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Chapter 6

DISTRIBUTOR REGULATION SCHEMES

Moris Italia s.r.l.
Via Per Cadrezzate, 21/C
21020 Brebbia (VA) - Italy
Tel. ++39 0332 984211 - Fax ++39 0332 984280
e-mail moris@moris.it
www.moris.it

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DRAWING	DESCRIPTION
	ADJUSTMENT AND OPERATION SCHEME
9233	Adjustment and operation scheme of distributor for indirect acting and direct on-line starting installation (Distributor “HL” 8-28 L/min)
9232 2V-35	Adjustment and operation scheme of distributor for indirect acting and direct on-line starting installation (Distributor MH2V from 8/30 L/min)
2V-35	Control Valve MH2V
9233/SS	Adjustment and operation scheme of distributor for indirect acting and direct on-line starting installation “SOFT STOP” (Distributor “HL” 8-28 L/min)
9227/S-NC	Adjustment and operation scheme of distributor for star delta installation (OFF normally “NC”)
9227/SS+21	Adjustment and operation scheme of distributor for SOFT STOP+21 installation (Distributor 15-250 L/min)
9232	Adjustment and operation scheme of distributor for indirect acting and direct on-line starting installation (Distributor 15-250 L/min)
9232/MED	Adjustment and operation scheme of distributor for indirect acting and direct on-line starting installation “MED” (Distributor 15-250 L/min)
9237	Adjustment and operation scheme of distributor for indirect acting and star-delta starting installation (Distributor 15-250 L/min)
9236/5	Adjustment and operation scheme of distributor for indirect acting and star-delta starting installation (Distributor 300-650 L/min)
9236/5-SS+21	Adjustment and operation scheme of distributor for “SOFT STOP+21” installation (Distributor 300-650 L/min)
	HYDRAULIC SCHEME
9242-S/A3	Hydraulic scheme for command group without A3 (European standards EN 81.2)
9242/SIC-1	Hydraulic scheme for command group KMI-A3 (European standards EN 81.20/50)
9242/SIC-2	Hydraulic scheme for command group KMI-A3 (European standards EN 81.20/50)
9242/HM-SV	Hydraulic scheme for command group HM-SV (European standards EN 81.20/50)
9242/HSV	Hydraulic scheme for command group HSV (European standards EN 81.20/50)
9242/MED	Hydraulic scheme for command group with MED (European standards EN 81.20)
9243	Hydraulic scheme for command group – Distributor HL 8-28 L/min (European standards EN 81.20/50)
9243-HY	Hydraulic scheme for command group – Distributor block for HYDROBATT drive (European standards EN 81.20/50)
9243-MH-2V	Hydraulic scheme for command group – Distributor block for MH-2V (European standards EN81.20/50)
9243/MH2V+A3	Hydraulic scheme for command group – Distributor block for MH-2V + AMENDMENT A3 (European standards EN81.20/50)

DRAWING	DESCRIPTION
	SECTIONAL VIEW
9257/A	Sectional view of oleo-dynamic distributor 15-250 L/min with star-delta starting
9257/AD	Sectional view of oleo-dynamic distributor 15-250 L/min with direct on-line starting
9258/B	Sectional view of oleo-dynamic distributor 300-650 L/min with star-delta starting
9258/BD	Sectional view of oleo-dynamic distributor 300-650 L/min with direct on-line starting
9259/C	Sectional view of oleo-dynamic distributor “HL” 8-28 L/min (Mono speed)
9259/2V	Sectional view of oleo-dynamic distributor “HL” 8-30 L/min (HL-2V)
9260/CM3	Sectional view of oleo-dynamic distributor 15-250 L/min (CM-320) with star-delta starting

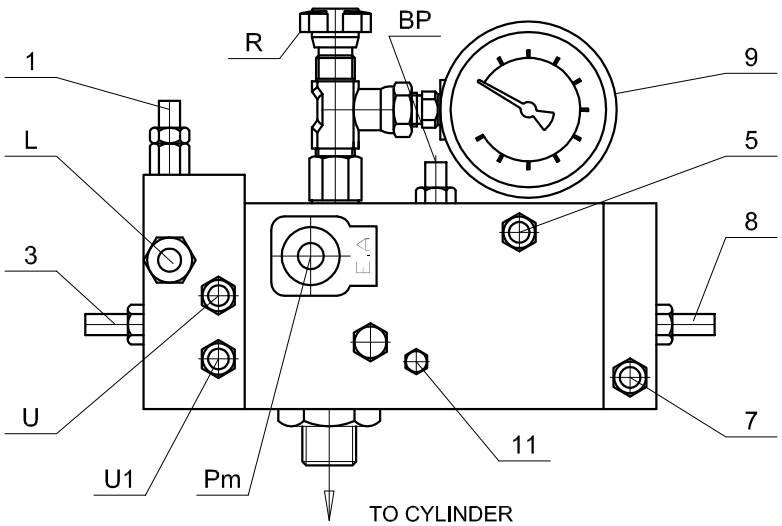
9233-ING

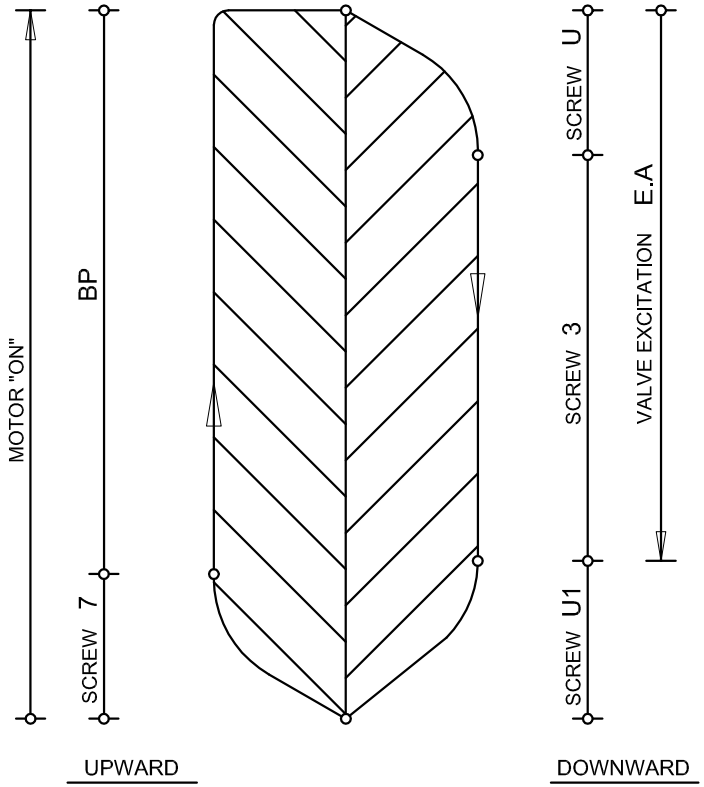
UT

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





ADJUSTMENT

SCREW -	1	ADJUSTMENT FOR ROD COUNTERPRESSURE - TIGHTEN SCREW TO INCREASE COUNTERPRESSURE
SCREW -	3	ADJUSTMENT FOR SPEED BALANCING IN DOWN DIRECTION - TIGHTEN SCREW TO REDUCE SPEED
SCREW -	5	ADJUSTMENT FOR MAX. PRESSURE - TIGHTEN SCREW TO INCREASE PRESSURE
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
	E.A	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
SCREW -	U	DOWNWARD DEPARTURE DEVICE - TIGHTEN SCREW TO REDUCE SPEED (1)
SCREW-	U1	ADJUSTMENT FOR DECELERATION PHASE - SCREW DOWN FOR A SOFT DECELERATION
SCREW-	3+8	ADJUSTMENT AND TEST OF SAFETY VALVE FOR ROD FAILURE - UNSCREW THEM IN SAFETY
	BP	BY-PASS REG. UPWARD CAPACITY FOR SPEED < 0.15 m/s (PRESET IN FACTORY)

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

9232-IN

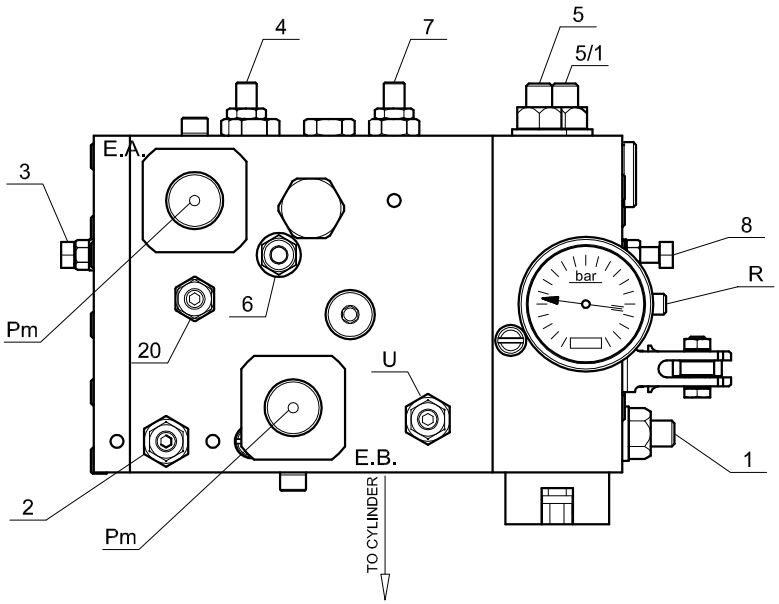
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ADJUSTMENT AND OPERATION SCHEME OF DISTRIBUTOR FOR INDIRECT ACTING AND DIRECT ON-LINE STARTING INSTALLATION

(DISTRIBUTOR MH2V FROM 8/30 L/MIN)

DATE 11/18

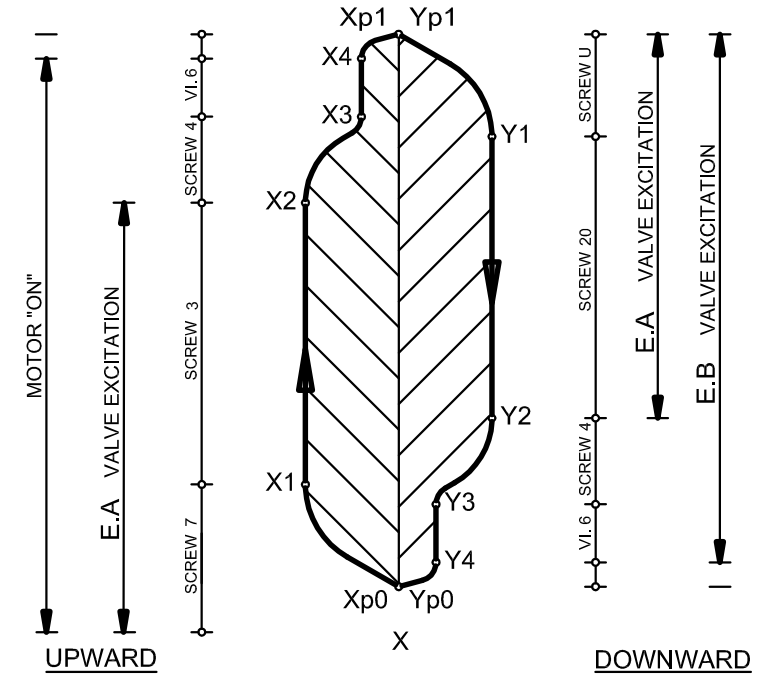
DWG N° 9232 2V-35



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

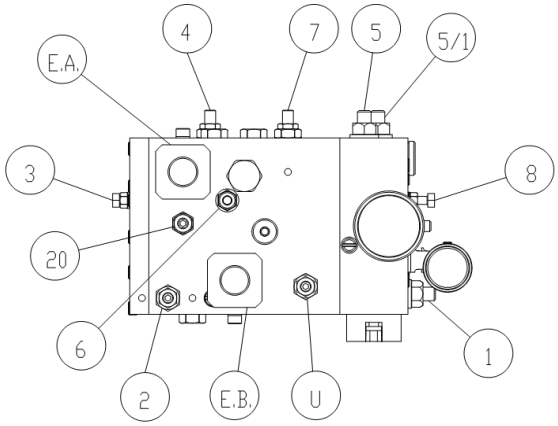
NOTE (1): DO NOT TIGHTEN COMPLETELY, SINCE DEPARTURE MOVEMENT MAY BE INTERRUPTED



OPERATION

UPWARD	X	→ Xp0	INSERTING ELECTRIC MOTOR, REG. DELAY HYDRAULIC THROUGH SCREW 7/a
	Xp0	→ X1	MOTOR SUPPLY AND E.A. VALVE EXCITATION ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
	X1	→ X2	CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
	X2	→ X3	1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED ADJUST USING SCREW 4
	X3	→ X4	CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
	X4	→ Xp1	2ND DECELERATION PHASE TO FLOOR LEVEL (MOTOR OFF)
DOWNWARD	Yp1	→ Y1	E.A./E.B. VALVES EXCITATION - ACCELERATION IN DOWNWARD DIRECTION ADJUST USING SCREW U
	Y1	→ Y2	CONSTANT HIGH SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 20
	Y2	→ Y3	1ST DECELERATION PHASE - E.A. VALVE DE-ENERGIZED ADJUST USING SCREW 4
	Y3	→ Y4	CONSTANT LOW SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 6
	Y4	→ Yp0	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





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**

9233/SS-IN

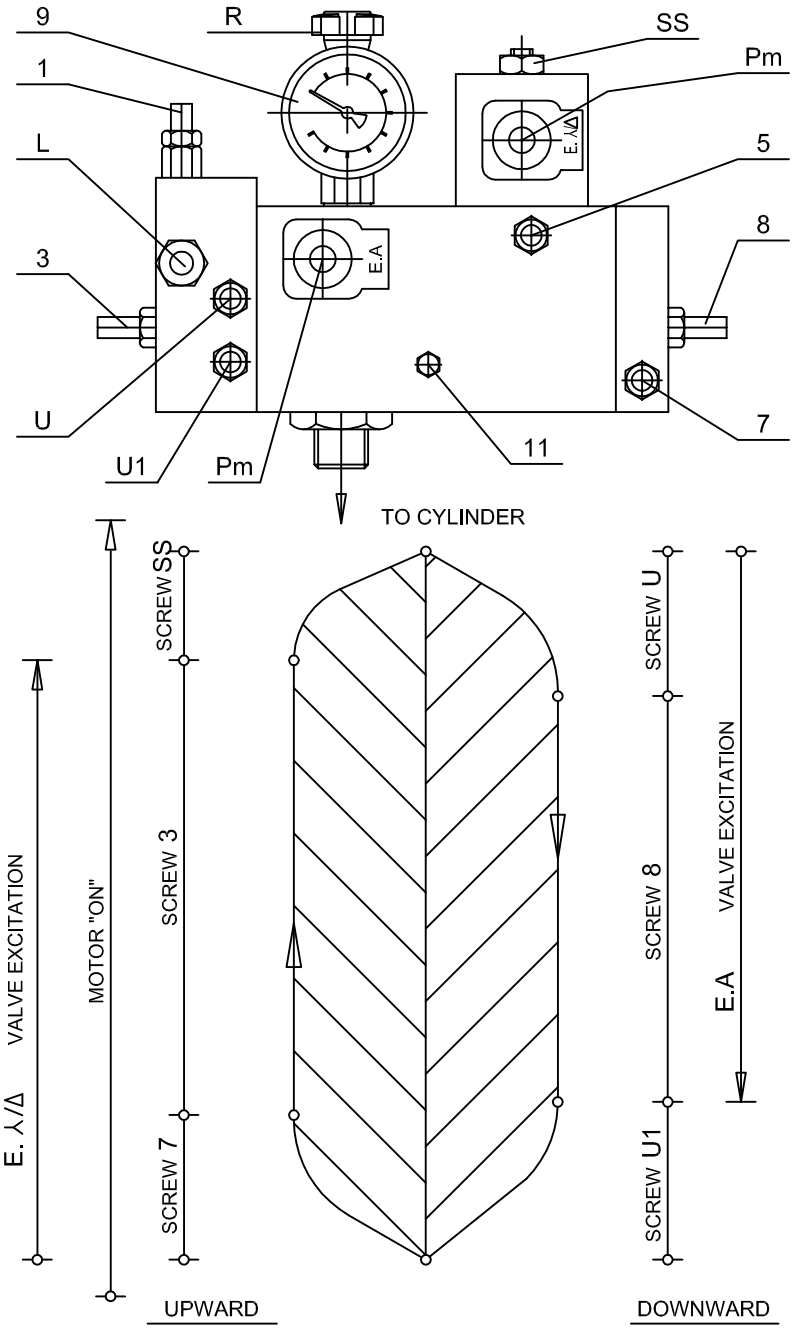
UT

ADJUSTMENT AND OPERATION SCHEME OF DISTRIBUTOR FOR INDIRECT ACTING AND DIRECT ON-LINE STARTING INSTALLATION (SOFT STOP)

(DISTRIBUTOR SINGLE SPEED "HL" 8/23 L/MIN)

DATE 06/18

DWG N. 9233/SS



ADJUSTMENT

SCREW -	1	ADJUSTMENT FOR ROD COUNTERPRESSURE - TIGHTEN SCREW TO INCREASE COUNTERPRESSURE
SCREW -	3	ADJUSTMENT FOR SPEED BALANCING IN UP/DOWN DIRECTION - TIGHTEN SCREW TO REDUCE SPEED
SCREW -	5	ADJUSTMENT FOR MAX. PRESSURE - TIGHTEN SCREW TO INCREASE PRESSURE
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-	SS	ADJUSTMENT SOFT ARRIVAL TO FLOOR LEVEL - SCREW DOWN FOR SOFT ARRIVAL
	E.A	DOWNWARD DIRECTION VALVE
	E. ⅄ / Δ	STAR DELTA START VALVE TYPE "SS" (SOFT STOP)
	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)
SCREW-	U1	ADJUSTMENT FOR DECELERATION PHASE - SCREW DOWN FOR A SOFT DECELERATION
SCREW-	3+8	ADJUSTMENT AND TEST OF SAFETY VALVE FOR ROD FAILURE - UNSCREW THEM IN SAFETY

