



**Macchine Oleodinamiche
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HYDRAULIC TANK FOR HOME LIFTS

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UT			ASSEMBLY and USE MANUAL	DATE 02/25
				DWG N. 9001/MIU-IN

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Dwg. 9305

UT			INDEX ASSEMBLY AND USE MANUAL	DATE 06/23
				DWG N. IN-HOME-LIFT

WARNING

- IN ORDER TO AVOID MOTOR DAMAGES, WIRE UP AS INDICATED ON THE TERMINAL BOARD COVER.
- WHEN THE MOTOR/PUMP IS FIRST STARTED UP, CHECK THE NOISE LEVEL, IF IT SEEMS TOO HIGH THEN THE PHASES MUST BE INVERTED AT THE CONTROL PANEL.

0552/IN

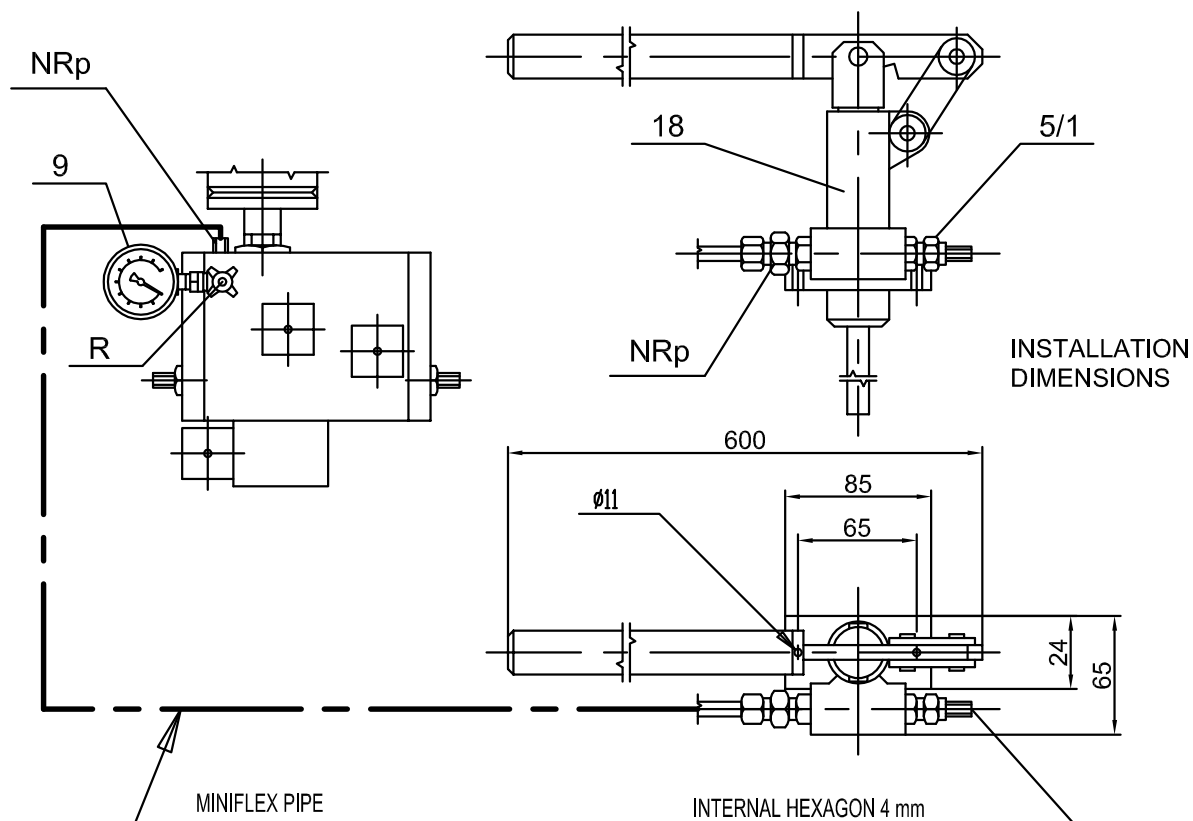
WARNING

- THIS POWER UNIT HAS BEEN FACTORY SET.
- READ THE ENCLOSED INSTRUCTIONS CAREFULLY BEFORE TO ADJUSTING ANY OF THE SCREW.

0553/IN

UT			General instructions for connection motor and solenoid valves power unit	DATE	10/08
				DWG Nr	0985/IN

TECHNICAL DATA: FLOW RATE FOR EVERY CYCLE 12 cm³
MAX. ADMISSIBLE PRESSURE 110 bar

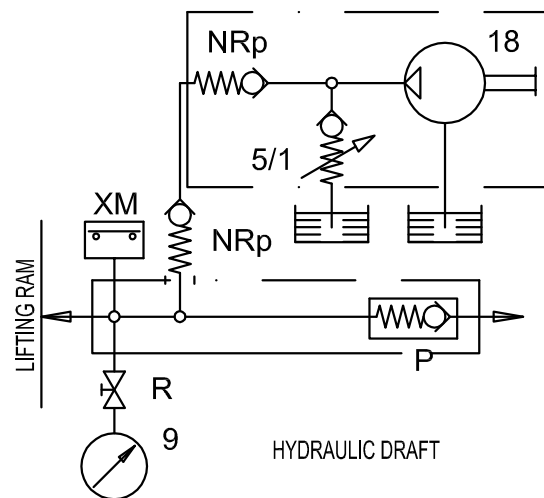


18- HAND PUMP

NRp- NONRETURN VALVE
OF THE HAND PUMP

5/1- OVERPRESSURE VALVE OF THE HAND
PUMP 2, 3 TIMES THE MAX STATIC PRESSURE

- THE HAND PUMP CONNECTION IS REALIZED
BETWEEN THE VALVE "P" AND THE PRESSURE
GAUGE "9"



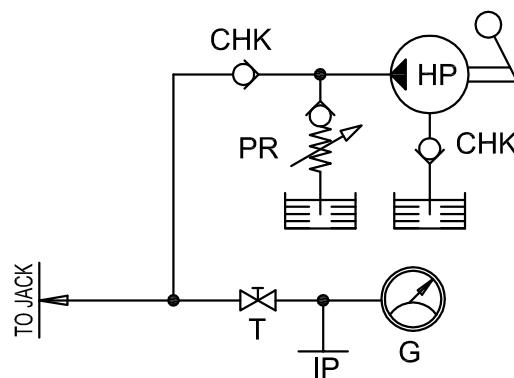
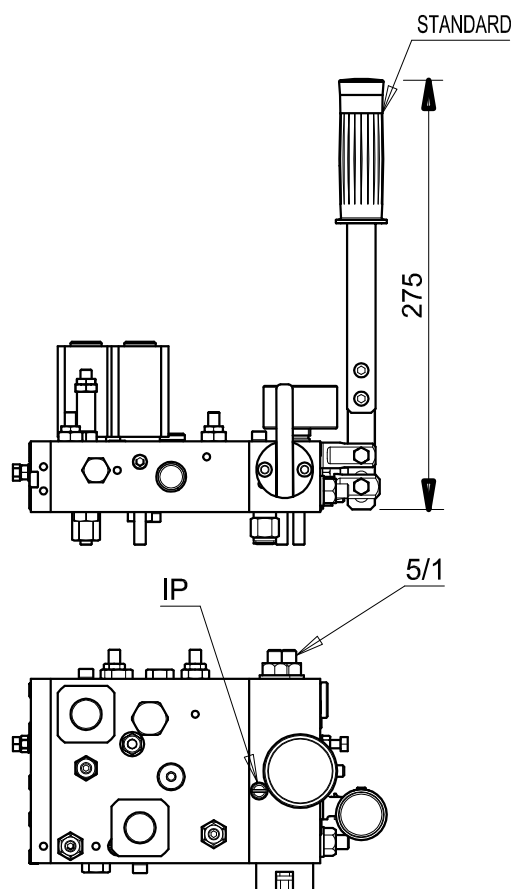
NOTES FOR THE HAND PUMP REGULATION SET

- BEFORE GIVING TENSION TO THE MOTOR, IT IS NECESSARY TO ACTUATE
THE HAND PUMP, IN THE FOLLOWING WAY:

- LOOSEN THE SCREW N°5/1 (ACTING ON THE HEXAGONAL NUT IN ORDER
TO KEEP CONSTANT THE PROTRUDING LENGTH OF THE NUT SCREW)
FOR ABOUT 2 - 5 TURNS.
- OPERATE THE HAND PUMP IN ORDER TO OBTAIN THE OIL FLOW IN A REGULAR
WAY (NO AIR), FROM THE N°5/1 SCREW OUTLET.
- BRING BACK THE N°5/1 SCREW IN THE ORIGINAL POSITION, VERIFYING THE
PRESSURE VALUE SET BEFORE (2, 3 TIMES THE MAX. STATIC PRESSURE).
- FOR DIFFERENT PRESSURE VALUES, SET THE N°5/1 SCREW
(ROTATING CLOCKWISE THE PRESSURE INCREASES)

UT						DATE	12/07
						DWG N.	9405

HAND PUMP



HYDRAULIC SCHEME

CHK- NON -RETURN VALVE
 G- MANOMETER
 HP- HAND PUMP
 IP- INSPECTION
 PR- OVERPRESSURE VALVE
 T- TAP EXCLUDER

NOTES FOR HAND PUMP SETTING (ADJUSTMENT)

- BEFORE APPLYING VOLTAGE TO THE MOTOR, ACTIVATE THE HAND PUMP AS FOLLOWS:

- ① - UNSCREW THE SCREW IP FOR ABOUT 3 TURNS.
- ② - OPERATE THE HAND PUMP UNTIL OIL COMES FROM THE SCREW IP.
- ③ - IF NO OIL COMES OUT, UNSCREW THE SCREW IP AND FILL THE HOLE WITH OIL TO THE EDGE AND THEN REPEAT STEP ②
- ④ - TIGHTEN THE SCREW IP UNTIL IT STOPS.

- FOR DIFFERENT PRESSURES ADJUST SCREW N° 5/1.
 (TURNING CLOCKWISE THE PRESSURE INCREASES)

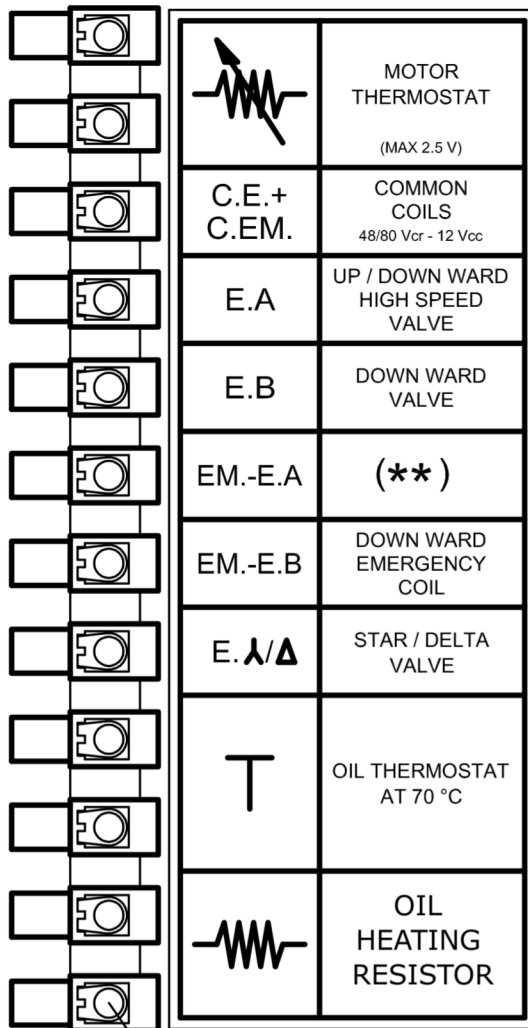
UT		

HAND PUMP FOR VALVE MH2V

DATE 11/18

DWG N.
 9405/2V-35

ELECTRICAL WIRING
for 15-30 l/min 2 speed distributor



Øi 4

E.A
E.B
E. - VALVES (STAR / DELTA ON REQUEST)

