



# Parts Manual Monobloc Pumps for Hydraulic Units

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Ref. NR-00023-ENG



***Before installing the unit and starting it up, carefully read all the technical and safety documentation included in the Manual Service. Pay special attention to the information to know and understand the handling and the conditions of use of the unit. All of the information is aimed at enhancing User Safety and avoiding possible breakdowns derived from the incorrect use of the Unit.***



## WARRANTY

HI-TECH SPRAY EQUIPMENT, S. A. (hereinafter "HI-TECH") grants this Limited Guarantee to the original buyer (hereinafter the "Client") for the unit and the original accessories given with the unit (hereinafter the "Product") against any fault in the design, materials or manufacture of the Product at the time of the first purchase by the user and for a duration of two (2) years thereafter, except in the case of hoses and TSU's, which will have a warranty period of one (1) year. Additionally, for any other product manufactured by external suppliers, the warranty period will be as specified by the manufacturer.

If during the guarantee period and under normal conditions of use, the Product should fail to work correctly due to defects of design, material or manufacture, the authorised distributor of the country where the HI-TECH Product or technical assistance service has been purchased shall repair or replace the Product in accordance with what is established in the following:

### CONDITIONS

- a) The validity of this guarantee will be subject to the presentation of the original invoice issued by the HI-TECH authorised distributor for the sale of the Product along with the Product handed over for repair or replacement, which must show the date of purchase and the serial number. HI-TECH reserves the right to refuse to give the guarantee service when the indicated data fail to appear on the invoice or have been modified after the purchase of the Product.
- b) The repaired or replaced Product will continue to maintain the original guarantee for the time remaining until the end of the guarantee or for three (3) months from the repair date, if the remaining period of the original guarantee were shorter.
- c) This guarantee will not be applied to the faults in the Product caused by its faulty installation, the natural wear and tear of the components, any use other than that considered normal for this Product or which should fail to strictly comply with the instructions of use provided by HI-TECH; due to accident, carelessness, adjustments, alterations or modifications of the Product not authorised by HI-TECH or due to the use of accessories, heating devices, pumping equipment and/or dispensers that have not been approved or manufactured by HI-TECH.
- d) The guarantee applicable to the components and accessories forming part of the Product and which have not been made by HI-TECH will be limited to the guarantee offered by the original manufacturer thereof.

**HI-TECH WILL NOT RECOGNISE ANY EXPRESS ORAL OR WRITTEN GUARANTEES OTHER THAN THIS PRINTED LIMITED GUARANTEE. ALL IMPLICIT GUARANTEES, INCLUDING, WITHOUT LIMIT, ADAPTATION FOR A SPECIFIC USE, ARE SUBJECT TO THE DURATION OF THIS WRITTEN GUARANTEE. HI-TECH DOES NOT ASSUME ANY KIND OF COMMITMENT OR RESPONSIBILITY FOR ALL POSSIBLE DAMAGE OR EXPENSE CAUSED BY FAULTS IN THE OUTPUT OF THE PRODUCT, ITS WORKING OR THE DISPENSING OF MATERIAL THROUGH THE PRODUCT, INCLUDING, WITHOUT LIMITATION, ALL EXPENSES CAUSED BY DAMAGE TO PEOPLE OR PROPERTY. EQUALLY, HI-TECH WILL IN NO CASE ACCEPT LIABILITY FOR THE LOSS OF SPECULATIVE PROFITS OR COMMERCIAL LOSSES. ALL REPAIRS OR REPLACEMENT OF FAULTY PRODUCTS WILL CONSTITUTE THE COMPREHENSIVE FULFILMENT OF HI-TECH'S OBLIGATIONS WITH RESPECT TO THE CLIENT. HI-TECH DOES NOT IN ANY WAY GUARANTEE THE SUITABILITY OR APTITUDE OF ITS PRODUCT FOR ANY PARTICULAR PURPOSE OR APPLICATION.**

All of the information provided on components which have not been manufactured by HI-TECH and which is based on reports received from the original manufacturer, though considered precise and reliable, is provided without any guarantee or responsibility of any explicit or implicit kind.

All concession, sale or financial leasing of the Product by HI-TECH in no case explicitly or implicitly constitutes any authorisation, acceptance or concession for the use of any rights or patents, nor does it encourage, nurture or back their infringement.

The restrictions on the guarantee suppose no limitation on the legal rights of the consumer established in applicable national legislation, nor do they affect any rights derived from the bargain and sale agreement between the consumer and supplier.



All of the information provided in this manual has been included in the confidence that it is true, although it does not constitute any responsibility or implicit or explicit guarantee. HI-TECH reserves the right at any time and without prior warning to make all improvements and modifications necessary to this manual, in order to rectify any possible typographical errors, increase the information contained or insert the changes caused to the characteristics and performance of the unit.

## SAFETY AND HANDLING

The equipment described in this manual has been designed and manufactured in compliance with the following European Directives, following as application guide the harmonized standards detailed and in conformity with the relevant UK Statutory Instruments (and their amendments):

**2006/42/EC Machinery Directive**

**2014/35/EU Low Voltage Directive**

**2014/30/EU EMC Directive**

**2011/65/EU RoHS Directive with amendment 2015/863**

**2012/19/EU Directive on waste electrical and electronic equipment**

Standards used:

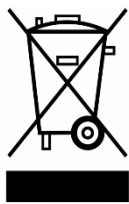
EN ISO 12100:2010

EN 60204-1:2018

EN IEC 61000-6-4:2019

EN IEC 61000-6-2:2019

EN IEC 63000:2018



Electrical products cannot be thrown out with the rubbish. They must be taken to a dedicated collection point for an environmentally sound disposal in accordance with local regulations. You must contact your local collective or retailer for information about recycling. Before leaving WEEE at appropriate collection facilities, batteries must be removed and disposed of separately for proper recycling. The packaging materials are recyclable. Dispose of packaging materials in an environmentally sound manner and place them at the disposal of recycling sectors.

### TRANSPORT AND STORAGE

Proper precautions must be taken so that the equipment can withstand the effects of transport and storage temperatures between  $-25^{\circ}\text{C}$  and  $+55^{\circ}\text{C}$  or up to  $+70^{\circ}\text{C}$  for short periods that do not exceed 24 hours. Also, appropriate means to prevent damage from moisture, vibrations or shocks must be foreseen.



## IDENTIFICATION MODEL OF PUMP

The HI-TECH hydraulic units incorporate monobloc design dosing pumps, of which there are two models compatible with each other. The difference between one model and another is in the design of the gasket located in the cylinder head. The evolved "G" model ensures a better sealing of the shaft, as well as a longer life of the joint.

To identify which pump model incorporates your unit, you must verify the gasket described above.