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

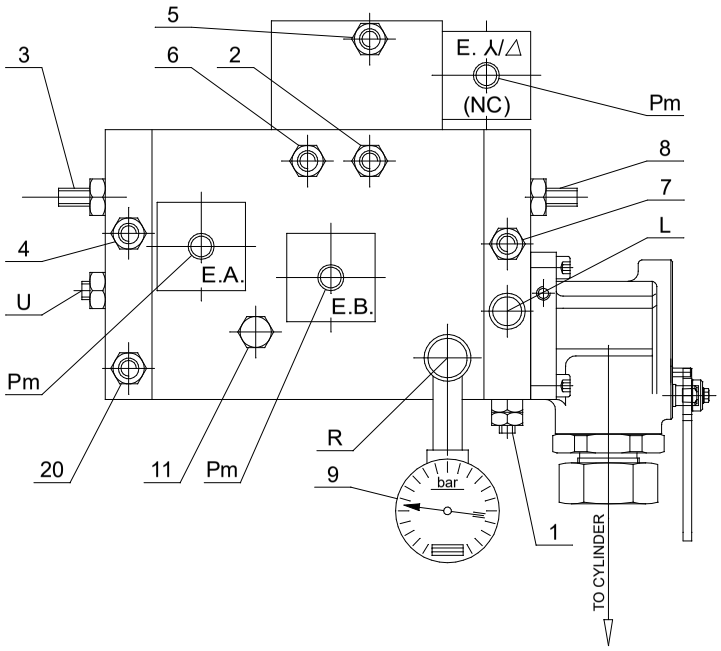
9227/S-NC-IN

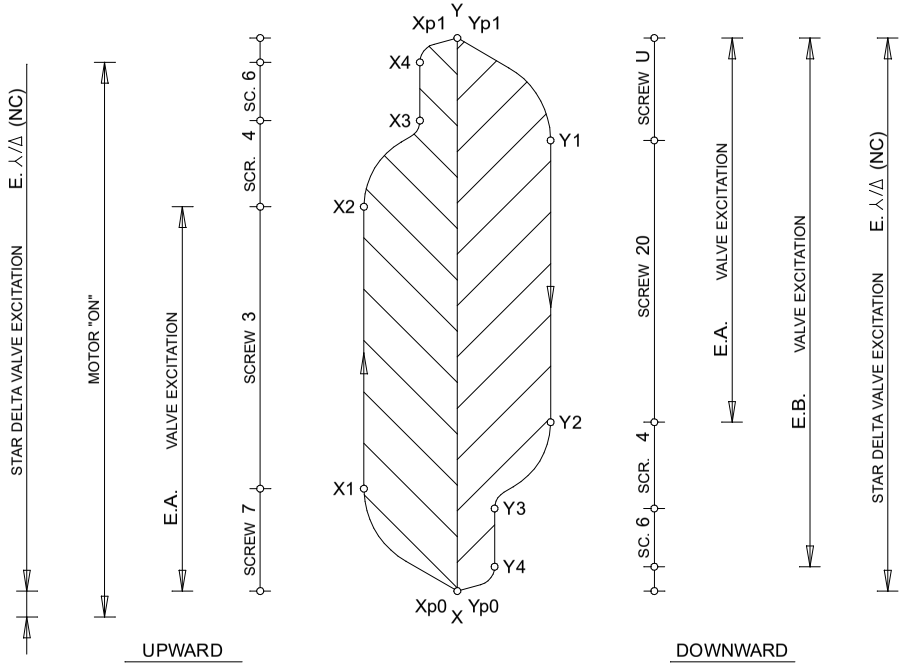
UT

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

DATA 06/10

DIS. N° 9227/S-NC





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. ⅄/△ (NC)	STAR DELTA START VALVE ⅄/△ 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)

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

OPERATION

UPWARD	X	→ Xp0	ELECTRIC MOTOR AND VALVES EXCITATION E⅄ Δ (NC)
	Xp0	→ X1	EXCITATION VALVE E.A. DE-ENERGIZED VALVE E.⅄ Δ (NC) ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
	X1	→ X2	CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
	X2	→ X3	1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED ADJUST USING SCREW 4
	X3	→ X4	CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
	X4	→ Xp1	2ND DECELERATION PHASE TO FLOOR LEVEL
	Xp1	→ Y	DELAY FOR MOTOR DE-ENERGIZING
DOWNWARD	Yp1	→ Y1	E.A. - E.B. E.⅄ Δ (NC) VALVES EXCITATION - ACCELERATION IN DOWNWARD DIRECTION ADJUST USING SCREW U
	Y1	→ Y2	CONSTANT HIGH SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 20
	Y2	→ Y3	1ST DECELERATION PHASE - E.A. VALVE DE-ENERGIZED ADJUST USING SCREW 4
	Y3	→ Y4	CONSTANT LOW SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 6
	Y4	→ Yp0	2ND DECELERATION PHASE TO FLOOR LEVEL - E.B. VALVE DE-ENERGIZED
	Xp0	→ X	DE-ENERGIZED VALVE E⅄ 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

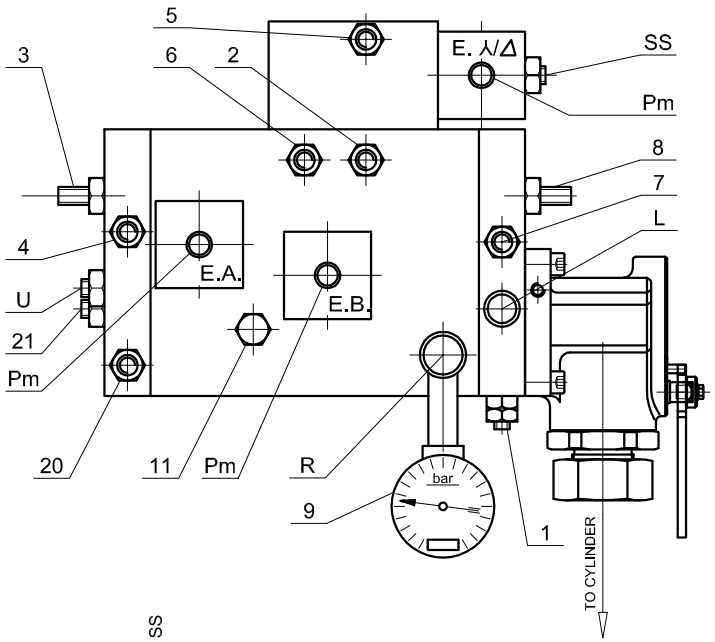
9227/SS+21-IN

UT

ADJUSTMENT AND OPERATION SCHEME
OF DISTRIBUTOR FOR SOFT STOP+21 INSTALLATION
(DISTRIBUTOR 15/250 L/MIN)

DATE 11/15

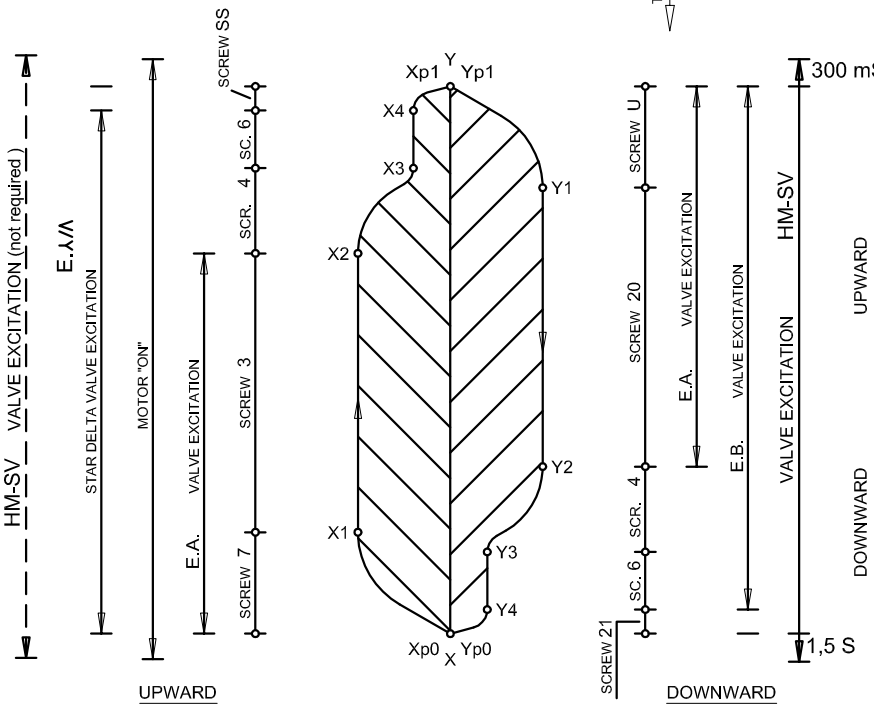
DWG Nr. 9227/SS+21



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)
SCREW-	SS	ADJUSTMENT SOFT ARRIVAL TO FLOOR LEVEL - SCREW DOWN FOR SOFT ARRIVAL (3)
	E.A.	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
	E.B.	DOWNWARD DIRECTION VALVE
	E.⅄/Δ	STAR DELTA START VALVE TYPE "SS" (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)

NOTE (1): DO NOT TIGHTEN COMPLETELY, SINCE DEPARTURE MOVEMENT MAY BE INTERRUPTED.
(2): DO NOT TIGHTEN COMPLETELY, MAY BE NO STOP TO FLOOR LEVEL , BUT OTHER SIDE PASSED.
(3): TIGHTEN SCREW No 7 (WITH COLD OIL) UNTIL THE SYSTEM STOPS, JUST BY ENGAGING THE ENGINE GEARS



OPERATION

UPWARD	X	→ Xp0	ELECTRIC MOTOR ON
	Xp0	→ X1	MOTOR SUPPLY AND E.A. + E⅄ Δ VALVE EXCITATION ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
	X1	→ X2	CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
	X2	→ X3	1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED ADJUST USING SCREW 4
	X3	→ X4	CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
	X4	→ Xp1	2ND DECELERATION PHASE TO FLOOR LEVEL - ADJUST USING SCREW "SS" ON E.⅄/Δ
	Yp1	→ Y	DELAY FOR MOTOR DE-ENERGIZING
DOWNWARD	Yp1	→ Y1	E.A./E.B. VALVES EXCITATION - ACCELERATION IN DOWNWARD DIRECTION ADJUST USING SCREW U
	Y1	→ Y2	CONSTANT HIGH SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 20
	Y2	→ Y3	1ST DECELERATION PHASE - E.A. VALVE DE-ENERGIZED ADJUST USING SCREW 4
	Y3	→ Y4	CONSTANT LOW SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 6
	Y4	→ Yp0	2ND DECELERATION PHASE TO FLOOR LEVEL - E.B. VALVE DE-ENERGIZED ADJUST USING SCREW 21

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

9232-IN

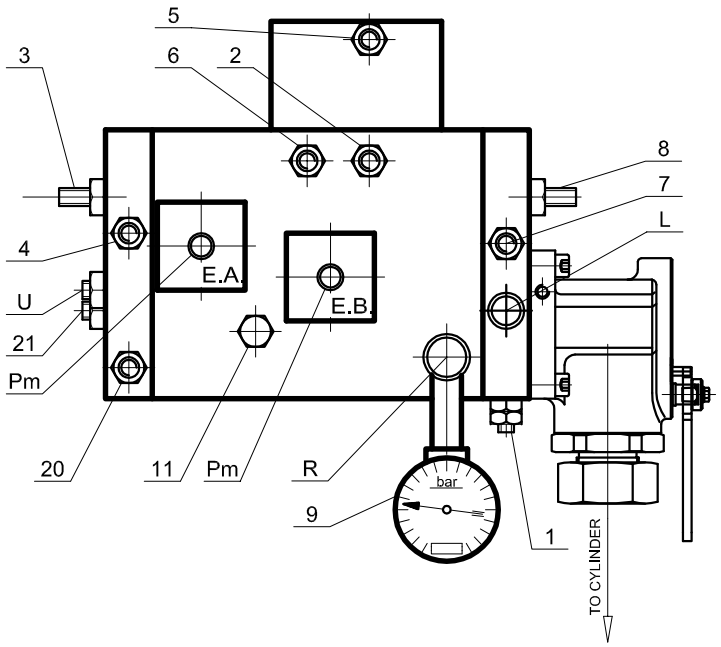
UT

ADJUSTMENT AND OPERATION SCHEME OF DISTRIBUTOR FOR INDIRECT ACTING AND DIRECT ON-LINE STARTING INSTALLATION

(DISTRIBUTOR 15/250 L/MIN)

DATE 10/15

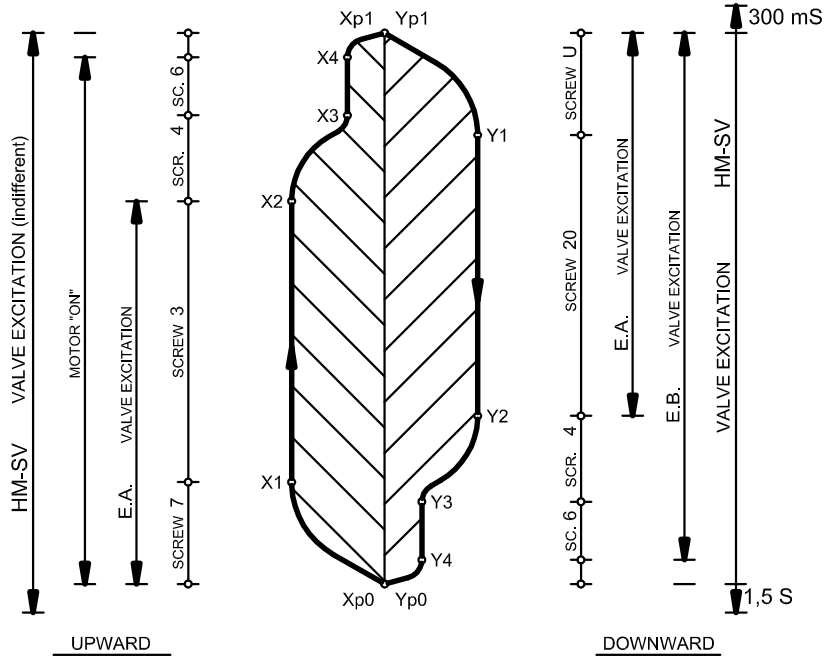
DWG No 9232



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

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



OPERATION

UPWARD

Xp0	X1	MOTOR SUPPLY AND E.A. VALVE EXCITATION ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
X1	X2	CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
X2	X3	1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED ADJUST USING SCREW 4
X3	X4	CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
X4	Xp1	2ND DECELERATION PHASE TO FLOOR LEVEL (MOTOR OFF)

DOWNWARD

Yp1	Y1	E.A./E.B. VALVES EXCITATION - ACCELERATION IN DOWNWARD DIRECTION ADJUST USING SCREW U
Y1	Y2	CONSTANT HIGH SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 20
Y2	Y3	1ST DECELERATION PHASE - E.A. VALVE DE-ENERGIZED ADJUST USING SCREW 4
Y3	Y4	CONSTANT LOW SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 6
Y4	Yp0	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

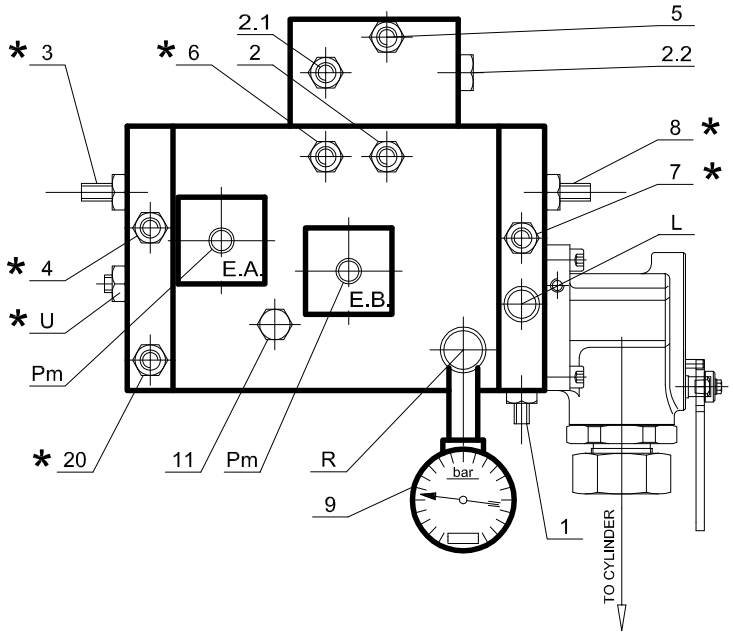
9232/MED-IN

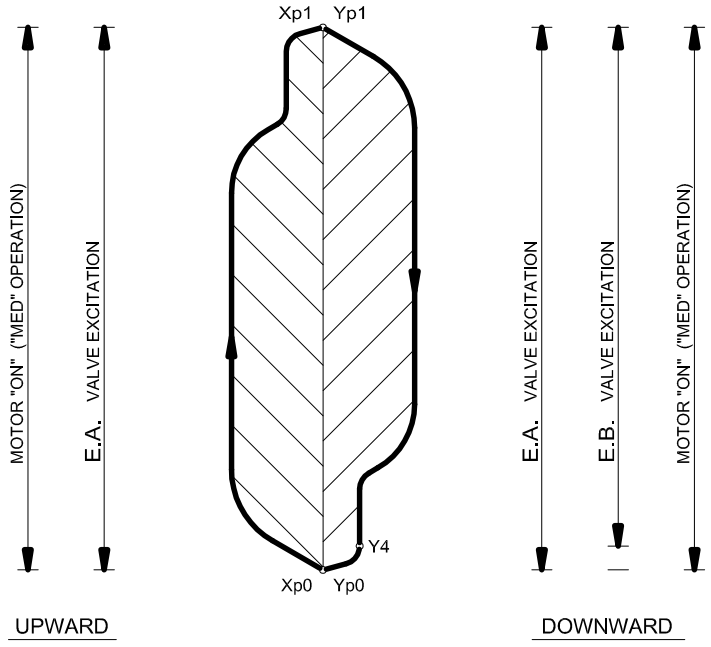
UT

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

DATA 11/14

DIS. N° 9232/MED





ADJUSTMENT

SCREW	1	ADJUSTMENT FOR ROD COUNTERPRESSURE - TIGHTEN SCREW TO INCREASE COUNTERPRESSURE
SCREW	2	ADJUSTMENT AND TEST OF SAFETY VALVE FOR ROD FAILURE (REF. DIS. N° 9345/MED)
SCREW	2.1	
SCREW	2.2	
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
SCREW	U	DOWNWARD DEPARTURE DEVICE - TIGHTEN SCREW TO REDUCE SPEED (1) *

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

NOTE *: ADJUSTMENT ON FACTORY (IF NOT ADJUSTMENT)

OPERATION

UPWARD	Xp0 → Xp1	MOTOR SUPPLY AND E.A. VALVE EXCITATION UPWARD WITH CONTROL "MED" TO FLOOR LEVEL - ON Xp1 DE-EXCITATION VALVE E.A.
DOWNWARD	Yp1 → Yp0	MOTOR SUPPLY AND E.A. + E.B. VALVE EXCITATION DOWNWARD WITH CONTROL "MED" TO FLOOR LEVEL - ON Y4 DE-EXCITATION E.B. - ON Yp0 DE-EXCITATION E.A.