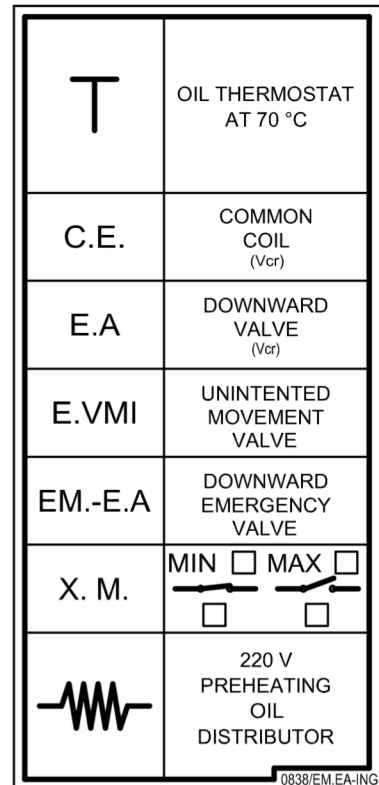
C.E. - COMMON VALVE
C.EM. - COMMON EMERGENCY VALVE
EM. - EMERGENCY

E.A-E.B-E. - NORMAL USE 48 V. RECTIFIED CURRENT-BLACK WIRE
E.A-E.B - AUTOMATIC USE IN EMERGENCY 12 V. DIRECT CURRENT-WHITE WIRE

NOTE:

* N.B.: CONNECT IN PARALLEL THE OIL HEATING RESISTOR (WITH THERMOSTAT) AND THE VALVE HEATING RESISTOR DURING COLD SEASON (230V BLACK WIRE; 400V BLUE WIRE)

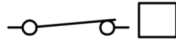
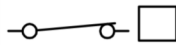
ELECTRICAL WIRING
for 8-23 l/min 1 speed distributor



0838/EM.EA-ING

UT			ELECTRICAL WIRING IN THE POWER UNIT	DATE 02/25
				DWG Nr 9310/1-ML

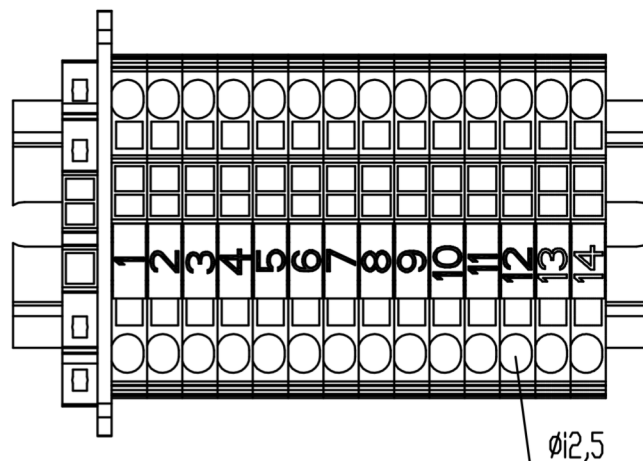
ELECTRICAL WIRING
for 8-30 l/min 2 speed

1		MOTOR THERMOSTAT (MAX - 2.5 V)
2		
3	C.E.+ C.E.M.	COMMON COILS 48/80 Vcr - 12 Vcc
4	E.A	UP/DOWN WARD HIGH SPEED VALVE
5	E.B	DOWN WARD VALVE
6	EM.-E.B	DOWN WARD EMERGENCY COIL
7	X.M.	
8	max.	
9		OIL THERMOSTAT AT 70°C
10		
11		OIL HEATING RESISTOR
12		
13	X.M.	
14	min.	

**

*

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E.A
E.B - SOLENOID VALVES

C.E. - COMMON VALVE
C.E.M. - COMMON EMERGENCY VALVE
EM. - EMERGENCY

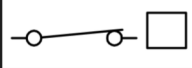
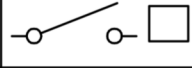
E.A-E.B-E. - NORMAL USE 48V.c.r. BLACK WIRE
E.A.-E.B - AUTOMATIC USE IN EMERGENCY 12 V.cc WHITE WIRE

* N.B.: CONNECT IN PARALLEL THE OIL HEATING RESISTOR (WITH THERMOSTAT) AND THE VALVE HEATING RESISTOR DURING COLD SEASON (230V BLACK WIRE; 400V BLUE WIRE)

** OPZIONAL

UT		ELECTRICAL WIRING IN THE POWER UNIT (ONLY VALVE MH2V)	DATE 02/25
			DWG N. 9312/1

ELECTRICAL WIRING
for 8-30 l/min 2 speed

1		GROUND
2		MOTOR THERMOSTAT (MAX - 2.5 V)
3	C.E.+ C.E.M.	COMMON COILS E.A.+E.B.
4	E.A	UP/DOWN WARD HIGH SPEED VALVE
5	E.B	DOWN WARD VALVE
6	EM.-E.B	DOWN WARD EMERGENCY COIL
7	C.E.B.	COMMON COILS 12Vdc E.B.
8	X.M.	
9	max.	
10		OIL THERMOSTAT AT 70°C
11		
12		OIL HEATING RESISTOR
13		

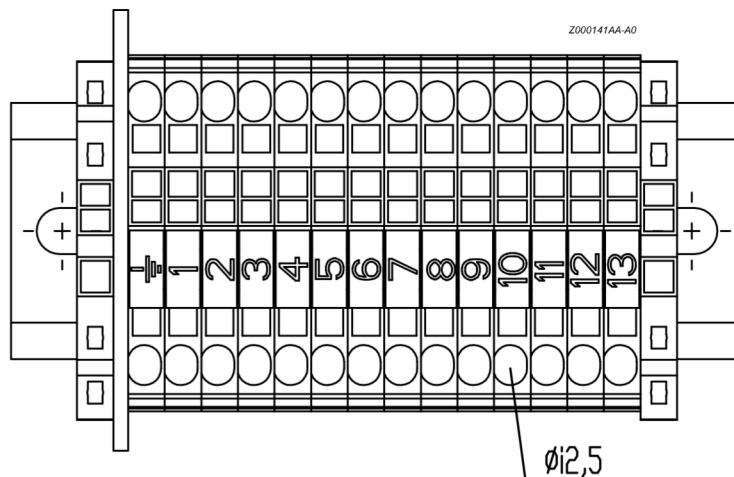
✱

E.A
E.B - SOLENOID VALVES

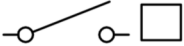
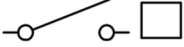
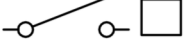
C.E. - COMMON VALVE
C.E.M. - COMMON EMERGENCY VALVE
EM. - EMERGENCY

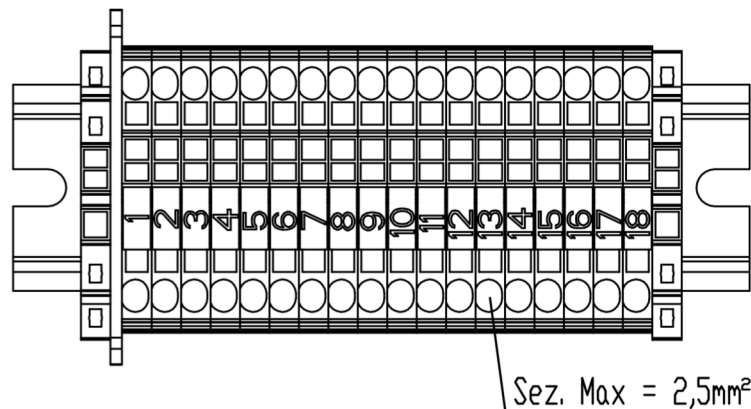
E.A-E.B-E. - NORMAL USE 48V.c.c. BLACK WIRE
E.A.-E.B - AUTOMATIC USE IN EMERGENCY 12 V.c.c WHITE WIRE

✱ N.B.: CONNECT IN PARALLEL THE OIL HEATING RESISTOR (WITH THERMOSTAT)
AND THE VALVE HEATING RESISTOR DURING COLD SEASON
(230V BLACK WIRE; 400V BLUE WIRE)



UT		ELECTRICAL WIRING IN THE POWER UNIT (ONLY VALVE MH2V WITH COILS 110V)	DATE 02/25
			DWG N. 9312/1-110V

1		MOTOR THERMOSTAT
2		(MAX - 2.5 V)
3	C.E.+ C.E.M.	COMMON COILS 48/80 Vdc - 12 Vdc
4		
5	E.A	UP/DOWN WARD HIGHT SPEED VALVE
6	E.B	DOWN WARD VALVE
7	EM,-E.B	DOWN WARD EMERGENCY COIL
8	E. Δ / Δ	STAR/DELTA COIL
9		OIL THERMOSTAT AT 70°C
10		
11		OIL HEATING RESISTOR
12		
13	X.M.	
14	min.	
15	X.M.	
16	max.	
17	X.M.	
18	max.	



E.A - SOLENOID VALVES
E.B - SOLENOID VALVES

C.E. - COMMON VALVE
C.E.M. - COMMON EMERGENCY VALVE
EM. - EMERGENCY

E.A-E.B-E. - NORMAL USE 48Vdc
BLACK WIRE

E.A.-E.B - AUTOMATIC USE IN EMERGENCY
12 Vdc WHITE WIRE

* N.B.: CONNECT IN PARALLEL THE OIL HEATING RESISTOR (WITH THERMOSTAT) AND THE VALVE HEATING RESISTOR DURING COLD SEASON (230V BLACK WIRE; 400V BLUE WIRE)

** OPTIONAL

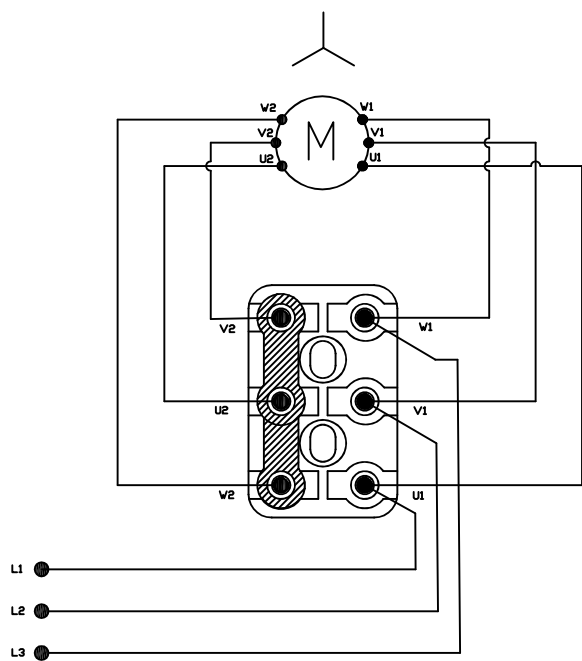
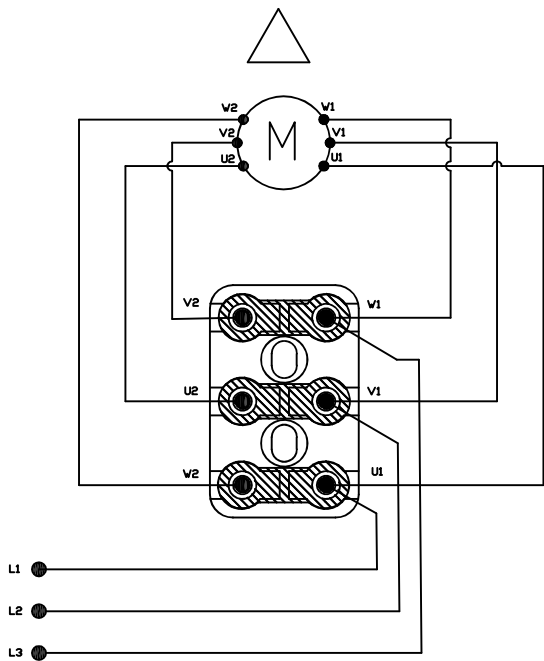
UT		ELECTRICAL WIRING FOR POWER UNIT MARK2 (auxiliary circuits)	DATE 02/25
			DWG N. 9312/2