ORIGINAL "A" MODEL (A SLIM SEAL WITH DOUBLE TOROIDAL SPRING)	EVOLVED "G" MODEL (A THICK SEAL WITH A TRIPLE SEALING LIP)
	

If your Unit incorporates the first model, refer to the *Proportioning Pumps for Hydr. Units, Mod. "A"* section.

If your Unit incorporates the second model, refer to the *Proportioning Pumps for Hydr. Units, Mod. "G"* section".

If your Unit incorporates model "A" Proportioning Pumps and you want to update them to the "G" model, refer to the *Upgrade model Pumps* section.



**PROPORTIONING PUMPS FOR HYDR. UNITS, MOD. “A”**

**Table 1. “A” Model Proportioning ISO Pump Assy Size, Parts List**

ISO Pump SIZE	For Units with one Hydraulic Motor
0.60	NPU-06101-006A
0.80 (*)	NPU-06101-008A
0.88	NPU-06101-088A
0.96	NPU-06101-096A
1.14	NPU-06101-114A
1.2 (*)	NPU-06101-012A
1.47	NPU-07101-147A
2.00	NPU-07101-020A

**N.B.:**

*(\*) The standard proportioning pump size are # 0.80 & # 1.2, different sizes are available under order. For delivery time, please consult with Marketing department.*

**Table 2. “A” Model Proportioning POL Pump Assy Size, Parts List**

“R” Pump SIZE	For Units with one Hydraulic Motor
0.60	NPU-06102-006A
0.80 (*)	NPU-06102-008A
0.88	NPU-06102-088A
0.96	NPU-06102-096A
1.14	NPU-06102-114A
1.2 (*)	NPU-06102-012A
1.47	NPU-07102-147A
2.00	NPU-07102-020A

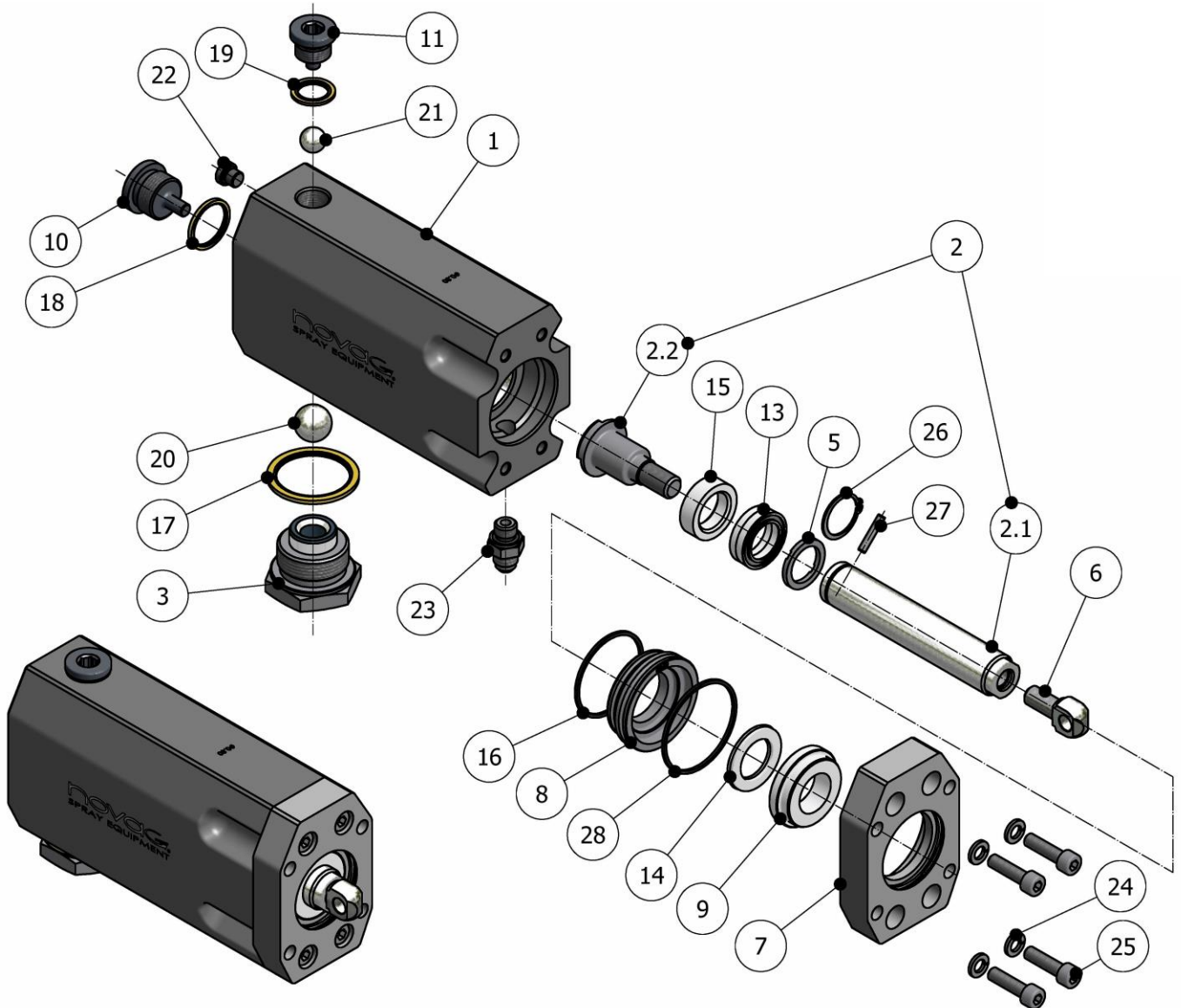
**N.B.:**

*(\*) The standard proportioning pump size are # 0.80 & # 1.2, different sizes are available under order. For delivery time, please consult with Marketing department.*



## “A” MODEL PROPORTIONING ISO PUMPS

*Discontinued, see “G” model in pg.17*



**Figure 1. “A” Model Proportioning ISO Pumps, Exploded View**

*The monobloc pumps model "A" have a different pump casing and flange geometry than the current "G" model, but are interchangeable with each other.*



**Table 3. “A” Model Proportioning ISO Pump, Parts List**

item.	Description	Part Number	Qty.
1	Body Pump with Check Valve Seat	See Table 4	1
2	Piston Rod Assembly (Only item. 2.1 y 2.2)	See Table 4	1
2.1	Piston Rod (Included in item 2)	See Table 4	1 (#)
2.2	Piston Head (Included in item 2)	See Table 4	1 (#)
3	Inlet Ball Seat Assembly	PU-01003-0J	1
4			
5	Piston Seal	See Table 4	1
6	Pump Clevis	See Table 4	1
7	Monobloc Flange Pump – ISO	See Table 4	1
8	Seat Seal – ISO	See Table 4	1
9	Bearing ISO	See Table 5	1 (*)
10	Plug Side Pump	PU-01003-0E	1
11	Upper Plug Pump	PU-01003-0F	1
12			
13	Piston Seal	See Table 5	1 (*)
14	Cylinder Seal	See Table 5	1 (*)
15	Piston Guide	See Table 5	1 (*)
16	O-Ring	See Table 5	1 (*)
17	Metallic Ring	OR-00088	1
18	Metallic Ring	OR-00082	1
19	Metallic Ring	OR-00023	1
20	Lower Ball	TN-00013	1
21	Upper Ball	TN-00012	1
22	Plug	See Table 4	1
23	Output Elbow	See Table 7	1
24	Washer	See Table 4	4
25	Allen Screw	See Table 4	4
26	Seeger Ring	See Table 4	1
27	Pin	See Table 4	1
28	O-Ring	See Table 5	1 (*)

**N.B.:** The parts marked with (\*), are included in the repair seal kit of “A” Model ISO pump (see Table 6). The parts marked with (#), are not supplied separately.



