INSTRUCTION MANUAL

PROPORTIONING SYSTEM - MODEL P 85

105 391 00 01

Manual : 574.005.112 - 0704

Date : 03/04/07 – Supersede : 15/12/05

Modif. : Update

IMPORTANT : Read and understand all instructions before storing, installing and operating concerned equipment (professional use only).

PICTURES AND DRAWINGS ARE NOT CONTRACTUAL. THE MATERIAL MAY BE CHANGED WITHOUT PRIOR NOTICE.

KREMLIN REXSON – Site de Stains : 150, avenue de Stalingrad
93 245 - STAINS CEDEX - FRANCE
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INSTRUCTION MANUAL

PROPORTIONING SYSTEM - MODEL P 85

SUMMARY

ADDITIONAL DOCUMENTATIONS

PART	PART NUMBER	INSTRUCTION MANUAL
Motor	105 291 (Model 9000) 105 271 (Model 7000) 105 261 (Model 6000)	574.150.110
Fluid section	105 395 00 01 (75 cc / 2.5 oz) 105 397 00 01 (113 cc / 3.8 oz) 105 399 00 01 (215 cc / 7.3 oz) 106 417 00 01 (338 cc / 11.4 oz) 106 561 00 01 (446 cc 15.1 oz)	574.276.110 574.241.110 574.240.110 106 417 0001 106 561 0001

Dear Customer,

You are the owner of our new equipment and we would like to take this opportunity to thank you.

To make sure your investment will provide full satisfaction, special care has been taken by KREMLIN REXSON during all designing and manufacturing processes.

To obtain the best result, safe and efficient operation of your equipment, we advice you to read and make yourself familiar with this instruction and service manual. Indeed, the non-compliance with instructions and precautions stated in this manual could reduce the equipment working life, result in operating trouble and create unsafe conditions.

01. EC DECLARATION OF CONFORMITY

The manufacturer : **KREMLIN REXSON** with assets of 6 720 000 euros

Head office : 150, avenue de Stalingrad – 93 245 - STAINS CEDEX - FRANCE

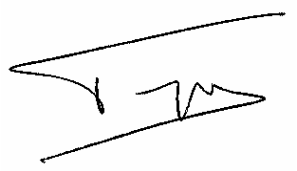
Tel. 33 (0)1 49 40 25 25 - Fax : 33 (0)1 48 26 07 16

Herewith declares that : Proportioning system, model P85, is in conformity with the provisions of :

EC - Machinery Directive (Directive 98/37/EEC) as amended and with national implementing legislation.

Ex - ATEX Directive (Directive 94/9/EEC) :  II 2 G (group II, class 2, gas).

Established in Stains, On March 1st 2003,



Daniel TRAGUS
President

02. WARRANTY

We reserve the right to make changes; these changes may be carried out after the receipt of the order. No claim will be accepted as a consequence of any change carried out in the instruction manuals or in the selection guides.

Our equipment is checked and tested prior to shipment. In the case of a problem arising with the equipment, this must be in writing, within ten days from the delivery date.

KREMLIN REXSON warrants all equipment manufactured bearing its name, to be free from defect in material or workmanship for a period of 12 months (one shift per day or 1800 hours - 1 term reached) from the date of delivery. Work life is based on single shift working - 8 hours per day. Warranty claims for defective items will only be accepted in writing and will be verified and confirmed by us.

The warranty does not cover fair wear and tear, damage or wear caused by misuse, improper maintenance or non-observance of our recommendations.

KREMLIN REXSON will repair or replace parts (carriage paid to our plant and accepted as defective by us). We shall not be liable for any losses, resulting from a production breakdown. Upon request, we can carry out service work at your premises; all expenses (travelling and accommodation) for KREMLIN REXSON technicians will be chargeable.

In the event that it is found that equipment has been tampered with, this will invalidate the warranty. Equipment that it is bought in will be subject to the suppliers' warranty.

03. SAFETY INSTRUCTIONS

■ GENERAL SAFETY INSTRUCTIONS

CAUTION : The equipment can be dangerous if you do not use it according to the rules mentioned in this instruction manual. Read carefully all the instructions hereafter before operating your equipment.

Only trained operators can use the equipment. (To acquire an essential training, please contact the "KREMLIN REXSON University" training center - Stains).

The foreman must ensure that the operator has perfectly taken in the safety instructions of this equipment as well as the instructions in the manuals of the different parts and accessories.

Read carefully all instruction manuals, label markings before operating the equipment.

Incorrect use may result in injury. This equipment is for professional use only. It must be used only for what it has been designed for. Never modify the equipment. The parts and accessories supplied must be regularly inspected. Defective or worn parts must be replaced.

Never exceed the equipment components' maximum working pressure.

Comply with regulations concerning safety, fire risks, electricity in force in the country of final destination of the material. Use only products or solvent compatible with the parts in contact with the material (refer to data sheet of the material manufacturer).

PICTOGRAMS

					
NIP HAZARD	WARNING MOVING ELEVATOR	WARNING MOVING PARTS	WARNING MOVING SHOVEL	DO NOT EXCEED THIS PRESSURE	HIGH PRESSURE HAZARD
					
RELIEF OR DRAIN VALVE	WARNING HOSE UNDER PRESSURE	WEAR GLASSES OBLIGATORY	WEAR OF GLOVES IS OBLIGATORY	PRODUCT VAPOR HAZARDS	WARNING HOT PARTS OR AREAS
					
ELECTRICAL HAZARD	WARNING FIRE HAZARDS	EXPLOSION HAZARDS	GROUNDING	WARNING (USER)	WARNING SERIOUS INJURIES

PRESSURE HAZARDS

Current legislation requires that an **air relief** shut off valve is mounted on the supply circuit of the pump motor to let air off when closing the supply circuit. Without this precaution, the motor residual air of the motor may let the pump beat and cause a serious injury.

Please ensure that, a **material drain valve** is mounted on the material circuit to drain it (after shutting down air to the motor and the pressure relief) before any servicing on the equipment. These valves must be closed for air and opened for product when processing.

HIGH PRESSURE INJECTION HAZARDS

When working with high pressure equipment, special care is required. Fluid leaks can occur. Then there are injection risks in exposed parts of body that may cause severe injuries or amputations :

- Medical care must be handled immediately if product is injected under the skin or in other parts of the body (eyes, fingers).
- Never point the spray gun at any one. Never try to stop the spray with your hands or fingers nor with rags or similars.
- **Follow the shut down procedure and always depressurize air and fluid circuits** before carrying out any servicing on the gun (cleaning, checking, maintenance of the material or cleaning of the gun nozzles).

For the guns equipped with a safety device, always lock the trigger when you do not start the gun.

FIRE - EXPLOSION - SPARKS - STATIC ELECTRICITY HAZARDS

A poor earth connection, inadequate ventilation, sparks or static electricity can cause an explosion or fire. to avoid these risks when using or servicing KREMLIN REXSON equipment, the following safety procedures must be followed :

- ensure a good earth connection and ground the parts to be handled i.e. solvents, materials, components and equipment,
- ensure adequate ventilation,
- keep working area clean and free from waste solvents, chemicals, or solid waste i.e. rags, paper and empty chemicals drums,
- never use electrical switches / power if in an atmosphere of volatile solvent vapour,
- stop working immediately in case of electrical arcs,
- never store chemicals and solvents in the working area.

TOXIC PRODUCT HAZARDS

Toxic products or vapours can cause severe injury not only though contact with the body, but also if the products are ingested or inhaled. It is imperative :

- to know the material products and their risks,
- notified or hazardous materials must be stored in accordance with the regulations,
- the material must be stored in an appropriate container, never place materials in a container where there is a risk o spillage or leakage,
- a procedure must be applied for the safe disposal of waste material. It must comply with all prevailing regulations and legislations of the country where the equipment is to be used,
- protective clothing should always be worn in compliance with the material manufacturers' recommendations,
- depending on the application and chemical safety instructions, safety glasses, gloves, foot wear, protective masks and possible breathing equipment should be worn to comply with the regulations

(Refer to chapter "Safety equipment of KREMLIN selection guide).

CAUTION!

It is forbidden using any solvent or with halogenated hydrocarbon base and also products with these solvents facing **aluminium** or **zinc**. The non-compliance with the instructions may cause explosion hazards causing serious or fatal injuries.

EQUIPMENT REQUIREMENTS

PUMP

Before carrying out any work, it is imperative to get used with the compatibilities of motors with pumps before coupling. The operator shall understand the equipment and the safety instructions. These instructions are available in the manuals of the pumps.

The air motor is designed to be mounted with a pump. Never modify any components or couplings. Where operating, please keep hands away from moving parts. Before starting up the equipment, please read the PRESSURE RELIEF instructions. Please ensure that any relief or drain valves fitted are in good working order.

HOSES

- Keep hoses out of circulation areas, moving parts or hot surfaces,
- Never expose product hoses to temperature higher than + 60°C / 140° F or lower than 0°C / 32° F,
- Never pull or use the hoses to move the equipment,
- Tighten all fittings as well as the hoses before operating the equipment,
- Check the hoses regularly; change them if they are damaged,
- Never exceed the working pressure (WP) indicated on the hose.