THREE-PHASE WIRING

box-terminal board

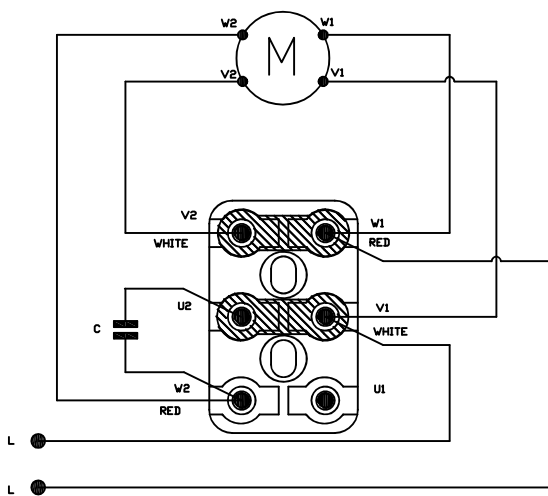
DIRECT STARTING

LINE VOLTAGE	MOTOR VOLTAGE	CONNECTION
220..240	230/400	
380..415	230/400	



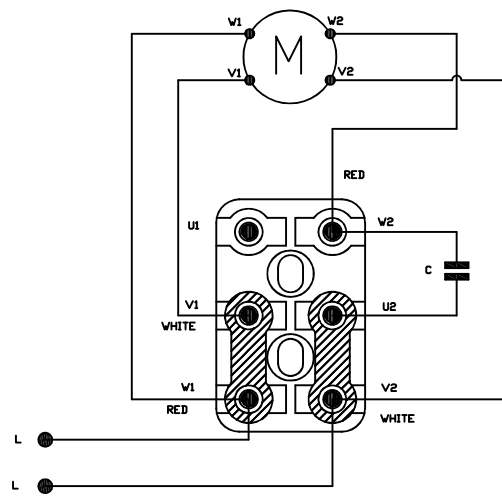
WIRING SINGLE-PHASE

HL AIR

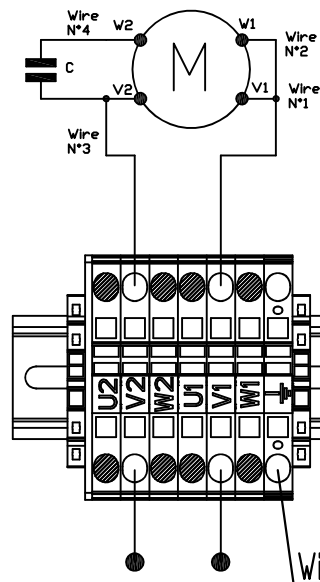


box-terminal board

HL OIL



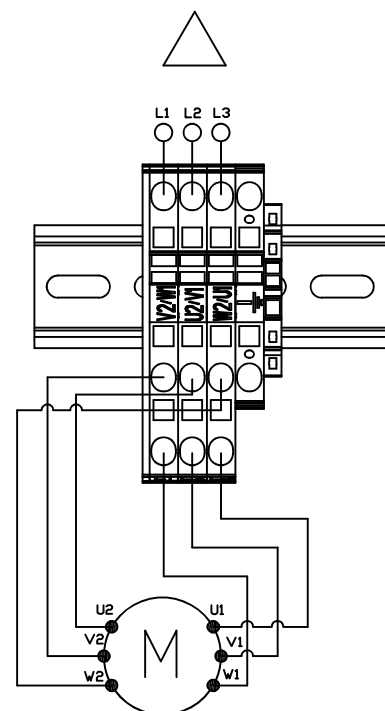
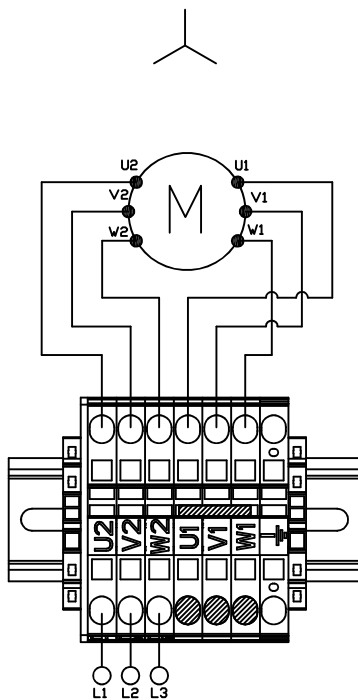
UT	ELECTRICAL WIRING FOR POWER UNIT HL-AIR HL-OIL (main power single phase motor)	DATE 03/21
		DWG N. 9312/7



WIRING SINGLE-PHASE modular terminal board

THREE PHASE WIRING - DIRECT STARTING modular terminal board

LINE VOLTAGE	MOTOR VOLTAGE	CONNECTION
220..240	230/400	
380..415	230/400	
380..415	400/690 - 415/720	

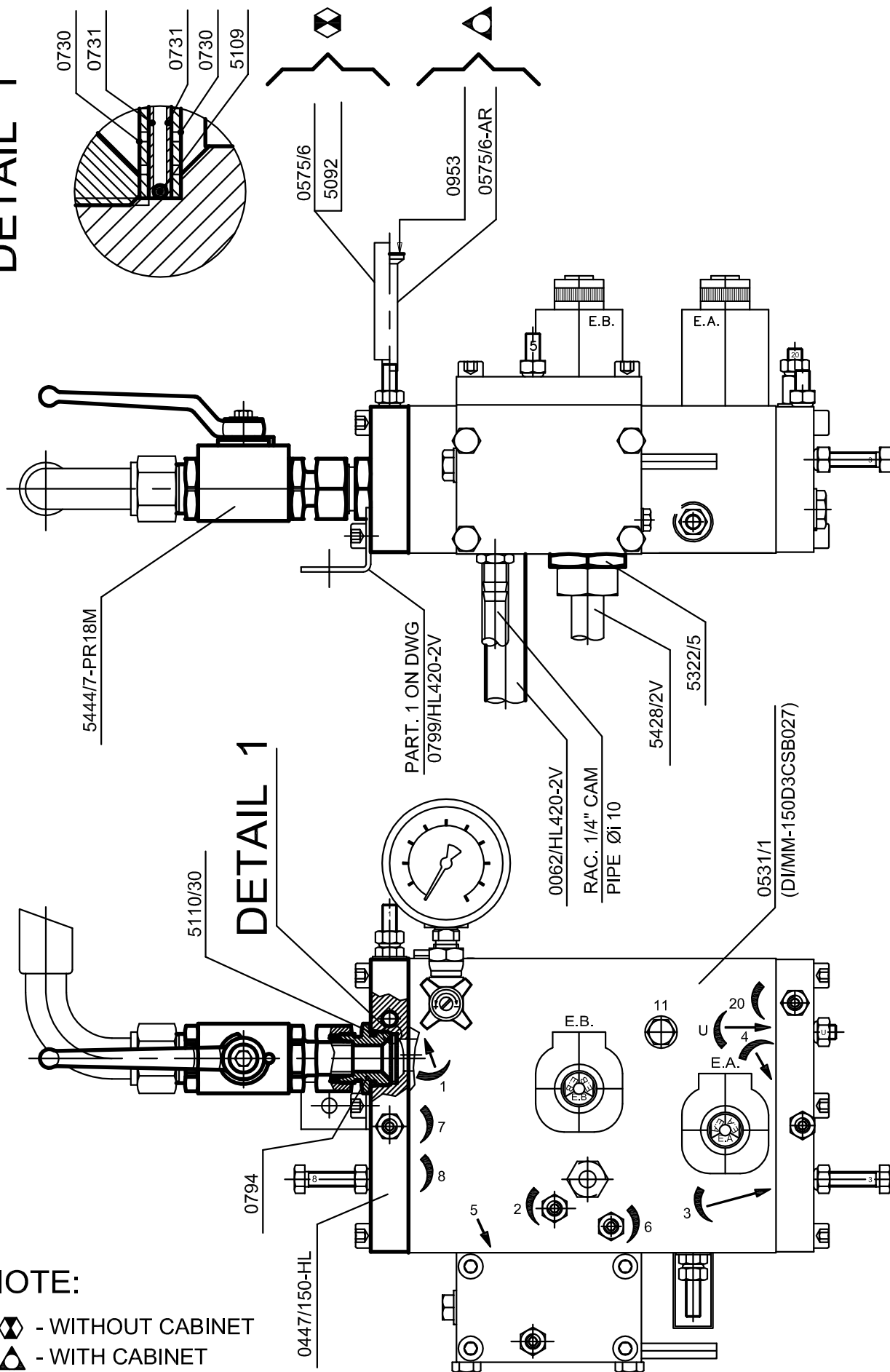


UT	

ELECTRICAL WIRING
FOR POWER UNIT HL320
MOTOR CIRCUITS

DATE	05/23
DWG N.	9312/8

DETAIL 1



UT

OLEODYNAMIC DISTRIBUTOR "HL-2V"
 (15 / 30 L/MIN.)

DATE

08/11

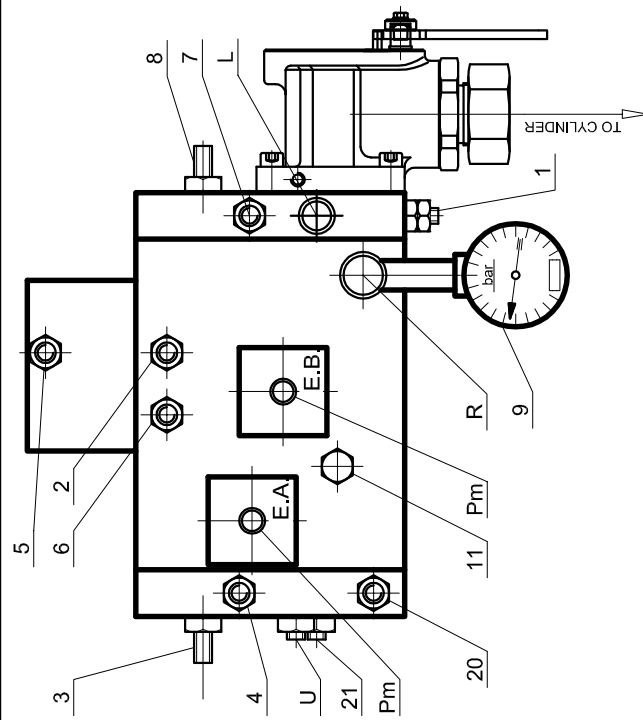
DWG Nr.

9505/2V

UT	

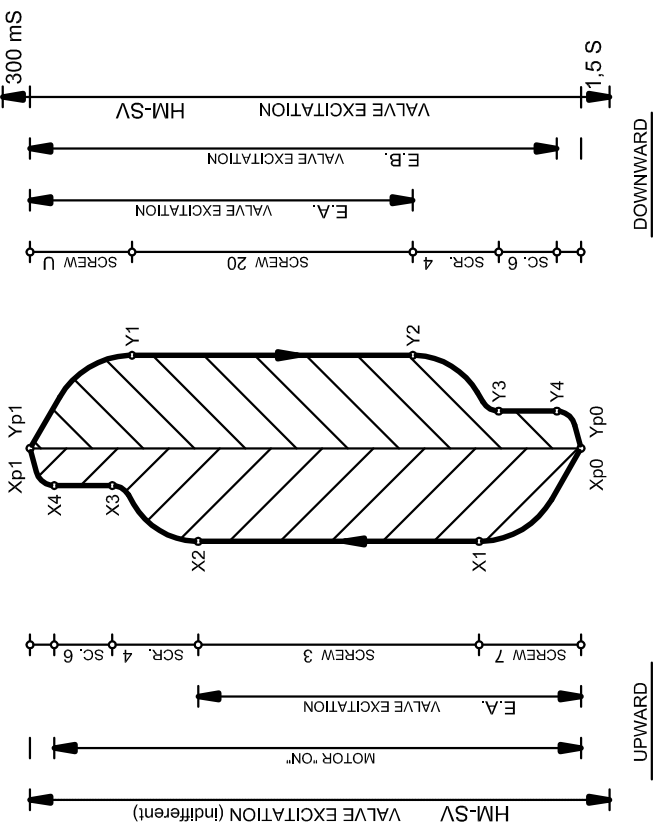
ADJUSTMENT AND OPERATION SCHEME
OF DISTRIBUTOR FOR INDIRECT ACTING
AND DIRECT ON-LINE STARTING INSTALLATION
(DISTRIBUTOR 15/250 L/MIN)