9237-IN

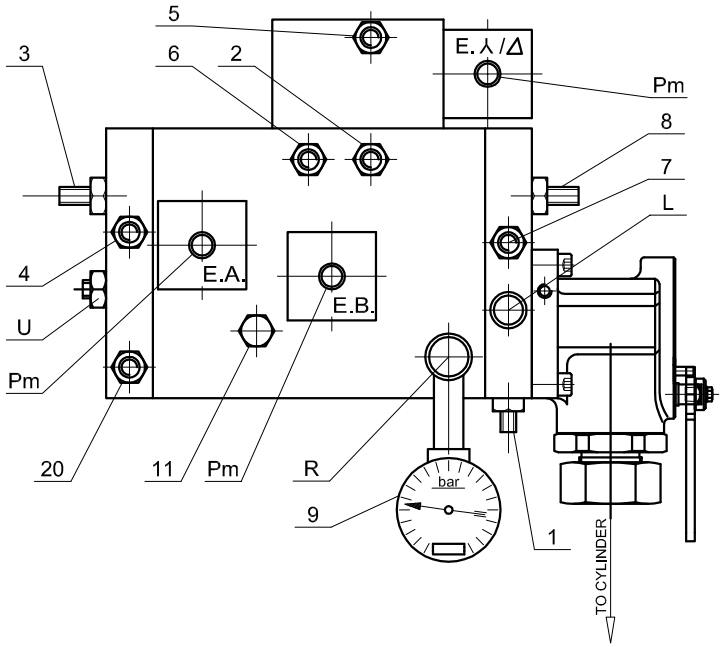
UT

ADJUSTMENT AND OPERATION SCHEME OF DISTRIBUTOR

(DISTRIBUTOR 15/250 L/MIN)

DATE 07/18

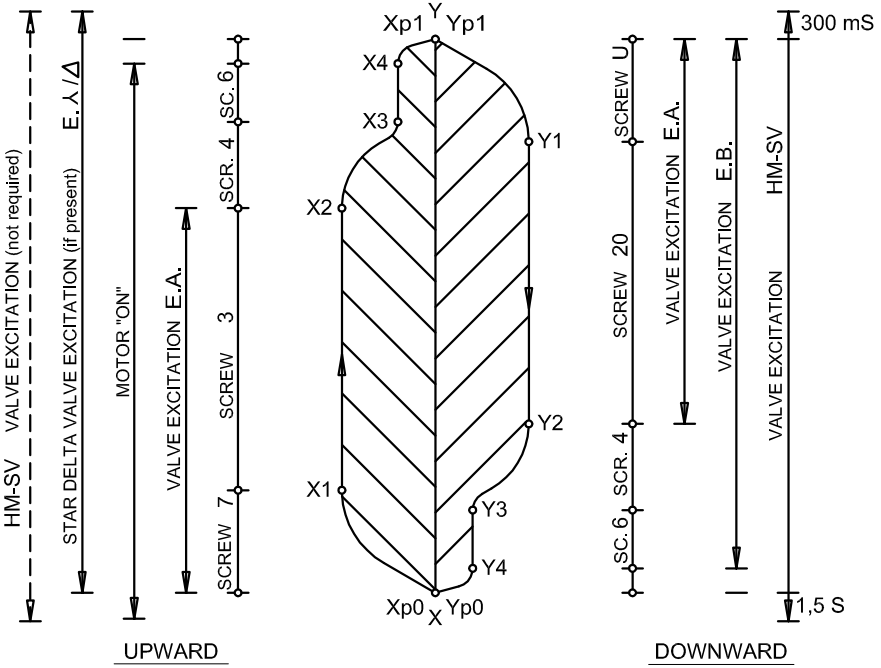
DWG Nr. 9237



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
	E. λ/Δ	STAR DELTA START 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
SCREW-	U	DOWNWARD DEPARTURE DEVICE - TIGHTEN SCREW TO REDUCE SPEED (1)

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



OPERATION

UPWARD	X	→ Xp0	ELECTRIC MOTOR ON
	Xp0	→ X1	MOTOR SUPPLY AND E.A. VALVE EXCITATION AND λ/Δ ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
	X1	→ X2	CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
	X2	→ X3	1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED ADJUST USING SCREW 4
	X3	→ X4	CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
	X4	→ Xp1	2ND DECELERATION PHASE TO FLOOR LEVEL (MOTOR OFF)
	Xp1	→ Y	DELAY FOR STAR DELTA VALVE DE-ENERGIZING
DOWNWARD	Yp1	→ Y1	E.A./E.B. VALVES EXCITATION - ACCELERATION IN DOWNWARD DIRECTION ADJUST USING SCREW U
	Y1	→ Y2	CONSTANT HIGH SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 20
	Y2	→ Y3	1ST DECELERATION PHASE - E.A. VALVE DE-ENERGIZED ADJUST USING SCREW 4
	Y3	→ Y4	CONSTANT LOW SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 6
	Y4	→ Yp0	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

9236/5-IN

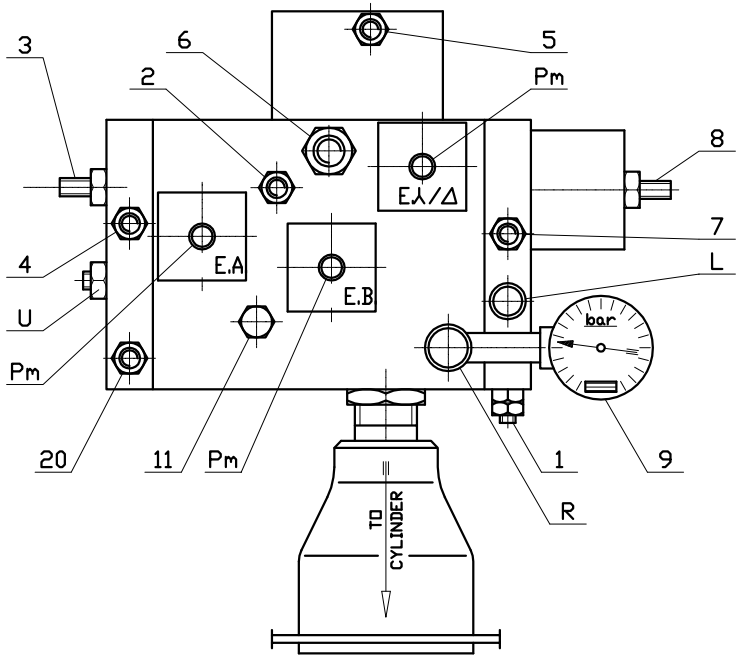
UT

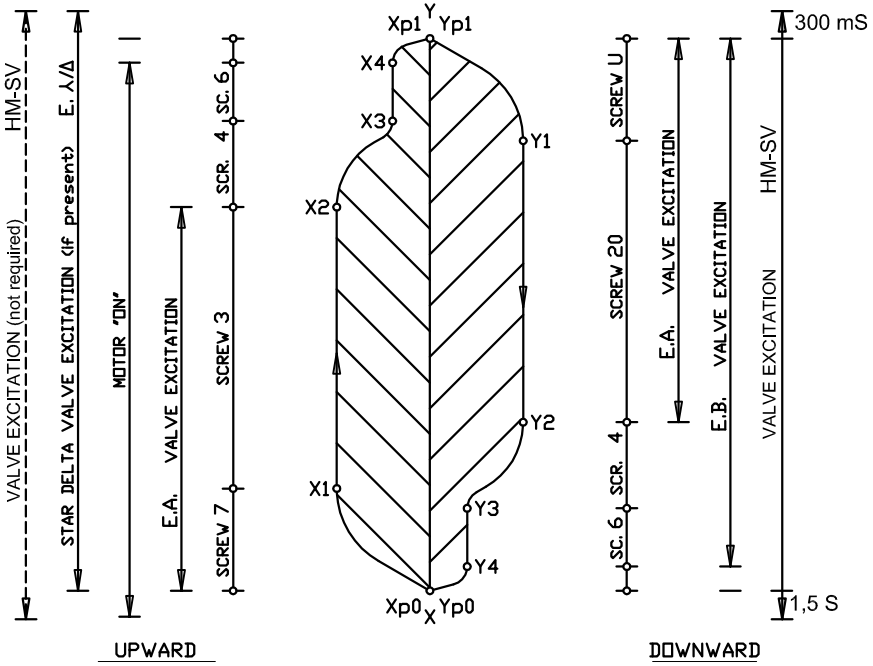
ADJUSTMENT AND OPERATION SCHEME OF DISTRIBUTOR

(DISTRIBUTOR 300/650 L/MIN)

DATE 07/18

DWG N. 9236/5





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
E.λ/Δ		STAR DELTA START 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
SCREW-	U	DOWNWARD DEPARTURE DEVICE - TIGHTEN SCREW TO REDUCE SPEED (1)

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

OPERATION

UPWARD

X → Xp0	ELECTRIC MOTOR ON
Xp0 → X1	MOTOR SUPPLY AND E.A. VALVE EXCITATION AND λ/Δ ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
X1 → X2	CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
X2 → X3	1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED ADJUST USING SCREW 4
X3 → X4	CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
X4 → Xp1	2ND DECELERATION PHASE TO FLOOR LEVEL (MOTOR OFF)
Xp1 → Y	DELAY FOR STAR DELTA VALVE DE-ENERGIZING

DOWNWARD

Yp1 → Y1	E.A./E.B. VALVES EXCITATION - ACCELERATION IN DOWNWARD DIRECTION ADJUST USING SCREW U
Y1 → Y2	CONSTANT HIGH SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 20
Y2 → Y3	1ST DECELERATION PHASE - E.A. VALVE DE-ENERGIZED ADJUST USING SCREW 4
Y3 → Y4	CONSTANT LOW SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 6
Y4 → Yp0	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

9236/5-SS+21-IN

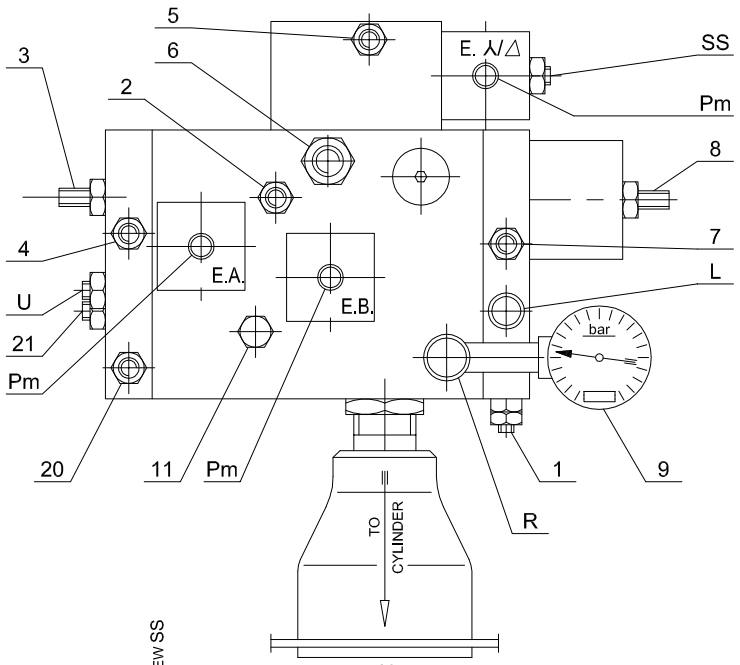
UT

ADJUSTMENT AND OPERATION SCHEME OF DISTRIBUTOR FOR SOFT STOP+21 INSTALLATION

(DISTRIBUTOR 300/650 L/MIN)

DATE 11/15

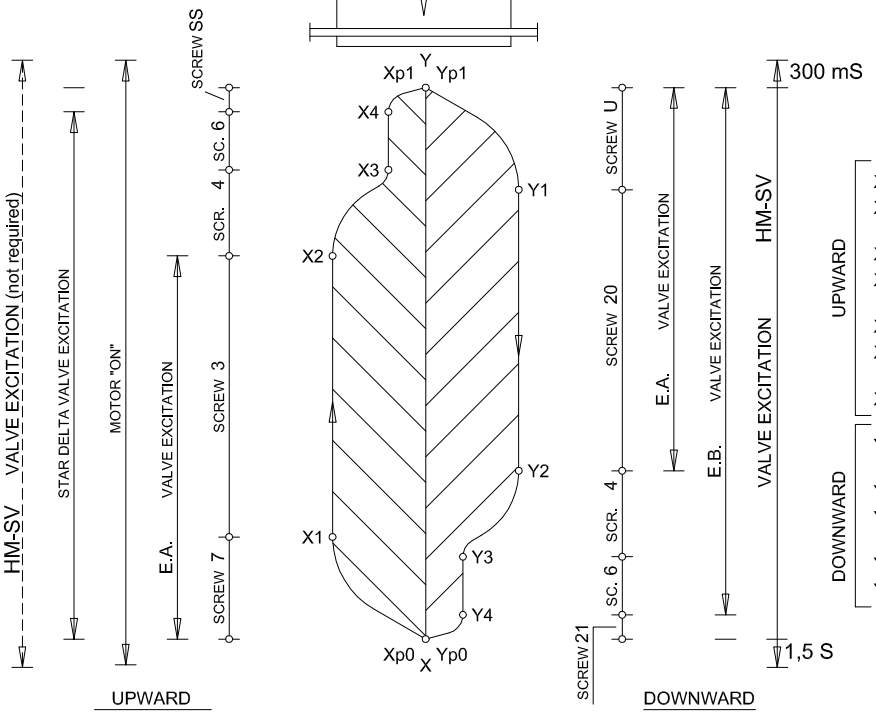
DWG N. 9236/5-SS+21



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)
SCREW-	SS	ADJUSTMENT SOFT ARRIVAL TO FLOOR LEVEL - SCREW DOWN FOR SOFT ARRIVAL (3)
	E.A.	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
	E.B.	DOWNWARD DIRECTION VALVE
	E. ⅄/△	STAR DELTA START VALVE TYPE "SS" (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)

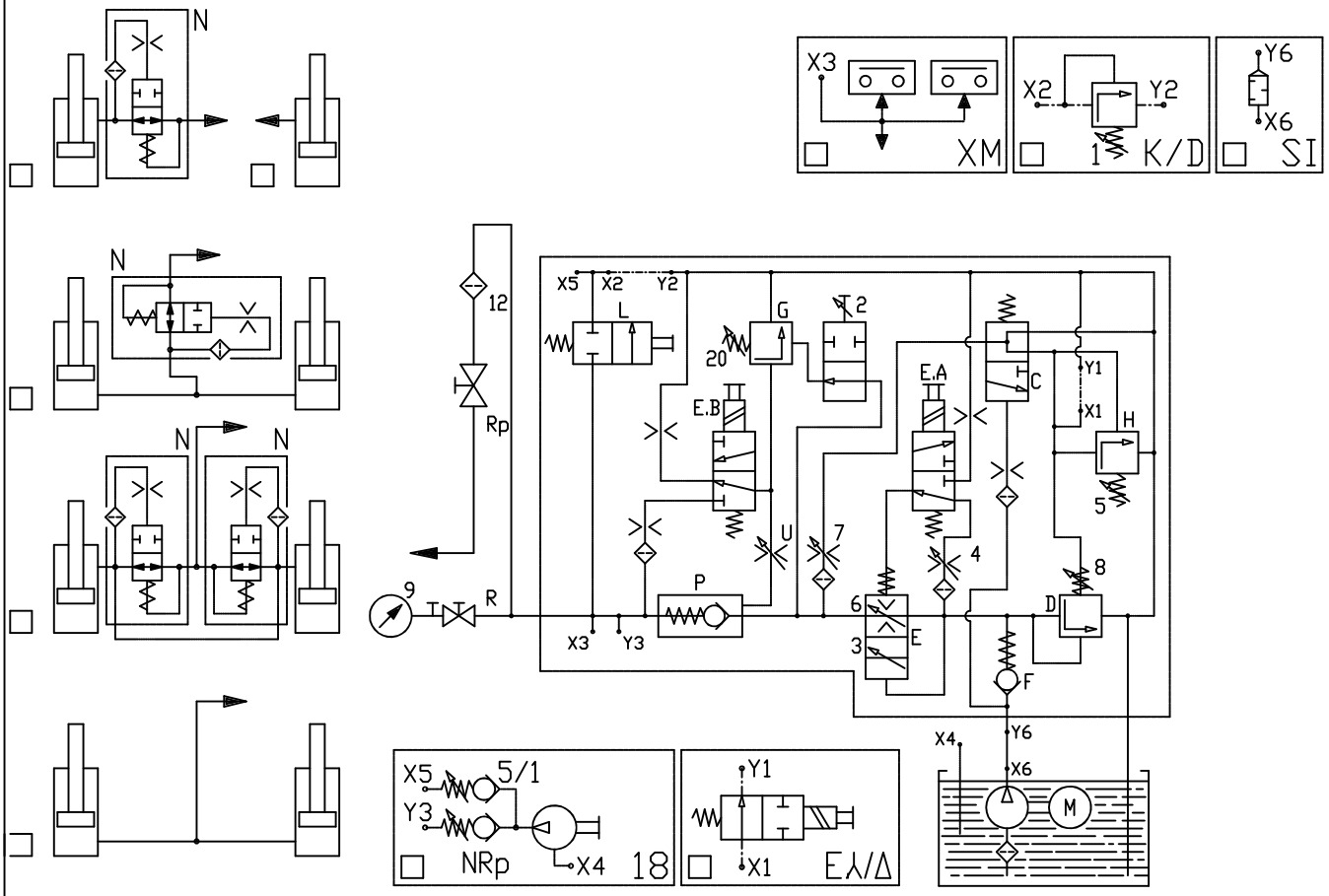
NOTE (1): DO NOT TIGHTEN COMPLETELY, SINCE DEPARTURE MOVEMENT MAY BE INTERRUPTED.
(2): DO NOT TIGHTEN COMPLETELY, MAY BE NO STOP TO FLOOR LEVEL , BUT OTHER SIDE PASSED.
(3): TIGHTEN SCREW No 7 (WITH COLD OIL) UNTIL THE SYSTEM STOPS, JUST BY ENGAGING THE ENGINE GEARS