USED PRODUCTS

Considering the variety of products that may be used by the users and the impossibility to check off all chemical data, of possible reactions of chemicals to each other and their long term evolution, KREMLIN REXSON can not be considered as liable for :

- the bad compatibility of wetted parts,
- risks for staff and surroundings,
- for worn or out of order parts, for wrong working of equipments or units, as well as for the qualities of final product,

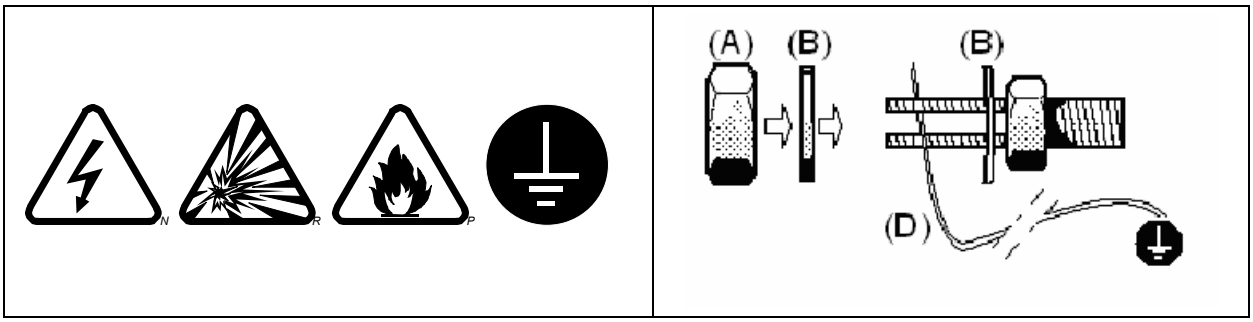
The user must know and prevent the possible risks as toxic vapours, fires or explosions due to used products. He shall determine the risks of immediate reactions or pursuant to repeated exposures of the staff,

KREMLIN REXSON shall not be liable for psychic injuries, direct or indirect material damages further to the use of chemicals.

■ SPECIFIC SAFETY INSTRUCTIONS

Do not take off the protective carter during the operating of the P85.
Keep hands and fingers away from P85 proportioning system moving parts.
The non-compliance with the instructions could lead to serious injuries.

GROUNDING OF THE P85



Loosen the lock nut (A), introduce between the washers (B) the end of an earth-wire (D) (minimum section : 1.5 mm2) into the hole of the terminal. Tighten the lock nut (A). Connect the other end of the wire to a real ground according to the local rules.
A qualified electrician must check the continuity of the earth. If that function is not provided, check the terminal, the electric wire, the bracket and the grounding system. Do not operate the motor without resolving previously the trouble.

CONNECTION TO A COMPRESSED AIR SUPPLY

For a correct operating and a higher life duration of the motor, the air supply must be filtered and not lubricated.

- We advice you to install a pressure release valve to follow the pressure release instructions,

- The air supply hose of the motor shall have an internal diameter of at least 19 mm / 0.7".

- The motors are tested prior to their delivery. Nevertheless, before connecting the motor to the pump, you must operate it empty under a maximum pressure of 1 bar / 14.5 psi during a few minutes

You must follow these instructions :

1- Connect the motor to the pump,

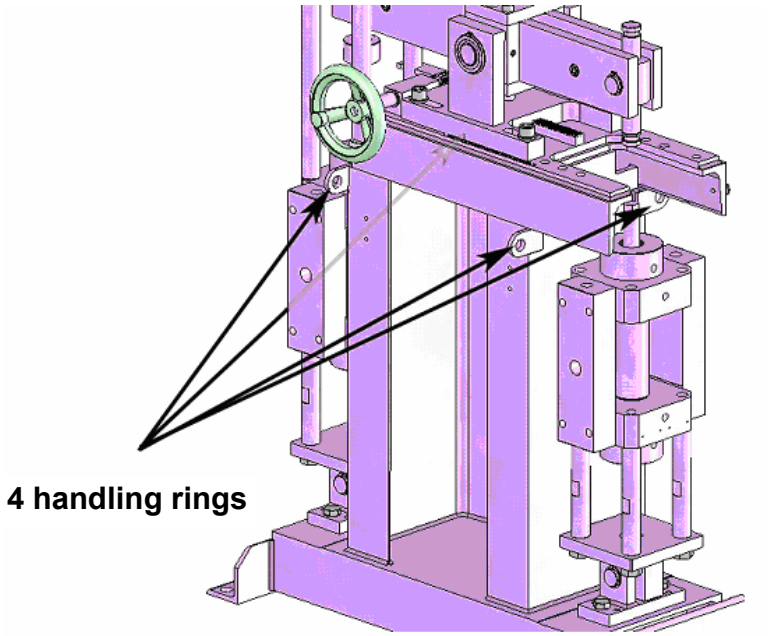
2- Connect the main air supply to the motor,

3- Adjust the pressure from the air regulator.

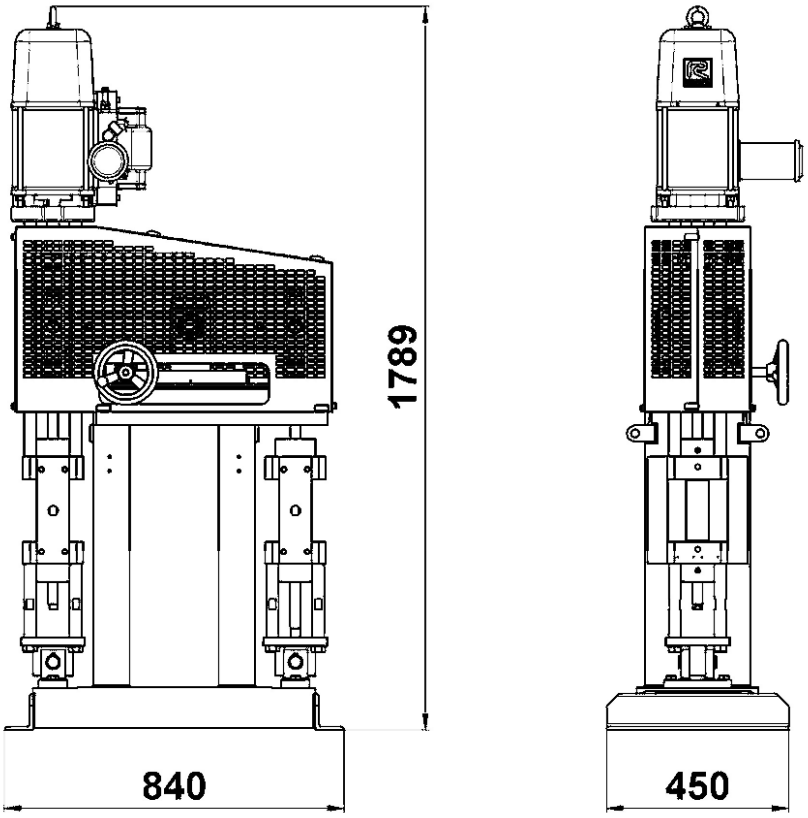
04. MAINTENANCE - DIMENSIONS

MAINTENANCE

The four rings located on the assembly sides are designed for the hoisting of the P85 and can not be used for the handling of the complete machine.



DIMENSIONS

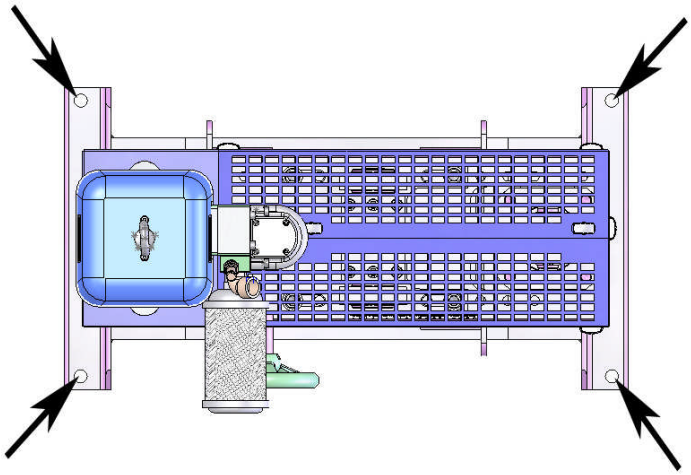


05. STORING

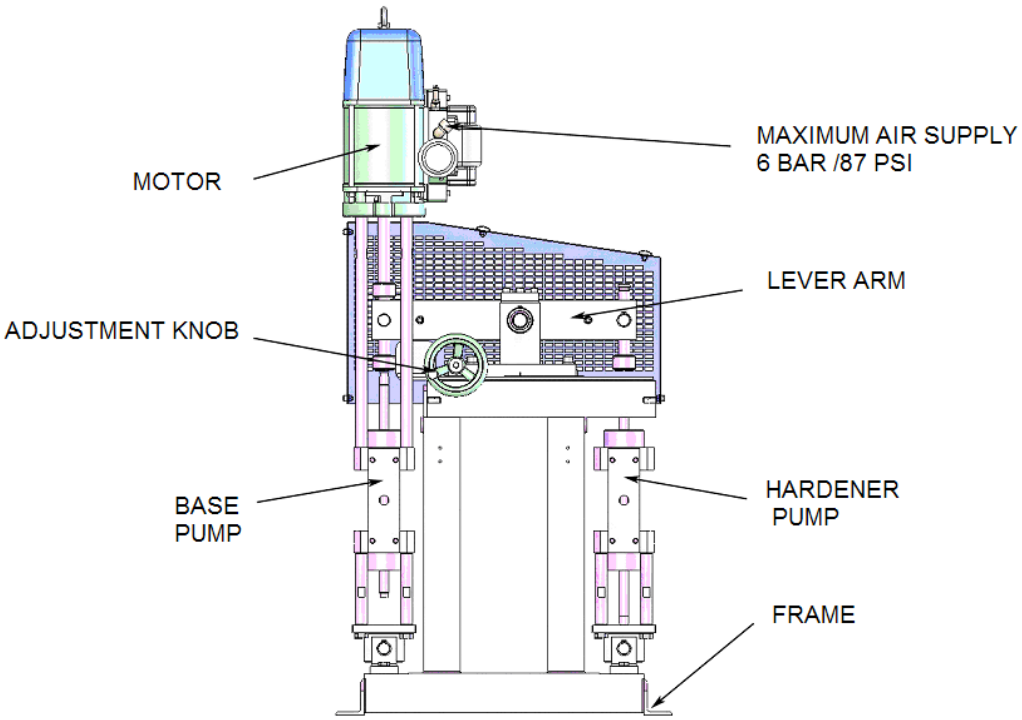
Place the equipment safe from dampness after having closed the different air inlets and ports (plugs).