**Table 4. "A" Model Proportioning ISO Pump Assembly, Parts List**

Pump	Item 1	Item 2 (2.1 + 2.2)	Item 2.1	Item 2.2
0.60	NPU-06001-006	PU-01006-006	PU-01007-006	PU-01008-006
0.80 (*)	NPU-06001-008	PU-01006-008	PU-01007-008	PU-01008-008
0.88	NPU-06001-088	PU-01006-088	PU-01007-088	PU-01008-088
0.96	NPU-06001-096	PU-01006-096	PU-01007-096	PU-01008-096
1.14	NPU-06001-114	PU-01006-114	PU-01007-114	PU-01008-114
1.20 (*)	NPU-06001-012	PU-01006-012	PU-01007-012	PU-01008-012
1.47	NPU-07001-147	PU-01006-147	PU-01007-147	PU-01008-147
2.00	NPU-07001-020	PU-01006-020	PU-01007-020	PU-01008-020

Pump	Item 5	Item 6	Item 7	Item 8	Item 22
0.60	PU-01010-006	PU01042	NPU-06004	PU-06009-006	RA-00211
0.80 (*)	PU-01010-008	PU-01042	NPU-06004	PU-06009-008	RA-00211
0.88	PU-01010-088	PU-01042	NPU-06004	PU-06009-088	RA-00211
0.96	PU-01010-096	PU-01042	NPU-06004	PU-06009-096	RA-00211
1.14	PU-01010-114	PU-01042	NPU06004	PU-06009-114	RA-00211
1.20 (*)	PU-01010-012	PU-01042	NPU-06004	PU-06009-012	RA-00211
1.47	PU-01010-147	PU-07012	NPU-07004	PU-07009-147	RA-00013
2.00	PU-01010-020	PU-07012	NPU-07004	PU-07009-020	RA-00013

Pump	Item 24	Item 25	Item 26	Item 27
0.60	TN-00028	TN-00062	TN-00066	TN-00072
0.80 (*)	TN-00028	TN-00062	TN-00067	TN-00085
0.88	TN-00028	TN-00062	TN-00067	TN-00085
0.96	TN-00028	TN-00062	TN-00068	TN-00085
1.14	TN-00028	TN-00062	TN-00070	TN-00086
1.20 (*)	TN-00028	TN-00062	TN-00070	TN-00086
1.47	TN-00039	TN-00043	TN-00382	TN-00381
2.00	TN-00039	TN-00043	TN-00380	TN-00383

**N.B :**

**(\*) The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.**



**Table 5. Seals Monobloc “A” Model ISO Pump**

item	#0.6	#0.8	#0.88	#0.96
9	PU-06007-006	PU-06007-008	PU-06007-088	PU-06007-096
13	PU-01016-006A	PU-01016-008A	PU-01016-088A	PU-01016-096A
14	PU-01017-006	PU-01017-008	PU-01017-088	PU-01017-096
15	PU-01014-006A	PU-01014-008A	PU-01014-088A	PU-01014-096A
16	OR-00009	OR-00009	OR-00009	OR-00009
28	OR-00115	OR-00115	OR-00115	OR-00115

item	#1.14	#1.2 (*)	#1.47	#2.00
9	PU-06007-114	PU-06007-012	PU-07007-147	PU-07007-020
13	PU-01016-114A	PU-01016-012A	PU-01016-147A	PU-01016-020A
14	PU-01017-114	PU-01017-012	PU-01017-147	PU-01017-020
15	PU-01014-114A	PU-01014-012A	PU-01014-147A	PU-01014-020A
16	OR-00009	OR-00009	OR-00115	OR-00127
28	OR-00115	OR-00115	OR-00128	OR-00128

**Table 6. Repair Seal Kit “A” Model ISO Pump**

Pump	Item
2.00	KT-00015-020A
1.47	
1.20 (*)	KT-00095-012A
1.14	KT-00095-114A
0.96	
0.88	KT-00095-088A
0.80 (*)	KT-00095-008A
0.60	KT-00095-006A

**N.B :**

*(\*) The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.*

*The Repair seal kit include the parts indicated (\*) in the Table 3.*



**Table 7. Exit Elbow of Product, "A" Model ISO Pump**

	<b>Pumps</b>	<b>Item 23</b>	<b>Qty.</b>
<b>Units with One Hydraulic Motor</b>	0.60 / 0.80 / 0.88 / 0.96 / 1.14 / 1.20	RA-00145	1x Pump
	1.47 / 2.00	RA-00145 + RA-00373	1x Pump





**Table 8. "A" Model Proportioning RESIN Pump, Parts List**

item.	Description	Part Number	Qty.
1	Body Pump with Check Valve Seat	See Table 9	1
2	Piston Rod Assembly (Only item. 2.1 y 2.2)	See Table 9	1
2.1	Piston Rod (Included in item 2)	See Table 9	1 (#)
2.2	Piston Head (Included in item 2)	See Table 9	1 (#)
3	Inlet Ball Seat Assembly	PU-01003-0J	1
4			
5	Piston Seal	See Table 9	1
6	Pump Clevis	See Table 9	1
7	Monobloc Flange Pump – POL	See Table 9	1
8	Seat Seal – POL	See Table 9	1
9	Bearing POL	See Table 10	1 (*)
10	Plug Side Pump	PU-01003-0E	1
11	Upper Plug Pump	PU-01003-0F	1
12			
13	Piston Seal	See Table 10	1 (*)
14	Cylinder Seal	See Table 10	1 (*)
15	Piston Guide	See Table 10	1 (*)
16	O-Ring	See Table 10	1 (*)
17	Metallic Ring	OR-00088	1
18	Metallic Ring	OR-00082	1
19	Metallic Ring	OR-00023	1
20	Lower Ball	TN-00013	1
21	Upper Ball	TN-00012	1
22	Plug	See Table 9	1
23	Exit Elbow	See Table 12	1
24	Washer	See Table 9	4
25	Allen Screw	See Table 9	4
26	Seeger Ring	See Table 9	1
27	Pin	See Table 9	1
28	Grease Fiting	See Table 9	1

**N.B:** The parts marked with (\*), are included in the repair seal kit of "A" Model RESIN pump (see Table 11).

The parts marked with (#), are not supplied separately.