OPERATION

UPWARD	X	→ Xp0	ELECTRIC MOTOR ON
	Xp0	→ X1	MOTOR SUPPLY AND E.A. + E.⅄/△VALVE EXCITATION ACCELERATION IN UPWARD DIRECTION - ADJUST USING SCREW 7
	X1	→ X2	CONSTANT HIGH SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 3
	X2	→ X3	1ST DECELERATION PHASE FROM HIGH TO LOW SPEED - E.A. DE-ENERGIZED ADJUST USING SCREW 4
	X3	→ X4	CONSTANT LOW SPEED IN UPWARD DIRECTION - ADJUST USING SCREW 6
	X4	→ Xp1	2ND DECELERATION PHASE TO FLOOR LEVEL - ADJUST USING SCREW "SS" ON E.⅄/△
	Xp1	→ Y	DELAY FOR MOTOR DE-ENERGIZING
DOWNWARD	Yp1	→ Y1	E.A./E.B. VALVES EXCITATION - ACCELERATION IN DOWNWARD DIRECTION ADJUST USING SCREW U
	Y1	→ Y2	CONSTANT HIGH SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 20
	Y2	→ Y3	1ST DECELERATION PHASE - E.A. VALVE DE-ENERGIZED ADJUST USING SCREW 4
	Y3	→ Y4	CONSTANT LOW SPEED IN DOWNWARD DIRECTION - ADJUST USING SCREW 6
	Y4	→ Yp0	2ND DECELERATION PHASE TO FLOOR LEVEL - E.B. VALVE DE-ENERGIZED ADJUST USING SCREW 21

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



FUNCTIONAL SIMBOLOGY:

C	VALVE FOR SAFETY PRESSURE INSERTING
D	STEP/SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
E.A	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B	DOWNWARD VALVE
E. λ/Δ	STAR DELTA, STAR VALVE (ON REQUEST)
F	ONE WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
L	ROD MANUAL DOWNWARD VALVE
N	SAFETY VALVE TO PREVENT ROD FAILURE
NR_P	NONRETURN VALVE OF THE HAND PUMP
P	NONRETURN VALVE
R	GAUGE STOPCOCK WITH TEST JOINT
R_P	MAIN STOPCOCK
SI	ATTENUATION BOX
XM	PRESSURE SWITCH FOR MIN/MAX PRESSURE
K/D	CONTROL VALVE FOR ROD COUNTERPRESSURE

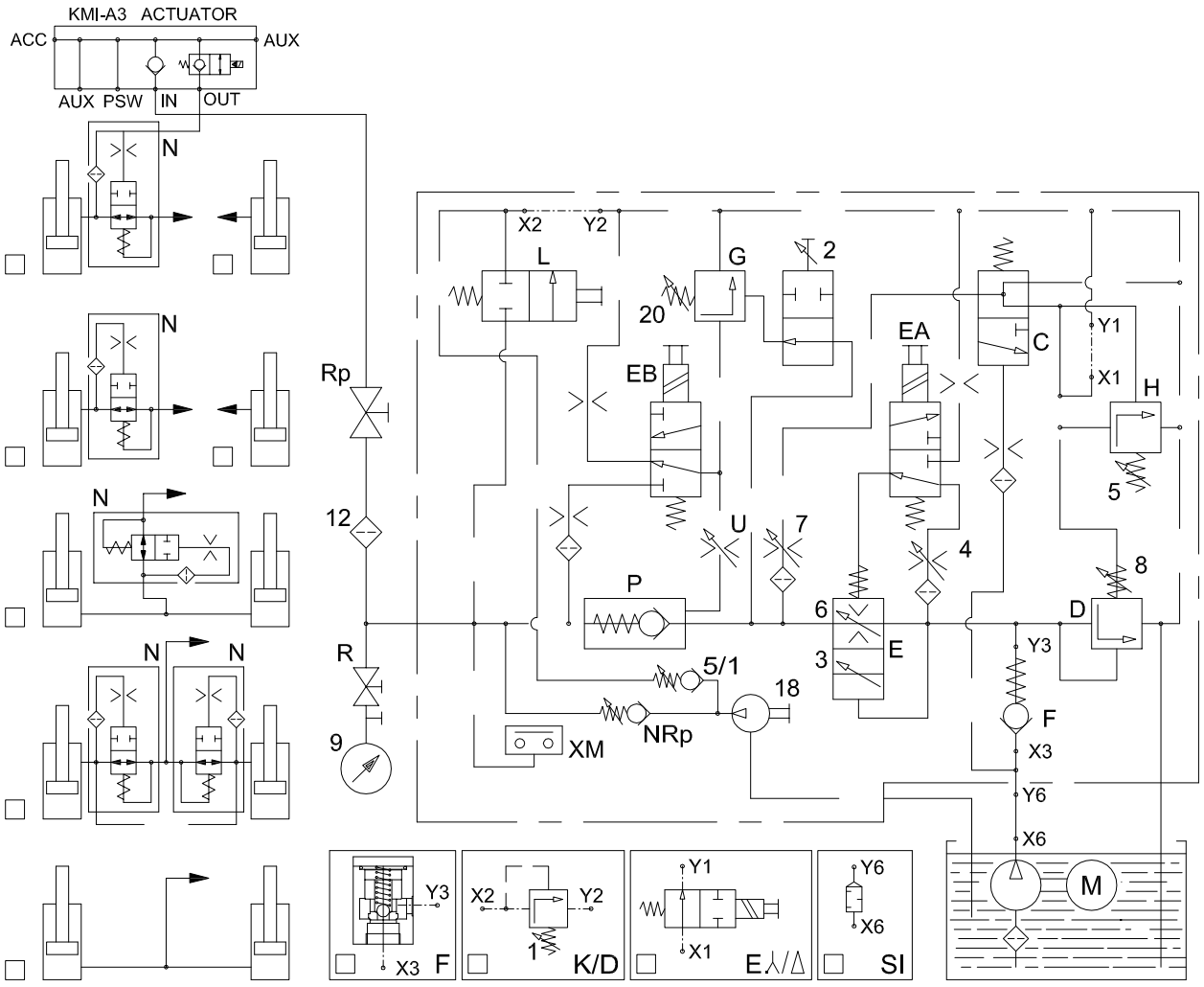
ADJUSTMENT SCREW FOR:

1	ROD COUNTERPRESSURE
2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	REGULATION OF HIGH SPEED BALANCE IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE
5	MAX. PRESSURE
5/1	OVERPRESSURE VALVE OF THE HAND PUMP
6	2nd DECELERATION PHASE
7	UPWARD ACCELERATION
8	VALVE "D" COUNTERPRESSURE
9	PRESSURE GAUGE
12	FILTER
18	HAND PUMP
20	DOWNWARD SPEED
U	DOWNWARD DEPARTURE DEVICE

FUNCTIONAL COMPONENTS

☒	AVAILABLES
☐	NOT AVAILABLES

UT	HYDRAULIC SCHEME FOR COMMAND GROUP - EUROPEAN STANDARDS EN 81.2 -	DATE 07/20 DWG N. 9242-S/A3



FUNCTIONAL SIMBOLOGY:

C	VALVE FOR SAFETY PRESSURE INSERTING
D	STEP/SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
E.A	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B	DOWNWARD VALVE
E. ⅄/Δ	STAR DELTA, STAR VALVE
F	ONE WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
L	ROD MANUAL DOWNWARD VALVE
N	SAFETY VALVE TO PREVENT ROD FAILURE
NR_P	NONRETURN VALVE OF THE HAND PUMP
P	NONRETURN VALVE
R	GAUGE STOPCOCK WITH TEST JOINT
R_P	MAIN STOPCOCK
SI	ATTENUATION BOX
XM	PRESSURE SWITCH FOR MIN/MAX PRESSURE
K/D	CONTROL VALVE FOR ROD COUNTERPRESSURE
KMI-A3	(SEE TABLE 9242/SIC-2)

ADJUSTMENT SCREW FOR:

1	ROD COUNTERPRESSURE
2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	REGULATION OF HIGH SPEED BALANCE IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE
5	MAX. PRESSURE
5/1	OVERPRESSURE VALVE OF THE HAND PUMP
6	2nd DECELERATION PHASE
7	UPWARD ACCELERATION
8	VALVE "D" COUNTERPRESSURE
9	PRESSURE GAUGE
12	FILTER
18	HAND PUMP
20	DOWNWARD SPEED
U	DOWNWARD DEPARTURE DEVICE

FUNCTIONAL COMPONENTS

☒	AVAILABLES
☐	NOT AVAILABLES

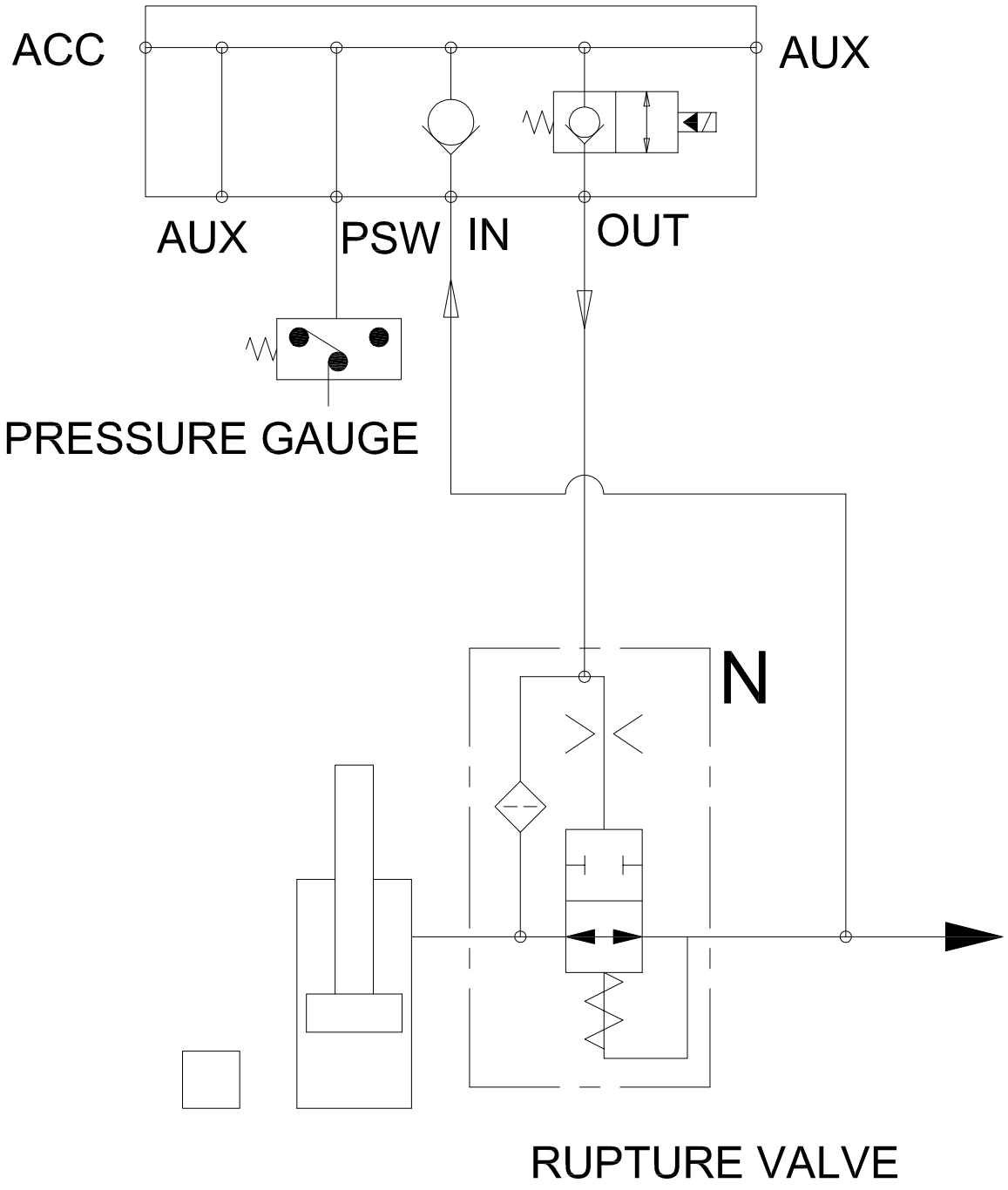
HYDRAULIC SCHEME FOR COMMAND GROUP

- EUROPEAN STANDARDS EN 81.20/50 -

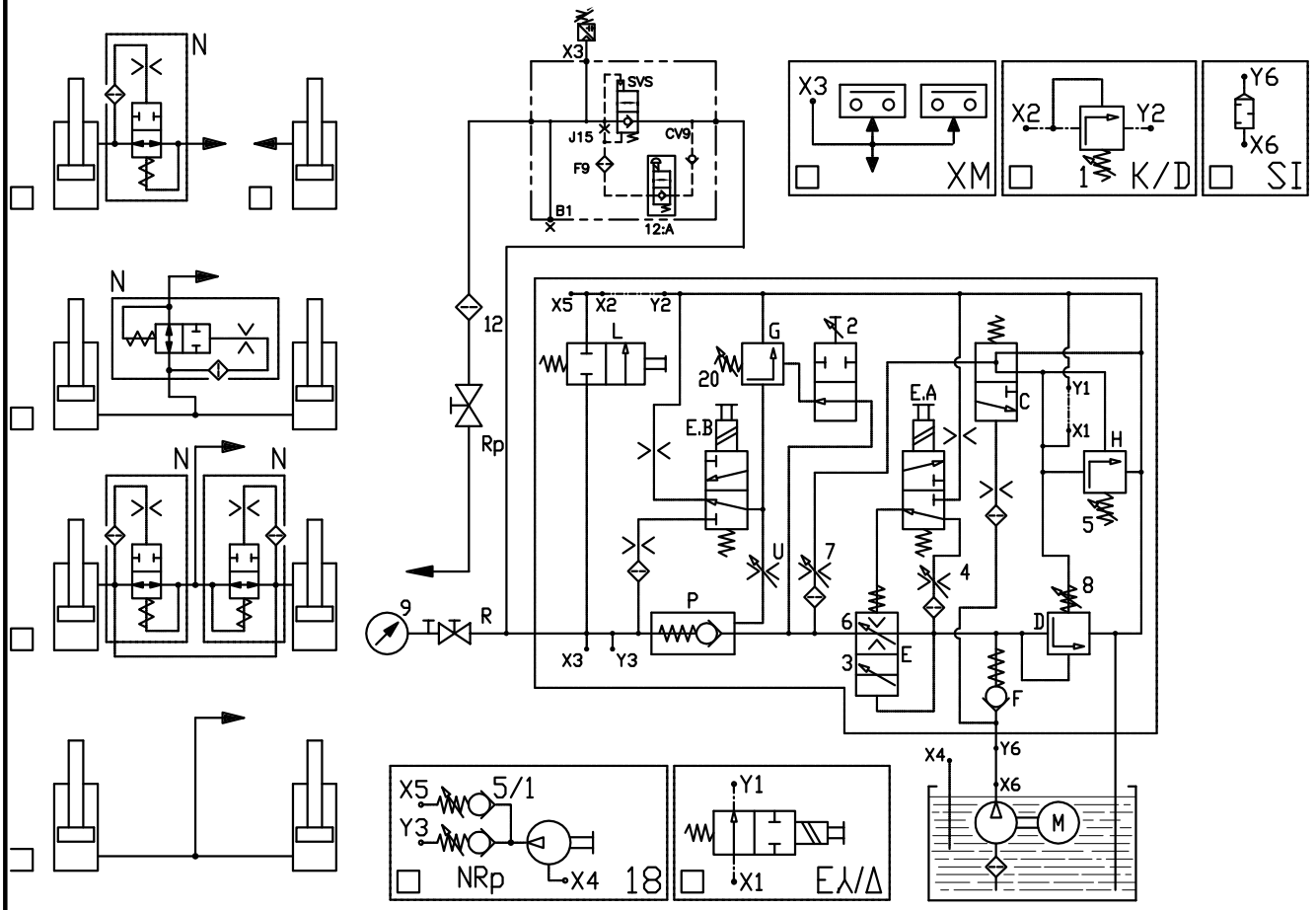
DATE 07/17

DWG No 9242/SIC-1

KMI-A3 ACTUATOR



	HYDRAULIC SCHEME FOR COMMAND GROUP - EUROPEAN STANDARDS EN 81.20/50 -	DATE 07/17 DWG N. 9242/SIC-2



FUNCTIONAL SIMBOLOGY:

