

- 1 Gauge
- 2 Gauge cut-out cock
- 5 Maximum pressure valve adjusting screw
- clockwise increase (+) - anticlockwise decrease (-)
- 12 VSC valve zero contact
- 16 ENR solenoid valve (unlock VNR valve)
- 17 Emergency manual lowering (clockwise rotation)
- 18 Filter
- 19 Ball valve
- 20 ERS solenoid valve (unlock VSR valve)
- 25 Emergency manual lowering minimum pressure
- clockwise increase (+) - anticlockwise decrease (-)
- 26 Hand pump
- 27 Hand pump maximum pressure valve
- clockwise increase (+) - anticlockwise decrease (-)
- 28 Hand pump non-return valve
- 29 Hand pump air-release screw

- TF Flow meter
- TP1 Pressure meter
- TT Temperature meter
- MPP VSC valve command Stepper motor

- M Cylinder port
- P Pump port
- S Tank port
- PM Hand pump input port
- P1 Auxiliary microlevelling port

Operating limits

- Max static pressure: 45 bar
- Max operating pressure: 55 bar
- Minimum pressure: 10 bar
- Flow 20 - 250 l/min
- Viscosity 14 - 290 cSt
- Room temperature 10 - 60 °C

**DIAGRAMS AND ADJUSTMENTS
VALVE UNIT
HSe250**



Start Elevator

02 310 / G

rev. 2

1/6

HYDRAULIC DIAGRAM