06. INSTALLATION OF THE EQUIPMENT

The P 85 proportioning system must be fixed by means of the fixing brackets. The working area must be well-ventilated.

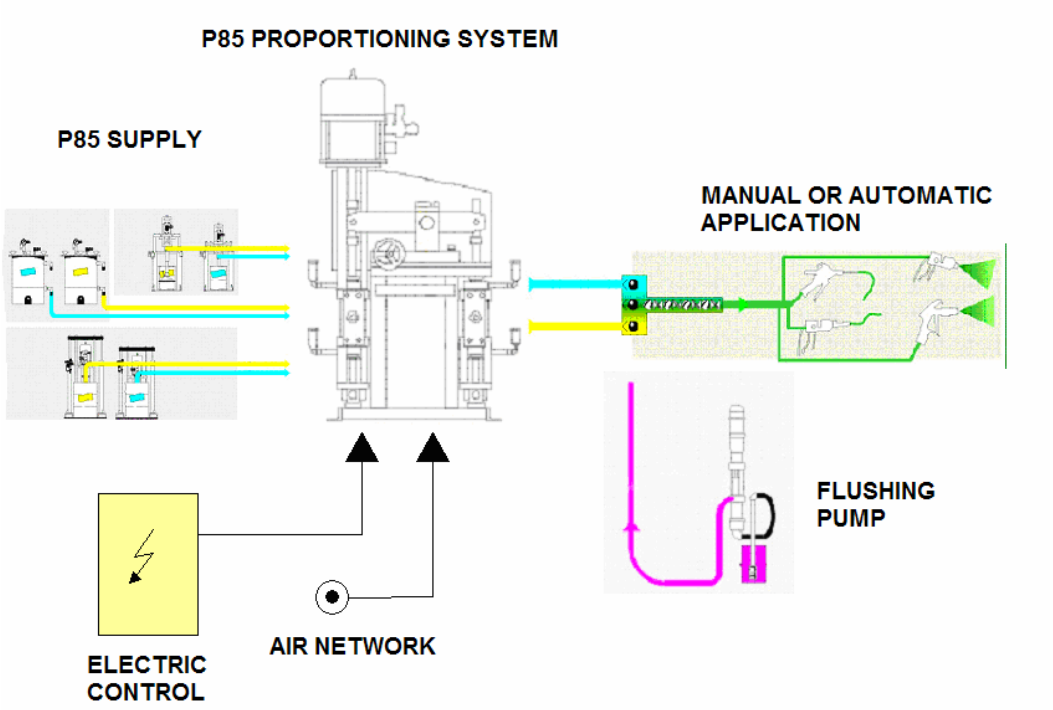


07. SETTING UP THE SUBSETS



08. CONNECTION OF THE SUBSETS

Air supply : install the correct air filter to supply the P 85 proportioning system (refer to accessories).



09. TECHNICAL FEATURES

The following charts collect the possibilities of associations between the 5 available pumps and the motor(s).

The four valves' pumps can be of different capacities :	The motors with stroke 120 mm / 4.7"
- 446 cm3 (#106561 00 01) - 338 cm3 (# 106417 00 01) - 215 cm3 (#. 105399 00 01) - 113 cm3 (#105397 00 01) - 75 cm3 (#105395 00 01)	- Motor, model 9000 (#105291) - Motor, model 7000 (# 105271) - Motor, model 6000 (#105261) *Fluid section motors are also available (equivalent to a motor, model 9000)with electrical or mechanical reversing* *(# 105408 +# HYD105 or # HYD107)*

On the following charts, the pumps are classified according to growing mix ratio.

The charts indicate :

- the possible extreme mix ratio by association,
- the stroke of the B pump for a 120 mm / 4.7" stroke to the A pump,
- the index position of the slide (from 0 to 200 mm / from 0 to 7.9"); the 0 index corresponds to the 1/1 lever; the 200 index corresponds to the 5/1 lever,
- the maximum outlet pressures (for 5 bars / 72.5 psi effective/ 6 bars/ 87 psi motor),
- the total flow of the two pumps for 10 strokes /mn,
- the possible pressures with two motors.

PRESSURE - FLOW MIX RATIO 1/3

PUMPS	MIX RATIO (B/A)	STROKE B PUMP		SLIDE index		1 MOTOR model 9000 (5 bars / 72.5 psi)			2 MOTORS model 9000 (5 bars / 72.5 psi)		
		mm	"	mm	"	P (bars)	P (psi)	Flow at 10c/min	P (bars)	P (psi)	Flow at 10c/min
A : 338 cm³/120 Ø 55/35	4,44 / 100	24	0.94	200	7.8	258	3742	3,53 L/10 c	IMPOSSIBLE		
B : 75 cm³/120 Ø 32/25	7,40 / 100	40	1.57	150	5.9	251	3640	3,63 L/10 c	334	4844	3,63 L/10 c
	22,20 / 100	120	4.72	0	0	221	3.205	4,13 L/10 c	442	6410	4,13 L/10 c
A : 338 cm³/120 Ø 55/35	6,70 / 100	24	0.94	200	7.8	252	3655	3,60 L/10 c	IMPOSSIBLE		
B :113 cm³/120 Ø 35/25	11,10 / 100	40	1.57	150	5.9	242	3510	3,75 L/10 c	322,6	4679	3,75 L/10 c
	33 / 100	120	4.72	0	0	202	2930	4,50 L/10 c	404	5859	4,50 L/10 c
A : 215 cm³/120 Ø 42/25	7 / 100	24	0.94	200	7.8	400	5801	2,29 L/10 c	IMPOSSIBLE		
B :75 cm³/120 Ø 32/25	11,70 / 100	40	1.57	150	5.9	382	5540	2,39 L/10 c	(509)*	7382	2,39 L/10 c
	35 / 100	120	4.72	0	0	316	4583	2,89 L/10 c	(632)*	9166	2,89 L/10 c
A : 215 cm³/120 Ø 42/25	10,60 / 100	24	0.94	200	7.8	386	5598	2,36 L/10 c	IMPOSSIBLE		
B :113 cm³/120 Ø 35/25	17,60 / 100	40	1.57	150	5.9	363	5624.5	2,50 L/10 c	(484)*	7019	2,50 L/10 c
	52,80 / 100	120	4.72	0	0	279	4046	3,27 L/10 c	(558)*	8093	3,27 L/10 c
A : 338 cm³/120 Ø 55/35	12,70 / 100	24	0.94	200	7.8	239	3466	3,81 L/10 c	IMPOSSIBLE		
B :215 cm³/120 Ø 42/25	21 / 100	40	1.57	150	5.9	222	3220	4,10 L/10 c	295	7278	4,10 L/10 c
	63/ 100	120	4.72	0	0	165	2393	5,53 L/10 c	330	4786	5,53 L/10 c
A : 446 cm³/120 Ø 60/35	15,20 / 100	24	0.94	200	7.8	177	2567	5,13 L/10 c	IMPOSSIBLE		
B :338 cm³/120 Ø 55/35	25,20 / 100	40	1.57	150	5.9	163	2364	5,58 L/10 c	217	3147	5,58 L/10 c
	76 / 100	120	4.72	0	0	116	1682	7,84 L/10 c	232	3365	7,84 L/10 c
A : 446 cm³/120 Ø 60/35	20 / 100	24	0.94	200	7.8	170	2465.5	5,35 L/10 c	IMPOSSIBLE		
B :446 cm³/120 Ø 60/35	33 / 100	40	1.57	150	5.9	153	2219	6,00 L/10 c	204	2959	6,00 L/10 c
	100 / 100	120	4.72	0	0	102	1479	8,90 L/10 c	204	2959	8,90 L/10 c
A : 338 cm³/120 Ø 55/35	20 / 100	24	0.94	200	7.8	224	3249	4,05 L/10 c	IMPOSSIBLE		
B :338 cm³/120 Ø 55/35	33 / 100	40	1.57	150	5.9	202	2930	4,50 L/10 c	269	3901	4,50 L/10 c
	100 / 100	120	4.72	0	0	135	1958	6,76 L/10 c	270	3915	6,76 L/10 c
A : 215 cm³/120 Ø 42/25	20 / 100	24	0.94	200	7.8	355	5148.5	2,58 L/10 c	IMPOSSIBLE		
B :215 cm³/120 Ø 42/25	33 / 100	40	1.57	150	5.9	320	4641	2,86 L/10 c	426	6178	2,86 L/10 c
	100 / 100	120	4.72	0	0	213	3089	4,30 L/10 c	426	6178	4,13 L/10 c
A : 113 cm³/120 Ø 35/25	20 / 100	24	0.94	200	7.8	(673)*	(9760.5)*	1,35 L/10 c			
B :113 cm³/120 Ø 35/25	33 / 100	40	1.57	150	5.9	(606)*	(8789)*	1,50 L/10 c			
	100 / 100	120	4.72	0	0	404	5859	2,26 L/10 c			
A : 215 cm³/120 Ø 42/25	31 / 100	24	0.94	200	7.8	324	4699	2,82 L/10 c	IMPOSSIBLE		
B :338 cm³/120 Ø 55/35	52 / 100	40	1.57	150	5.9	279	4046	3,28 L/10 c	370	5366	3,28 L/10 c
	100 / 100	76	4.72	67	0	213	3089	4,30 L/10 c	348	5047	4,30 L/10 c
A : 113 cm³/120 Ø 35/25	37,80 / 100	24	0.94	200	7.8	(586)*	(8499)*	1,55 L/10 c			
B :215 cm³/120 Ø 42/25	63 / 100	40	1.57	150	5.9	(496)*	(7193)*	1,84 L/10 c			
	100 / 100	65	4.72	90	0	400	5801	2,28 L/10 c			

* Caution! The maximum pressure accepted is 450 bar / 6526 psi.
Take precautions to prevent from exceeding.