DATE	10/15
DWG No	9232



ADJUSTMENT

- | | |
|-----------|---|
| SCREW- 1 | ADJUSTMENT FOR ROD COUNTERPRESSURE - TIGHTEN SCREW TO INCREASE COUNTERPRESSURE |
| SCREW- 2 | ADJUSTMENT AND TEST OF SAFETY VALVE FOR ROD FAILURE (SEE DWG N°9345) |
| SCREW- 3 | ADJUSTMENT FOR HIGH SPEED BALANCING IN UP/DOWN DIRECTION - TIGHTEN SCREW TO REDUCE SPEED |
| SCREW- 4 | ADJUSTMENT FOR 1ST DECELERATION PHASE - SCREW DOWN FOR A SOFT DECELERATION |
| SCREW- 5 | ADJUSTMENT FOR MAX. PRESSURE - TIGHTEN SCREW TO INCREASE PRESSURE |
| SCREW- 6 | ADJUSTMENT FOR LOW SPEED IN UPWARD AND DOWNWARD DIRECTION - TIGHTEN SCREW TO REDUCE SPEED |
| SCREW- 7 | ADJUSTMENT FOR DEPARTURE IN UPWARD DIRECTION - TIGHTEN SCREW FOR SOFT DEPARTURE (1) |
| SCREW- 8 | ADJUSTMENT FOR VALVE "D" COUNTERPRESSURE - TIGHTEN SCREW TO INCREASE COUNTERPRESSURE |
| 9 | PRESSURE GAUGE |
| SCREW- 11 | CONTROL OF PRESSURE SEAL BY NONRETURN VALVE WITH STANDSTILL SYSTEM |
| SCREW- 20 | ADJUSTMENT FOR DOWNWARD DIRECTION SPEED - TIGHTEN SCREW TO INCREASE SPEED |
| E.A. | VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION |
| E.B. | DOWNWARD DIRECTION VALVE |
| L | PUSH BUTTON FOR MANUAL EMERGENCY IN DOWNWARD DIRECTION |
| Pm | MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE |
| R | TAP TO CUT OFF PRESSURE GAUGE |
| U | DOWNWARD DEPARTURE DEVICE - TIGHTEN SCREW TO REDUCE SPEED (1) |

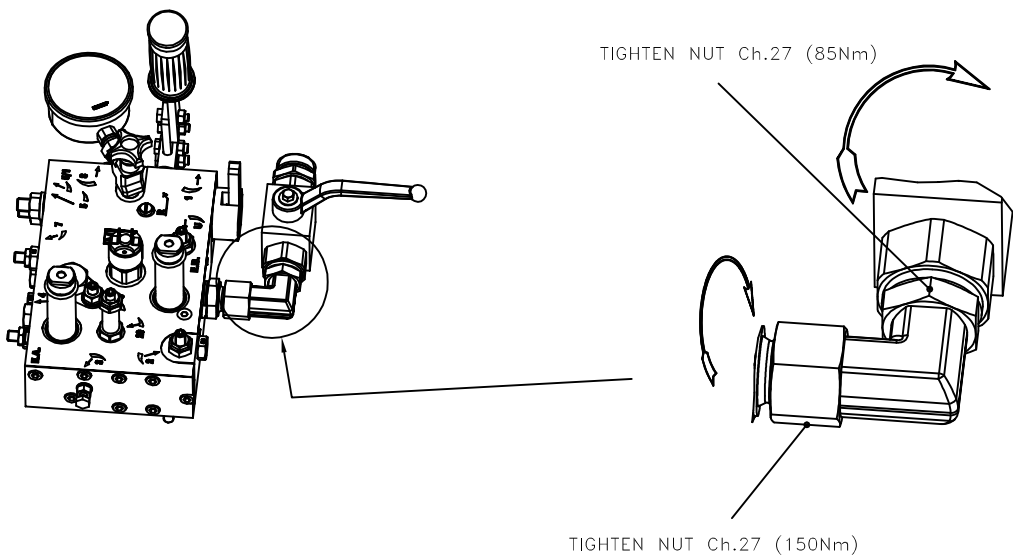
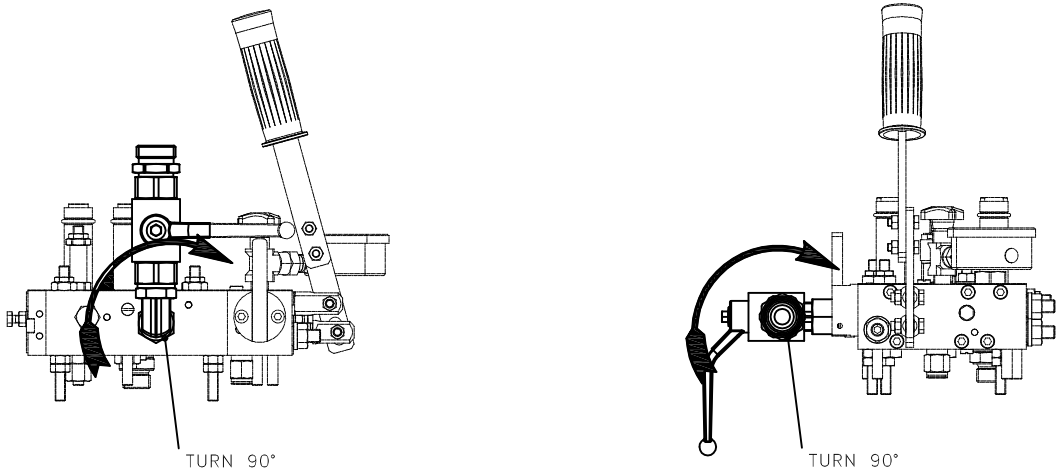
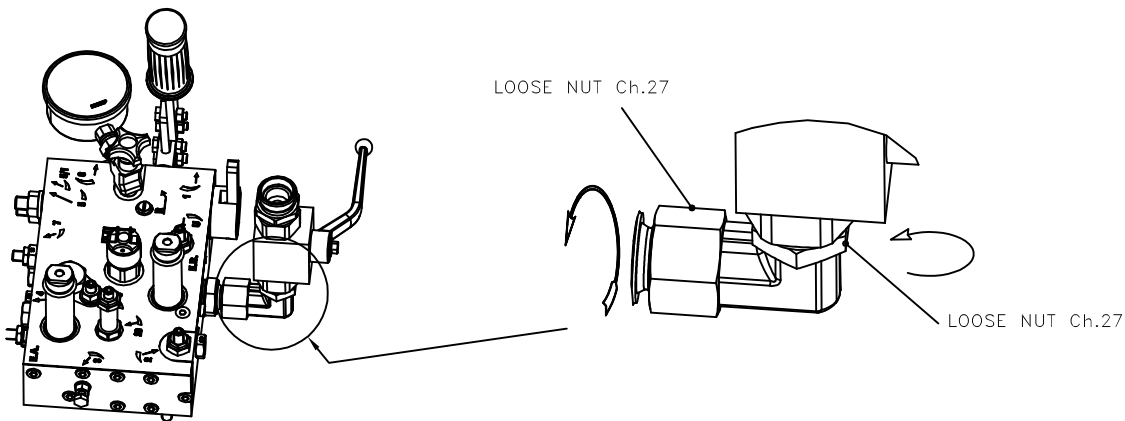


OPERATION

- MOTOR SUPPLY AND E.A. VALVE EXCITATION
ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED
ADJUST USING SCREW 4
CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
2ND DECELERATION PHASE TO FLOOR LEVEL (MOTOR OFF)
- E.A./E.B. VALVES EXCITATION - ACCELERATION IN DOWNWARD DIRECTION
ADJUST USING SCREW U
CONSTANT HIGH SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 20
1ST DECELERATION PHASE - E.A. VALVE DE-ENERGIZED
ADJUST USING SCREW 4
CONSTANT LOW SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 6
2ND DECELERATION PHASE TO FLOOR LEVEL - E.B. VALVE DE-ENERGIZED

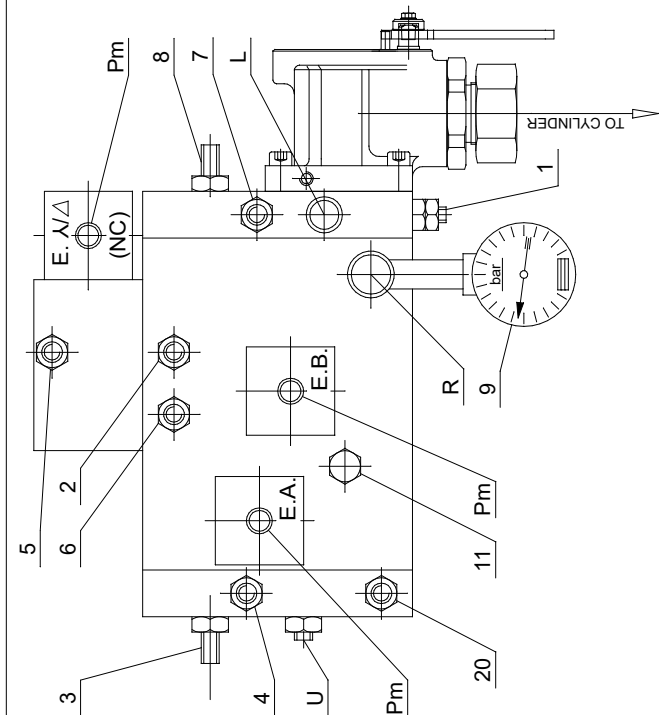
NOTE: DURING THE DE-ENERGIZING PHASE OF E.A. VALVE, MAKE SURE THAT AFTER THE PHASE OF DECELERATION, THE DISTANCE AT WHICH LOW SPEED BEGINS IS AT LEAST 15/20 cm BEFORE LEVEL STOP

CHANGE OUTPUT PORT FROM VERTICAL TO HORIZONTAL



UT		MH-2V VALVE OUTPUT DIRECTION CHANGE PROCEDURE ADJUSTABLE PORT	DATA
			11/18
			DIS. N° 9344 MH-2V

ADJUSTMENT AND OPERATION SCHEME
OF DISTRIBUTOR FOR STAR DELTA INSTALLATION
(OFF NORMALLY "NC")
(DISTRIBUTOR 15/250 L/MIN)



ADJUSTMENT

- SCREW- 1

ADJUSTMENT FOR ROD COUNTERPRESSURE - TIGHTEN SCREW TO INCREASE COUNTERPRESSURE
- SCREW- 2

ADJUSTMENT AND TEST OF SAFETY VALVE FOR ROD FAILURE (SEE DWG N°9345)
- SCREW- 3

ADJUSTMENT FOR HIGH SPEED BALANCING IN UP/DOWN DIRECTION - TIGHTEN SCREW TO REDUCE SPEED
- SCREW- 4

ADJUSTMENT FOR 1ST DECELERATION PHASE - SCREW DOWN FOR A SOFT DECELERATION
- SCREW- 5

ADJUSTMENT FOR MAX. PRESSURE - TIGHTEN SCREW TO INCREASE PRESSURE
- SCREW- 6

ADJUSTMENT FOR LOW SPEED IN UPWARD AND DOWNWARD DIRECTION - TIGHTEN SCREW TO REDUCE SPEED
- SCREW- 7

ADJUSTMENT FOR DEPARTURE IN UPWARD DIRECTION - TIGHTEN SCREW FOR SOFT DEPARTURE (1)
- SCREW- 8

ADJUSTMENT FOR VALVE "D" COUNTERPRESSURE - TIGHTEN SCREW TO INCREASE COUNTERPRESSURE
- 9

PRESSURE GAUGE
- SCREW- 11

CONTROL OF PRESSURE SEAL BY NONRETURN VALVE WITH STANDSTILL SYSTEM
- SCREW- 20

ADJUSTMENT FOR DOWNWARD DIRECTION SPEED - TIGHTEN SCREW TO INCREASE SPEED
- SCREW- 21

ADJUSTMENT SOFT ARRIVAL TO FLOOR LEVEL - SCREW DOWN FOR SOFT ARRIVAL (2)
- E.A.

VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
- E.B.