**Table 9. "A" Model Proportioning RESIN Pump Assembly, Parts List**

Pump	Item 1	Item 2 (2.1 + 2.2)	Item 2.1	Item 2.2
0.60	NPU-06001-006	PU-01006-006	PU-01007-006	PU-01008-006
0.80 (*)	NPU-06001-008	PU-01006-008	PU-01007-008	PU-01008-008
0.88	NPU-06001-088	PU-01006-088	PU-01007-088	PU-01008-088
0.96	NPU-06001-096	PU-01006-096	PU-01007-096	PU-01008-096
1.14	NPU-06001-114	PU-01006-114	PU-01007-114	PU-01008-114
1.20 (*)	NPU-06001-012	PU-01006-012	PU-01007-012	PU-01008-012
1.47	NPU-07001-147	PU-01006-147	PU-01007-147	PU-01008-147
2.00	NPU-07001-020	PU-01006-020	PU-01007-020	PU-01008-020

Pump	Item 5	Item 6	Item 7	Item 8	Item 22
0.60	PU-01010-006	PU-01042	NPU-06005	PU-06006-006	RA-00211
0.80 (*)	PU-01010-008	PU-01042	NPU-06005	PU-06006-008	RA-00211
0.88	PU-01010-088	PU-01042	NPU-06005	PU-06006-088	RA-00211
0.96	PU-01010-096	PU-01042	NPU-06005	PU-06006-096	RA-00211
1.14	PU-01010-114	PU-01042	NPU-06005	PU-06006-114	RA-00211
1.20 (*)	PU-01010-012	PU-01042	NPU-06005	PU-06006-012	RA-00211
1.47	PU-01010-147	PU-07012	NPU-07005	PU-07006-147	RA-00013
2.00	PU-01010-020	PU-07012	NPU-07005	PU-07006-020	RA-00013

Pump	Item 24	Item 25	Item 26	Item 27	Item 28
0.60	TN-00028	TN-00062	TN-00066	TN-00072	TN-00073
0.80 (*)	TN-00028	TN-00062	TN-00067	TN-00085	TN-00073
0.88	TN-00028	TN-00062	TN-00067	TN-00085	TN-00073
0.96	TN-00028	TN-00062	TN-00068	TN-00085	TN-00073
1.14	TN-00028	TN-00062	TN-00070	TN-00086	TN-00073
1.20 (*)	TN-00028	TN-00062	TN-00070	TN-00086	TN-00073
1.47	TN-00039	TN-00043	TN-00382	TN-00381	TN-00384
2.00	TN-00039	TN-00043	TN-00380	TN-00383	TN-00384

*(\*) The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.*



**Table 10. Seals Monobloc “A” Model RESIN Pump**

item	#0.60	#0.8 (*)	#0.88	#0.96
9	PU-06008-006	PU-06008-008	PU-06008-088	PU-06008-096
13	PU-01016-006A	PU-01016-008A	PU-01016-088A	PU-01016-096A
14	PU-01017-006	PU-01017-008	PU-01017-088	PU-01017-096
15	PU-01014-006A	PU-01014-008A	PU-01014-088A	PU-01014-096A
16	OR-00009	OR-00009	OR-00009	OR-00009

item	#1.14	#1.2 (*)	#1.47	#2.00
9	PU-06008-114	PU-06008-012	PU-07008-147	PU-07008-020
13	PU-01016-114A	PU-01016-012A	PU-01016-147A	PU-01016-020A
14	PU-01017-114	PU-01017-012	PU-01017-147	PU-01017-020
15	PU-01014-114A	PU-01014-012A	PU-01014-147A	PU-01014-020A
16	OR-00009	OR-00009	OR-00115	OR-00127

**Table 11. Repair Seal Kit “A” Model RESIN Pump**

Pump	Item
2.00	
1.47	KT-00016-147A
1.20 (*)	KT-00096-012A
1.14	KT-00096-114A
0.96	
0.88	KT-00096-088A
0.80 (*)	KT-00096-008A
0.60	KT-00096-006A

**N.B :**

*(\*) The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.*

*The Repair seal kit include the parts indicated (\*) in the Table 8.*

*The monobloc pumps model “A” have a different pump casing and flange geometry than the current “G” model, but are interchangeable with each other.*



**Table 12. Exit Elbow of Product, "A" Model RESIN Pump**

	<b>Pumps</b>	<b>Item 23</b>	<b>Qty.</b>
<b>Units with One Hydraulic Motor</b>	0.60 / 0.80 / 0.88 / 0.96 / 1.14 / 1.20	RA-00145	1x Pump
	1.47 / 2.00	RA-00145 + RA-00373	1x Pump



## PROPORTIONING PUMPS FOR HYDR. UNITS, MOD. "G"

**Table 13. "G" Model Proportioning ISO Pump Assy Size, Parts List**

ISO Pump SIZE	For Units with one Hydraulic Motor
0.40	NPU-06101-004G
0.60	NPU-06101-006G
0.80 (*)	NPU-06101-008G
0.88	NPU-06101-088G
0.96	NPU-06101-096G
1.14	NPU-06101-114G
1.2 (*)	NPU-06101-012G
1.47	NPU-07101-147G
2.00	NPU-07101-020G

**N.B.:**

*(\*) The standard proportioning pump size are # 0.80 & # 1.2, different sizes are available under order. For delivery time, please consult with Marketing department.*