PRESSURE - FLOW MIX RATIO 2/3

PUMPS	MIX RATIO (B/A)	STROKE B PUMP		SLIDE index		1 MOTOR model 7000 (5 bars / 72.5 psi)			2 MOTORS model 7000 (5 bars / 72.5 psi)		
		mm	"	mm	"	P (bars)	P (psi)	Flow at 10c/min	P (bars)	P (psi)	Flow at 10c/min
A : 338 cm³/120 Ø 55/35	4,44 / 100	24	0.94	200	7.8	167	2422	3,53 L/10 c	IMPOSSIBLE		
B : 75 cm³/120 Ø 32/25	7,40 / 100	40	1.57	150	5.9	162	2350	3,63 L/10 c	216	3133	3,63 L/10 c
	22,20 / 100	120	4.72	0	0	143	2074	4,13 L/10 c	286	4148	4,13 L/10 c
A : 338 cm³/120 Ø 55/35	6,70 / 100	24	0.94	200	7.8	163	2364	3,60 L/10 c	IMPOSSIBLE		
B :113 cm³/120 Ø 35/25	11,10 / 100	40	1.57	150	5.9	156	2262.5	3,75 L/10 c	209	3031	3,75 L/10 c
	33 / 100	120	4.72	0	0	130	1885	4,50 L/10 c	262	3800	4,50 L/10 c
A : 215 cm³/120 Ø 42/25	7 / 100	24	0.94	200	7.8	259	3756	2,29 L/10 c	IMPOSSIBLE		
B :75 cm³/120 Ø 32/25	11,70 / 100	40	1.57	150	5.9	247	3582	2,39 L/10 c	330	4786	2,39 L/10 c
	35 / 100	120	4.72	0	0	205	2973	2,89 L/10 c	409	5932	2,89 L/10 c
A : 215 cm³/120 Ø 42/25	10,60 / 100	24	0.94	200	7.8	250	3626	2,36 L/10 c	IMPOSSIBLE		
B :113 cm³/120 Ø 35/25	17,60 / 100	40	1.57	150	5.9	235	3408	2,50 L/10 c	313	4539	2,50 L/10 c
	52,80 / 100	120	4.72	0	0	181	2625	3,27 L/10 c	361	5236	3,27 L/10 c
A : 338 cm³/120 Ø 55/35	12,70 / 100	24	0.94	200	7.8	155	2248	3,81 L/10 c	IMPOSSIBLE		
B :215 cm³/120 Ø 42/25	21 / 100	40	1.57	150	5.9	144	2088	4,10 L/10 c	191	2770	4,10 L/10 c
	63/ 100	120	4.72	0	0	107	1552	5,53 L/10 c	214	3104	5,53 L/10 c
A : 446 cm³/120 Ø 60/35	15,20 / 100	24	0.94	200	7.8	115	1668	5,13 L/10 c	IMPOSSIBLE		
B :338 cm³/120 Ø 55/35	25,20 / 100	40	1.57	150	5.9	105	1523	5,58 L/10 c	140	2030	5,58 L/10 c
	76 / 100	120	4.72	0	0	75	1088	7,84 L/10 c	150	2175	7,84 L/10 c
A : 446 cm³/120 Ø 60/35	20 / 100	24	0.94	200	7.8	110	1595	5,35 L/10 c	IMPOSSIBLE		
B :446 cm³/120 Ø 60/35	33 / 100	40	1.57	150	5.9	99	1436	6,00 L/10 c	132	1914	6,00 L/10 c
	100 / 100	120	4.72	0	0	66	957	8,90 L/10 c	132	1914	8,90 L/10 c
A : 338 cm³/120 Ø 55/35	20 / 100	24	0.94	200	7.8	145	2103	4,05 L/10 c	IMPOSSIBLE		
B :338 cm³/120 Ø 55/35	33 / 100	40	1.57	150	5.9	131	1900	4,50 L/10 c	175	2538	4,50 L/10 c
	100 / 100	120	4.72	0	0	87	1262	6,76 L/10 c	175	2538	6,76 L/10 c
A : 215 cm³/120 Ø 42/25	20 / 100	24	0.94	200	7.8	230	3336	2,58 L/10 c	IMPOSSIBLE		
B :215 cm³/120 Ø 42/25	33 / 100	40	1.57	150	5.9	207	3002	2,86 L/10 c	276	4003	2,86 L/10 c
	100 / 100	120	4.72	0	0	138	2001	4,30 L/10 c	276	4003	4,13 L/10 c
A : 113 cm³/120 Ø 35/25	20 / 100	24	0.94	200	7.8	435	6309	1,35 L/10 c			
B :113 cm³/120 Ø 35/25	33 / 100	40	1.57	150	5.9	392	5685	1,50 L/10 c			
	100 / 100	120	4.72	0	0	262	3800	2,26 L/10 c			
A : 215 cm³/120 Ø 42/25	31 / 100	24	0.94	200	7.8	210	3046	2,82 L/10 c	IMPOSSIBLE		
B :338 cm³/120 Ø 55/35	52 / 100	40	1.57	150	5.9	180	2610.5	3,28 L/10 c	240	3481	3,28 L/10 c
	100 / 100	76	4.72	67	0	138	2001	4,30 L/10 c	225	3263	4,30 L/10 c
A : 113 cm³/120 Ø 35/25	37,80 / 100	24	0.94	200	7.8	380	5511	1,55 L/10 c			
B :215 cm³/120 Ø 42/25	63 / 100	40	1.57	150	5.9	321	4655	1,84 L/10 c			
	100 / 100	65	4.72	90	0	259	3756	2,28 L/10 c			

* Caution! The maximum pressure accepted is 450 bar / 6526 psi.
Take precautions to prevent from exceeding.

PRESSURE - FLOW MIX RATIO 2/3

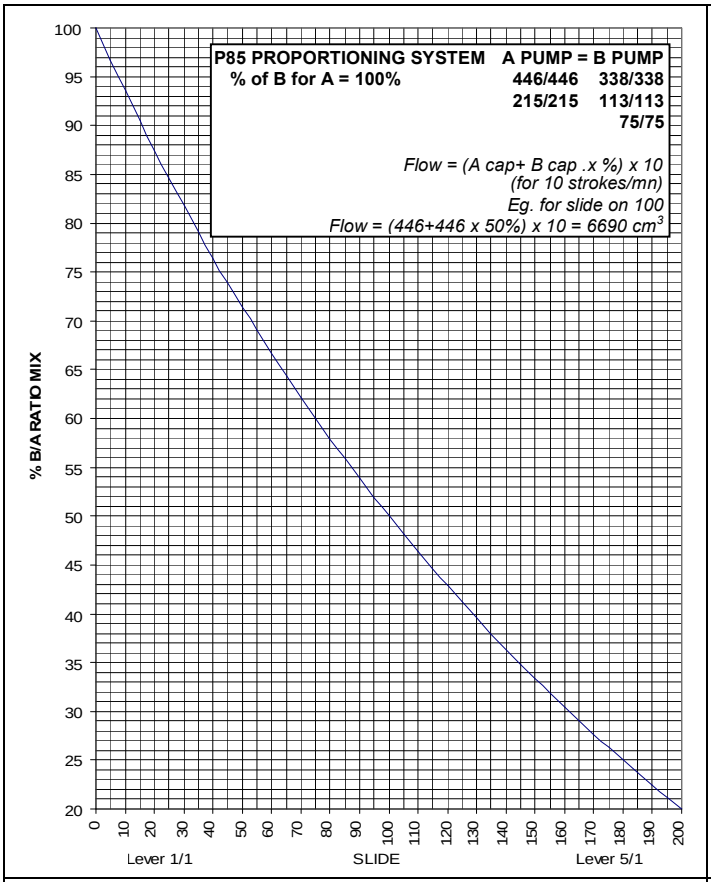
PUMPS	MIX RATIO (B/A)	STROKE B PUMP		SLIDE index		1 MOTOR model 6000 (5 bars / 72.5 psi)		
		mm	"	mm	"	P (bars)	P (psi)	Flow at 10c/min
A : 338 cm^3/120 Ø 55/35	4,44 / 100	24	0.94	200	7.8	95	1378	3,53 L/10 c
B : 75 cm^3/120 Ø 32/25	7,40 / 100	40	1.57	150	5.9	92	1334	3,63 L/10 c
	22,20 / 100	120	4.72	0	0	81	1175	4,13 L/10 c
A : 338 cm^3/120 Ø 55/35	6,70 / 100	24	0.94	200	7.8	92	1334	3,60 L/10 c
B :113 cm^3/120 Ø 35/25	11,10 / 100	40	1.57	150	5.9	89	1291	3,75 L/10 c
	33 / 100	120	4.72	0	0	74	1073	4,50 L/10 c
A : 215 cm^3/120 Ø 42/25	7 / 100	24	0.94	200	7.8	147	2132	2,29 L/10 c
B :75 cm^3/120 Ø 32/25	11,70 / 100	40	1.57	150	5.9	140	2030	2,39 L/10 c
	35 / 100	120	4.72	0	0	116	1682	2,89 L/10 c
A : 215 cm^3/120 Ø 42/25	10,60 / 100	24	0.94	200	7.8	142	2059	2,36 L/10 c
B :113 cm^3/120 Ø 35/25	17,60 / 100	40	1.57	150	5.9	133	1929	2,50 L/10 c
	52,80 / 100	120	4.72	0	0	102	1479	3,27 L/10 c
A : 338 cm^3/120 Ø 55/35	12,70 / 100	24	0.94	200	7.8	88	1276	3,81 L/10 c
B :215 cm^3/120 Ø 42/25	21 / 100	40	1.57	150	5.9	82	1189	4,10 L/10 c
	63/ 100	120	4.72	0	0	61	885	5,53 L/10 c
A : 446 cm^3/120 Ø 60/35	15,20 / 100	24	0.94	200	7.8	65	943	5,13 L/10 c
B :338 cm^3/120 Ø 55/35	25,20 / 100	40	1.57	150	5.9	60	870	5,58 L/10 c
	76 / 100	120	4.72	0	0	43	624	7,84 L/10 c
A : 446 cm^3/120 Ø 60/35	20 / 100	24	0.94	200	7.8	62	899	5,35 L/10 c
B :446 cm^3/120 Ø 60/35	33 / 100	40	1.57	150	5.9	56	812	6,00 L/10 c
	100 / 100	120	4.72	0	0	38	551	8,90 L/10 c
A : 338 cm^3/120 Ø 55/35	20 / 100	24	0.94	200	7.8	82	1189	4,05 L/10 c
B :338 cm^3/120 Ø 55/35	33 / 100	40	1.57	150	5.9	74	1073	4,50 L/10 c
	100 / 100	120	4.72	0	0	50	725	6,76 L/10 c
A : 215 cm^3/120 Ø 42/25	20 / 100	24	0.94	200	7.8	130	1885	2,58 L/10 c
B :215 cm^3/120 Ø 42/25	33 / 100	40	1.57	150	5.9	118	1711	2,86 L/10 c
	100 / 100	120	4.72	0	0	78	1131	4,30 L/10 c
A : 113 cm^3/120 Ø 35/25	20 / 100	24	0.94	200	7.8	(247)*	(3582)*	1,35 L/10 c
B :113 cm^3/120 Ø 35/25	33 / 100	40	1.57	150	5.9	(223)*	(3234)*	1,50 L/10 c
	100 / 100	120	4.72	0	0	148	2146	2,26 L/10 c
A : 215 cm^3/120 Ø 42/25	31 / 100	24	0.94	200	7.8	119	1726	2,82 L/10 c
B :338 cm^3/120 Ø 55/35	52 / 100	40	1.57	150	5.9	103	1494	3,28 L/10 c
	100 / 100	76	4.72	67	0	78	1131	4,30 L/10 c
A : 113 cm^3/120 Ø 35/25	37,80 / 100	24	0.94	200	7.8	(215)*	3118	1,55 L/10 c
B :215 cm^3/120 Ø 42/25	63 / 100	40	1.57	150	5.9	(182)*	2639.5	1,84 L/10 c
	100 / 100	65	4.72	90	0	147	2132	2,28 L/10 c