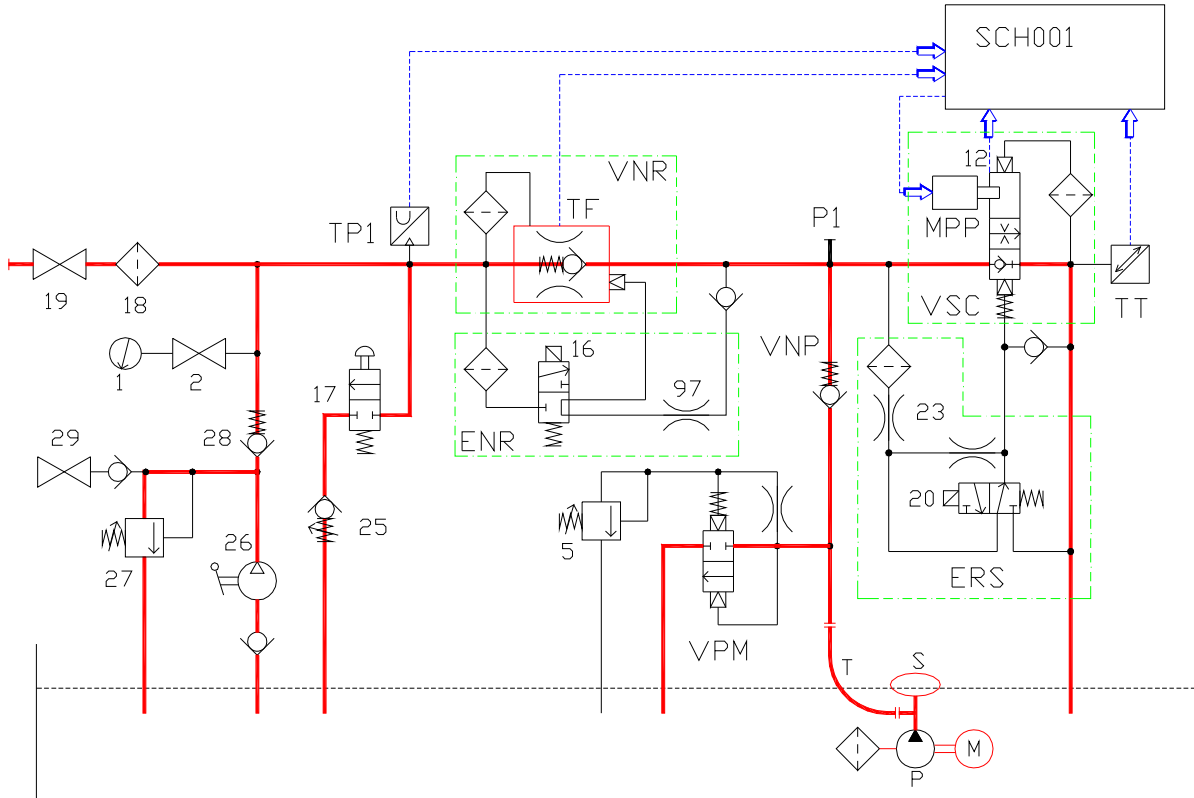
LEGEND

- 1 Gauge
- 2 Gauge cut-out cock
- 5 Maximum pressure valve adjusting screw
- clockwise increase (+) - anticlockwise decrease (-)
- 12 VSC valve zero contact
- 16 ENR solenoid valve (unblock VNR valve)
- 17 Emergency manual lowering (clockwise rotation)
- 18 Filter
- 19 Ball valve
- 20 ERS solenoid valve (unblock VSR valve)
- 23 VSC valve block control throttle
- 25 Emergency manual lowering minimum pressure
- clockwise increase (+) - anticlockwise decrease (-)
- 26 Hand pump
- 27 Hand pump maximum pressure valve
- clockwise increase (+) - anticlockwise decrease (-)
- 28 Hand pump non-return valve
- 29 Hand pump air-release screw
- 97 VNR valve block control throttle

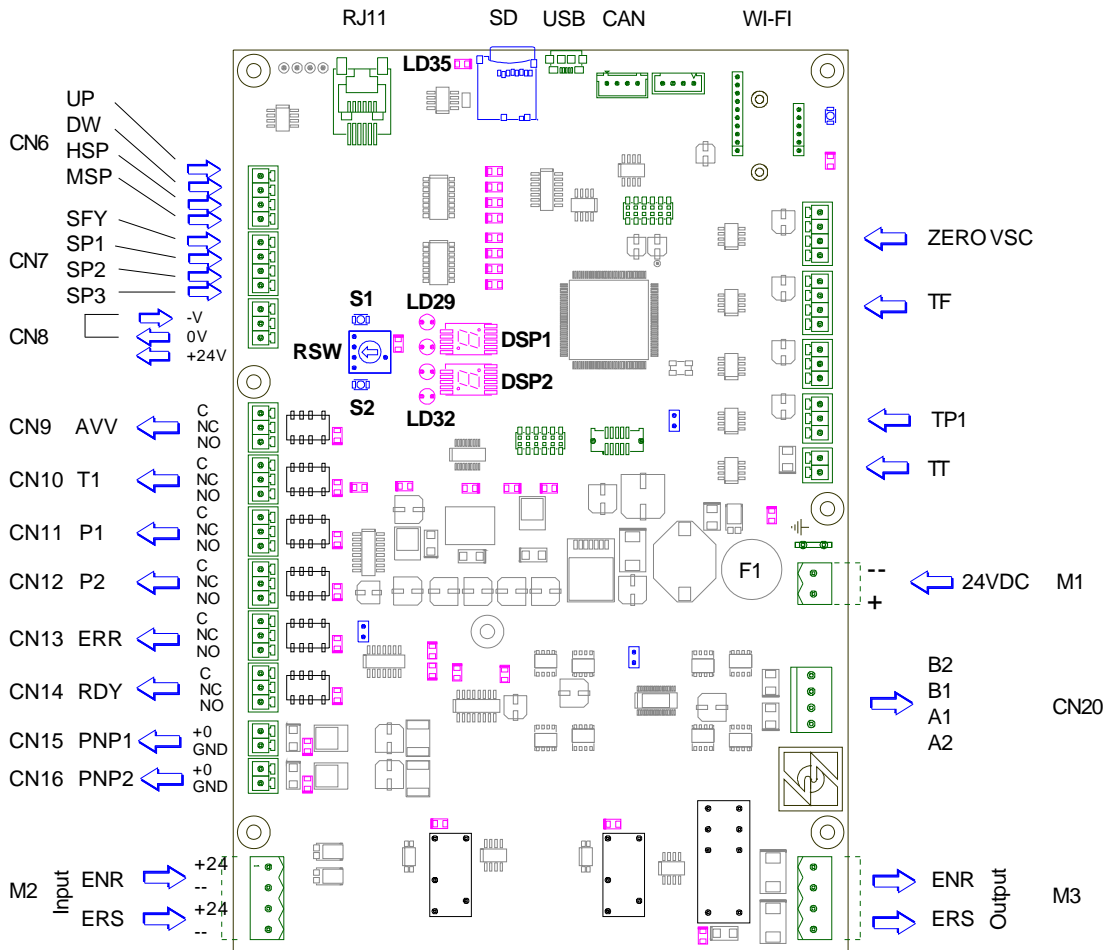
- TF Flow meter
- TP1 Pressure meter
- TT Temperature meter
- ENR VNR valve unblock solenoid valve
- ERS VSC valve unblock solenoid valve
- MPP VSC valve command Stepper motor
- VNP Pump no return valve
- VNR No return and downstroke safety valve
- VPM Pump maximum pressure valve
- VSC Flow control valve
- P1 Auxiliary microlevelling port