DOWNWARD DIRECTION VALVE
- E. Δ/Δ (NC)

STAR DELTA START VALVE Δ/Δ OFF NORMALLY (HYDRAULIC ONLY)
- L

PUSH BUTTON FOR MANUAL EMERGENCY IN DOWNWARD DIRECTION
- Pm

MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE
- R

TAP TO CUT OFF PRESSURE GAUGE
- SCREW- U

DOWNWARD DEPARTURE DEVICE - TIGHTEN SCREW TO REDUCE SPEED (1)

DO NOT TIGHTEN COMPLETELY, SINCE DEPARTURE MOVEMENT MAY BE INTERRUPTED.

OPERATION

- UPWARD

X

→

Xp0

Xp0

→

X1

X1

→

X2

X2

→

X3

X3

→

X4

X4

→

Xp1

Xp1

→

Y
- DOWNWARD

Yp1

→

Y1

Y1

→

Y2

Y2

→

Y3

Y3

→

Y4

Y4

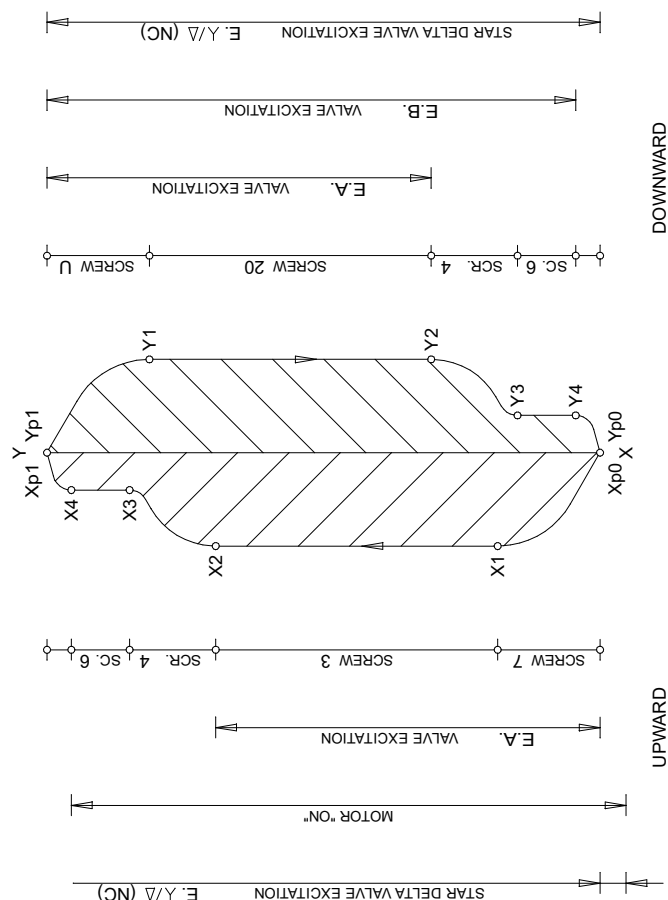
→

Yp0

Xp0

→

X
- ELECTRIC MOTOR AND VALVES EXCITATION E.Δ Δ (NC)
- EXCITATION VALVE E.A. DE-ENERGIZED VALVE E.Δ Δ (NC)
- ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
- CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
- 1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED ADJUST USING SCREW 4
- CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
- 2ND DECELERATION PHASE TO FLOOR LEVEL
- DELAY FOR MOTOR DE-ENERGIZING
- E.A. - E.B. E.Δ Δ (NC) VALVES EXCITATION - ACCELERATION IN DOWNWARD DIRECTION ADJUST USING SCREW U
- CONSTANT HIGH SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 20
- 1ST DECELERATION PHASE - E.A. VALVE DE-ENERGIZED ADJUST USING SCREW 4
- CONSTANT LOW SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 6
- 2ND DECELERATION PHASE TO FLOOR LEVEL - E.B. VALVE DE-ENERGIZED DE-ENERGIZED VALVE E.Δ Δ (NC)

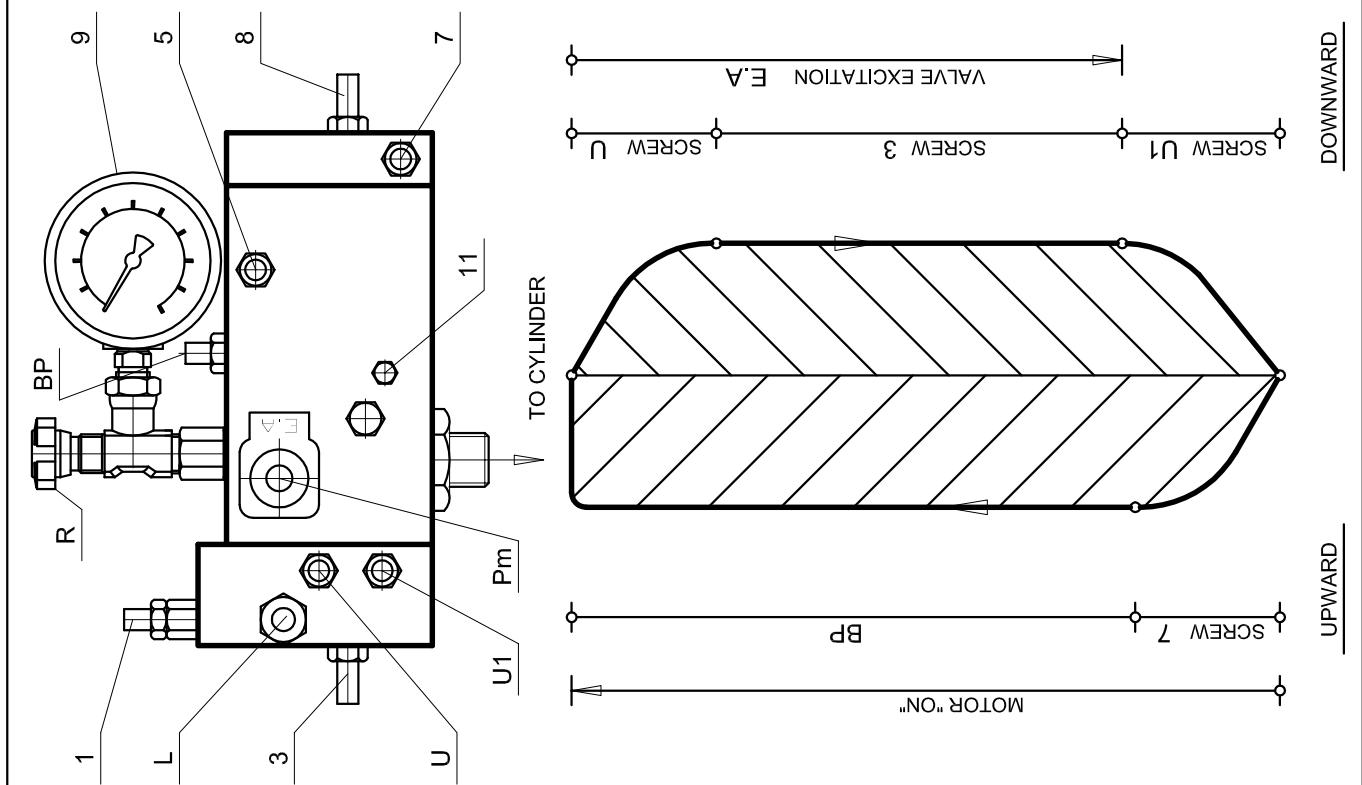


NOTE: DURING THE DE-ENERGIZING PHASE OF E.A. VALVE, MAKE SURE THAT AFTER THE PHASE OF DECELERATION, THE DISTANCE AT WHICH LOW SPEED BEGINS IS AT LEAST 15/20 cm BEFORE LEVEL STOP

UT	

**ADJUSTMENT AND OPERATION SCHEME
 OF DISTRIBUTOR FOR INDIRECT ACTING
 AND DIRECT ON-LINE STARTING INSTALLATION**
 (DISTRIBUTOR SINGLE SPEED "HL" 8/23 L/MIN)

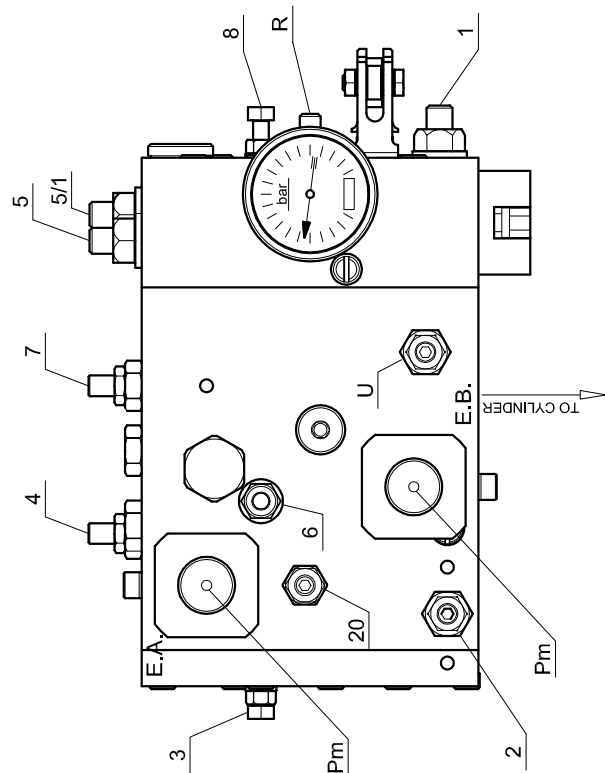
DATE	08/16
DWG Nr.	9233



UT	

ADJUSTMENT AND OPERATION SCHEME
OF DISTRIBUTOR FOR INDIRECT ACTING
AND DIRECT ON-LINE STARTING INSTALLATION
(DISTRIBUTOR MH2V FROM 8/30 L/MIN)

DATE	11/18
DWG N°	9232 2V-35



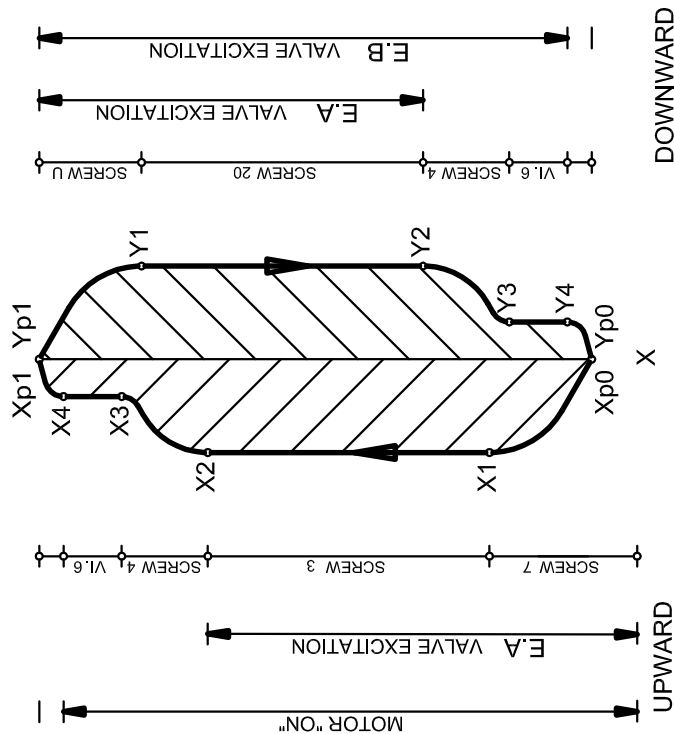
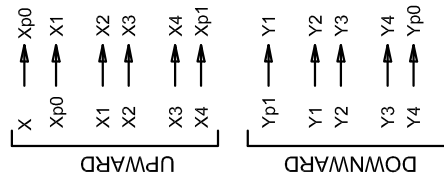
ADJUSTMENT