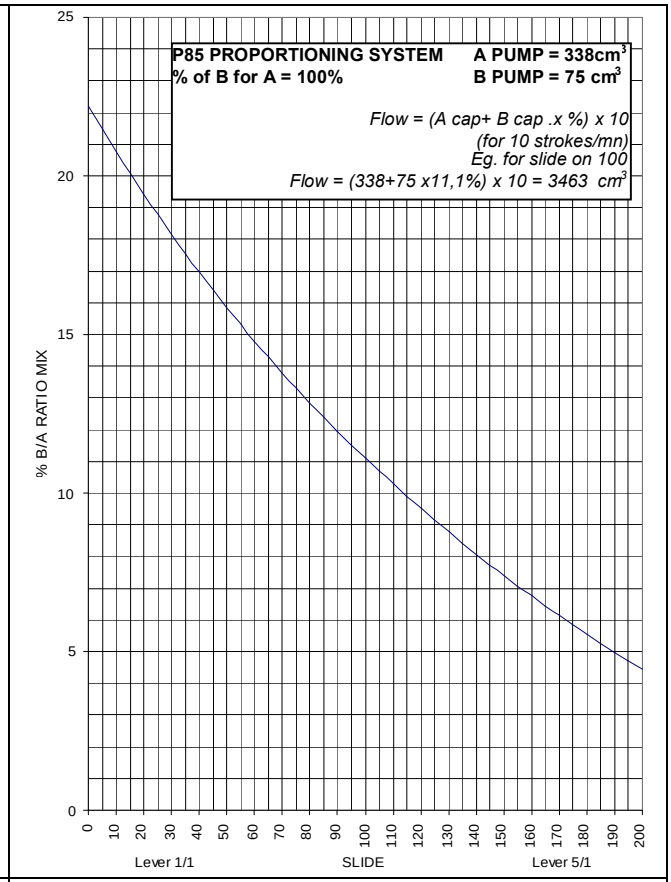
* Caution! The maximum pressure accepted is 450 bar / 6526 psi.
Take precautions to prevent from exceeding.

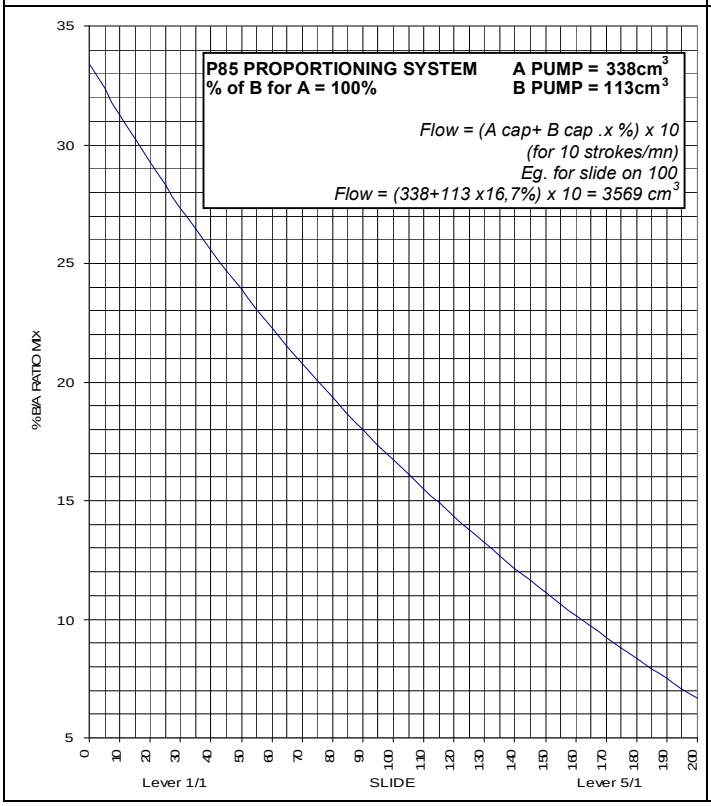
DETAILLED DIAGRAMS

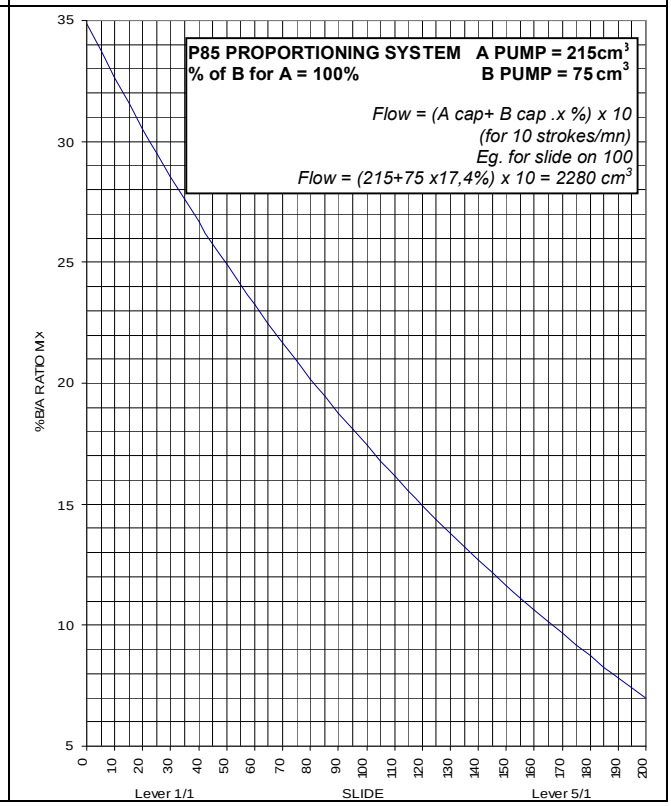
These diagrams indicate for each association of pumps :

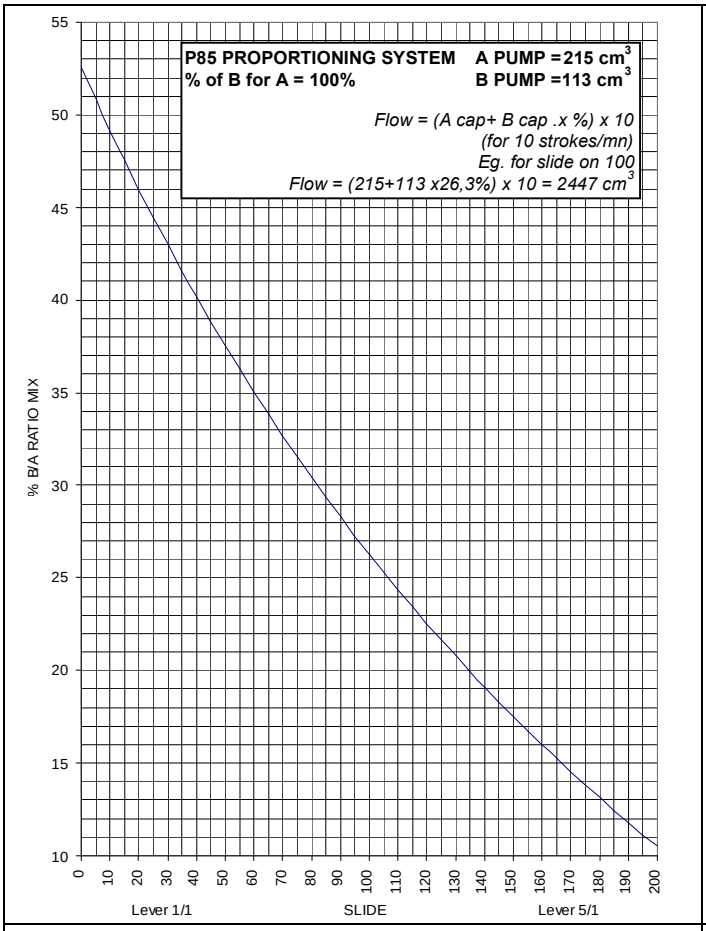
- The mix ratio according to the index position of the slide,
- The total flow calculation of the two pumps according to the position of the slide.