**Table 14. "G" Model Proportioning RESIN Pump Assy Size, Parts List**

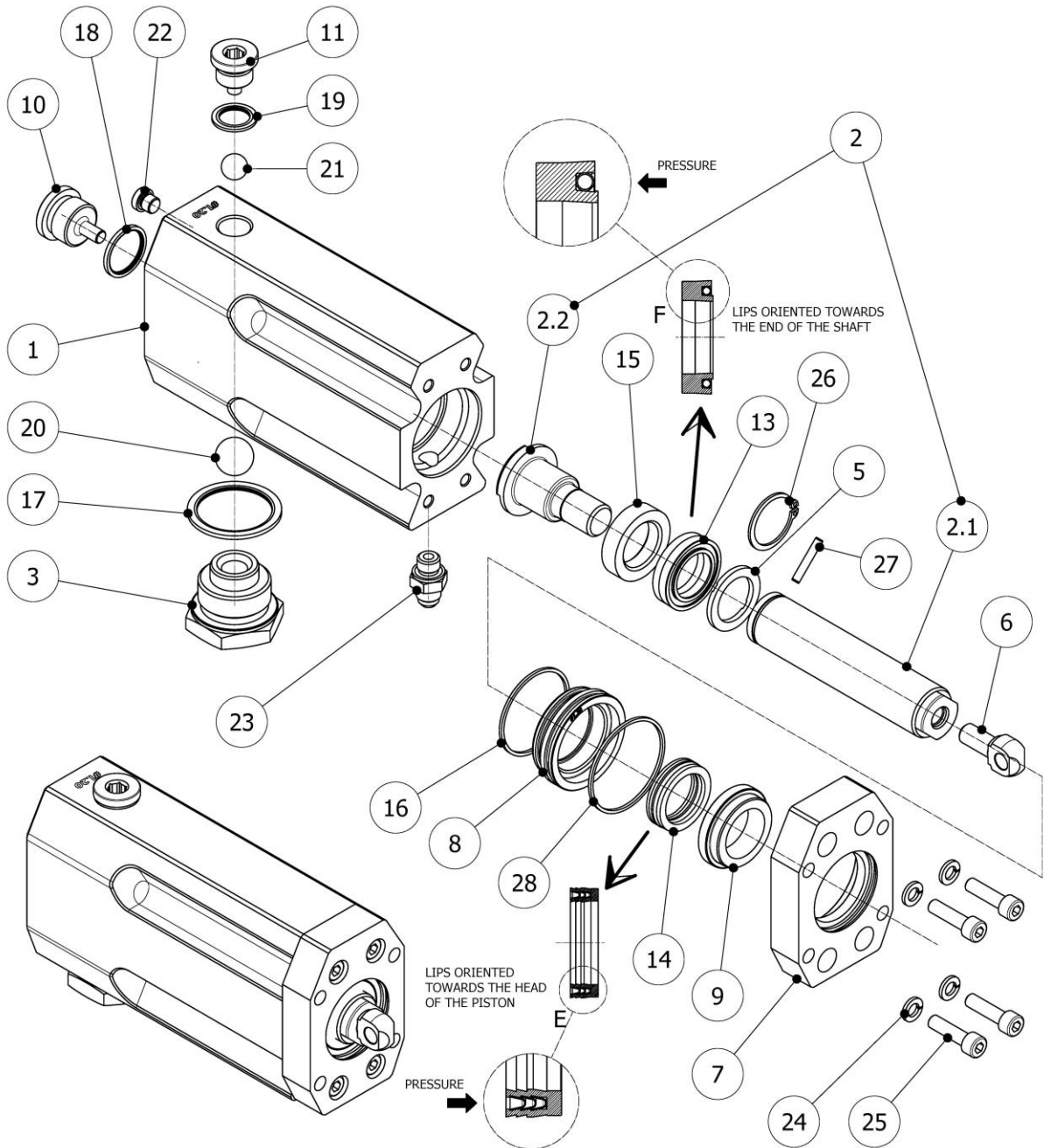
"R" Pump SIZE	For Units with one Hydraulic Motor
0.60	NPU-06102-006G
0.80 (*)	NPU-06102-008G
0.88	NPU-06102-088G
0.96	NPU-06102-096G
1.14	NPU-06102-114G
1.2 (*)	NPU-06102-012G
1.47	NPU-07102-147G
2.00	NPU-07102-020G

**N.B.:**

*(\*) The standard proportioning pump size are # 0.80 & # 1.2, different sizes are available under order. For delivery time, please consult with Marketing department.*



**“G” MODEL PROPORTIONING ISO PUMPS**



**Figure 3. “G” Model Proportioning ISO Pumps, Exploded View**



**Table 15. “G” Model Proportioning ISO Pump, Parts List**

item.	Description	Part Number	Qty.
1	Body Pump with Check Valve Seat	See Table 16	1
2	Piston Rod Assembly (Only item. 2.1 y 2.2)	See Table 16	1
2.1	Piston Rod (Included in item 2)	See Table 16	1 (#)
2.2	Piston Head (Included in item 2)	See Table 16	1 (#)
3	Inlet Ball Seat Assembly	PU-01003-0J	1
4			
5	Piston Seal	See Table 16	1
6	Pump Clevis	See Table 16	1
7	Monobloc Flange Pump – ISO	See Table 16	1
8	Seat Seal – ISO	See Table 16	1
9	Bearing ISO	See Table 17	1 (*)
10	Plug Side Pump	PU-01003-0E	1
11	Upper Plug Pump	PU-01003-0F	1
12			
13	Piston Seal	See Table 17	1 (*)
14	Cylinder Seal	See Table 17	1 (*)
15	Piston Guide	See Table 17	1 (*)
16	O-Ring	See Table 17	1 (*)
17	Metallic Ring	OR-00088	1
18	Metallic Ring	OR-00082	1
19	Metallic Ring	OR-00023	1
20	Lower Ball	TN-00013	1
21	Upper Ball	TN-00012	1
22	Plug	See Table 16	1
23	Output Elbow	See Table 7	1
24	Washer	See Table 16	4
25	Allen Screw	See Table 16	4
26	Seeger Ring	See Table 16	1
27	Pin	See Table 16	1
28	O-Ring	See Table 17	1 (*)

**N.B.: The parts marked with (\*), are included in the repair seal kit of “G” model ISO pump (see Table 18). The parts marked with (#), are not supplied separately.**



**Table 16. "G" Model Proportioning ISO Pump Assembly, Parts List**

Pump	Item 1	Item 2 (2.1 + 2.2)	Item 2.1	Item 2.2
0.40	NPU-06001-004	PU-01006-004	PU-01007-004	PU-01008-004
0.60	NPU-06001-006	PU-01006-006	PU-01007-006	PU-01008-006
0.80 (*)	NPU-06001-008	PU-01006-008	PU-01007-008	PU-01008-008
0.88	NPU-06001-088	PU-01006-088	PU-01007-088	PU-01008-088
0.96	NPU-06001-096	PU-01006-096	PU-01007-096	PU-01008-096
1.14	NPU-06001-114	PU-01006-114	PU-01007-114	PU-01008-114
1.20 (*)	NPU-06001-012	PU-01006-012	PU-01007-012	PU-01008-012
1.47	NPU-07001-147	PU-01006-147	PU-01007-147	PU-01008-147
2.00	NPU-07001-020	PU-01006-020	PU-01007-020	PU-01008-020