- | | | |
|---------|-----|---|
| SCREW - | 1 | ADJUSTMENT FOR ROD COUNTERPRESSURE - TIGHTEN SCREW TO INCREASE COUNTERPRESSURE |
| SCREW - | 2 | ADJUSTMENT AND TEST OF SAFETY VALVE FOR ROD FAILURE (SEE DWG N°9345 2V-35) |
| SCREW - | 3 | ADJUSTMENT FOR HIGH SPEED BALANCING IN UP/DOWN DIRECTION - TIGHTEN SCREW TO REDUCE SPEED |
| SCREW - | 4 | ADJUSTMENT FOR 1ST DECELERATION PHASE - SCREW DOWN FOR A SOFT DECELERATION |
| SCREW - | 5 | ADJUSTMENT FOR MAX. PRESSURE - TIGHTEN SCREW TO INCREASE PRESSURE |
| SCREW - | 5/1 | REG. MAX PRESSURE HAND PUMP - UNSCREWING INCREASES PRESSURE |
| SCREW - | 6 | ADJUSTMENT FOR LOW SPEED IN UPWARD AND DOWNWARD DIRECTION - TIGHTEN SCREW TO REDUCE SPEED |
| SCREW - | 7 | ADJUSTMENT FOR DEPARTURE IN UPWARD DIRECTION - TIGHTEN SCREW FOR SOFT DEPARTURE (1) |
| SCREW - | 8 | ADJUSTMENT FOR VALVE "D" COUNTERPRESSURE - TIGHTEN SCREW TO INCREASE COUNTERPRESSURE |
| SCREW - | 20 | ADJUSTMENT FOR DOWNWARD DIRECTION SPEED - TIGHTEN SCREW TO INCREASE SPEED |
| E.A | | VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION |
| E.B | | DOWNWARD DIRECTION VALVE |
| L | | PUSH BUTTON FOR MANUAL EMERGENCY IN DOWNWARD DIRECTION |
| Pm | | MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE |
| R | | TAP TO CUT OFF PRESSURE GAUGE |
| U | | DOWNWARD DEPARTURE DEVICE - TIGHTEN SCREW TO REDUCE SPEED (1) |

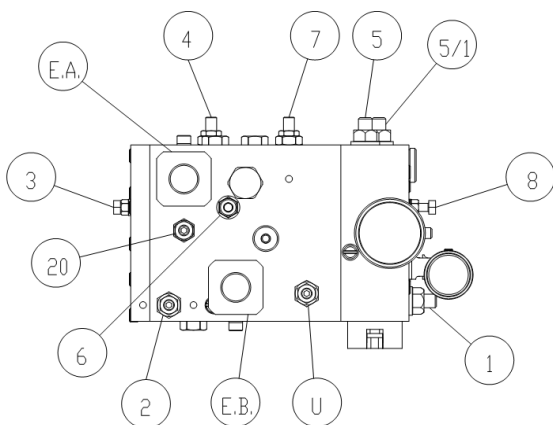
NOTE (1): DO NOT TIGHTEN COMPLETELY, SINCE DEPARTURE MOVEMENT MAY BE INTERRUPTED

OPERATION

INSERTING ELECTRIC MOTOR, REG. DELAY HYDRAULIC THROUGH SCREW 7/a
MOTOR SUPPLY AND E.A. VALVE EXCITATION
ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED
ADJUST USING SCREW 4
CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
2ND DECELERATION PHASE TO FLOOR LEVEL (MOTOR OFF)



NOTE: DURING THE DE-ENERGIZING PHASE OF E.A. VALVE, MAKE SURE THAT AFTER THE PHASE OF DECELERATION, THE DISTANCE AT WHICH LOW SPEED BEGINS IS AT LEAST 15/20 cm BEFORE LEVEL STOP



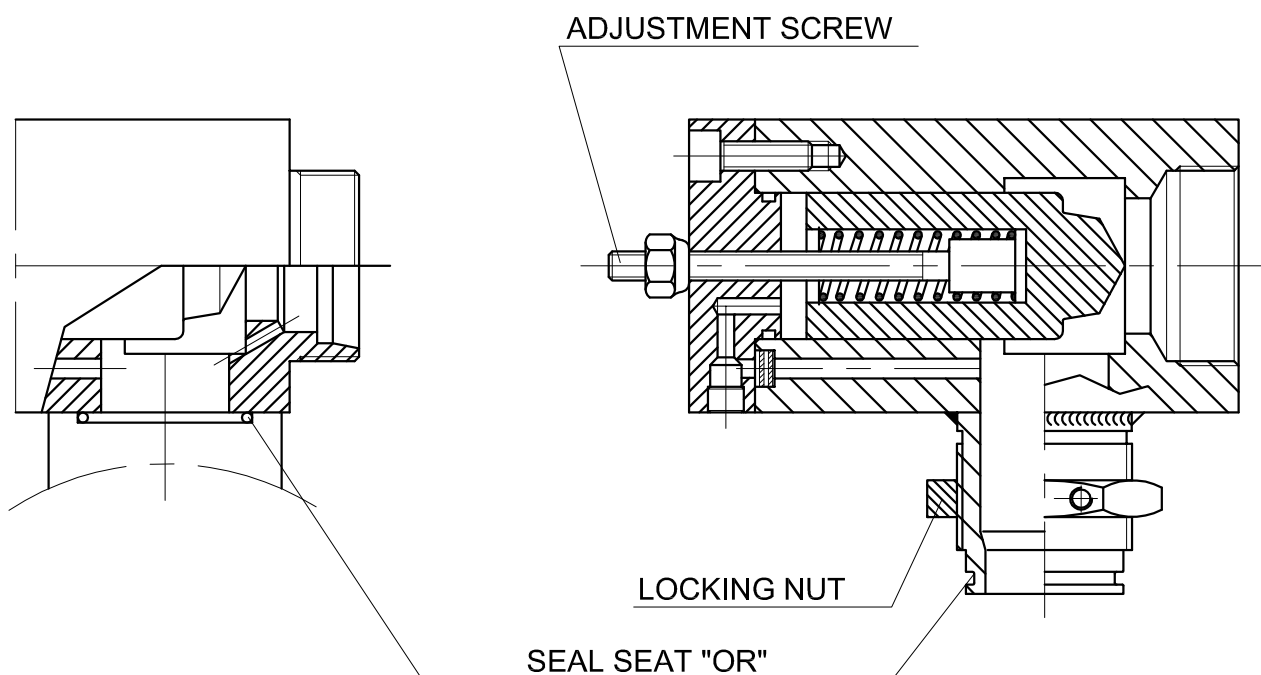
Performance		Screw	Setting	Setting Effect
Upwards	By pass pressure	8	↻	Increase
	Acceleration	7 *	↻	Soft
	Max speed	3	↻	Decrease speed **
	Deceleration	4 *	↻	Soft
	Low speed	6	↻	Decrease speed
Downwards	Acceleration	U *	↻	Soft
	Max speed	20	↻	Increase speed **
	Deceleration	4	↻	Soft
	Low speed	6	↻	Decrease speed
Overpressure		5	↻	Increase
Overpressure hand pump		5/1	↻	Increase
Minimum pressure		1	↻	Increase

* Setting very sensitive MAX 1/6 round at time

** ATTENTION: Screw 3 also acts on the downwards speed. First adjust screw n°3 and then screw n°20.

For rupture valve test on the jack, rotate ↻ screw n° 2

UT		CONTROL VALVE MH2V	DATE 06/23
			DWG N. 2V-35



TYPE: *3/4" - *1"1/4 - 1"1/2

TYPE: 2"

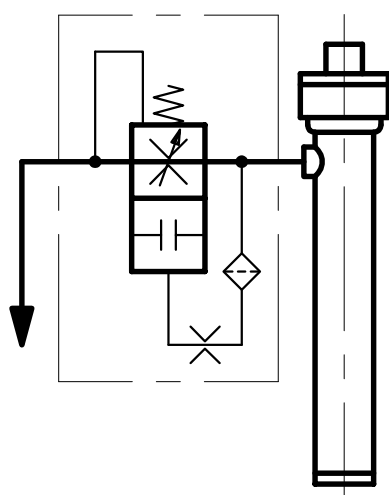
*** FOR HL POWER UNIT
OPERATING TEST:**

- A** - PREPARE THE CAR FULLY CHARGED (SEE POINT 4) AND SEND IT TO THE HIGHEST LEVEL.
- B** - LOCK ON THE DISTRIBUTOR GROUP SCREW N. 2 AND UNSCREW SCREW N. 8.
(FOR VALVE 3/4" ONLY: SCREW N. 3 AND N. 8 IN SAFETY UNSCREW)
(FOR VALVE MH2V: TIGHTEN ONLY THE SCREW N°2)
- C** - SET A DOWNWARD RUNNING SO THAT THE CAR WILL GO DOWN FASTER THAN THE NOMINAL SPEED.
- D** - THE VALVE MUST BE ABLE TO STOP THE DESCENDING CAB AND TO KEEP IT STILL AT THE LATEST WHEN THE SPEED REACHES A VALUE EQUAL TO THE NOMINAL DOWN STROKE SPEED "Vd" INCREASED OF 0.3 m/s.
- E** - WHEN THE CHECK HAS BEEN TERMINATED WITH THE CAR IN STOP POSITION, RESET THE ADJUSTMENT SCREW N.2 (UNSCREW OF 3.5 TURNS) AND N. 8 (FOR VALVE 3/4" ONLY: SCREW N. 3 AND N. 8) TO THE ORIGINAL CONDITION.
(FOR VALVE MH2V: EMPTY COMPLETELY SCREW N°2)

NOTE:

- 1) IF DURING THE CHECK THE VALVE DOES NOT OPERATE TAKE OFF THE CAP AND THE ADJUST THE VALVE BY TURNING 1/4 OF A ROUND AT A TIME, REPEAT THE CHECK UNTIL IT FUNCTIONS.
- 2) THE VALVE CAN BE ORIENTATED IN ANY DIRECTION.
- 3) THE VALVE IS ALREADY CALIBRATED.
- 4) FOR SYSTEMS WITH TWO OR MORE PISTONS, EACH FITTED WITH A STOP VALVE, THE FIRST TEST MUST BE CARRIED OUT WITH A MIN. LOAD, BEFORE INCREASING THE WEIGHT UNTIL REACHING THE MAX.
LOAD IN TWO POINTS AT LEAST (HALFWAY AND MAX.) TO CHECK THE OPERATION.

UT	FUNCTIONAL CHECKING OF THE ADJUSTABLE STOP VALVE 	DATE 08/16 DWG N. 9345-2V-35
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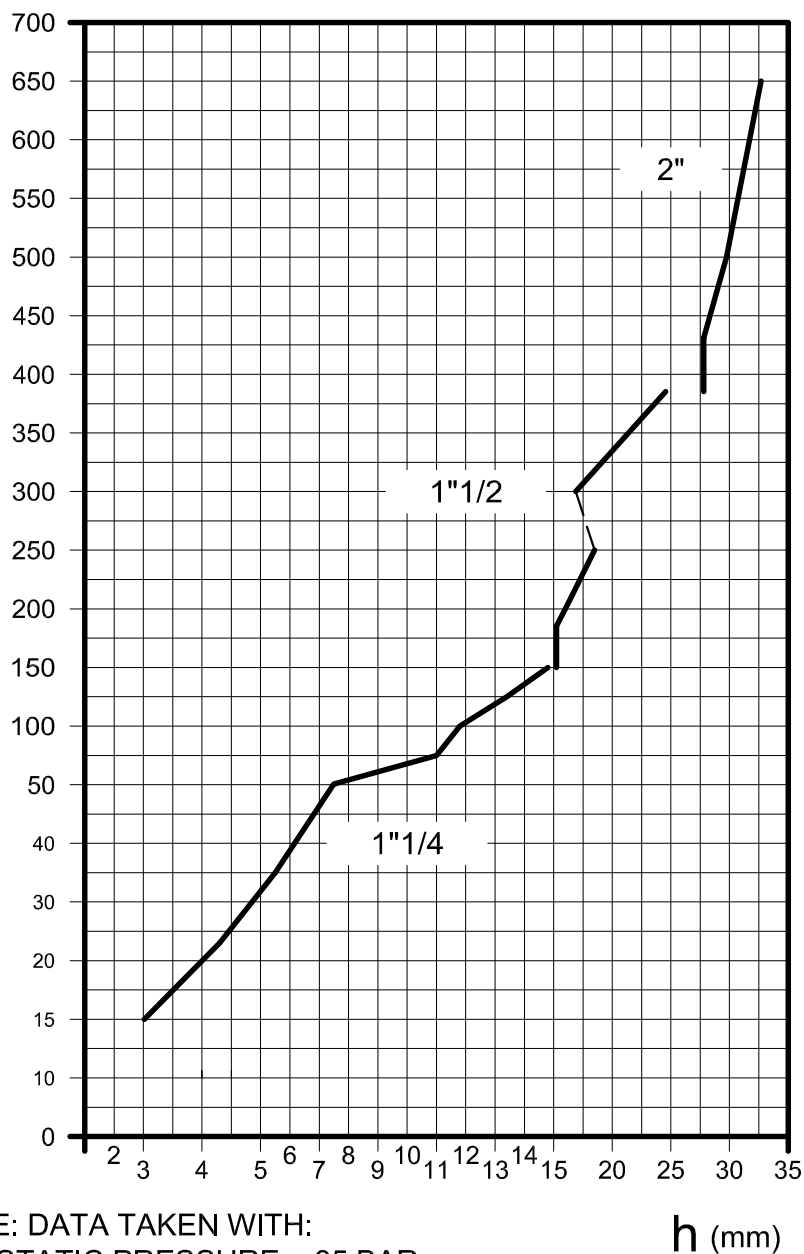