C	VALVE FOR SAFETY PRESSURE INSERTING
CV9	HM-SV CHECK VALVE
D	STEP/SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
E.A	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B	DOWNWARD VALVE
E. λ/Δ	STAR DELTA, STAR VALVE (ON REQUEST)
F	ONE WAY FLOW VALVE
F9	HM-SV PILOT FILTER
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
J15	HM-SV NOZZLE
L	ROD MANUAL DOWNWARD VALVE
N	SAFETY VALVE TO PREVENT ROD FAILURE
NR_P	NONRETURN VALVE OF THE HAND PUMP
P	NONRETURN VALVE
R	GAUGE STOPCOCK WITH TEST JOINT
R_P	MAIN STOPCOCK
SI	ATTENUATION BOX
SVS	HM-SV MAIN SPOOL
XM	PRESSURE SWITCH FOR MIN/MAX PRESSURE
K/D	CONTROL VALVE FOR ROD COUNTERPRESSURE
12:A	HM-SV PILOT VALVE

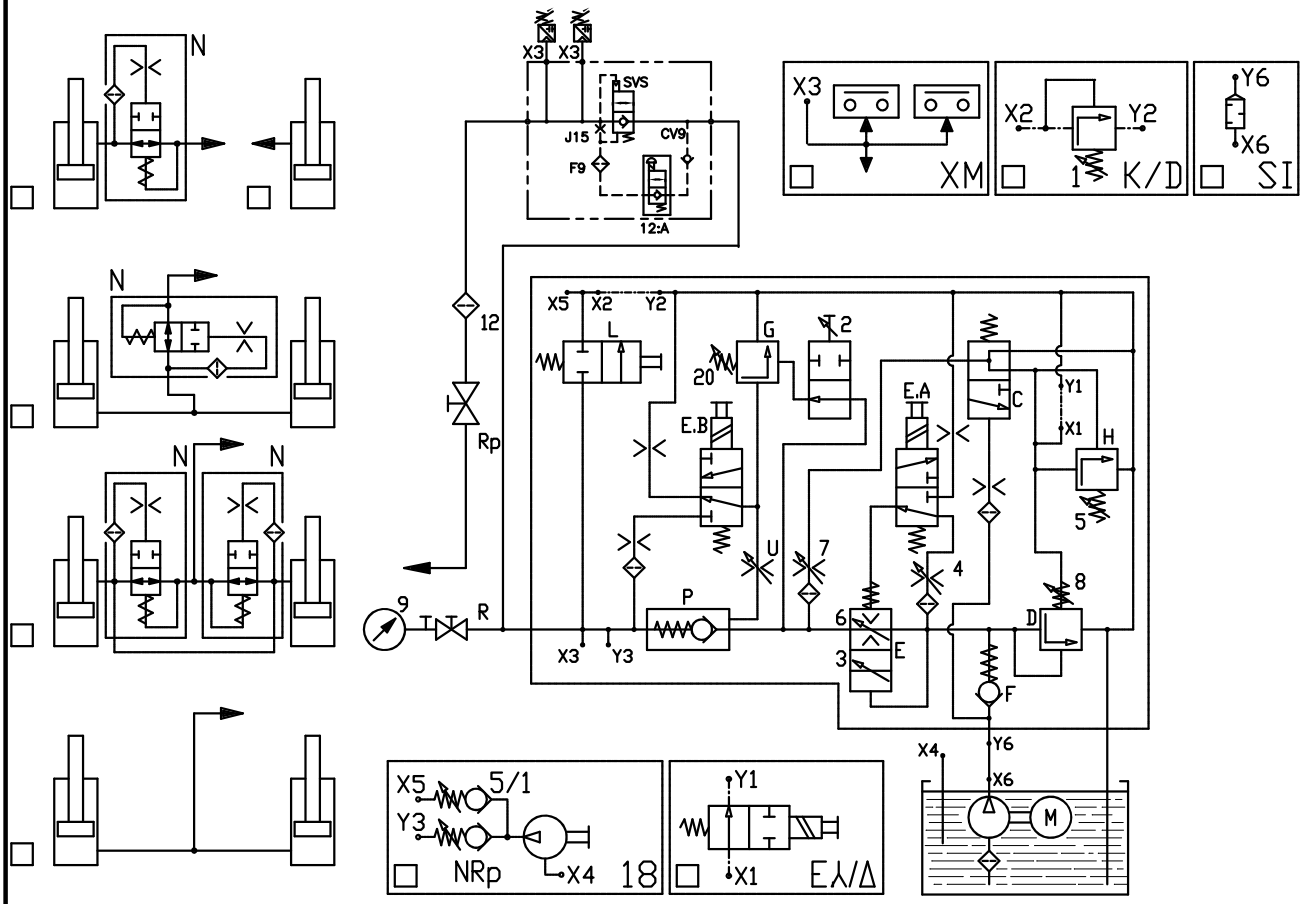
ADJUSTMENT SCREW FOR:

1	ROD COUNTERPRESSURE
2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	REGULATION OF HIGH SPEED BALANCE IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE
5	MAX. PRESSURE
5/1	OVERPRESSURE VALVE OF THE HAND PUMP
6	2nd DECELERATION PHASE
7	UPWARD ACCELERATION
8	VALVE 'D' COUNTERPRESSURE
9	PRESSURE GAUGE
12	FILTER
18	HAND PUMP
20	DOWNWARD SPEED
U	DOWNWARD DEPARTURE DEVICE

FUNCTIONAL COMPONENTS

☒	AVAILABLES
☐	NOT AVAILABLES

UT	HYDRAULIC SCHEME FOR COMMAND GROUP - EUROPEAN STANDARDS EN 81.20/50 -	DATE 07/17 DWG N. 9242 HM-SV



FUNCTIONAL SIMBOLOGY:

C	VALVE FOR SAFETY PRESSURE INSERTING
CV9	HM-SV CHECK VALVE
D	STEP/SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
E.A	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B	DOWNWARD VALVE
E. λ/Δ	STAR DELTA, STAR VALVE (ON REQUEST)
F	ONE WAY FLOW VALVE
F9	HM-SV PILOT FILTER
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
J15	HM-SV NOZZLE
L	ROD MANUAL DOWNWARD VALVE
N	SAFETY VALVE TO PREVENT ROD FAILURE
NR_P	NONRETURN VALVE OF THE HAND PUMP
P	NONRETURN VALVE
R	GAUGE STOPCOCK WITH TEST JOINT
R_P	MAIN STOPCOCK
SI	ATTENUATION BOX
SVS	HM-SV MAIN SPOOL
XM	PRESSURE SWITCH FOR MIN/MAX PRESSURE
K/D	CONTROL VALVE FOR ROD COUNTERPRESSURE
12:A	HSV PILOT VALVE

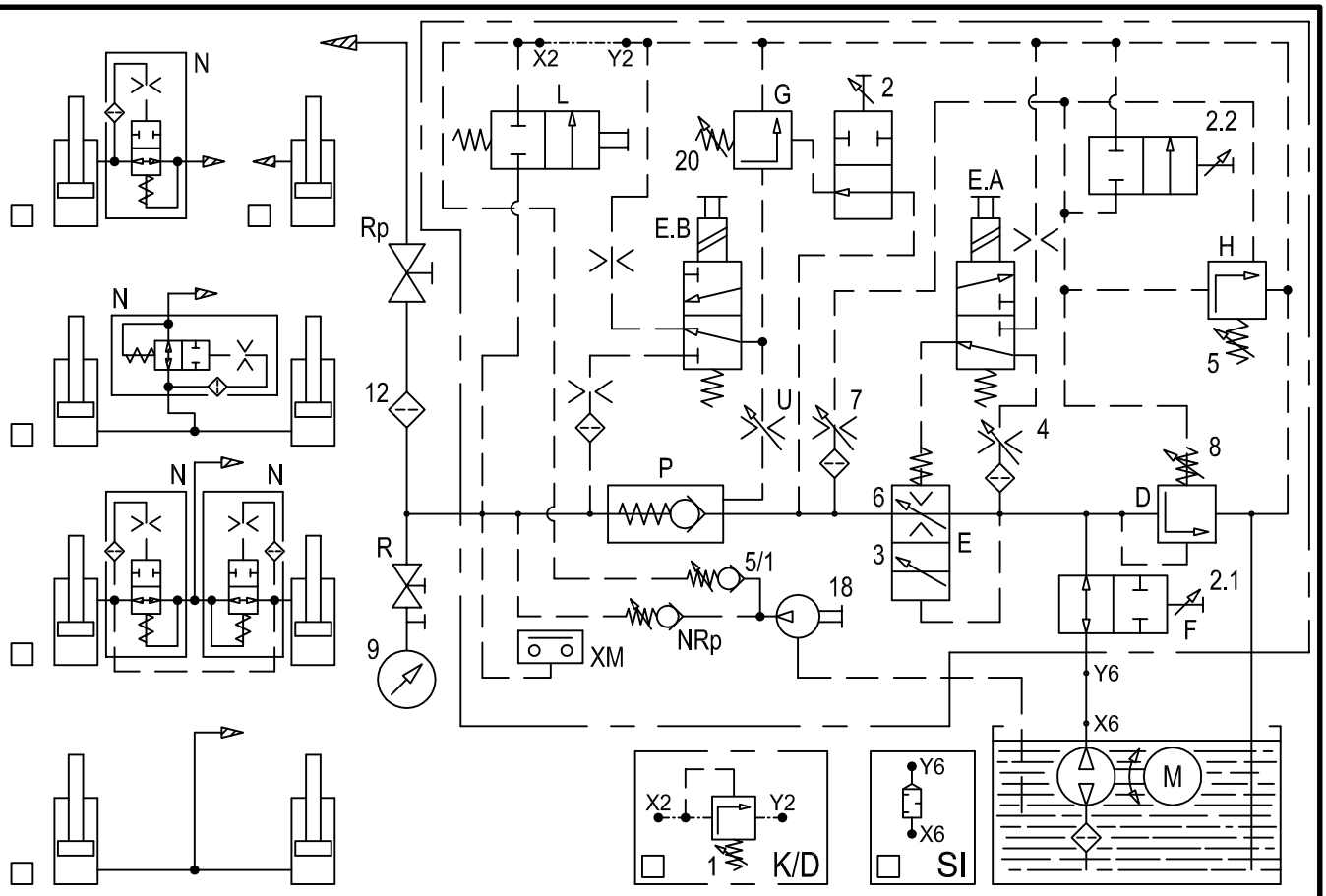
ADJUSTMENT SCREW FOR:

1	ROD COUNTERPRESSURE
2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	REGULATION OF HIGH SPEED BALANCE IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE
5	MAX. PRESSURE
5/1	OVERPRESSURE VALVE OF THE HAND PUMP
6	2nd DECELERATION PHASE
7	UPWARD ACCELERATION
8	VALVE 'D' COUNTERPRESSURE
9	PRESSURE GAUGE
12	FILTER
18	HAND PUMP
20	DOWNWARD SPEED
U	DOWNWARD DEPARTURE DEVICE

FUNCTIONAL COMPONENTS

☒	AVAILABLES
☐	NOT AVAILABLES

UT	HYDRAULIC SCHEME FOR COMMAND GROUP - EUROPEAN STANDARDS EN 81.20/50 -	DATE 07/17 DWG N. 9242 HSV



FUNCTIONAL SIMBOLOGY:

D	STEP/SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
E.A	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B	DOWNWARD VALVE
F	ONE WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
L	ROD MANUAL DOWNWARD VALVE
N	SAFETY VALVE TO PREVENT ROD FAILURE
NR_P	NONRETURN VALVE OF THE HAND PUMP
P	NONRETURN VALVE
R	GAUGE STOPCOCK WITH TEST JOINT
R_P	MAIN STOPCOCK
SI	ATTENUATION BOX
XM	PRESSURE SWITCH FOR MAX PRESSURE
K/D	CONTROL VALVE FOR ROD COUNTERPRESSURE

ADJUSTMENT SCREW FOR:

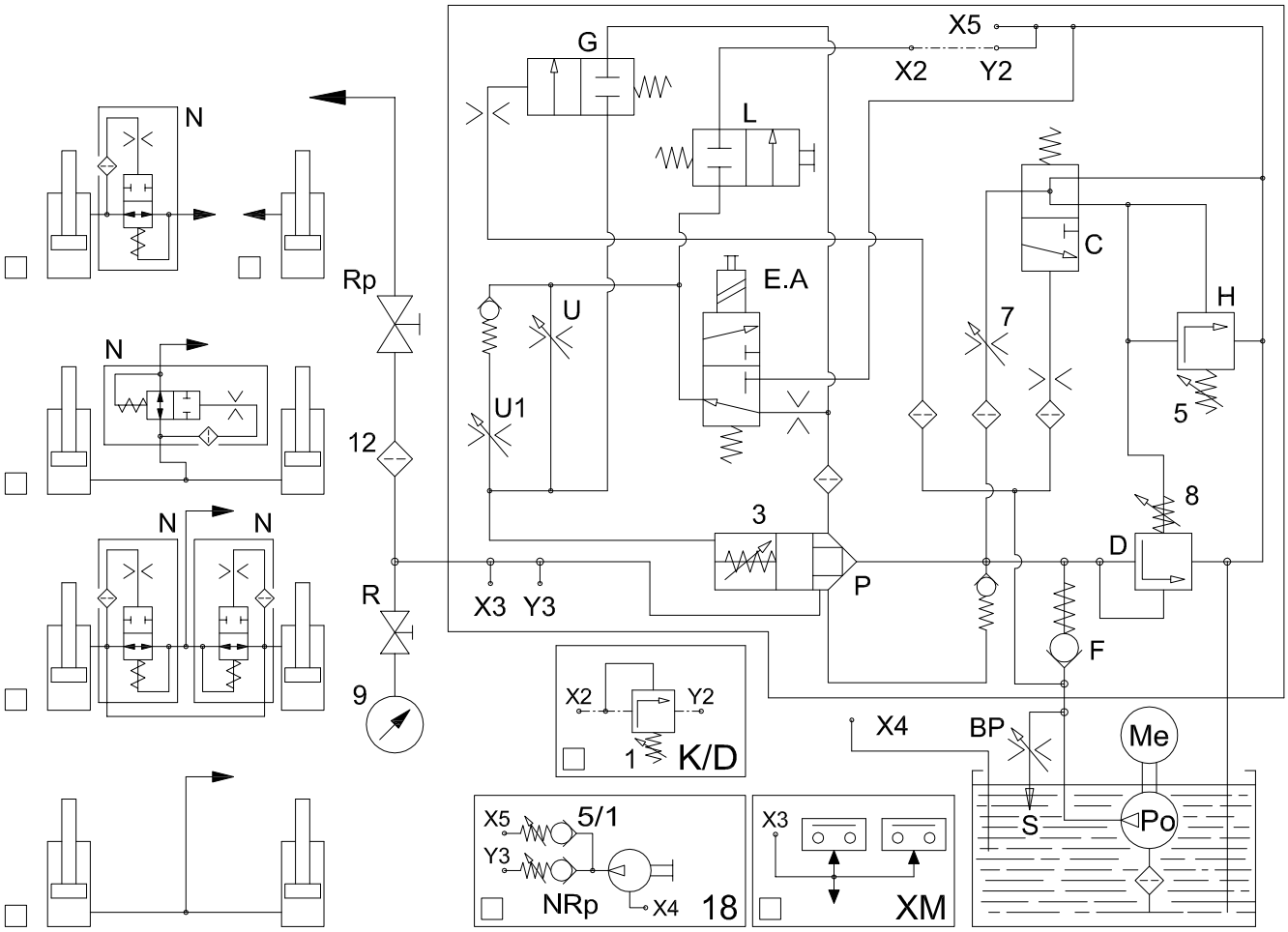
1	ROD COUNTERPRESSURE
2+2.1+2.2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	REGULATION OF HIGH SPEED BALANCE IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE
5	MAX. PRESSURE
5/1	OVERPRESSURE VALVE OF THE HAND PUMP
6	2nd DECELERATION PHASE
7	UPWARD ACCELERATION
8	VALVE "D" COUNTERPRESSURE
9	PRESSURE GAUGE
12	FILTER
18	HAND PUMP
20	DOWNWARD SPEED
U	DOWNWARD DEPARTURE DEVICE

FUNCTIONAL COMPONENTS

☒ AVAILABLES

☐ NOT AVAILABLES

UT	HYDRAULIC SCHEME FOR COMMAND GROUP "MED" - EUROPEAN STANDARDS EN 81.20 -	DATE 01/19 DWG N. 9242/MED



FUNCTIONAL SIMBOLOGY:

C	VALVE FOR SAFETY PRESSURE INSERTING
D	STEP/SEQUENCE VALVE
E.A	DOWNWARD VALVE
F	ONE WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
Me	MOTOR
L	ROD MANUAL DOWNWARD VALVE
N	SAFETY VALVE TO PREVENT ROD FAILURE
NR_P	NONRETURN VALVE OF THE HAND PUMP
P	NONRETURN VALVE
P_O	PUMP
R	GAUGE STOPCOCK WITH TEST JOINT
R_P	MAIN STOPCOCK
XM	PRESSURE SWITCH FOR MIN/MAX PRESSURE
K/D	CONTROL VALVE FOR ROD COUNTERPRESSURE