Pump	Item 5	Item 6	Item 7	Item 8	Item 22
0.40	PU-01010-004	PU-01042	NPU-06004	PU-06009-004G	RA-00211
0.60	PU-01010-006	PU01042	NPU-06004	PU-06009-006G	RA-00211
0.80 (*)	PU-01010-008	PU-01042	NPU-06004	PU-06009-008G	RA-00211
0.88	PU-01010-088	PU-01042	NPU-06004	PU-06009-088G	RA-00211
0.96	PU-01010-096	PU-01042	NPU-06004	PU-06009-096G	RA-00211
1.14	PU-01010-114	PU-01042	NPU06004	PU-06009-114G	RA-00211
1.20 (*)	PU-01010-012	PU-01042	NPU-06004	PU-06009-012G	RA-00211
1.47	PU-01010-147	PU-07012	NPU-07004	PU-07009-147G	RA-00013
2.00	PU-01010-020	PU-07012	NPU-07004	PU-07009-020G	RA-00013

Pump	Item 24	Item 25	Item 26	Item 27
0.40	TN-00028	TN-00062	TN-00065	TN-00072
0.60	TN-00028	TN-00062	TN-00066	TN-00072
0.80 (*)	TN-00028	TN-00062	TN-00067	TN-00085
0.88	TN-00028	TN-00062	TN-00067	TN-00085
0.96	TN-00028	TN-00062	TN-00068	TN-00085
1.14	TN-00028	TN-00062	TN-00070	TN-00086
1.20 (*)	TN-00028	TN-00062	TN-00070	TN-00086
1.47	TN-00039	TN-00043	TN-00382	TN-00381
2.00	TN-00039	TN-00043	TN-00380	TN-00383

**N.B :** (\*) The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.



**Table 17. Seals Monobloc “G” Model ISO Pump**

item	#0.40	#0.6	#0.8	#0.88	#0.96
9	PU-06007-004	PU-06007-006	PU-06007-008	PU-06007-088	PU-06007-096
13	PU-01016-004A	PU-01016-006A	PU-01016-008A	PU-01016-088A	PU-01016-096A
14	PU-01017-004G	PU-01017-006G	PU-01017-008G	PU-01017-088G	PU-01017-096G
15	PU-01014-004A	PU-01014-006A	PU-01014-008A	PU-01014-088A	PU-01014-096A
16	OR-00009	OR-00009	OR-00009	OR-00009	OR-00009
28	OR-00115	OR-00115	OR-00115	OR-00115	OR-00115

item	#1.14	#1.2 (*)	#1.47	#2.00
9	PU-06007-114	PU-06007-012	PU-07007-147	PU-07007-020G
13	PU-01016-114A	PU-01016-012A	PU-01016-147A	PU-01016-020A
14	PU-01017-114G	PU-01017-012G	PU-01017-147G	PU-01017-020G
15	PU-01014-114A	PU-01014-012A	PU-01014-147A	PU-01014-020A
16	OR-00009	OR-00009	OR-00115	OR-00127
28	OR-00115	OR-00115	OR-00128	OR-00128

**Table 18. Repair Seal Kit “G” Model ISO Pump**

Pump	Item
2.00	KT-00169
1.47	KT-00171
1.20 (*)	KT-00157
1.14	
0.96	KT-00182
0.88	KT-00198
0.80 (*)	KT-00159
0.60	
0.40	KT-00178

**N.B :**

**(\*) The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.**

**The Repair seal kit include the parts indicated (\*) in the Table 15**



**Table 19. Exit Elbow of Product, "G" Model ISO Pump**

	<b>Pumps</b>	<b>Item 23</b>	<b>Qty.</b>
<b>Units with One Hydraulic Motor</b>	0.40 / 0.60 / 0.80 / 0.88 / 0.96 / 1.14 / 1.20	RA-00145	1x Pump
	1.47 / 2.00	RA-00145 + RA-00373	1x Pump



