not exceeded during operation.

2. Specifications

The KarryFlare is a portable device for easy and workmanlike 37° tube flaring. It allows the flaring of even large dimension steel and stainless steel hydraulic tube at assembly sites where Parflange® technology is not available.
The KarryFlare consists of a hydraulic flaring unit and a hand pump. The hydraulic assembly pressure can be read on a gauge which is ergonomically located. The KarryFlare is ideal for tube flaring of small quantities and on-site tube installation. It is practical, simple to operate, reliable and easy to transport.
The KarryFlare comes as one unit with all components firmly attached to a practical carrying frame.

Technical Data

- 37°flaring of hydraulic tube
- Flare dimensions and geometry according to ISO 8434 / SAE J514
- For Parker Triple-Lok® Plus hydraulic fittings
- Tube outer diameter 6 to 38mm / ¼ to 1½"
- Maximum capacity: 38 x 4mm / 1½ x 0.120"
- With special flaring pin up to 42mm tube OD
- Tube material: steel and stainless steel
- Weight: approx. 29 kg
- Dimensions: approx. L 750mm x W 360mm x H 260mm
- Hydraulic oil : H-LP32 – 1.2l

3. Ordering

KarryFlare device and accessories

Description	**Order Code**
	#
KarryFlare Manual flaring device KarryFlare including handpump, carrying case and manual, tank filled with hydraulic oil, 37° flaring pin installed. Flaring dies "M15" must be ordered separately.	**KARRYFLARE**
Accessoires	**#**
Tool lubricant 0,1L can	1040LUBCAN
Tool lubricant 1L refill	1040LUBSS
Promotion leaflet	LEAF/4047-D1/UK/DE
Spare parts	**#**
Flaring bloc, complete	KARRYFLARE/BLOC
Standard Flaring pin 6-38mm, with O-ring	KARRYFLARE/FPIN
Special Flaring Pin 42mm, with O-ring	KARRYFLARE/FPIN42
Tube stop with guide	KARRYFLARE/TSTOPKPL
Pressure chart sticker	KARRYFLARE/CHART
Operating manual	OM/4047-T1

Flaring dies for KarryFlare

Flaring die set M1574

Flaring dies for metric tube	
Tube O.D. mm	Order code
6	M157406-1
8	M157408-1
10	M157410-1
12	M157412
14	M157414
15	M157415
16	M157416
18	M157418
20	M157420
22	**M157422**
25	M157425
28	**M157428**
30	M157430
32	M157432
35	**M157435**
38	M157438
42*	M157442

Flaring dies for inch tube	
Tube O.D. inch	Order code
1/4″	M047415-1
5/16″	M157408-1
3/8″	M067415-1
1/2″	M087415
5/8″	M107415
3/4″	M127415
1″	M167415
1.1/4″	M207415
1.1/2″	M157438

Flaring diameters acc. to ISO 8434-2/SAE J514 for Triple-Lok®.

* Special flaring pin KARRYFLARE/FPIN42 required for tube OD 42mm.

Flaring tools are **not** interchangeable with Parflange® tools for 1025/1040-machines.

4 Initial Operation

- Open cover by loosening front screw. For stationary operation the cover can be removed completely.
- Take care that the machine cannot slip away at assembly. It might be necessary to support the machine when flaring large diameter tubes
- Take care that only actual Parker flaring dies are used.
- Make sure that die sets and flaring pin are clean and free of wear or damage.
- The tank cap on the hand pump can remain closed. It must be closed for transportation.

- Unlock transportation clip from hand pump lever.
- Do some test flarings to familiarise with the operation and the tool handling.
- Carefully check the flaring result according to the Triple-Lok® assembly instructions.

5 Operation of KarryFlare and assembly of Triple-Lok®

Triple-Lok® Plus assembly instructions

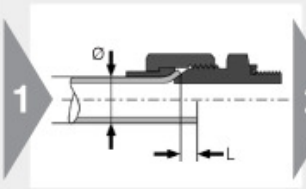
Tube selection

- Select suitable tube material

Steel tube		Stainless Steel tube
Cold drawn seamless	Welded & redrawn	Cold drawn seamless
NF A 49330	NF A 49341	
ISO 3304 R	DIN2393	NF A 49341
DIN 2391C pt 1	BS 3602/2	DIN 17458 DA/T3
BS 3602 pt1	SAE J525	ASTM A 269
SAE J524		