OTHER PUMP UNIT COMPONENTS

- M Pump motor
- P Pump
- S Pump silencer
- T Tubo flessibile collegamento pompa



BOARD SC001 CONNECTION



- M1 Input Voltage 24-30 VDC
 - Max input power 25 W
 - Standby consumption 24VDC: 200mA, 300 mA with conencted data entry device
- F1 Fuse 5A-T
- M2 Solenoid valve ENR 24-30 VDC 35 W input
Solenoid valve ERS 24-30 VDC 35 W input

- LD29 Red LED ON = Error condition
- LD30 Yellow LED CAN operating
- LD31 Green LED ON = Normal condition
- LD32 Blue LED ON = Wi-Fi module activated
- LD35 Orange LED ON = SD memory activated

OPTO-ISOLATED DIGITAL INPUT
- Working voltage 20 - 60 VDC - 100 mA

- CN6 UP Upward command input
- DW Downward command input
- HSP Upward high speed command input (Downward also when Par. 453 = 0)
- MSP Maintenance and V2 speed command (Par. 205 e 305) combined with high speed command when Par.454=1
- CN7 SFY Motor Pump ON signal
- SP1 V3 Speed (together high speed command input)
- SP2 V4 Speed (together high speed command input)
- SP3 Downward high speed command input (when Par. 453 = 1)
- CN8 -V Digital input negative common
- 0V Bridge with -V negative for dry contacts
- +24V Voltage for dry contacts utilization max 100 mA

SWITCHING RELAY OUTPUT 2A-220VDC/250VAC

- CN9 AVV Motor Pump starting
- CN10 T1 Maximum temperature limit T overcoming (Par.105) always active
- CN11 P1 PMAX-PMIN pressure range exit, (Par.106-107) always active if Par.457 =1 otherwise during waiting command only active if Par. 457=0
- CN12 P2 Overload PS pressure limit overcoming, (Par.108) during waiting command only active
- CN13 ERR Error condition
- CN14 RDY Ready condition

DIGITAL OUTPUT V = 23 VDC - 500mA - PNP type

- CN15 PNP1 Valve monitoring signal
- CN16 PNP2

- M3 ENR solenoid valve connection
- ERS solenoid valve connection

- RSW Working selector with 10 position
- S1-S2 Confirmation keys
- RJ11 Hand terminal connection
- SD Micro SD 2-16 GB FAT32
- CN20 Stepper motor connection
- USB Micro-Usb PC direct connection
- CAN CAN net connection
- Wi-Fi Wi-Fi net connection module
- ZERO VSC, TF, TP1, TT, sensor input
- DSP1-2 digit signalyng display



RSW SELECTOR POSITION	DSP1-2	CONFIRMATION BUTTON	DSP1-2
0 NORMAL WORKING CONDITION	(00)	/	
1 HAND TERMINAL PARAMETER MODIFICATION	(*)	/	
2 WI-FI NET PARAMETER MODIFICATION (**)	(UF)	/	
3 DROP TEST CONDITION	(FC)	S1	(FP)
4	(--)		
5 SD CARD PARAMETERS READING	(iL)	S2	
6	(--)		
7 SD CARD PARAMETERS WRITING	(oL)	S2	
8 MAXIMUM PRESSURE VALVE TEST CONDITION	(PP)	S1	(HP)
9 LAST ERROR NUMBER DISPLAY	(--)	S1=RESET	

(*) Sensor pressure value display

(**) LD32 Blue LED fixed ON = Wi-Fi module activated

SOFTWARE UPDATING PROCEDURE

Before the software updating it is appropriate to save the actual working parameters (Ex. SD card parameter writing).

After M1 input Voltage connection, the DSP1-2 rotates for 8 s, and during this time press S1 key for to pass from SD CARD (DSP1-2 = **F1**) to USB (DSP1-2 = **F2**) source updating device.

Then pres S2 key for to confirm the updating command from the selected device.

W-IFICONNECTION

- 1) Switches the RSW selector in the position number two.
- 2) Wait until the LD32 blue light is fixed ON.
- 3) In Your device, to find and connect the WiFi network, with the name of serial number (eg. 16187901 or 16187902).
- 4) Start the application and when the login key is required, enter the name of WiFi network (eg. 16187901 or 16187902).
- 5) With the RSW selector in the position number two you can change the parameters.
- 6) With the RSW selector in others position, you can only view the parameters until the blue light remains fixed.
- 7) If the RSW selector is not in the position number two, the WiFi blue light and the WiFi network fall when there is no connection for more that one minute.