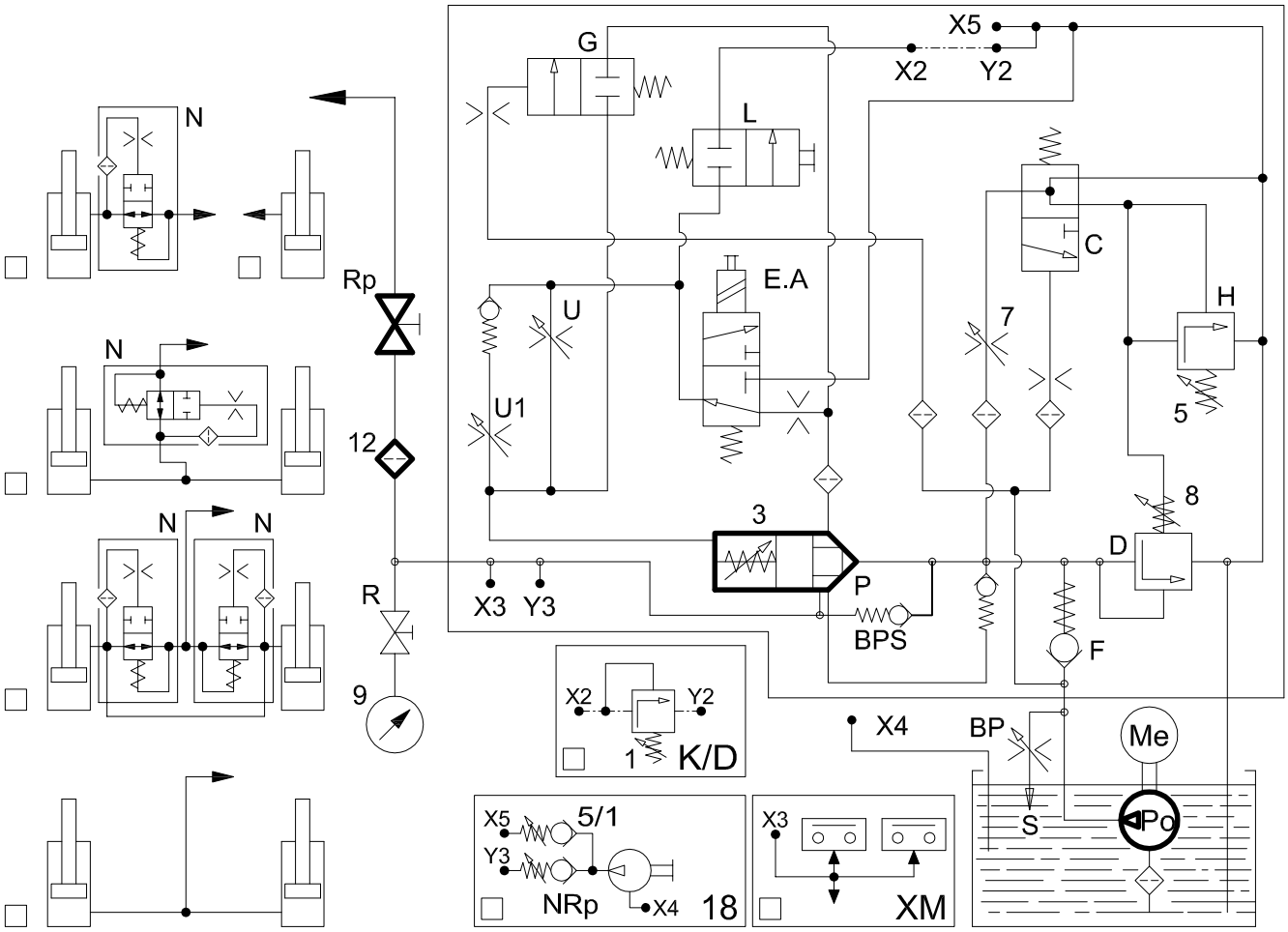
ADJUSTMENT SCREW FOR:

1	ROD COUNTERPRESSURE
3	REGULATION OF HIGH SPEED BALANCE IN UP/DOWNWARD DIRECTION
3+8	REGULATION OF TEST VALVE FOR ROD FAILURE
5	MAX. PRESSURE
5/1	OVERPRESSURE VALVE OF THE HAND PUMP
7	UPWARD ACCELERATION
8	VALVE "D" COUNTERPRESSURE
9	PRESSURE GAUGE
12	FILTER
18	HAND PUMP
U	DOWNWARD DEPARTURE DEVICE
U1	DOWNWARD ARRIVAL DEVICE
BP	BY-PASS PRESET IN FACTORY CAPACITY PUMP FOR UPWARD SPEED

FUNCTIONAL COMPONENTS

☒	AVAILABLES
☐	NOT AVAILABLES

UT	HYDRAULIC SCHEME FOR COMMAND GROUP (DISTRIBUTOR SINGLE SPEED "HL" 8/23 L/1') - EUROPEAN STANDARDS EN 81.20/50 -	DATE 06/18
		DWG N. 9243



FUNCTIONAL SIMBOLOGY:

BPS	UPWARD BY-PASS VALVE
C	VALVE FOR SAFETY PRESSURE INSERTING
D	STEP/SEQUENCE VALVE
E.A	DOWNWARD VALVE
F	ONE WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
Me	MOTOR
L	ROD MANUAL DOWNWARD VALVE
N	SAFETY VALVE TO PREVENT ROD FAILURE
NR_P	NONRETURN VALVE OF THE HAND PUMP
P	NONRETURN VALVE
P_O	PUMP
R	GAUGE STOPCOCK WITH TEST JOINT
R_P	MAIN STOPCOCK
XM	PRESSURE SWITCH FOR MIN/MAX PRESSURE
K/D	CONTROL VALVE FOR ROD COUNTERPRESSURE

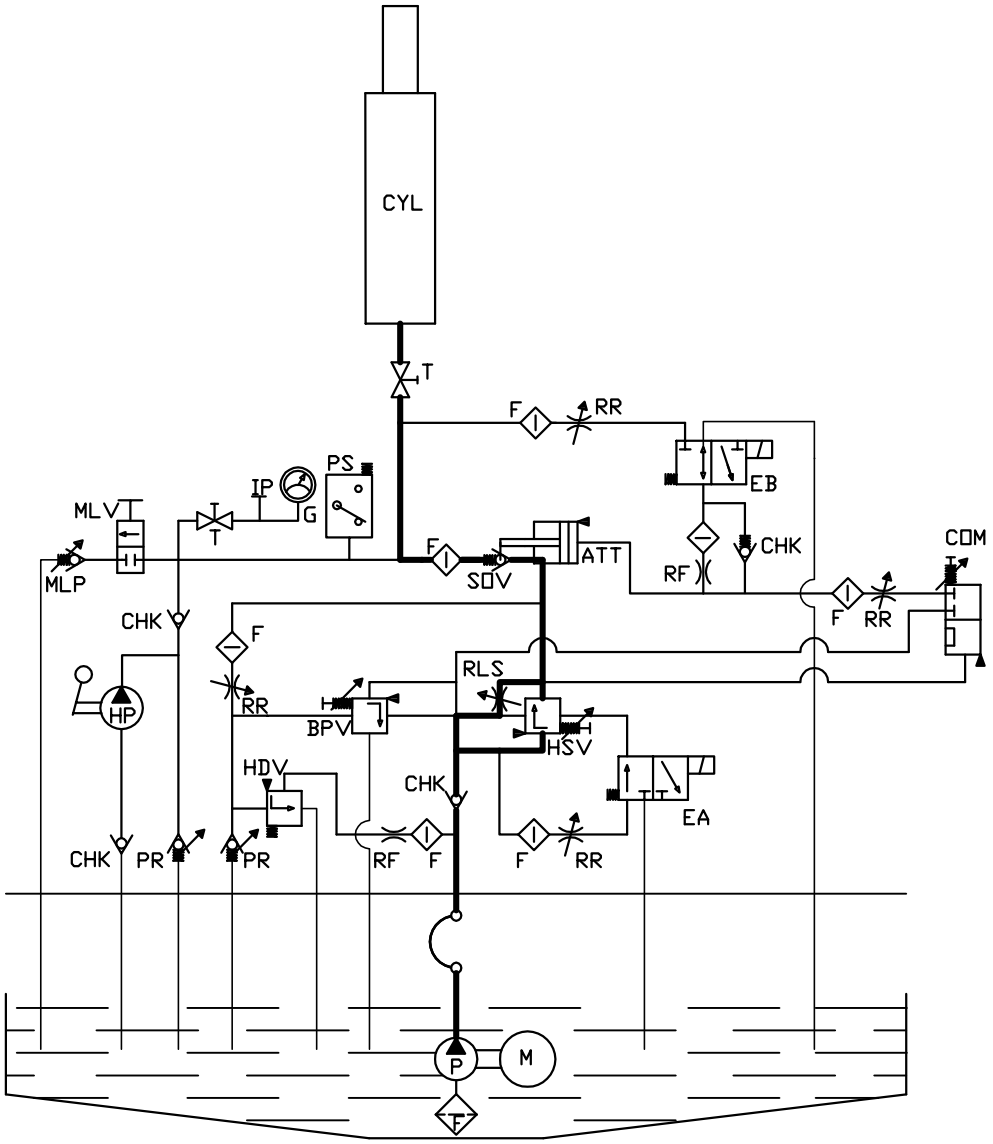
ADJUSTMENT SCREW FOR:

1	ROD COUNTERPRESSURE
3	REGULATION OF HIGH SPEED BALANCE IN UP/DOWNWARD DIRECTION
3+8	REGULATION OF TEST VALVE FOR ROD FAILURE
5	MAX. PRESSURE
5/1	OVERPRESSURE VALVE OF THE HAND PUMP
7	UPWARD ACCELERATION
8	VALVE "D" COUNTERPRESSURE
9	PRESSURE GAUGE
12	FILTER
18	HAND PUMP
U	DOWNWARD DEPARTURE DEVICE
U1	DOWNWARD ARRIVAL DEVICE
BP	BY-PASS PRESET IN FACTORY CAPACITY PUMP FOR UPWARD SPEED

FUNCTIONAL COMPONENTS

X	AVAILABLES
☐	NOT AVAILABLES

UT	HYDRAULIC SCHEME FOR COMMAND GROUP (DISTRIBUTOR BLOCK FOR "HYDROBATT" DRIVE) - EUROPEAN STANDARDS EN 81.20 -	DATE 11/18
		DWG N. 9243-HY

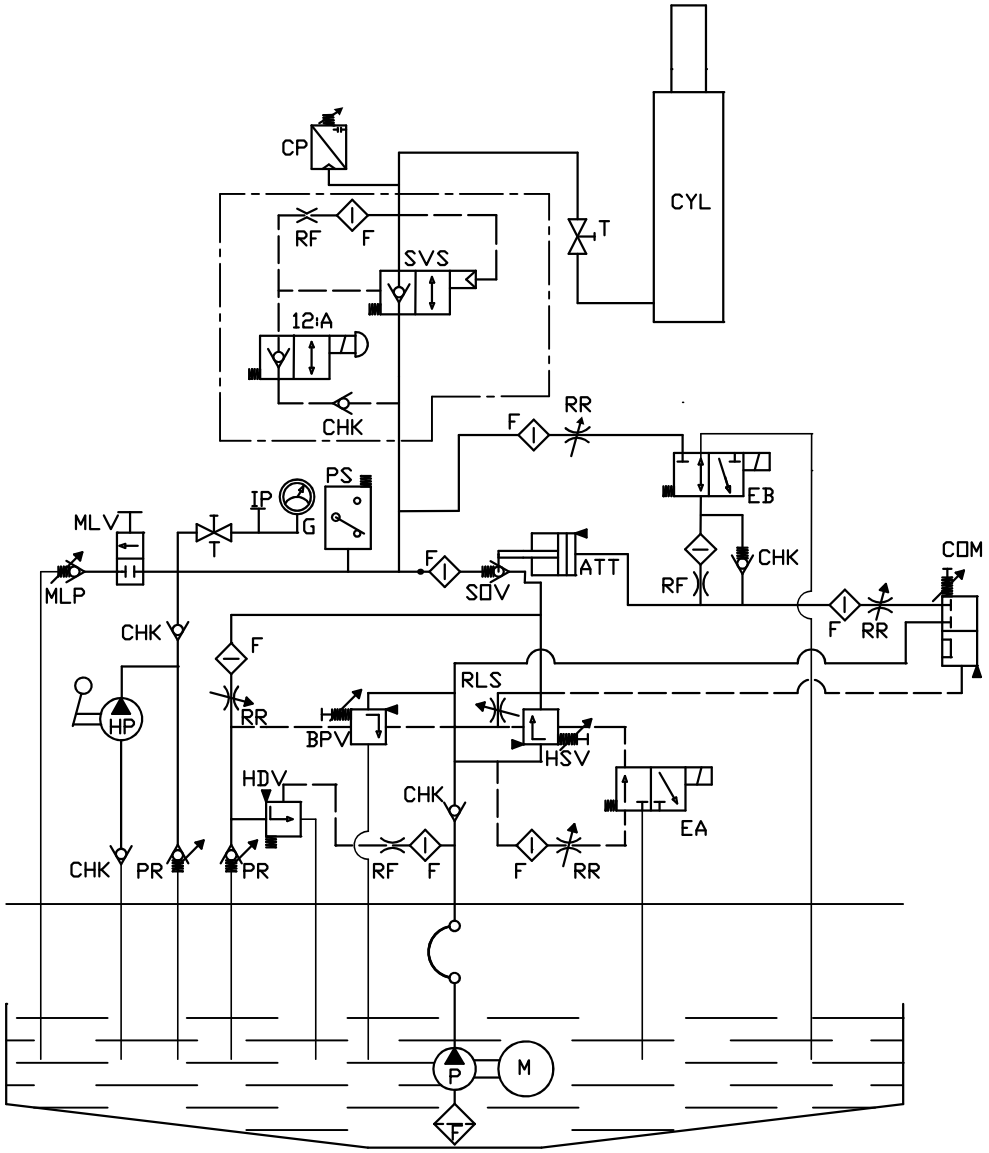


FUNCTIONAL SIMBOLOGY:

G	PRESSURE GAUGE
M	ELECTRICAL MOTOR
F	FILTER
T	GAUGE STOPCOCK
IP	TEST JOINT
RF	RESTRICTOR FIXED ORIFICE
RR	RESTRICTOR ADJUSTABLE ORIFICE
PS	PRESSURE SWITCH
PR	OVERPRESSURE VALVE
HP	HAND PUMP
EA	HIGH SPEED SOLENOID-VALVE
EB	DOWNWARD SOLENOID-VALVE

MLP	MINIMUM PRESSURE DOWNWARD VALVE
MLV	DOWNWARD HAND VALVE
CHK	NON-RETURN VALVE
HDV	HYDRAULIC DELAY VALVE
RLS	LOW SPEED RESTRICTOR UPWARD/DOWNWARD
HSV	HIGHT SPEED VALVE UPWARD/DOWNWARD
BPV	BY-PASS VALVE
SOV	DOWNWARD VALVE
ATT	ACTUATOR VALVE DOWNWARD
COM	COMPENSER DOWNWARD

UT	HYDRAULIC SCHEME FOR COMMAND GROUP DISTRIBUTOR BLOCK "MH-2V" - EUROPEAN STANDARDS EN 81.20 -	DATA 08/17 N°DIS. 9243-MH-2V



FUNCTIONAL SIMBOLOGY:

G	PRESSURE GAUGE
M	ELECTRICAL MOTOR
F	FILTER
T	GAUGE STOPCOCK
IP	TEST JOINT
RF	RESTRICTOR FIXED ORIFICE
RR	RESTRICTOR ADJUSTABLE ORIFICE
PS	PRESSURE SWITCH
PR	OVERPRESSURE VALVE
HP	HAND PUMP
EA	HIGH SPEED SOLENOID-VALVE
EB	DOWNWARD SOLENOID-VALVE
CP	PRESSURE SWITCH CONNECTION

MLP	MINIMUM PRESSURE DOWNWARD VALVE
MLV	DOWNWARD HAND VALVE
CHK	NON-RETURN VALVE
HDV	HYDRAULIC DELAY VALVE
RLS	LOW SPEED RESTRICTOR UPWARD/DOWNWARD
HSV	HIGHT SPEED VALVE UPWARD/DOWNWARD
BPV	BY-PASS VALVE
SOV	DOWNWARD VALVE
ATT	ACTUATOR VALVE DOWNWARD
COM	COMPENSER DOWNWARD
SVS	MAIN SLIDER A3
12:A	PILOT SYSTEM SOLENOID VALVE A3

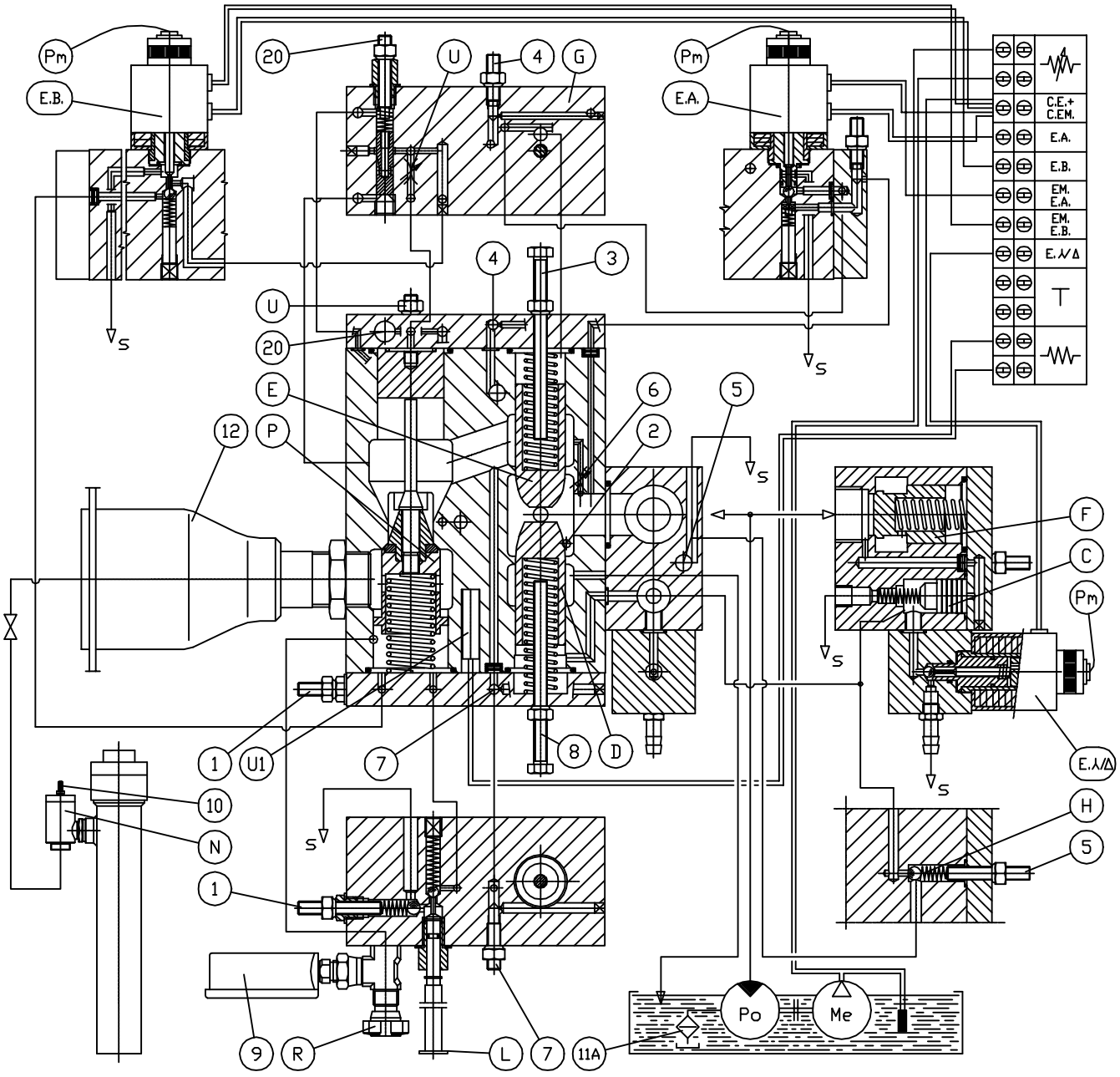
UT	HYDRAULIC SCHEME FOR COMMAND GROUP DISTRIBUTOR BLOCK "MH2V+AMENDMENT A3" - EUROPEAN STANDARDS EN 81.20 -	DATE 06/22 N°DIS. 9243/MH2V+A3