Tube preparation

- Cut and deburr thoroughly

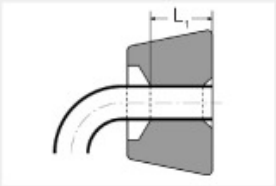


- Calculate tube length before cutting
- Add extra length "L"

- Minimum length L_1 of straight tube-ends (see chart below)

- Cut tube squarely
- max. ±1° deviation
- ⚠ Do not use pipe cutters
- Use tube cutting tool AV for manual cutting

- Remove internal and external burrs
- max. chamfer 0.3mm x 45°
- Recommendation: In-Ex Tube Deburring Tool 226
- ⚠ Proper deburring and cleaning of inner diameter essential for sealing surface quality



Tube preparation chart

Metric tube [mm]		Inch tube [inch]		Extra length ~ L [mm]	Minimum straight length to start to bend L1 [mm]
Tube Ø	Wall thickness	Tube Ø	Wall thickness		
6	1.0 - 1.5	1/4	0.020 - 0.065	2	40
8	1.0 - 1.5	5/16	0.020 - 0.065	2	40
10	1.0 - 1.5	3/8	0.020 - 0.065	2	42
12	1.0 - 2.5	1/2	0.028 - 0.083	2.5	43
14	1.5 - 2.0			2.5	52
15	1.0 - 2.5			2.5	52
16	1.5 - 2.5	5/8	0.035 - 0.095	2.5	52
18	1.5 - 3.0			3	56
20	2.0 - 3.0	3/4	0.035 - 0.109	3	57
22	1.5 - 3.0			3	58
25	2.0 - 3.0	1	0.035 - 0.120	3	58
28	1.5 - 3.0			4	65
30	2.0 - 3.0			4	65
32	2.0 - 3.0	1 1/4	0.049 - 0.120	4	65
35	2.0 - 3.0			4	70
38	2.0 - 4.0	1 1/2	0.049 - 0.120	4	70
42*	2.0 - 3.0			5	80

* Tube OD 42 mm:
+ 1015: not suitable
+ KarryFlare: special flaring pin KARRYFLARE/FPIN42 required

Triple-Lok® Plus assembly instructions

37° Flaring with EOMAT/KarryFlare

- Preferred method
- Most efficient method
- Parflange® recommended

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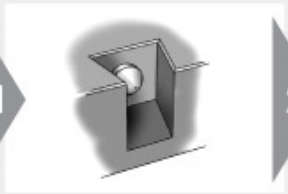

- Flaring pin is integrated in flaring block
- Pin must be clean and free of wear and damage
- Keep flaring pin clean
- KarryFlare: Flaring pin for 42 mm tube O.D. must be fitted with flat face on top

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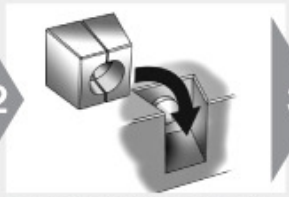

- Select flaring dies according to tube O.D.
- Grip surface must be clean and free of wear
- Use only genuine Parker tooling for flaring Triple-Lok® Plus
- Keep sliding surfaces clean and lubricated

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- Slide nut and sleeve as shown onto the tube-end

4

- Lubricate tube-end inside
- Lubricant 1040SS recommended

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- ⚠ Press tube firmly into the die against the tube stop
- KarryFlare: Close valve on handpump
- KarryFlare: Keep lid closed

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- EOMAT II: Adjustment according to pressure on machine
- EOMAT III/A: Menu selection (FLARE)
- KarryFlare: Refer to chart on machine
- Non-EOMAT-machines: check suitability

7

- Hold tube firmly
- EOMAT: Press and hold start button
- KarryFlare: Operate handpump until assembly pressure is reached
- ⚠ Keep hands clear off the working area
- ⚠ KarryFlare: Do not exceed max pressure 400 bar

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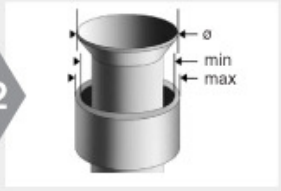
- KarryFlare: Open valve on handpump
- Remove tube from machine
- Use die separator to free tube

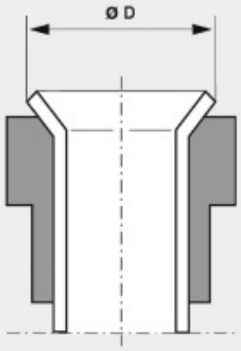
Triple-Lok® Plus assembly instructions

Checking the flare

- Clean flare for inspection
- ⚠ Check sealing surface for cracks, burrs, scratches and pitting