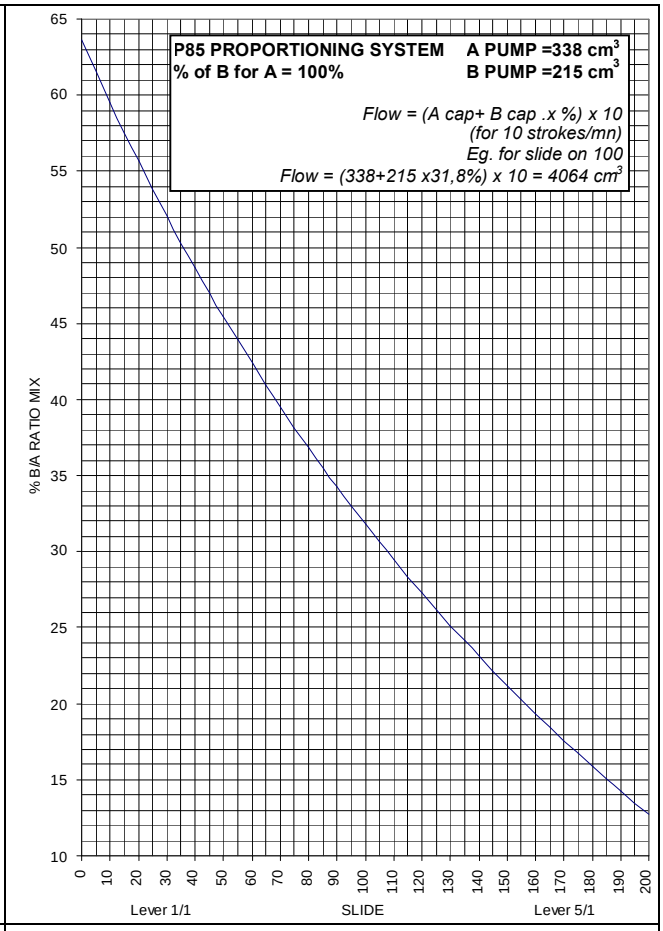


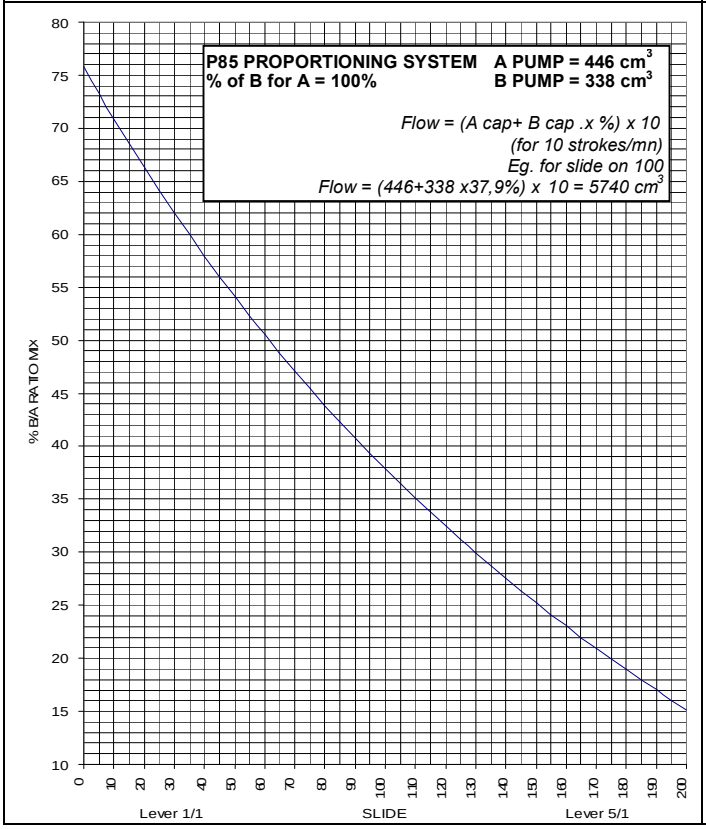


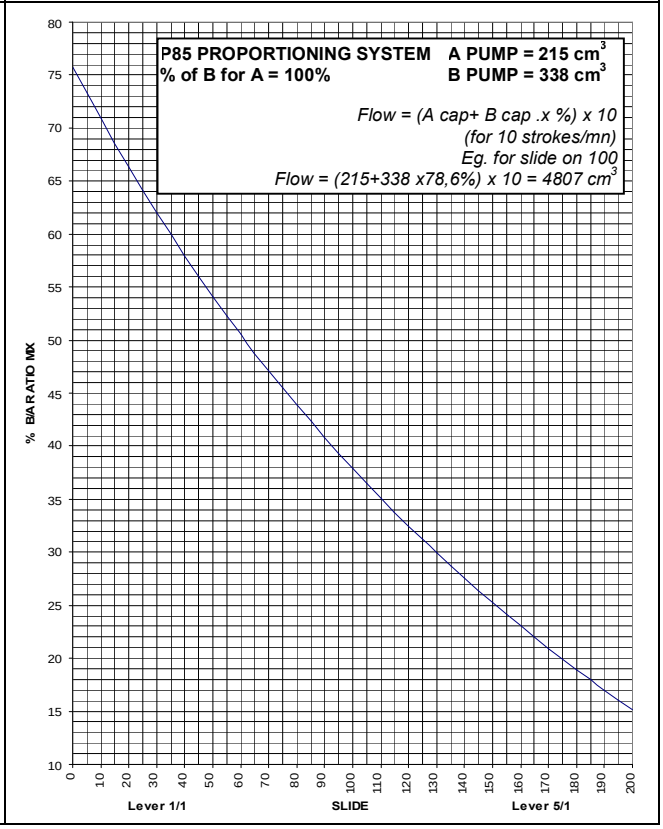


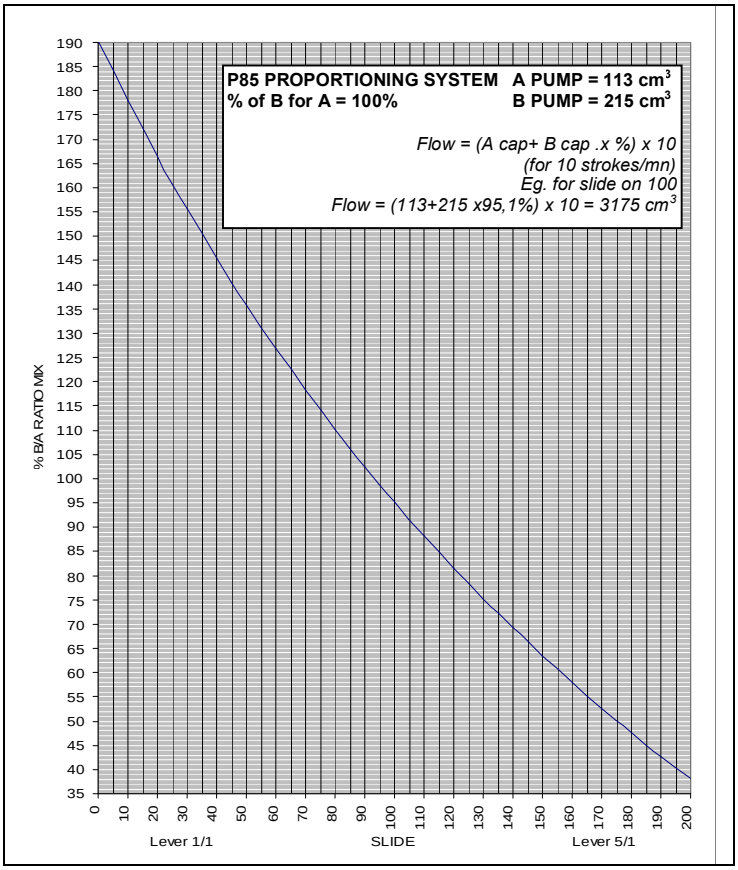



P85 PROPORTIONING SYSTEM A PUMP =215 cm3
% of B for A = 100% B PUMP =113 cm3
Flow = (A cap+ B cap .x %) x 10
(for 10 strokes/mn)
Eg. for slide on 100
Flow = (215+113 x26,3%) x 10 = 2447 cm3
% B/A RATIO MIX
Lever 1/1
SLIDE
Lever 5/1


P85 PROPORTIONING SYSTEM A PUMP =338 cm3
% of B for A = 100% B PUMP =215 cm3
Flow = (A cap+ B cap .x %) x 10
(for 10 strokes/mn)
Eg. for slide on 100
Flow = (338+215 x31,8%) x 10 = 4064 cm3
% B/A RATIO MIX
Lever 1/1
SLIDE
Lever 5/1


P85 PROPORTIONING SYSTEM A PUMP = 446 cm3
% of B for A = 100% B PUMP = 338 cm3
Flow = (A cap+ B cap .x %) x 10
(for 10 strokes/mn)
Eg. for slide on 100
Flow = (446+338 x37,9%) x 10 = 5740 cm3
% B/A RATIO MIX
Lever 1/1
SLIDE
Lever 5/1


P85 PROPORTIONING SYSTEM A PUMP = 215 cm3
% of B for A = 100% B PUMP = 338 cm3
Flow = (A cap+ B cap .x %) x 10
(for 10 strokes/mn)
Eg. for slide on 100
Flow = (215+338 x78,6%) x 10 = 4807 cm3
% B/A RATIO MIX
Lever 1/1
SLIDE
Lever 5/1



10. EXPECTED USE

The P 85 proportioning system is designed for using high or medium viscosity materials (up to 10 000 000 cps). It enables the mixing of two materials, A and B, by means of the two pumps (A for the base and B for the hardener), activated by one or two motors (maximum stroke : 120 mm / 4.7").