9257/A-IN

SECTIONAL VIEW OF OLEODYNAMIC DISTRIBUTOR 15-250 L/M WITH STAR DELTA STARTING

DATE 01/95

DWG N. 9257/A



1	REGULATION OF ROD COUNTERPRESSURE
2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	HIGH SPEED BALANCE REGULATION IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE ADJUSTMENT
5	MAX. PRESSURE ADJUSTMENT
6	LOW SPEED ADJUSTMENT IN UP/DOWNWARD DIRECTION
7	UPWARD DEPARTURE ADJUSTMENT
8	VALVE "D" COUNTERPRESSURE ADJUSTMENT
9	PRESSURE GAUGE
10	ADJUSTMENT OF SAFETY VALVE IN CASE OF ROD FAILURE
11A	FILTER AT PUMPE ENTRANCE
12	FILTER/SILENCER
20	DOWNWARD SPEED ADJUSTMENT
E.A.	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B.	DOWNWARD VALVE
E. λ Δ	STAR DELTA, STAR VALVE (ON REQUEST)
C	VALVE FOR SAFETY PRESSURE
D	STEP SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
F	ONE-WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
L	ROD MANUAL DOWNWARD VALVE
Me	MOTOR
N	SAFETY VALVE TO PREVENT ROD FAILURE
P	NONRETURN VALVE
Po	PUMP
Pm	MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE
R	TAP TO CUT OFF PRESSURE GAUGE
s	OIL DRAIN
U	DOWNWARD DEPARTURE DEVICE
U1	OIL HEATER INSIDE DISTRIBUTOR

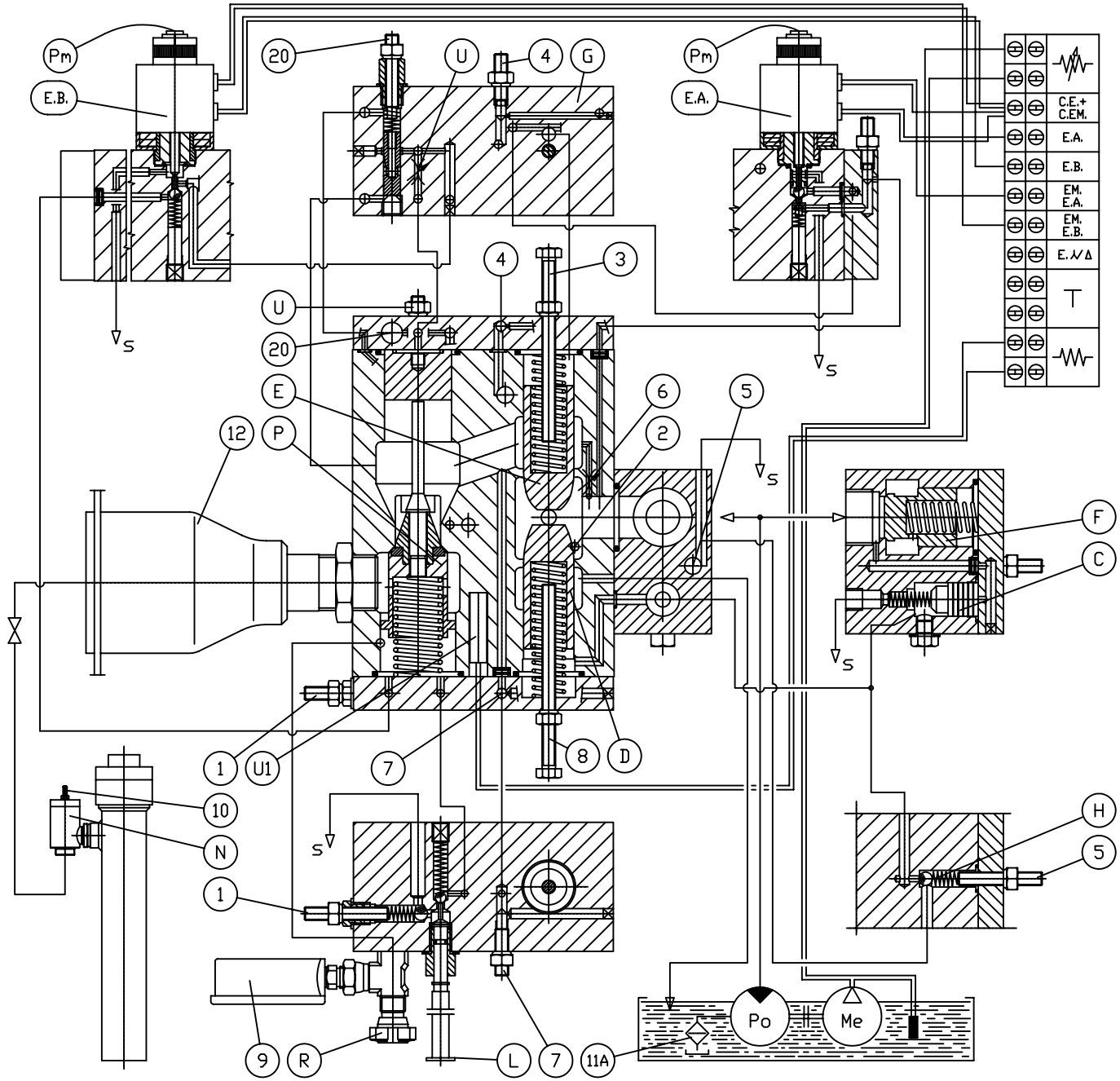
9257/AD-IN

UT

SECTIONAL VIEW OF
OLEODYNAMIC DISTRIBUTOR 15-250 L/M
WITH DIRECT ON-LINE STARTING

DATE 01/95

DWG N. 9257/AD



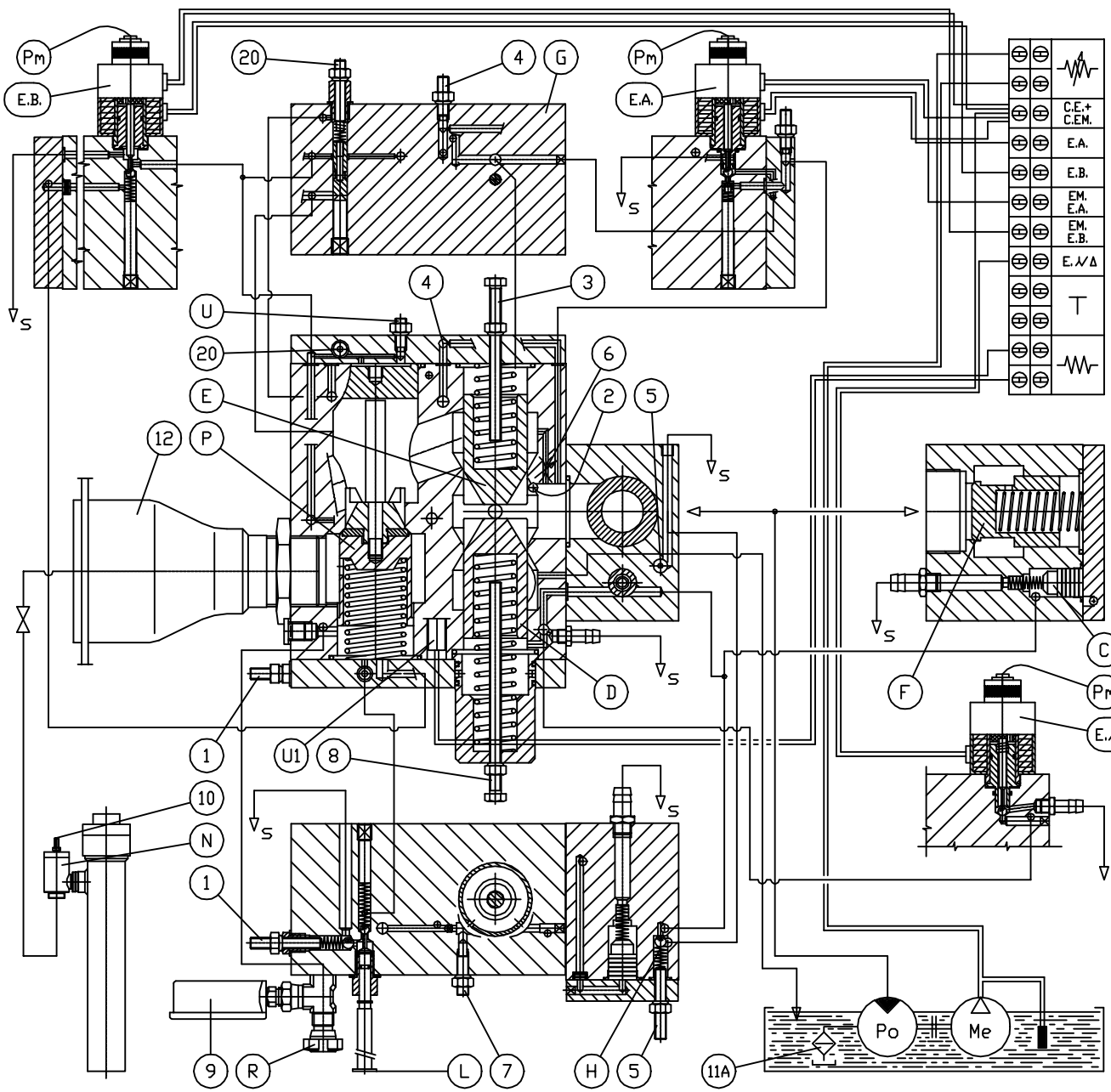
1	REGULATION OF ROD COUNTERPRESSURE
2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	HIGH SPEED BALANCE REGULATION IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE ADJUSTMENT
5	MAX. PRESSURE ADJUSTMENT
6	LOW SPEED ADJUSTMENT IN UP/DOWNWARD DIRECTION
7	UPWARD DEPARTURE ADJUSTMENT
8	VALVE 'D' COUNTERPRESSURE ADJUSTMENT
9	PRESSURE GAUGE
10	ADJUSTMENT OF SAFETY VALVE IN CASE OF ROD FAILURE
11A	FILTER AT PUMPE ENTRANCE
12	FILTER/SILENCER
20	DOWNWARD SPEED ADJUSTMENT
E.A.	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B.	DOWNWARD VALVE
C	VALVE FOR SAFETY PRESSURE
D	STEP SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
F	ONE-WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
L	ROD MANUAL DOWNWARD VALVE
Me	MOTOR
N	SAFETY VALVE TO PREVENT ROD FAILURE
P	NONRETURN VALVE
Po	PUMP
Pm	MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE
R	TAP TO CUT OFF PRESSURE GAUGE
s	OIL DRAIN
U	DOWNWARD DEPARTURE DEVICE
U1	OIL HEATER INSIDE DISTRIBUTOR

9258/B-IN

SECTIONAL VIEW OF OLEODYNAMIC DISTRIBUTOR 300-650 L/M WITH STAR DELTA STARTING

DATE 01/95

DWG N. 9258/B



1	REGULATION OF ROD COUNTERPRESSURE
2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	HIGH SPEED BALANCE REGULATION IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE ADJUSTMENT
5	MAX. PRESSURE ADJUSTMENT
6	LOW SPEED ADJUSTMENT IN UP/DOWNWARD DIRECTION
7	UPWARD DEPARTURE ADJUSTMENT
8	VALVE "D" COUNTERPRESSURE ADJUSTMENT
9	PRESSURE GAUGE
10	ADJUSTMENT OF SAFETY VALVE IN CASE OF ROD FAILURE
11A	FILTER AT PUMPE ENTRANCE
12	FILTER/SILENCER
20	DOWNWARD SPEED ADJUSTMENT
E.A.	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B.	DOWNWARD VALVE
E. Y Δ	STAR DELTA, STAR VALVE (ON REQUEST)
C	VALVE FOR SAFETY PRESSURE
D	STEP SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
F	ONE-WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
L	ROD MANUAL DOWNWARD VALVE
Me	MOTOR
N	SAFETY VALVE TO PREVENT ROD FAILURE
P	NONRETURN VALVE
Po	PUMP
Pm	MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE
R	TAP TO CUT OFF PRESSURE GAUGE
s	OIL DRAIN
U	DOWNWARD DEPARTURE DEVICE
U1	OIL HEATER INSIDE DISTRIBUTOR

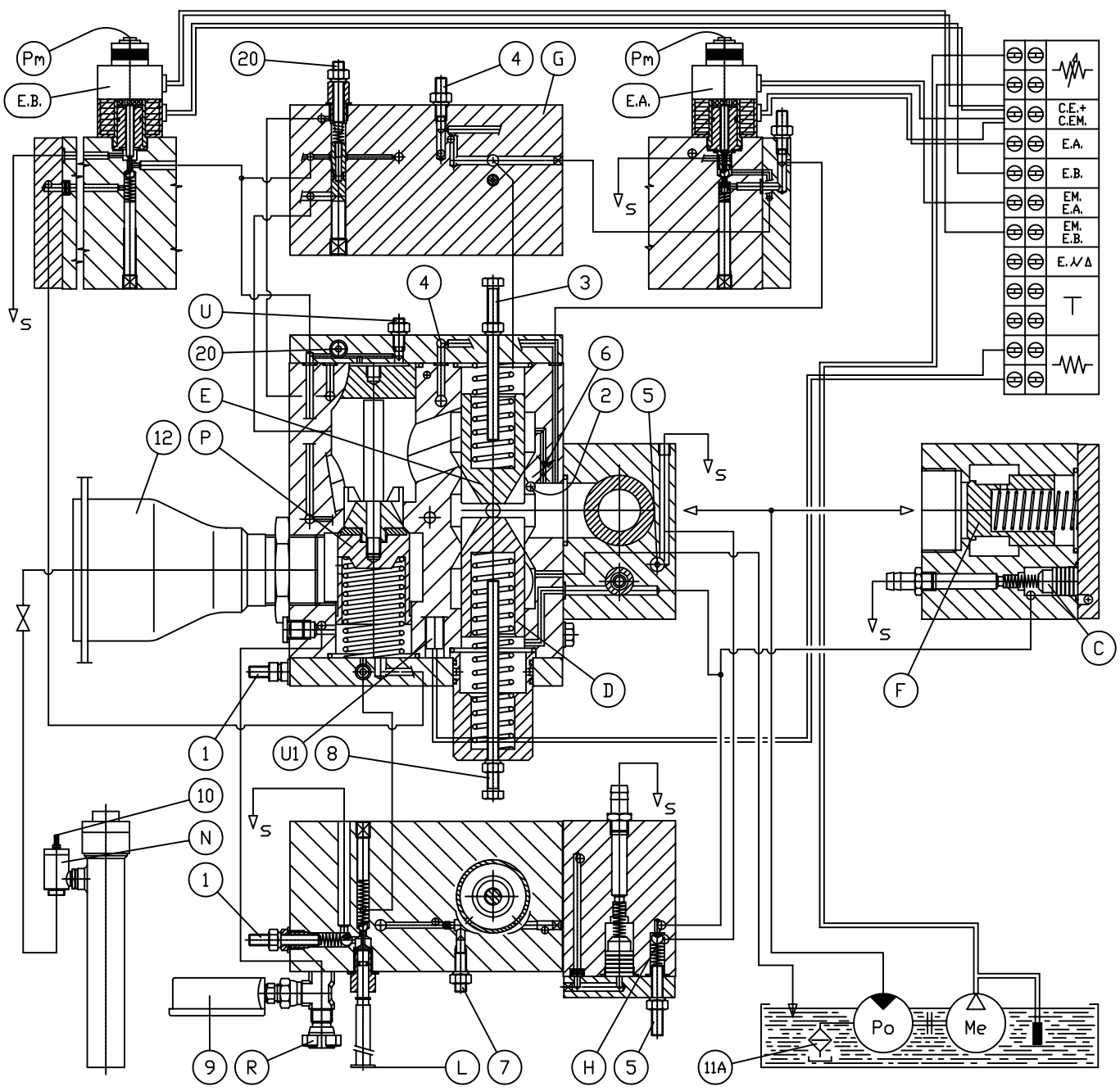
9258/BD-IN

UT

SECTIONAL VIEW OF
OLEODYNAMIC DISTRIBUTOR 300-650 L/M
WITH DIRECT ON-LINE STARTING

DATE 01/95

DWG N. 9258/BD



1	REGULATION OF ROD COUNTERPRESSURE
2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	HIGH SPEED BALANCE REGULATION IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE ADJUSTMENT
5	MAX. PRESSURE ADJUSTMENT
6	LOW SPEED ADJUSTMENT IN UP/DOWNWARD DIRECTION
7	UPWARD DEPARTURE ADJUSTMENT
8	VALVE 'D' COUNTERPRESSURE ADJUSTMENT
9	PRESSURE GAUGE
10	ADJUSTMENT OF SAFETY VALVE IN CASE OF ROD FAILURE
11A	FILTER AT PUMPE ENTRANCE
12	FILTER/SILENCER
20	DOWNWARD SPEED ADJUSTMENT
E.A.	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B.	DOWNWARD VALVE
C	VALVE FOR SAFETY PRESSURE
D	STEP SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
F	ONE-WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
L	ROD MANUAL DOWNWARD VALVE
Me	MOTOR
N	SAFETY VALVE TO PREVENT ROD FAILURE
P	NONRETURN VALVE
Po	PUMP
Pm	MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE
R	TAP TO CUT OFF PRESSURE GAUGE
s	OIL DRAIN
U	DOWNWARD DEPARTURE DEVICE
U1	OIL HEATER INSIDE DISTRIBUTOR

