

Application examples

C578

Application

The overtravel distance tester C 578 is intended for checking the overtravel of linearly operating hydraulic, pneumatic and spindle presses in accordance with VBG 7n5.2 §11.

Functions and connections

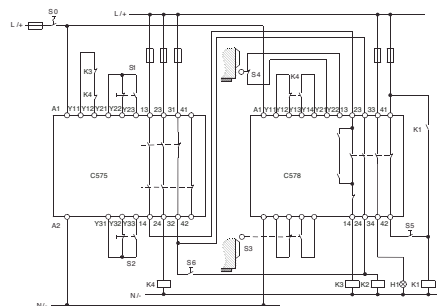
The overtravel distance tester C 578 has four safety outputs, three NO contacts and one NC contact. Two LEDs indicate the functions.

The C 578 tests the overtravel distance in connection with a position switch every time the control voltage is switched on. The permissible overtravel distance corresponds to dimension 's' of the cam that is used to operate the position switch. Obtain dimension 's' from the press manufacturer in accordance with ZH 1/456 (published by the German central office for accident prevention and labour safety, Cologne).

Terminal marking

Supply voltage	A1 A2	L/+ N/-
Outputs	13, 14 23, 24 33, 34	Safety output 1 (tool down) n/o contact (tool up) n/o contact (overtravel distance)
OK	41, 42	n/c contact (hydraulic pump ON)
Inputs	Y11, 12, 13, 14 Y21, 22 Y31, 32, 33, 34	Feedback loop (K4) Position switch (S4) Top dead centre switch (S3)

External circuit



C 575 two hand control unit,
S0 Main switch,
S1, S2 keys at two hand control console,
S3 Position switch for top dead centre,
S4 Position switch for test cam
S5 Hydraulic pump "ON",
S6 Tool "up" (manual mode),
K1 Contactor for hydr. pump,
K2 Tool "up",
K3, K4 Tool "down",
H1 Indicator light

Operation

Sequence of operations after the press has been switched on:

1. Switch on the hydraulic pump with S5, move plunger to top dead centre, if necessary by means of S6.
2. Operate S1, S2 on the two-hand control console until the position switch for test-cam (S4) opens.
3. Stop operating S1, S2.
4. Operate S1, S2 again: Indicator light H1 lights up if the overtravel distance is OK.
5. Stop operating S1, S2: The plunger returns to top dead centre.
6. If overtravel distance is OK, all outputs remain active until the control voltage is switched OFF.

LEDs		Operation
POWER	Release	
		Overtravel distance OK.
		Overtravel distance incorrect or test not yet performed

Fault

If the cam overtravels position switch S4, indicator light H1 does not light up. The hazardous part of the machine can be moved up to top dead centre only by means of S6.

The press can no longer be used for production. When this happens, notify the maintenance staff that the press needs attention.

Internal circuit