Its material supply needs a feeding appropriate to the packaging, to the required output and to the viscosity of the components.

The strong points are mainly :

- its important flow (to 9 L for 10 cycles/mn),
- its mix range (from 1/1 to 22/1),
- its high working pressure (to 250 bars / 3625 psi),
- the possibility to add an identical second motor to maintain a constant flow and pressure required for a specific application.

11. OPERATING DESCRIPTION

The P 85 proportioning system is supplied via either cups or feeding groups.

The feeding is carried out by the P 85 via a wheel, rack and vernier.
Once the feeding carried out, the application is made by means of a gun or manual or automatic mix aircaps, with static mixers.

12. STARTING THE EQUIPMENT

Before using the equipment, make sure the operators have read and understood the instructions and warning instructions of this manual as well as the ones concerning the other elements and accessories.

Before starting the equipment, carry out some handling operations to make the operator familiar with the equipment and its controls.

Before starting and flushing, check the correct grounding of the P 85 proportioning system and that the air supply is filtered.

Follow the instructions before starting the equipment (according to the setting up the subsets § 07).

- Connect the inlet of the base and hardener materials to the inlet of the two four valves' pumps,
- Connect the air inlet of the motor to the air network (air must be filtered).

The P 85 proportioning system is adjusted in factory on the position 0 of the slide, the adjustable base as well as the lever-arm are in contact with the stop screw. For pumps of identical capacity, it corresponds to a mix ratio of 100/100.

START UP

- Start feeding the P 85 proportioning system and let the factory adjustment with the base material and the hardener,
- Once the feeding carried out, depressurize completely the installation (stop the installation with the lever-arm parallel to the frame base),
- Install the indexing bracket (ind. 36 - according to list) on the motor rod to put it straight,
- Unscrew the 4 M16 screws,
- Loosen the 6 M12 screws of the lever-arm,
- Turn the wheel and adjust the flow (refer to § 11 for the curves of adjustments).

The adjustment by means of the wheel plays on the stroke of the **hardener pump**.

When adjusting to 0, the stroke corresponds to 120 mm / 4.42". For an adjustment up to 0, the stroke is reduced.

- Tighten correctly the screws of the lever-arm,
- Install the 4 M16 screws to fasten the assembly,
- **Take off the motor support bracket (ind. 36),**
- Connect air to the network,
- Carry out a flow with proportioning intake.
- Check and if necessary, adjust once again starting the above instructions.

Before starting once again the installation, do not forget to take off the motor fixing bracket. The non-compliance with this instruction could damage seriously the P 85 proportioning system.

13. SHUTDOWN

When stopping production, for a short or a long shutdown, the P 85 proportioning system does not need any intervention, because the two materials, base or catalyst, are not mixed into the proportioning system.

14. MAINTENANCE

WARNING!

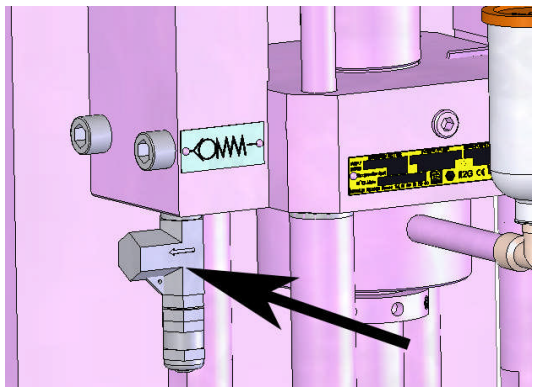
Before any intervention, please follow the pressure release instructions.

To prevent from injuries, material injections, injuries due to moving parts or sparks during the stopping of the system, the assembly, the cleaning or changing of a component, **you must follow the instructions hereafter** before intervening :

- Close the guns,
- Shut off the air inlet using the pressure release to evacuate the residual air,
- Move the gun near to a metallic drum to get back the fluid. Keep it against the drum to maintain the grounding (if necessary use a wire to ground the metallic drum),
- Open the gun to drain the circuit,
- Open the drain valve of the pump and get back the fluid in a metallic drum correctly grounded,
- Let the drain valve open during the intervention.

Check the conformity of cabling before intervening.

A safety valve is mounted on each four valves' pump. It is preset at 450 bar / 6526 psi.
If the pressure is up to the calibration, the valve opens to decrease the pressure into the pump.
The fluid is released via the release hose.



Refer to the individual instruction manuals for pumps and motors.
Once the installation depressurized, stop the P 85 with the lever-arm parallel to the base of the frame. Install the plate (ind. 36). Put aside the protective carter (ind. 41-42 - two parts).

PUMP DISASSEMBLY :

- Remove the three screws of the motor support plate,
- Disassemble the motor removing the elastic ring, raising the closing ring and taking off the two half shells,
- Remove the motor,
- Disassemble the pump in the same way as the motor,
- Take off the two TH support screws of the pump on the frame,
- Remove the pump.

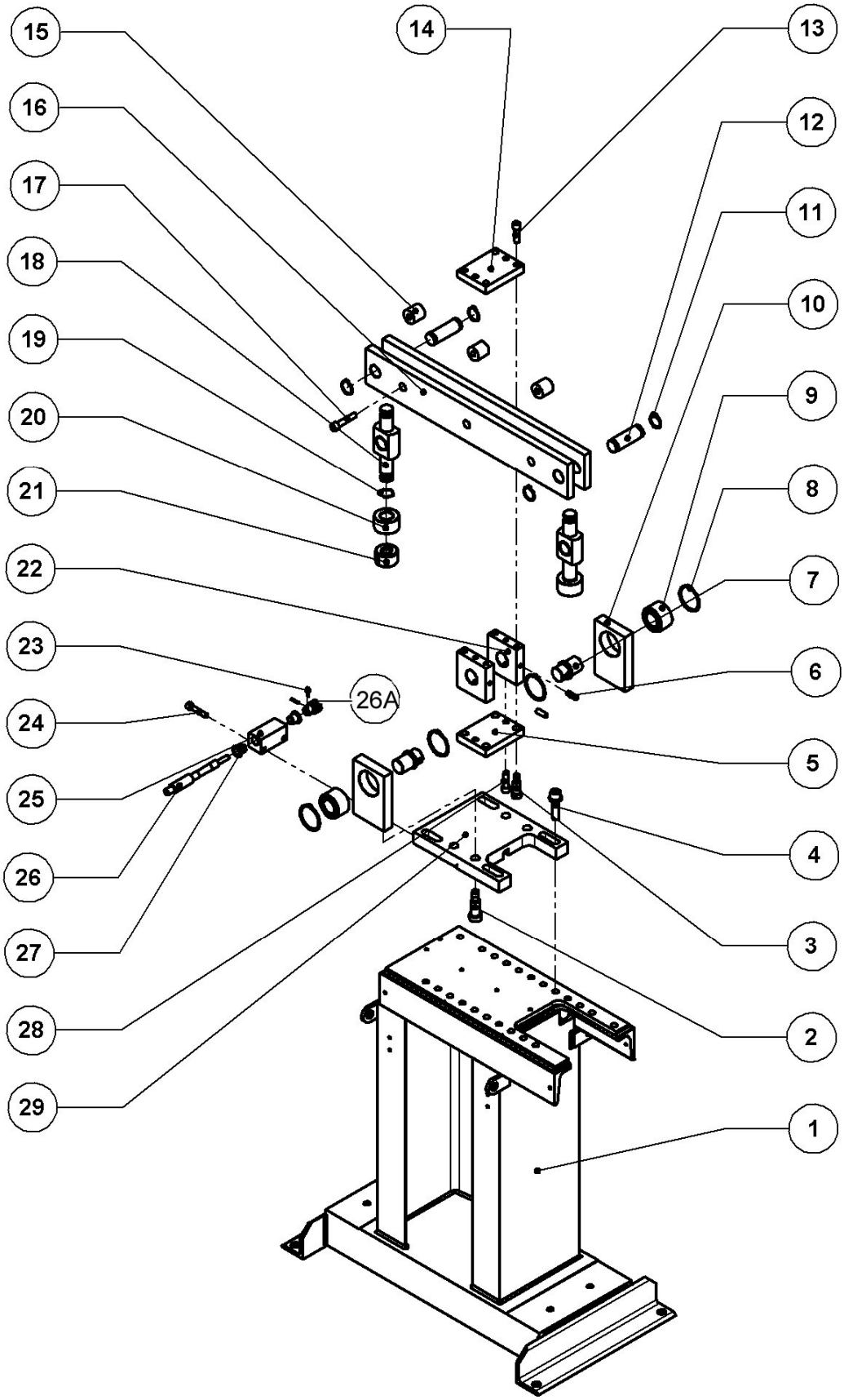
ASSEMBLY OF THE PUMP :

- Fix the pump on the frame by means of the two TH screws,
- Couple the pump to the lever-arm installing the two half shells, the closing ring then the elastic ring,
- Couple the motor to the lever-arm in the same way as the pump,
- Tighten the three fixing screws of the motor.