- Dimensional check of the flare
- Flare O.D. should not exceed outside sleeve diameter
- Flare O.D. should not be less than smaller diameter of front of sleeve
- When in doubt, measure

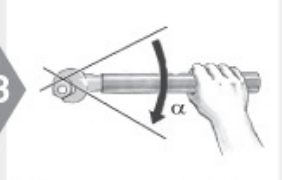


Tube O.D.		Ø D	
mm	inch	Min.	Max.
6	1/4"	8	9.7
8	5/16"	9.5	10.3
10	3/8"	11.2	12.7
12	1/2"	14.9	17.3
14		17.9	20.2
15		17.9	20.2
16	5/8"	17.9	20.2
18		22.3	24.7
20	3/4"	22.3	24.7
22	7/8"	25.5	27.8
25	1"	28.7	31
28		35.8	38.9
30		35.8	38.9
32	1.1/4"	35.8	38.9
35		41.4	45.3
38	1.1/2"	41.4	45.3
42		50.9	54.8

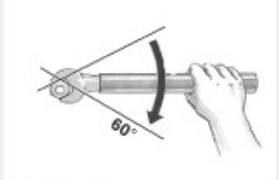
Installation

- Steel fittings: No lubrication
- ⚠ Stainless steel fittings: Lubrication required
- Use EO-NIROMONT special high-performance lubricant for stainless steel fittings

- Thread nut onto body
- Tighten to full metal contact (finger tight)
- Mark body and nut as quality check
- Tighten with spanner the number of flats indicated



- Use spanner extension for larger fittings (28mm+)

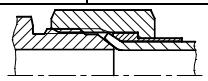


- 1 flat = 60°

Tightening recommendation

Metric tube [mm]	Inch tube [inch]	SAE threat	α flats from finger tight method*		Assembly torque Nm -0% + 10%	
			tube	Swivel nut	steel	stainless steel
6	1/4	7/16-20	2	2	15	30
8	5/16	1/2-20	2	2	20	40
10	3/8	9/16-18	1.1/2	1.1/4	30	60
12	1/2	3/4-16	1.1/2	1	60	115
14		7/8-14	1.1/2	1	75	145
15		7/8-14	1.1/2	1	75	145
16	5/8	7/8-14	1.1/2	1	75	145
18		1.1/16-12	1.1/4	1	110	180
20	3/4	1.1/16-12	1.1/4	1	110	180
22	7/8	1.3/16-12	1	1	135	225
25	1	1.5/16-12	1	1	175	255
28		1.5/8-12	1		260	295
30		1.5/8-12	1	1	260	295
32	1.1/4	1.5/8-12	1	1	260	295
35		1.7/8-12	1		340	345
38	1.1/2	1.7/8-12	1	1	340	345
42		2.1/4-12	1	1	380	400

* "Flats From Finger Tight" Method for steeel and stainless steel

KARRYFLARE 07/2004		Parker
 Tube-OD Ø[mm] - Ø[Inch]		 Triple-Lok, P [bar]
6	1/4	35
8	5/16	45
10	3/8	60
12	1/2	60
14		80
15		100
16	5/8	100
18		120
20	3/4	160
22		160
25	1	180
28		215
30	1 1/4	230
35		270
38	1 1/2	280
42		320

KARRYFLARE/CHART

6 Transport

- For transportation the oil refill screw has to be closed and the hand lever has to be locked.
- The cover protects the device. Lock cover for transport.
- Use handle on side for carrying.
- For trolley transport, the telescopic tube handle on the machine front must be completely pulled out.

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7 Trouble Shooting

Problem	Probable cause	Suggested solution
The device slips when tube is pressed against the tube stop	Placed on a slippery surface	Place the device on a non-slip surface. If flaring large dimensions place the device in front of a fixture so that it cannot slide backwards.
Oil leaks out	Oil refill screw not closed	Always close the oil refill screw during transportation.
No cylinder movement	Valve on handpump not closed	Tighten the hand wheel at the pump.
No cylinder movement	Not enough oil in the handpump	Check oil level and refill, if necessary.
The cylinder does not withdraw	Valve on handpump is closed	Open hand wheel at the pump completely.
Clap does not close	Flaring block is bent	Check mechanism and make sure that flaring block is not bent.
Flaring dies get stuck in flaring block	Friction between dies and flaring block is to	Lubricate sliding surfaces between dies and flaring block.

	high	
Scratches in Tube-ID and flare area	Worn flaring pin	Check flaring pin on wear and damages and replace if necessary.
Surface faults in Tube-ID and flare area	Flaring pin not clean	Allways keep flaring pin clean and lubricated. Take care, that tubes are deburred well and no chips can be placed on the flaring pin.