- RAM SPEED AFTER
VALVE INTERVENTION

$V_d = 0$ (m/s)

VALUE BROUGHT FORWARD
ON THE TESTING CERTIFICATE

Q_n (l/1') NOMINAL FLOW RATE DOWNWARD



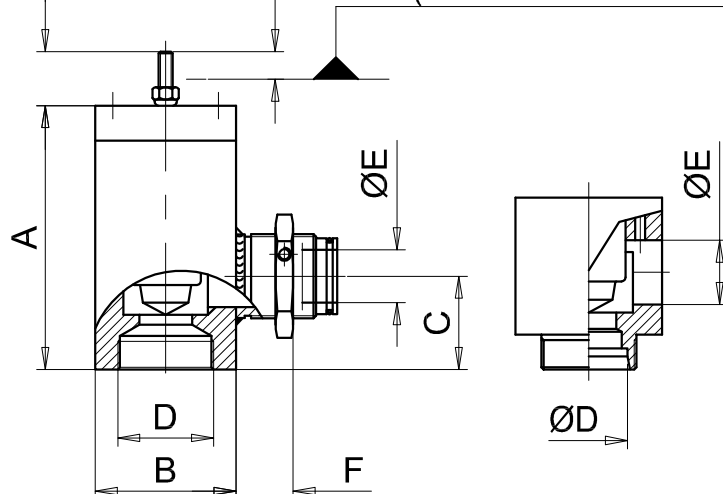
NOTE: DATA TAKEN WITH:

- STATIC PRESSURE = 35 BAR

- OIL TEMPERATURE = 35°C

h (mm)

$h = 0$ (TOTALLY CLOSED VALVE)



TYPE: 2"

TYPE: 1"1/4 - 1"1/2

		1" 1/4	1" 1/2	2"
Q_n	MIN	15	151	381
	MAX	150	380	650
A		132	153	186
B		Ø 70	Ø 70	Ø 75
C		56	56	63
D		28 35	42	2"/F
E		25	30	40
F		/	/	24

UT

DIMENSIONING AND REGULATION OF
THE ADJUSTABLE STOP VALVE 1"1/4; 1"1/2; 2"



DATE

10/19

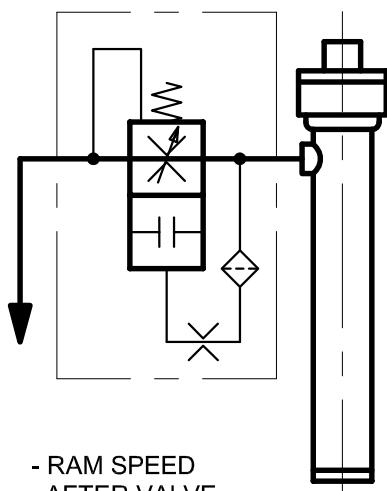
DWG N.

9346

N.B: Q=operating flow
Q_n=nominal flow

MANUAL ADJUSTMENT GRAPH:

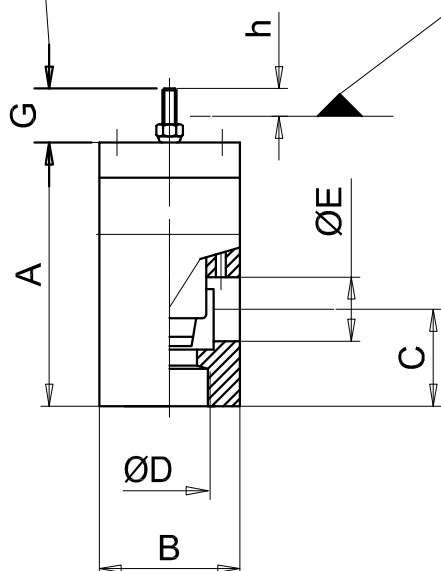
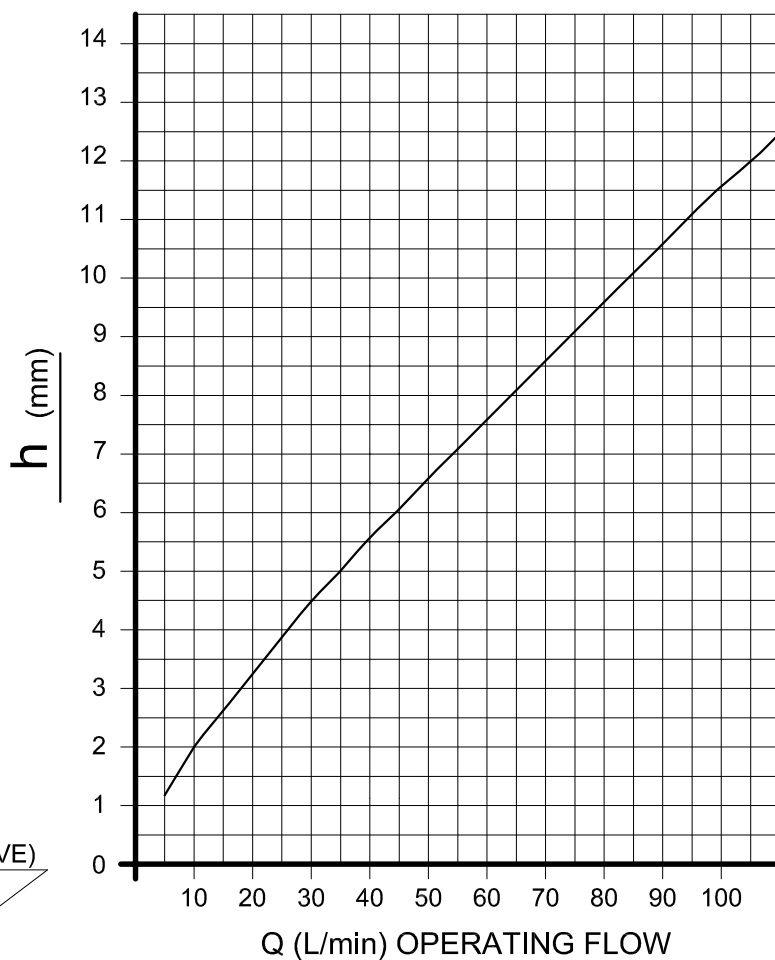
- 1) CLOSE THE SCREW COMPLETELY (h=0)
- 2) ACCORDING TO Q (L/min), UNSCREW OF h (mm)



- RAM SPEED
AFTER VALVE
INTERVENTION:
V_d = 0 (m/s)

- VALUE BROUGHT FORWARD
ON THE TESTING CERTIFICATE

START VALUE FOR
MANUAL REGULATION
h = 0 (TOTALLY CLOSED VALVE)



Q _n	MIN	8 L/min
	MAX	75 L/min
P	MIN	12 Bar
	MAX	80 Bar
T	MIN	10°C
	MAX	60°C
A	100	
B	∅50	
C	40	
D	3/4"	
E	18	

Table adjustment h in function of the nominal pump flow

Nominal pump flow Q _n [L/min]	h [mm]
8	2,6
12	3,5
18	4,5
23	5,0
30	5,5
35	6,2
45	7,6
55	8,9
75	11,3

NOTE:

DATA TAKEN WITH:

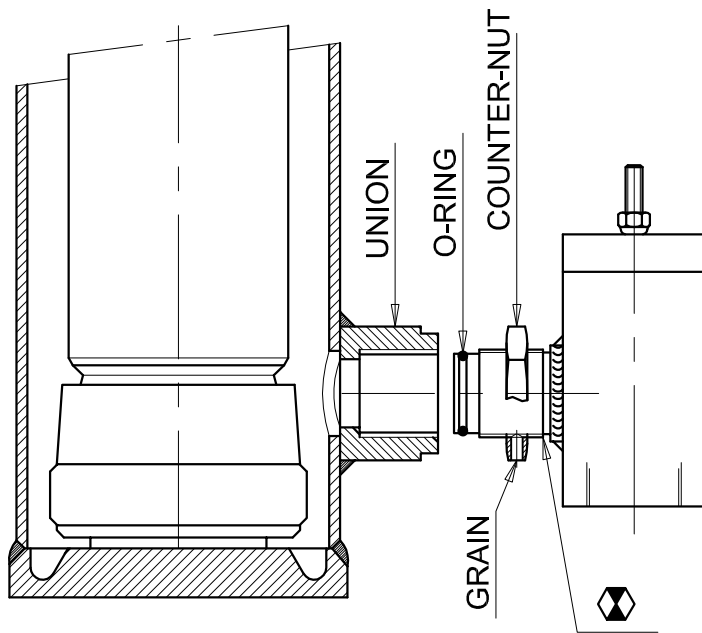
- STATIC PRESSURE = 30 BAR
- OIL TEMPERATURE = 30°C

UT	

PROCEDURE FOR ADJUSTMENT OF
LOCK VALVE 3/4" HP (0825/P-VP22-HP)

DATE	10/19
DWG N°	9346/2

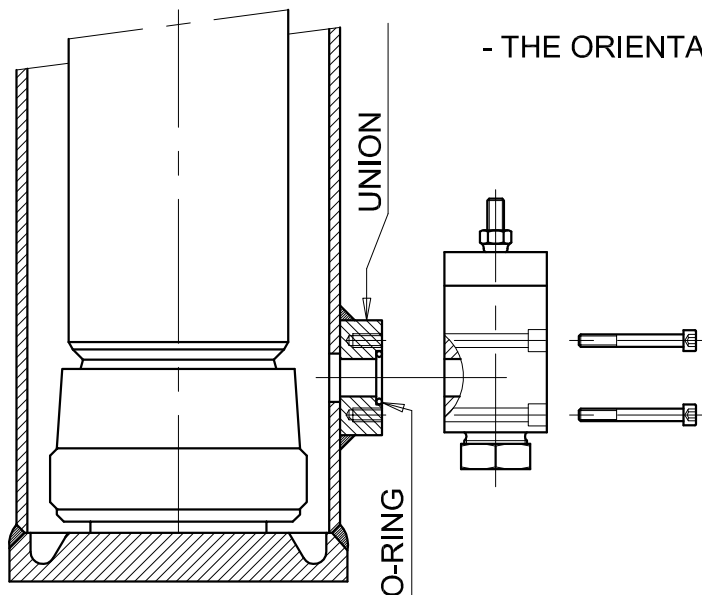
TYPE: 2"



- THE VALVE HAS TO BE DIRECTLY SCREWED ON PISTON UNTIL IT STOPS (MECHANICAL LEDGE).
- WITH COUNTER NUT IN LEDGE ON THE UNION, I HAVEN'T SEE THE THREAD. 
- POSSIBLE ORIENTATION ON 360° UNSCREWING IT BY ONE TURN (MAX POSSIBLE FOR O-RING SEAL)
- SCREW THE COUNTER-NUT UP TO MECHANICAL LEDGE (SIDE OF THE UNION SOLDERED TO THE CYLINDER)
- SCREW THE GRAIN ON THE COUNTER-NUT, TO THE BODY VALVE