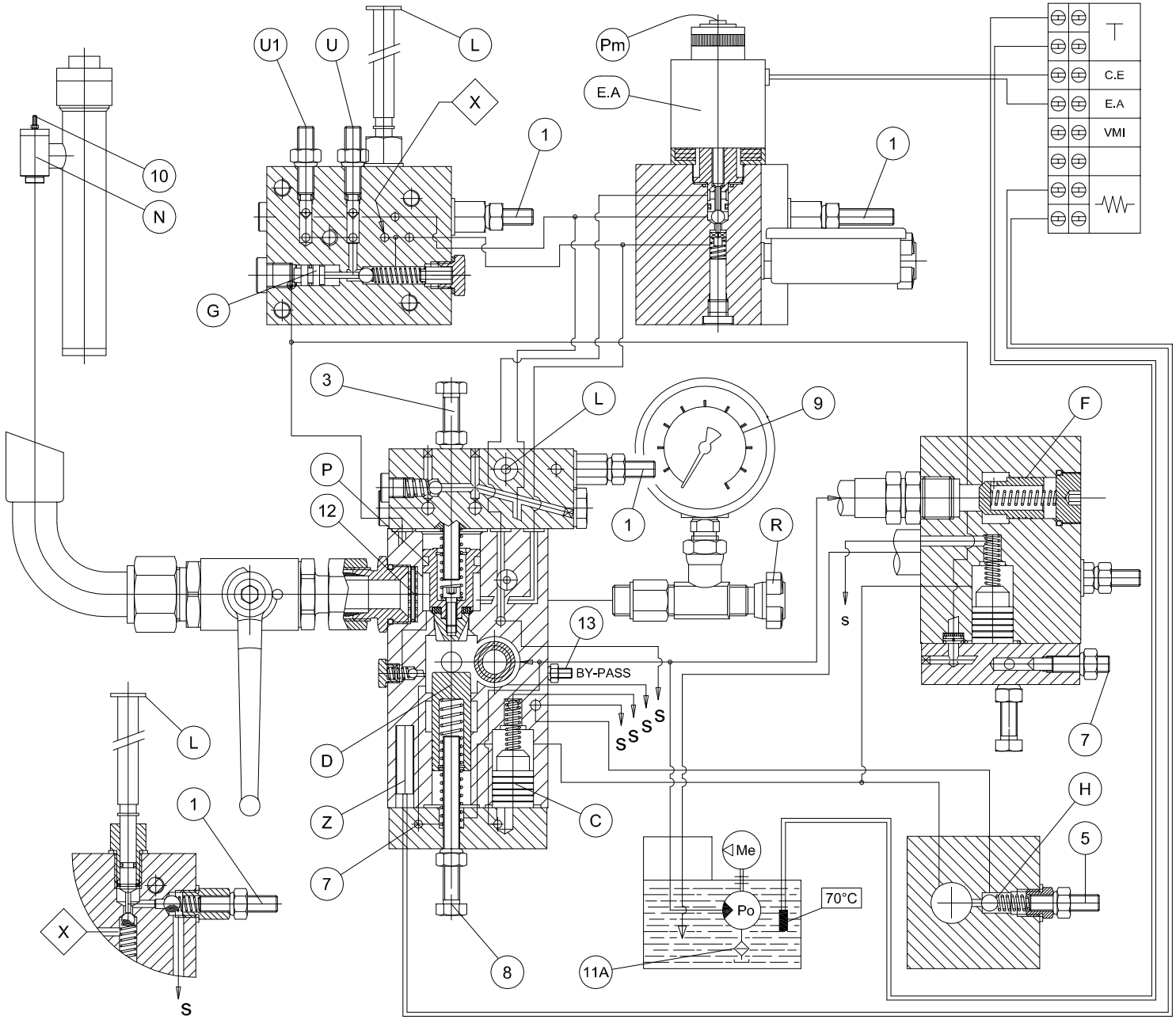
9259/C-ING

UT

SECTIONAL VIEW OF OLEODYNAMIC
DISTRIBUTOR SINGLE SPEED "HL"
8/23 L/1'

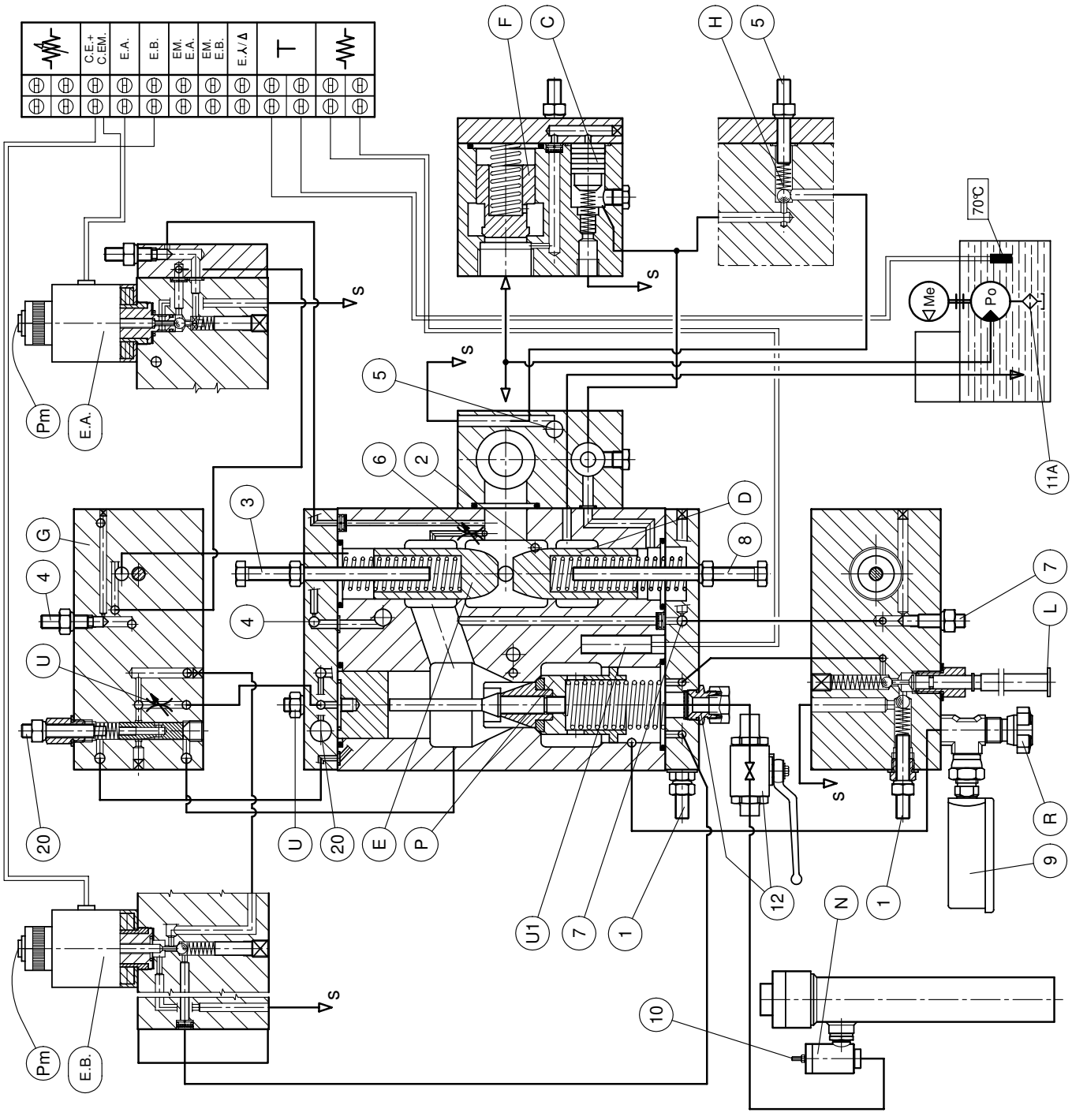
DATA 06/18

DIS. N° 9259/C



1	ROD COUNTERPRESSURE
3	REGULATION OF HIGH SPEED BALANCE IN UP/DOWNWARD DIRECTION
3+8	REGULATION OF TEST VALVE FOR ROD FAILURE
5	MAX. PRESSURE
7	UPWARD ACCELERATION
8	VALVE "D" COUNTERPRESSURE
9	PRESSURE GAUGE
10	ADJUSTEMENT OF SAFETY VALVE IN CASE OF ROD FAILURE
11A	FILTER AT PUMPE ENTRANCE
12	FILTER
E.A	DOWNWARD VALVE
C	VALVE FOR SAFETY PRESSURE INSERTING
D	STEP/SEQUENCE VALVE
F	ONE WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
L	ROD MANUAL DOWNWARD VALVE
Me	MOTOR "AIR"
N	SAFETY VALVE TO PREVENT ROD FAILURE
P	NONRETURN VALVE
Pm	MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE
Po	PUMP
R	TAP TO CUT OFF PRESSURE GAUGE
s	OIL DRAIN
U	DOWNWARD DEPARTURE DEVICE
U1	DOWNWARD ARRIVAL DEVICE
Z	OIL HEATER
13	BY-PASS, REGULATION UPWARD SPEED (PRESET IN FACTORY)

1 REGULATION OF ROD COUNTERPRESSURE
2 REGULATION OF TEST VALVE FOR ROD FAILURE
3 HIGH SPEED BALANCE REGULATION IN UP/DOWNWARD DIRECTION
4 1st DECELERATION PHASE ADJUSTMENT
5 MAX. PRESSURE ADJUSTMENT
6 LOW SPEED ADJUSTMENT IN UP/DOWNWARD DIRECTION
7 UPWARD DEPARTURE ADJUSTMENT
8 VALVE "D" COUNTERPRESSURE ADJUSTMENT
9 PRESSURE GAUGE
10 ADJUSTMENT OF SAFETY VALVE IN CASE OF ROD FAILURE
11A FILTER AT PUMPE ENTRANCE
12 BALL VALVE / FILTER
20 DOWNWARD SPEED ADJUSTMENT
E.A. VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B. DOWNWARD VALVE
C VALVE FOR SAFETY PRESSURE
D STEP SEQUENCE VALVE
E FLOW RATE REGULATION VALVE
F ONE-WAY FLOW VALVE
G MODULATING VALVE
H MAX. PRESSURE VALVE
L ROD MANUAL DOWNWARD VALVE
Me MOTOR
N SAFETY VALVE TO PREVENT ROD FAILURE
P NONRETURN VALVE
Po PUMP
Pm MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE
R TAP TO CUT OFF PRESSURE GAUGE
s OIL DRAIN
U DOWNWARD DEPARTURE DEVICE
U1 OIL HEATER INSIDE DISTRIBUTOR



UT	SECTIONAL VIEW OF OLEODYNAMIC DISTRIBUTOR 8/30 L/1' (HL-2V)	DATE 02/07
		DWG NR 9259/2V

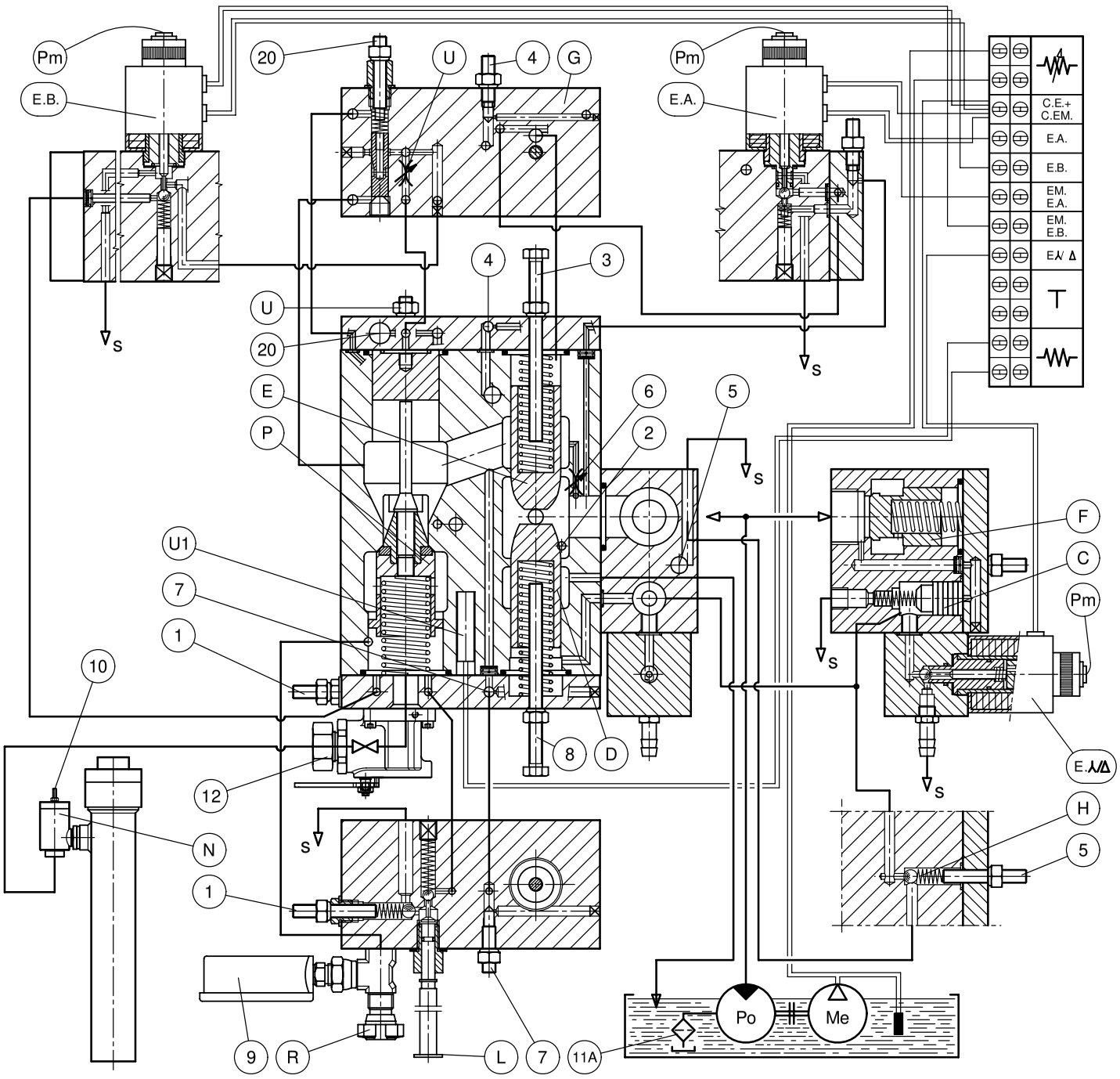
9260/CM3-IN

UT

SECTIONAL VIEW OF
OLEODYNAMIC DISTRIBUTOR 15-250 L/1' (CM-320)
WITH STAR DELTA STARTING

DATE 09/06

DWG Nr. 9260/CM3



1	REGULATION OF ROD COUNTERPRESSURE
2	REGULATION OF TEST VALVE FOR ROD FAILURE
3	HIGH SPEED BALANCE REGULATION IN UP/DOWNWARD DIRECTION
4	1st DECELERATION PHASE ADJUSTMENT
5	MAX. PRESSURE ADJUSTMENT
6	LOW SPEED ADJUSTMENT IN UP/DOWNWARD DIRECTION
7	UPWARD DEPARTURE ADJUSTMENT
8	VALVE "D" COUNTERPRESSURE ADJUSTMENT
9	PRESSURE GAUGE
10	ADJUSTMENT OF SAFETY VALVE IN CASE OF ROD FAILURE
11A	FILTER AT PUMPE ENTRANCE
12	BALL VALVE / FILTER
20	DOWNWARD SPEED ADJUSTMENT
E.A.	VALVE FOR HIGH SPEED IN UP/DOWNWARD DIRECTION
E.B.	DOWNWARD VALVE
E.λ/Δ	STAR DELTA, STAR VALVE (ON REQUEST)
C	VALVE FOR SAFETY PRESSURE
D	STEP SEQUENCE VALVE
E	FLOW RATE REGULATION VALVE
F	ONE-WAY FLOW VALVE
G	MODULATING VALVE
H	MAX. PRESSURE VALVE
L	ROD MANUAL DOWNWARD VALVE
Me	MOTOR
N	SAFETY VALVE TO PREVENT ROD FAILURE
P	NONRETURN VALVE
Po	PUMP
Pm	MANUAL PUSH BUTTON FOR STARTING EMERGENCY VALVE
R	TAP TO CUT OFF PRESSURE GAUGE
s	OIL DRAIN
U	DOWNWARD DEPARTURE DEVICE
U1	OIL HEATER INSIDE DISTRIBUTOR