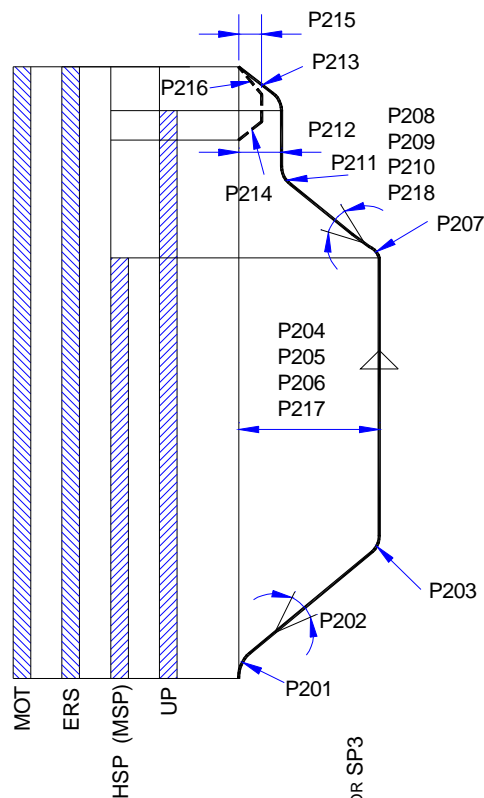
WORKING CYCLES PARAMETERS

P1 BASE PARAMETERS

- P101 Piston diameter (mm)
- P102 Pump nominal flow (litri/min.)
- P103 Tackle coefficient
- P104 Pistons number
- P105 Maximum temperature limit T1 (C°)
- P106 High pressure limit P1 (bar)
- P107 Low pressure limit P2 (bar)
- P108 Overload pressure PS (bar)

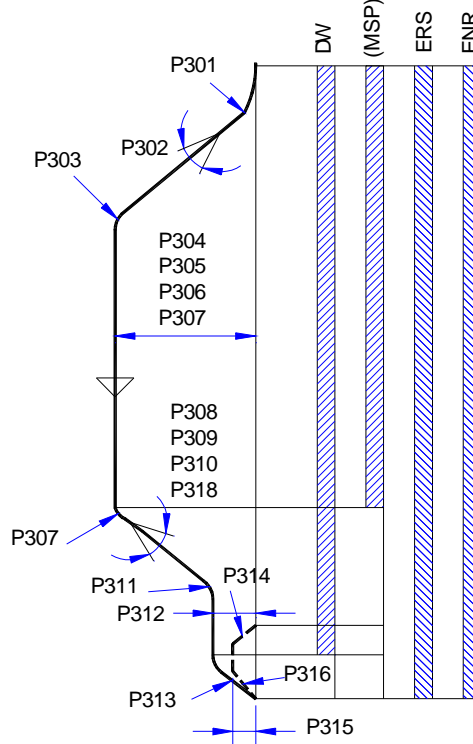
P2 UPWARD PARAMETERS

- P201 Upward initial acceleration change rate
- P202 Upward accelation distance (m)
- P203 Upward final deceleration change rate
- P204 Upward high speed (m/s)
- P205 Second upward high speed (maintenance) (m/s)
- P206 Third upward high speed (m/s)
- P207 Upward initial deceleration change rate
- P208 Upward deceleration distance (m)
- P209 Second upward deceleration distance (m)
- P210 Third upward deceleration distance (m)
- P211 Upward final deceleration change rate
- P212 Upward low speed (m/s)
- P213 Upward stopping distance (m)
- P214 Upward releveling acceleration distance (m)
- P215 Upward releveling speed (m/s)
- P216 Upward releveling stopping distance (m)
- P217 Fourth upward high speed (m/s)
- P218 Fourth upward deceleration distance (m)
- P231 VVVF setting, if = 1 upward travel with inverter
- P232 Soft stop setting, if = 1 upward travel with soft stop