## “G” MODEL PROPORTIONING RESIN PUMPS

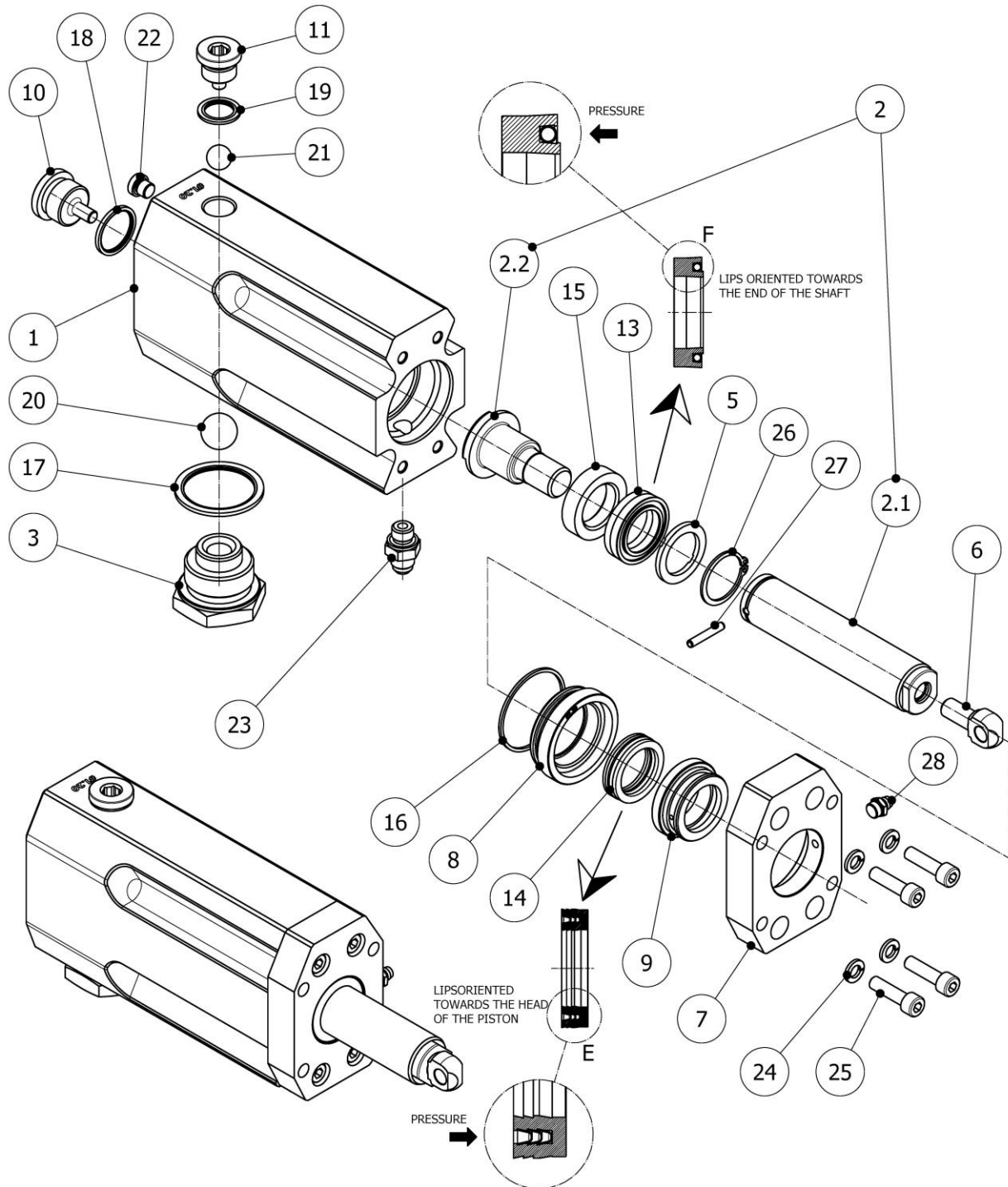


Figure 4. “G” Model Proportioning RESIN Pumps, Exploded View



**Table 20. “G” Model Proportioning RESIN Pump, Parts List**

item.	Description	Part Number	Qty.
1	Body Pump with Check Valve Seat	See Table 21	1
2	Piston Rod Assembly (Only item. 2.1 y 2.2)	See Table 21	1
2.1	Piston Rod (Included in item 2)	See Table 21	1 (#)
2.2	Piston Head (Included in item 2)	See Table 21	1 (#)
3	Inlet Ball Seat Assembly	PU-01003-0J	1
4			
5	Piston Seal	See Table 21	1
6	Pump Clevis	See Table 21	1
7	Monobloc Flange Pump – POL	See Table 21	1
8	Seat Seal – POL	See Table 21	1
9	Bearing POL	See Table 22	1 (*)
10	Plug Side Pump	PU-01003-0E	1
11	Upper Plug Pump	PU-01003-0F	1
12			
13	Piston Seal	See Table 22	1 (*)
14	Cylinder Seal	See Table 22	1 (*)
15	Piston Guide	See Table 22	1 (*)
16	O-Ring	See Table 22	1 (*)
17	Metallic Ring	OR-00088	1
18	Metallic Ring	OR-00082	1
19	Metallic Ring	OR-00023	1
20	Lower Ball	TN-00013	1
21	Upper Ball	TN-00012	1
22	Plug	See Table 21	1
23	Exit Elbow	See Table 24	1
24	Washer	See Table 21	4
25	Allen Screw	See Table 21	4
26	Seeger Ring	See Table 21	1
27	Pin	See Table 21	1
28	Grease Fiting	See Table 21	1

**N.B:** The parts marked with (\*), are included in the repair seal kit of “R” pump (see Table 23).

The parts marked with (#), are not supplied separately.



**Table 21. “G” Model Proportioning RESIN Pump Assembly, Parts List**

Pump	Item 1	Item 2 (2.1 + 2.2)	Item 2.1	Item 2.2
0.60	NPU-06001-006	PU-01006-006	PU-01007-006	PU-01008-006
0.80 (*)	NPU-06001-008	PU-01006-008	PU-01007-008	PU-01008-008
0.88	NPU-06001-088	PU-01006-088	PU-01007-088	PU-01008-088
0.96	NPU-06001-096	PU-01006-096	PU-01007-096	PU-01008-096
1.14	NPU-06001-114	PU-01006-114	PU-01007-114	PU-01008-114
1.20 (*)	NPU-06001-012	PU-01006-012	PU-01007-012	PU-01008-012
1.47	NPU-07001-147	PU-01006-147	PU-01007-147	PU-01008-147
2.00	NPU-07001-020	PU-01006-020	PU-01007-020	PU-01008-020

Pump	Item 5	Item 6	Item 7	Item 8	Item 22
0.60	PU-01010-006	PU-01042	NPU-06005	PU-06006-006G	RA-00211
0.80 (*)	PU-01010-008	PU-01042	NPU-06005	PU-06006-008G	RA-00211
0.88	PU-01010-088	PU-01042	NPU-06005	PU-06006-088G	RA-00211
0.96	PU-01010-096	PU-01042	NPU-06005	PU-06006-096G	RA-00211
1.14	PU-01010-114	PU-01042	NPU-06005	PU-06006-114G	RA-00211
1.20 (*)	PU-01010-012	PU-01042	NPU-06005	PU-06006-012G	RA-00211
1.47	PU-01010-147	PU-07012	NPU-07005	PU-07006-147G	RA-00013
2.00	PU-01010-020	PU-07012	NPU-07005	PU-07006-020G	RA-00013

Pump	Item 24	Item 25	Item 26	Item 27	Item 28
0.60	TN-00028	TN-00062	TN-00066	TN-00072	TN-00073
0.80 (*)	TN-00028	TN-00062	TN-00067	TN-00085	TN-00073
0.88	TN-00028	TN-00062	TN-00067	TN-00085	TN-00073
0.96	TN-00028	TN-00062	TN-00068	TN-00085	TN-00073
1.14	TN-00028	TN-00062	TN-00070	TN-00086	TN-00073
1.20 (*)	TN-00028	TN-00062	TN-00070	TN-00086	TN-00073
1.47	TN-00039	TN-00043	TN-00382	TN-00381	TN-00384
2.00	TN-00039	TN-00043	TN-00380	TN-00383	TN-00384

*(\*) The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.*



**Table 22. Seals Monobloc “G” Model RESIN Pump**

item	#0.60	#0.8 (*)	#0.88	#0.96
9	PU-06008-006	PU-06008-008	PU-06008-088	PU-06008-096
13	PU-01016-006A	PU-01016-008A	PU-01016-088A	PU-01016-096A
14	PU-01017-006G	PU-01017-008G	PU-01017-088G	PU-01017-096G
15	PU-01014-006A	PU-01014-008A	PU-01014-088A	PU-01014-096A
16	OR-00009	OR-00009	OR-00009	OR-00009

item	#1.14	#1.2 (*)	#1.47	#2.00
9	PU-06008-114	PU-06008-012	PU-07008-147	PU-07008-020G
13	PU-01016-114A	PU-01016-012A	PU-01016-147A	PU-01016-020A
14	PU-01017-114G	PU-01017-012G	PU-01017-147G	PU-01017-020G
15	PU-01014-114A	PU-01014-012A	PU-01014-147A	PU-01014-020A
16	OR-00009	OR-00009	OR-00115	OR-00127

**Table 23. Repair Seal Kit “G” Model RESIN Pump**

Pump	Item
2.00	KT-00170
1.47	KT-00172
1.20 (*)	KT-00158
1.14	
0.96	KT-00168
0.88	KT-00197
0.80 (*)	KT-00160
0.60	

**N.B :**

*(\*) The standard proportioning pump sizes are #0.80 & #1.20. Different sizes are available under order. For delivery time, please consult with Marketing department.*

*The Repair seal kit include the parts indicated (\*) in the Table 20.*



**Table 24. Exit Elbow of Product, "G" Model RESIN Pump**




	<b>Pumps</b>	<b>Item 23</b>	<b>Qty.</b>
<b>Units with One Hydraulic Motor</b>	0.60 / 0.80 / 0.88 / 0.96 / 1.14 / 1.20	RA-00145	1x Pump
	1.47 / 2.00	RA-00145 + RA-00373	1x Pump