8 Maintenance

The device is maintenance-free.
If oil has leaked out, check oil level at the tank cap and refill with oil of type H-LP 32 if necessary.

Regularly check flaring tools for wear and damage. Always keep flaring pin clean. Use lubrication on tube ends for maximum tool lifetime. Keep tube stop mechanism clean and lubricated.

If flaring pin is damaged or worn, it must be replaced:

- Disassemble tube-stop mechanism
- Pull off old flaring pin
- Push in new flaring pin with O-ring
- Assemble tube-stop mechanism

9 Disposal of old appliance

Old appliances contain materials which can be recycled. Please contact your dealer, your local waste collection centre or scrap merchant about potential recycling schemes. Ensure that the appliance presents no danger to children while being stored for disposal.

10 Interchangeable bite type presetting / flaring block

The bite-type presetting block of the EO Karrymat and the flaring block of the KarryFlare can be easily interchanged according to following instruction:

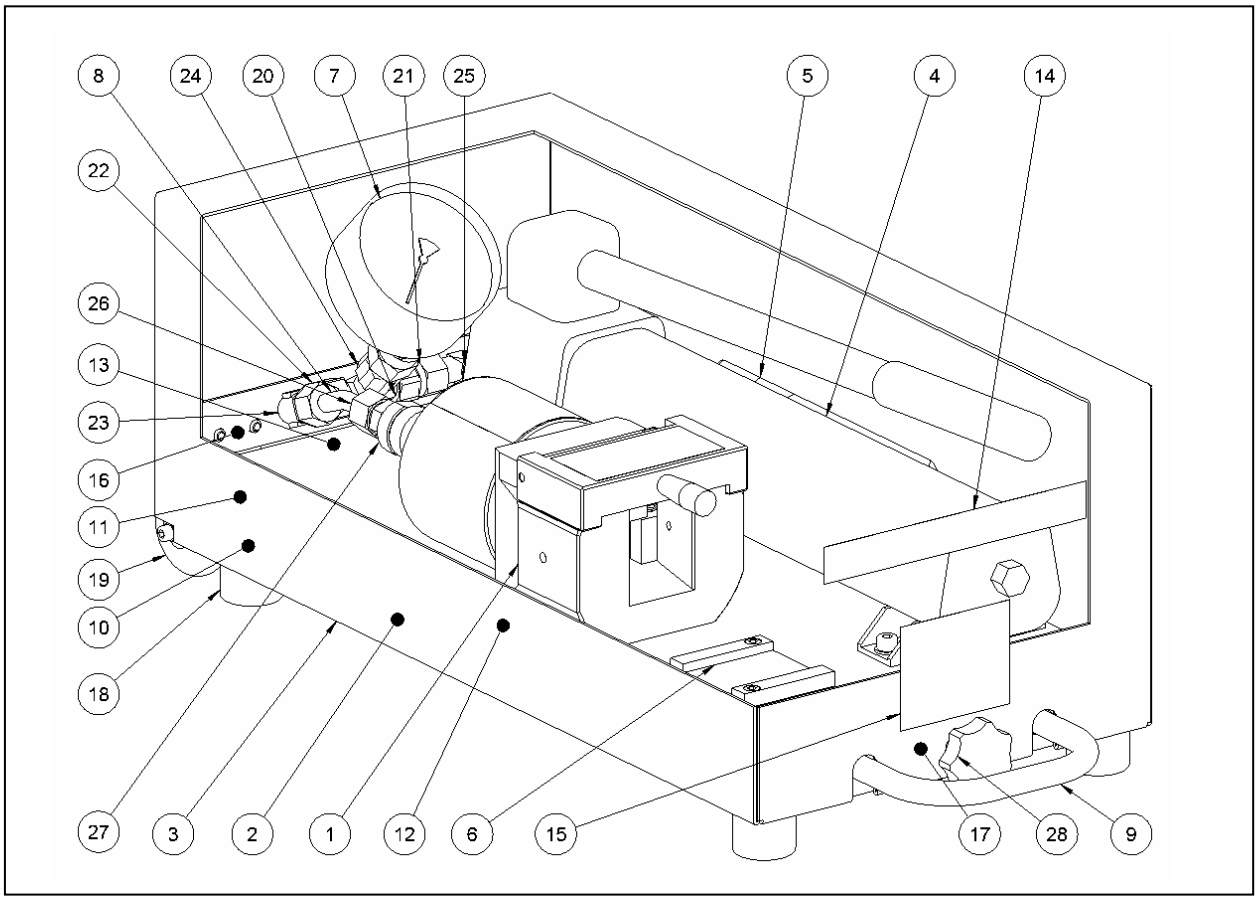
- Open the valve at the hand pump to release pressure.
- Dismantle the two fixing screws underneath the bite-type presetting / flaring block.
- Disconnect the hydraulic coupling of the cylinder. The quick couplings remain leak- free.
- Re-connect the coupling of the new block. Air bleeding is not required because all units are filled with hydraulic oil.
- Use same two fixing screws to attach the block to platform.
- Refer to KarryFlare / EO Karrymat manual for functional testing and operation
- Refer to TFDE handbook 4100 for assembly instructions of EO PSR / DPR / EO2 or Triple-Lok® fittings