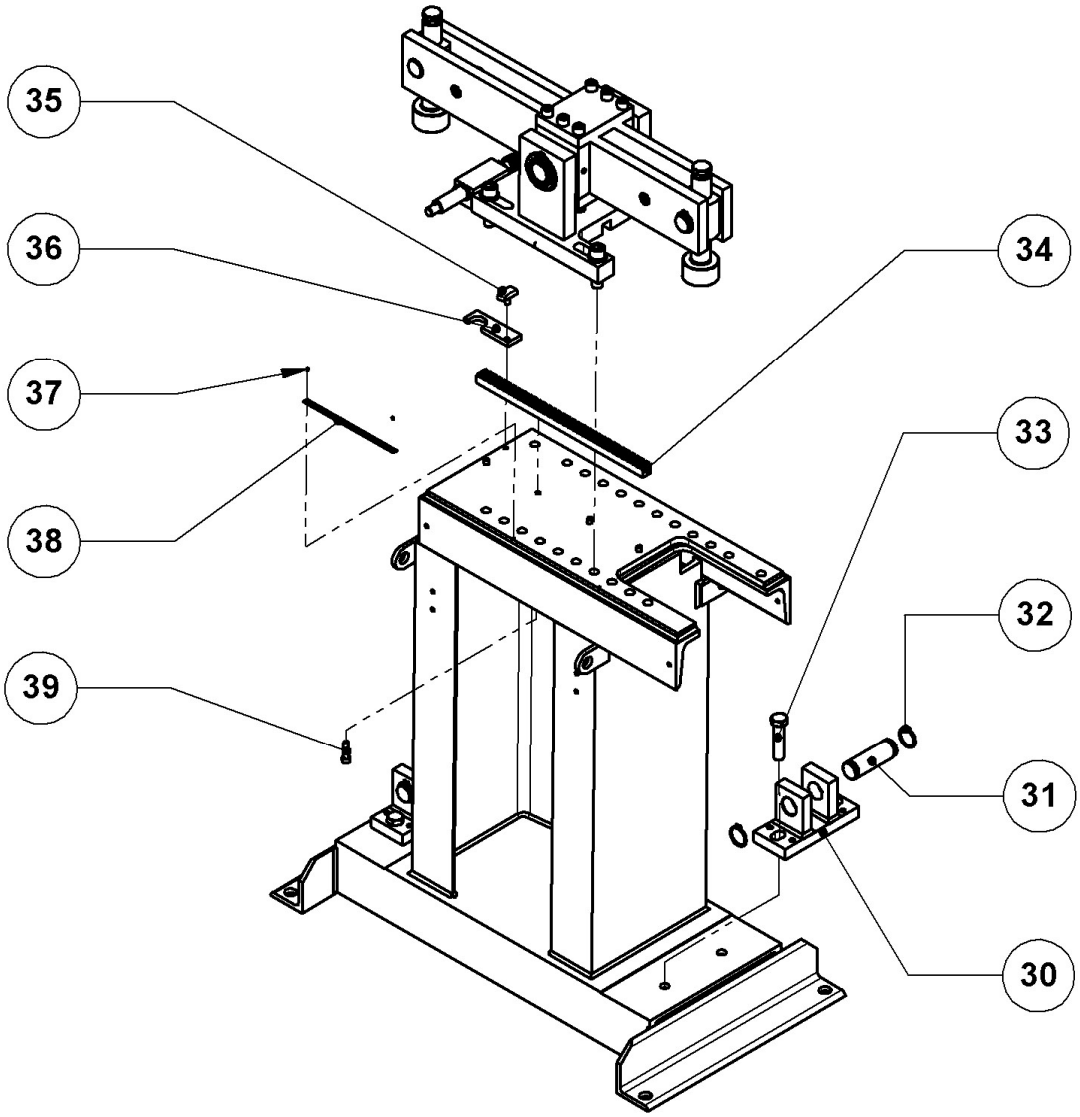
After the installation of the carter and the pressurization, carry out a priming of the materials and **check the mixing.**

Refer to the individual instruction manuals for the curative maintenance of each element.

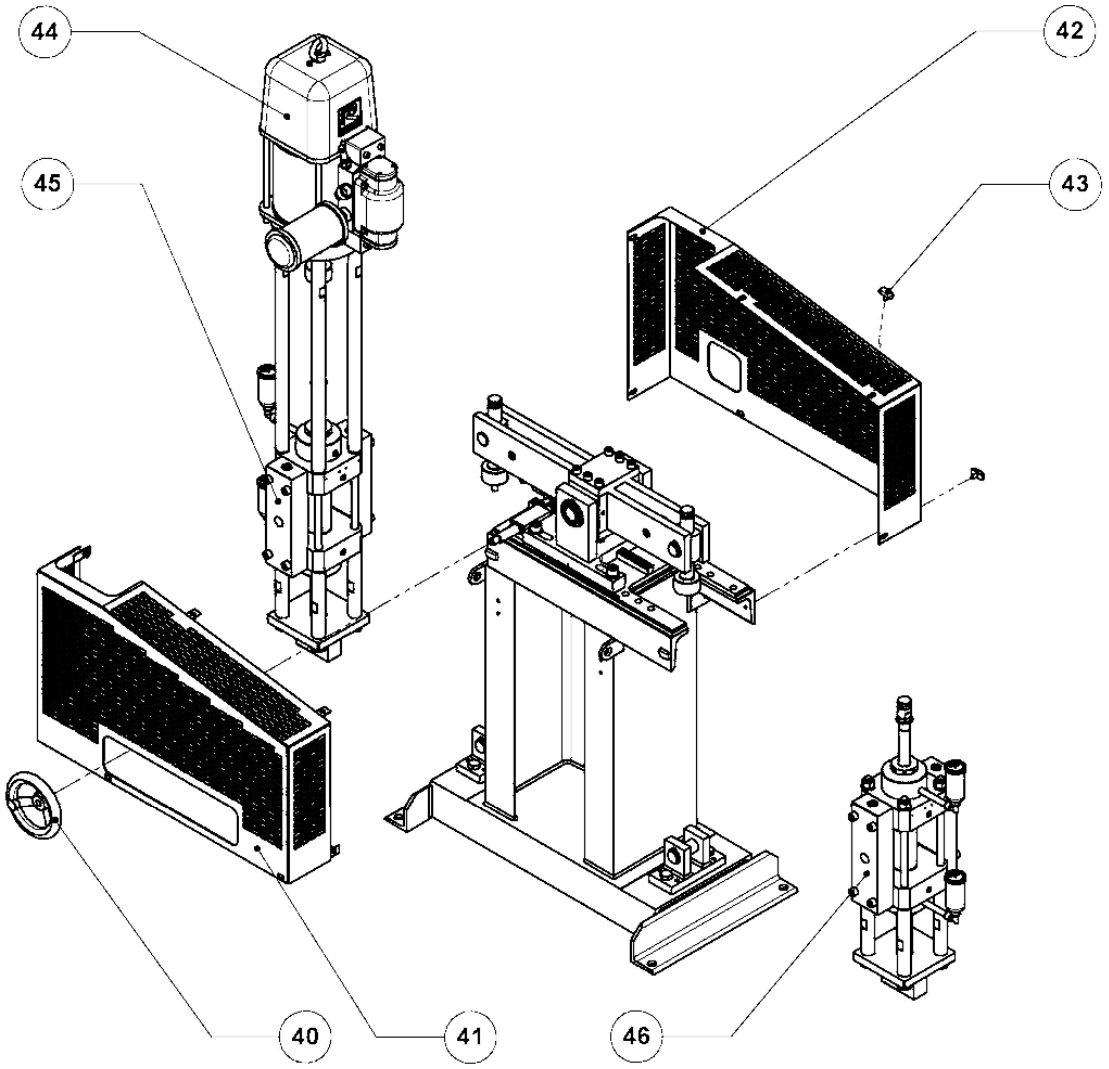
15. EXPLODED VIEWS & SPARE PARTS' LISTS



Ind.	#	Description	Material	Qty
1	209142	Proportioning frame	Steel	1
2	QUIT107	Washer head screw	-	4
3	QUIT106	Washer head screw	-	4
4	88897	Screw	Steel	4
5	209182	Plate	Steel	1
6	88707	Screw	Steel	2
7	209192	Axis	Steel	2
8	88706	Circlips	Steel	4
9	RLD155	Bearings	-	2
10	209181	Support	Steel	2
11	88496	Circlips	Steel	4
12	209516	Axis	Steel	2
13	88188	Screw	Steel	6
14	209183	Counterplate	Steel	1
15	209193	Spacer	Steel	3
16	209177	Set of rod	Steel	1
17	88183	Screw	Steel	3
18	209515	Terminal	Steel	2
19	90165	Brake	-	2
20	205212	Ring	Steel	2
21	205211	Bush	Steel	2
22	209184	Plate	Steel	2
23	88436	Pin	Steel	2
24	88173	Screw	Steel	2
25	209189	Support	Steel	1
26	209838	Axis	Steel	1
27	90471	Ring	-	2
28	88188	Screw	Steel	2
29	209176	Plate	Steel	1
26A	208942	Pinion	Steel	1



Ind.	#	Description	Material	Qty
30	209178	Support	Steel	2
31	209517	Axis	Steel	2
32	88496	Circlips	Steel	4
33	88634	Screw	Steel	4
34	209179	Rack	Steel	1
35	90693	Knob	-	1
36	209976	Plate	Steel	1
37	88590	Rivet	Steel	2
38	209297	Rule	Steel	1
39	88153	Screw	Steel	4



Ind.	#	Description	Material	Qty
40	209850	Knob	Steel	1
41 / 42	209222	Carter	Steel	1
43	906693	Knob	-	8
44	105291 105271 105261 105408 + HYD105 HYD107	Motor	-	1 or 2
45	106561 00 01 106417 00 01 105399 00 01 105397 00 01 105395 00 01	Base pump	-	1
46	SAME THAN BASE PUMP	Hardener pump	-	1

ACCESSORIES

☐ AIR REGULATOR, model 3/4"
91530
AIR REGULATOR, model 1/4"
91551

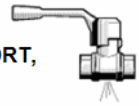
☐ METALLIC TANK FILTER, model 3/4"
91534
POLYCARBONAT TANK FILTER, model 1/4"
91553

☐ AIR FILTER + REGULATOR, model 3/4"
91532
AIR FILTER + REGULATOR, model 1/4"
91555

☐ RADIAL GAUGE
90048

☐ WALL SUPPORT, FILTER and REGULATOR model 1/4"
91548
WALL SUPPORT, FILTER and REGULATOR model 3/4"
91546

☐ AXIAL GAUGE
90049



☐ PRESSURE RELEASE VALVE, model 3/4"
91458
PRESSURE RELEASE VALVE, model 3/8"
91456