## SEAL ASSEMBLY TOOLS

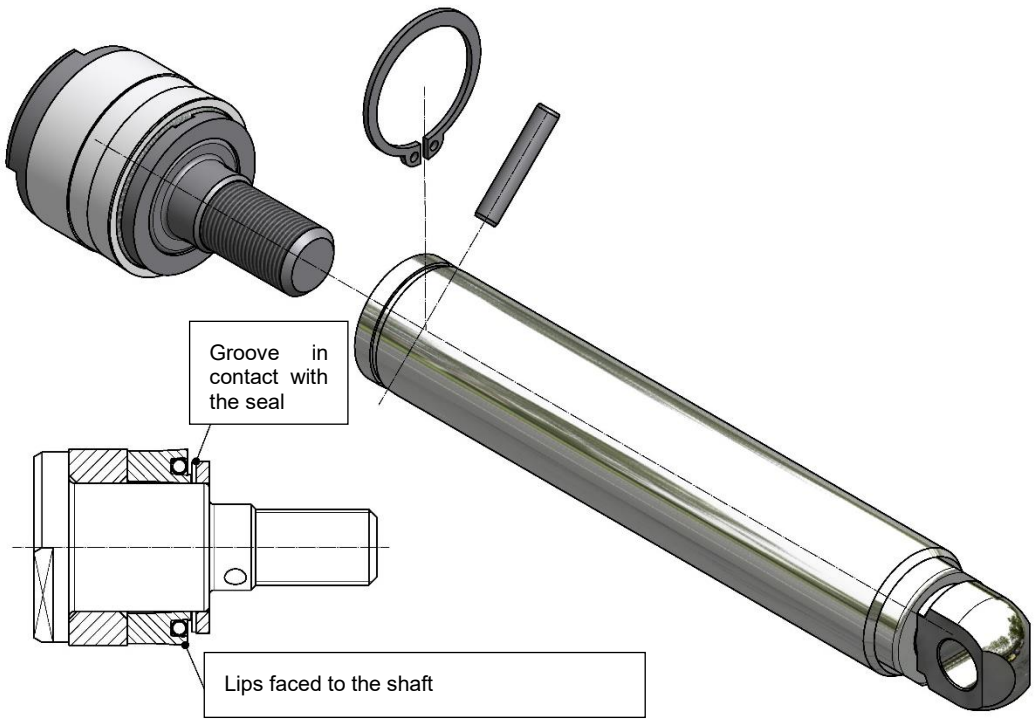
*Three special tools can be used to simplify the seal assembly. Tools A and B to insert the shaft seal into the seal housing and tool C for the packing retainer flange assembly insertion through the shaft.*

**Table 25. Rod Seal Assembly Tool**

	Centering Tool (A) Pumps, "G" Model	Insertion Tool (B) Pumps, "G" Model	Stem Tip Tool (C) Pumps, all Models
			
#0.40 Pump Size	HT-00135	HT-00136	HT-00137
#0.60 Pump Size			HT-00113
#0.69 Pump Size			HT-00114
#0.80 Pump Size	HT-00124	HT-00125	HT-00036
#0.88 Pump Size	HT-00145	HT-00125	HT-00037
#0.96 Pump Size	HT-00138	HT-00125	HT-00109
#1.20 Pump Size	HT-00124	HT-00125	HT-00035
#1.47 Pump Size	HT-00143	HT-00144	NOT USED
#2.00 Pump Size	HT-00140	HT-00141	HT-00142



## Seals assembly

PISTON SEAL		
		
<p>Insert the piston bearing, seal and washer into the piston shaft. Face the lips of the seal towards the end of the shaft. Face the grooves of the washer towards the seal.</p>	<p>Thread the plunger assembly onto the shaft as far as it will go (the pin holes in the shaft and plunger should line up).</p>	<p>Insert the spring pin so that it is recessed in the groove of the shaft. Insert the snap ring into the groove.</p>



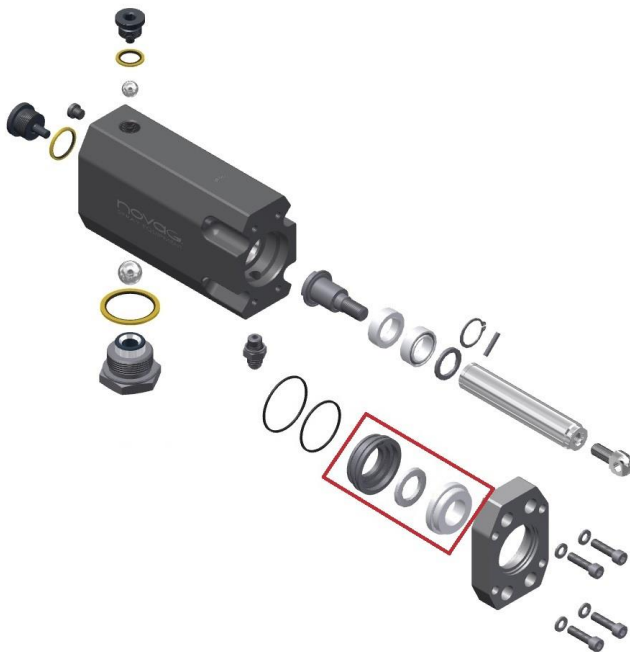
SHAFT SEAL		
<p>Insert the seal (1) into Tool A (2). Make sure that the lips are facing upwards.</p>	<p>Place tool A with the seal (3) inside the seal housing (4). With tool B (5) push the seal until it stops against the seal housing (4).</p>	<p>Place the shaft bearing (6) and the seal housing along with its corresponding O-rings (7) on the packing retainer flange (8).</p>
<p>Insert the shaft assembly (10) into the pump body (9) and place the tool C (11) on the tip of the shaft.</p>	<p>Mount the packing retainer flange assembly with all components assembled (12) on the front face of the pump. The shaft bearing should be visible from the outside.</p>	<p>Remove tool C and fix the packing retainer flange with its corresponding screws.</p>



## UPGRADE MODEL PUMPS

If you have units with monobloc designs Mod. "A", you can update them to the current evolved model "G".

To proceed with the change, you must order the evolved gasket kit (see Table 18 and Table 23 of this manual) and the Special Ring POS.8 (see Table 16 and Table 21) as appropriate by size and ISO or POL



If you have a pump with ONE piston seal, but with another narrow seal on the cylinder head with two spiral springs (Model "A"):

- Replace the parts indicated in the drawing with the parts included in the "G" model kit, and the corresponding Seat Seal Ring too.

***Use the specific tools for mounting the seals (see Table 25).***

***Give attention to the orientation of the seals in the assembly (see figures pg.17 & 22).***



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