The bite-type assembly block of the EO Karrymat and the flaring block of the KarryFlare can also be used as individual tools without the basic frame. Following guidelines apply for this:

- The Parker Karrykrimp power units can be connected to operate the hydraulic cylinders. See Karrykrimp cataloges for selection and ordering.
- The maximum pressure of 400 bar must not be exceeded. The pressure must be adjustable according to the chart on the cylinder. A pressure gauge must be installed.
- If other accessory parts or driving units are used, warranty is limited to genuine Parker components.
- Alterations on EO Karrymat / KarryFlare devices may result in incorrect assemblies. Parker is not liable for product failures due to wrong assembly.

10 Drawings and Parts List

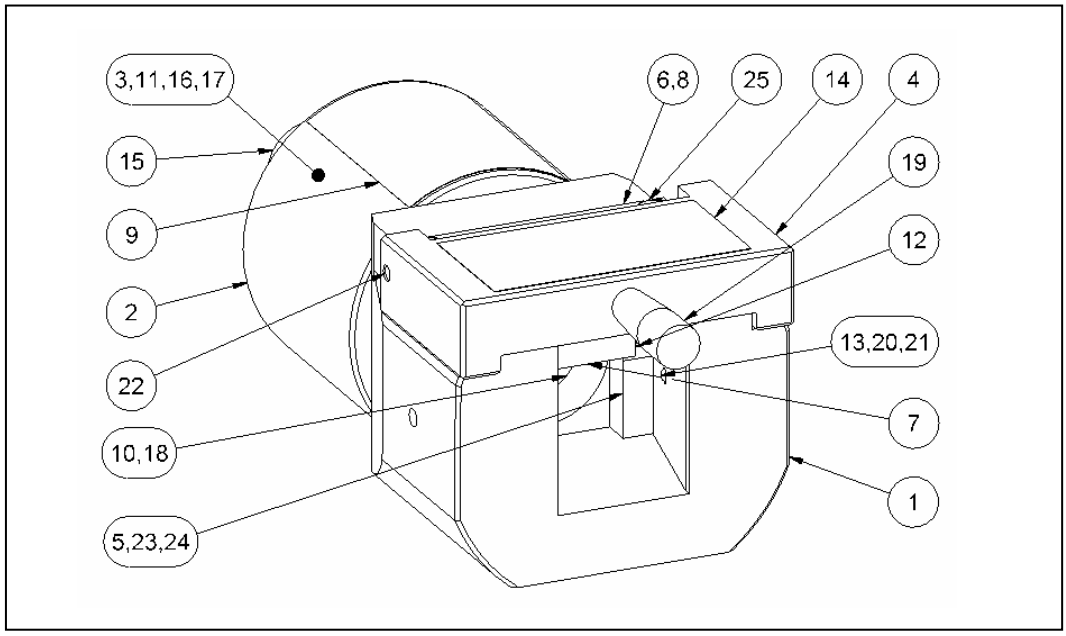
Partslist KARRYFLARE



Item.	Qty.	Partnumber	Description
1	1	KARRYFLARE/BLOC	37° Flaring Block
2	1	KARRYFLARE/BPLATE	Base Plate
3	1	KARRYFLARE/COVER	Cover Plate
4	1	82C-2HP	Hand pump
5	1	KARRYFLARE/HANDLE	Handle
6	1	KARRYFLARE/DPLATE	Dieplate
7	1	KARRYFLARE/GAUGE	Pressure Gauge
8	1	KARRYFLARE/T12X2	Tube 12x2 CF CF
9	1	KARRYFLARE/T16X2	Tube 16x2 CF