P3 DOWNWARD PARAMETERS

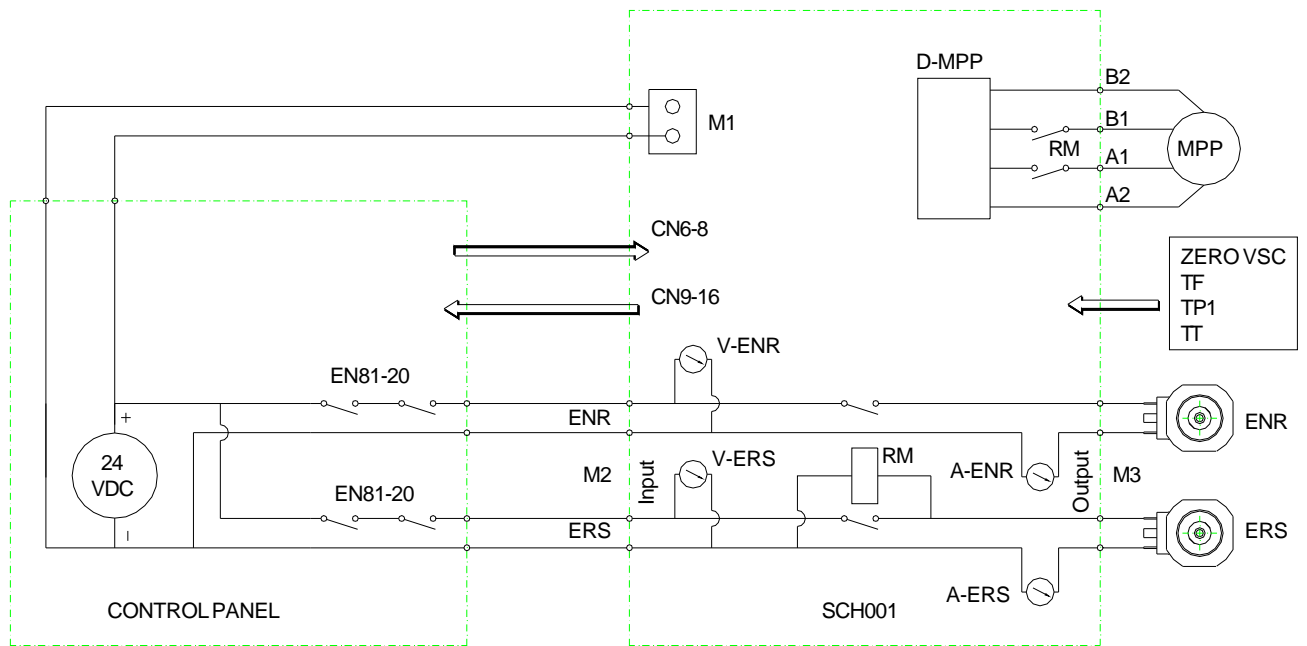
- P301 Downward initial acceleration change rate
- P302 Downward accelation distance(m)
- P303 Downward final acceleration change rate
- P304 Downward high speed (m/s)
- P305 Second downward high speed (maintenance) (m/s)
- P306 Third downward high speed (m/s)
- P307 Downward initial deceleration change rate
- P308 Downward deceleration distance (m)
- P309 Second downward deceleration distance (m)
- P310 Third downward deceleration distance (m)
- P311 Downward final deceleration change rate
- P312 Downward low speed (m/s)
- P313 Downward stopping distance (m)
- P314 Downward releveling acceleration distance (m)
- P315 Downward releveling speed (m/s)
- P316 Downward releveling stopping distance (m)
- P317 Fourth downward high speed (m/s)
- P318 Fourth downward deceleration distance (m)



- UP Upward command input
- DW Downward command input
- HSP Upward high speed command input (Downward also when Par. 453 = 0)
- MSP Maintenans and V2 speed command combined with high speed command when Par. 454=1
- SP3 Downward high speed command input (when Par. 453 = 1)
- MOT Motor pump input (corresponding to AVV output relay)
- ENR Solenoid valve ENR input
- ERS Solenoid valve ERS input



COMMAND DEVICE WORKING DIAGRAM



- M1 BOARD INPUT CONNECTION
- M2 SOLENOID VALVES INPUT CONNECTION
- M3 SOLENOID VALVES CONENCTION
- V-ENR ENR INPUT CONTROL
- V-ERS ERS INPUT CONTROL
- A-ENR ENR CURRENT CONTROL
- A-ERS ERS CURRENT CONTROL
- ENR VNR VALVE UNBLOCK SOLENOID VALVE
- ERS VSC VALVE UNBLOCK SOLENOID VALVE
- ZERO VSC VALVE POSITION SENSOR
- TF FLOW SENSOR
- TP1 PRESSURE SENSOR
- TT TEMPERATURE SENSOR

- MPP VSC VALVE COMAMND STEPPER MOTOR
- D-MPP STEPPER MOTOR CONTROL DRIVER
- RM STEPPER MOTOR CONNECTION RELAY
- A1-A2 STEPPER MOTOR A PHASE
- B1-B2 STEPPER MOTOR B PHASE

- CN6-8 BOARD SIGNALS INPUT CONNECTIONS
- CN9-16 BOARD SIGNALS OUTPUT CONNECTIONS

- EN81-20 DOWNWARD COMMAND DEVICES