* FOR HL POWER UNIT TYPE: *1"1/4 - 1"1/2

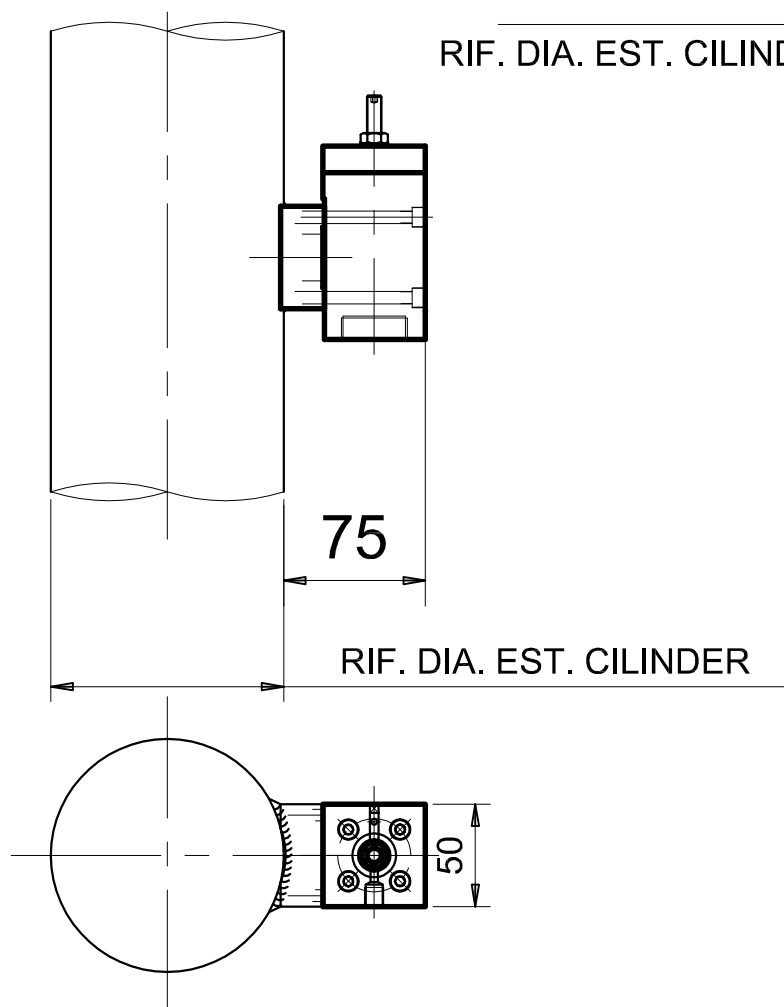
- THE VALVE HAS TO BE DIRECTLY MOUNTED ON THE PISTON USING:
 - TYPE 1"1/4 - 1"1/2: N° 4 SCREWS M8 (OVERAGE TIGHTENING TORQUE = 23.0 Nm)
- THE ORIENTATION IS POSSIBLE FOR ALL 90°



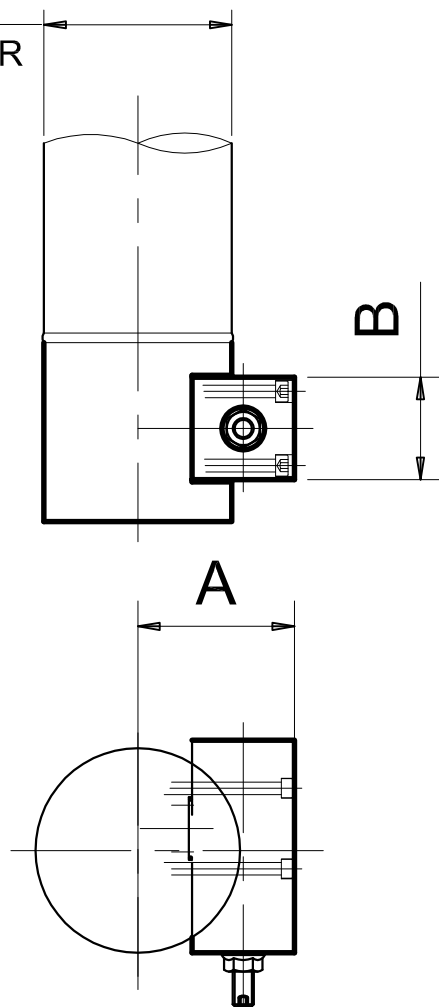
NOTE: REMEMBER TO VERIFY THAT THE SEAL O-RING GASKET IT IS ALWAYS INSERTED

UT	PROCEDURE FOR MOUNTING THE ADJUSTABLE LOCKING VALVE	DATE 11/18 DWG N. 9348
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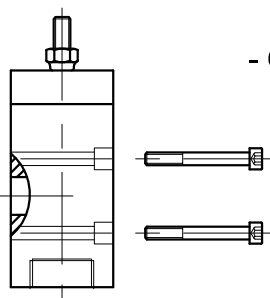
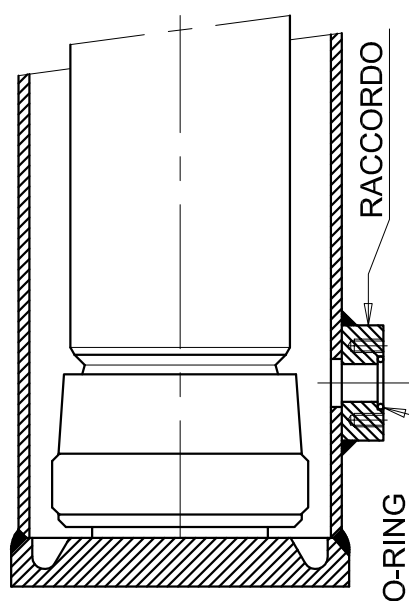
VP ON STANDARD CILINDER



VP ON MCE CILINDER



STELO Ø	Ø70	Ø80
A	75	79
B	50	50



THE VALVE MUST BE INSTALLED
DIRECTLY ON THE RAM WITH:
- N° 4 SCREWS M6 (OVERAGE TIGHTENING
TORQUE = 9.5 Nm)
- ORIENTATION POSSIBLE
FOR ALL 90°

NB: REMEMBER TO VERIFY
THAT THE SEAL O-RING GASKET
IT IS ALWAYS INSERTED

UT

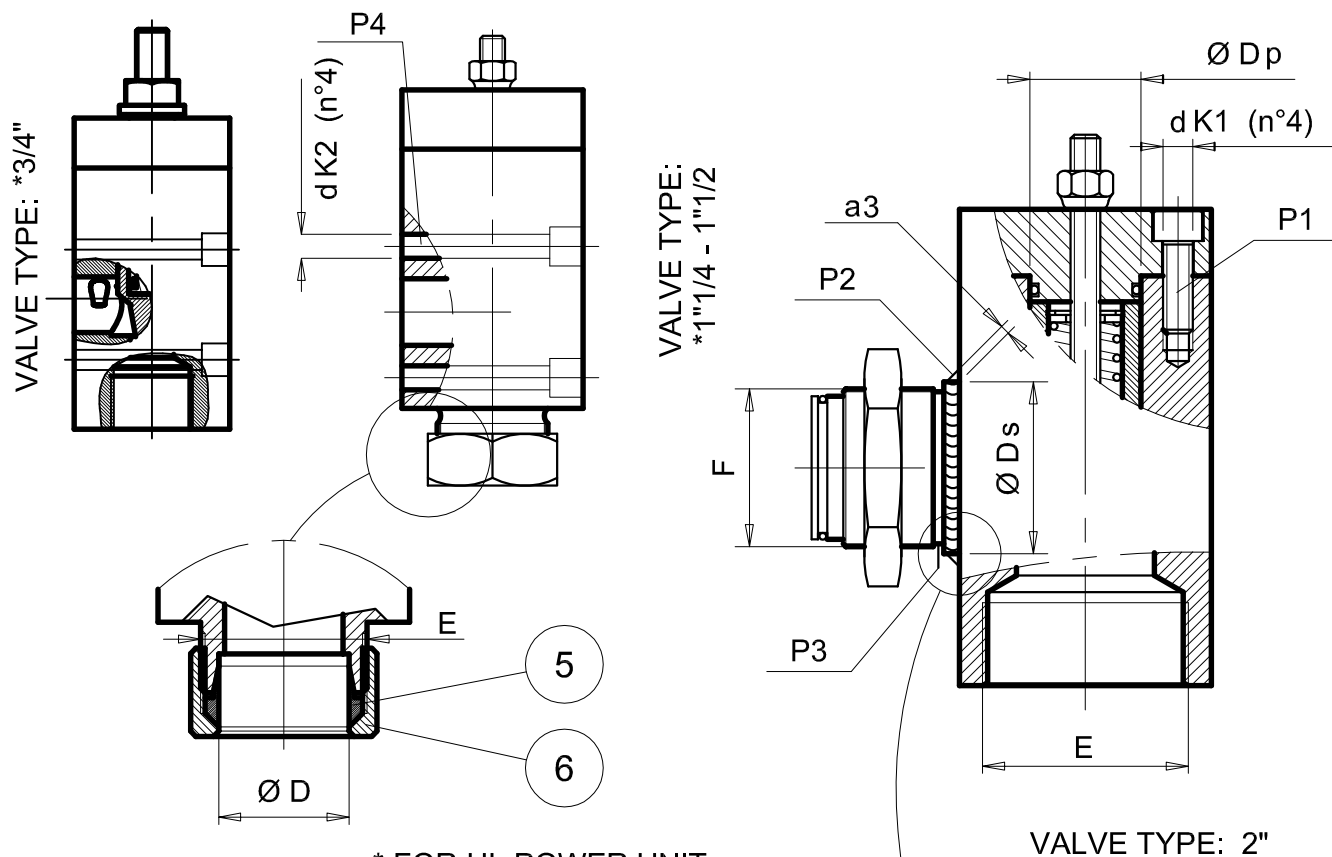
ASSEMBLY PROCEDURE TO THE RAM OF THE
LOCK VALVE 3/4" HP (0825/P-VP22-HP)

DATE

03/17

DWG N°

9348/1



		VALVE TYPE					
		*3/4" (8-75 L/1')		*1"1/4 (15-150 L/1')		1"1/2 (151-380 L/1')	2" (381-650 L/1')
BEGINNING DATA	a 3	/		/		/	5.0
	B	/		/		/	56.5
	d K1	6.0		8.0		8.0	8.0
	D	22.0		28.0	35.0	42.0	/
	d K2	6.0		8.0		8.0	/
	D p	22.0		30.0		40.0	53.0
	D s	/		/		/	65.0
	E	Nut thread		Male thread		Male thread	Nut thread
		M30x2	M36x2	M36x2	M45x2	M52x2	2" G
	F	/		/		/	2" G
	n°	4		4		4	4
	SB	/		/		/	4.75
	R _{p0.2}	*		*		*	*
MAX PRESSURES CALCULATED	PIPE FLEX	3/4"	1"	1"	1"1/4	1"1/2	2"
	P1	115.6		172.7		97.1	55.3
	P2	/		/		/	131.1
	P3	/		/		/	90.4
	P4	75.6		84.0		84.0	/

- THE MAX. WORKING PRESSURE OF THE SMALLER AMONG INDICATED ONES (EN BAR)



UT		INITIAL DATA AND MAX PRESSURE CALCULATED FOR THE BLOCK VALVE INSPECTION / FLOW LIMIT	DATE	07/18
			DWG Nr.	9065/1

UT	

DIMENSIONS OF CYLINDER
WITH RUPTURE VALVES

DATE	11/18
DWG Nr	9305

RUPTURE VALVE MODEL		
RUPTURE VALVE	1"1/4	1"1/2
	0393/P-....	0425/P-....
A	99	99
B	70	70
		0689/P-....
		136
		75

DIMENSIONS FOR
RUPTURE VALVE:
(1"1/4 - 1"1/2)

(REF. DWG. 9130; 9140; 9150) Chapter 3

DIMENSIONS FOR
RUPTURE VALVE:
(2")

(REF. DWG. 9130; 9140; 9150) Chapter 3