10	2	KARRYFLARE/T25X8	Tube 25x8 Alu
11	2	KARRYFLARE/RHOLD	Roller Holder
12	1	KARRYFLARE/THOLD	Tube Holder
13	1	KARRYFLARE/TPLATE	Type Plate
14	2	KARRYFLARE/STICKER	Sticker KARRYFLARE
15	2	KARRYFLARE/TSTICK	Transport Sticker
16	2	KARRYFLARE/HINGE	Hinge 4.008530 (R+K)
17	1	KARRYFLARE/NUT	Nut 32x32x10xM10
18	4	KARRYFLARE/BUFFER	Buffer Ø40x30 hole M8
19	2	KARRYFLARE/WHEEL	Skater wheel 64x24x6mm
20	1	GZ12SCF	Straight Sviwel Nut Connector
21	1	EW12SOMDCF	Swivel Nut Elbow
22	1	EL12SOMDCF	Swivel Nut Run Tee
23	1	XW12SCF	Elbow Fitting
24	1	MAVE12SRCF	Swivel Nut Pressure Gauge Connector
25	2	XGE12S3/8NPTCF	Straight Male Stud Fitting
26	2	FM12SCF	Functional Nut
27	1	3010-3	Quick Coupling Serie3000
28	1	KARRYFLARE/CSCREW	Star handle with bolt, DIN6336-SK-50-M10-25
29	2	DIN 11024 - 3	Clip
30	16	ISO 7089 - 6	Washer
31	12	ISO 7089 - 8	Washer
32	2	ISO 7089 - 10	Washer
33	2	ISO 4762 - M10x20	Screw bolt
34	4	ISO 4762 - M8x16	Screw bolt
35	4	ISO 4762 - M8x20	Screw bolt
36	2	ISO 4762 - M8x50	Screw bolt
37	5	ISO 4762 - M6x16	Screw bolt
38	2	ISO 4762 - M6x45	Screw bolt
39	8	ISO 10642 - M6x16	Countersink screw
40	15	ISO 7040 - M6	Nut
41	4	ISO 7040 - M8	Nut
42	1	SZ 2514.000	Document pocket (Rittal)
43	1	KARRYFLARE/MANUAL	Operation Manual

Partslist KARRYFLARE/BLOC



Item.	Qty.	Partnumber	Description
1	1	KARRYFLARE/BODY	Body
2	1	KARRYFLARE/CYLD	Cylinder
3	1	KARRYFLARE/PISTON	Piston
4	1	KARRYFLARE/CLAP	Clap
5	1	KARRYFLARE/SFRAME	Sliding Frame
6	1	KARRYFLARE/PLATE	Stop Plate
7	1	KARRYFLARE/TSTOP	Tube Stop
8	2	KARRYFLARE/GSCREW	Guide Screw
9	1	KARRYFLARE/CHART	Pressure Chart
10	1	KARRYFLARE/FPINX	Flaring Pin
11	1	KARRYFLARE/PSPRING	Spring D-345 (Gutekunst)
12	2	KARRYFLARE/TSPRING	Spring D-164 (Gutekunst)
13	2	KARRYFLARE/DSPRING	Spring D-135 (Gutekunst)
14	1	KARRYFLARE/LSTICK	Lubrication Sticker
15	1	3050-3	Quick Coupling Serie3000
16	1	FR4508Q5029	Guide Ring (Prädifa)
17	1	B7 8010 P5008	Piston Seal (Prädifa)
18	1	OR29.74X2.95	O-Ring NBR 90Shore
19	1	06320-306	Handle (Norelem)
20	2	ISO 3290 KU6.5	Bearing Ball
21	2	ISO 4027 - M8x12	Threadbolt
22	2	ISO 8734 - 6x20	Cyl.-Bolt
23	1	ISO 2338 - 5m6x35	Cyl.-Bolt
24	1	ISO 2338 - 4m6x60	Cyl.-Bolt
25	2	ISO 10642 - M6x16	Countersink screw