

**MANNESMANN
REXROTH****Press Modules Type P****RE63 147/01.94**

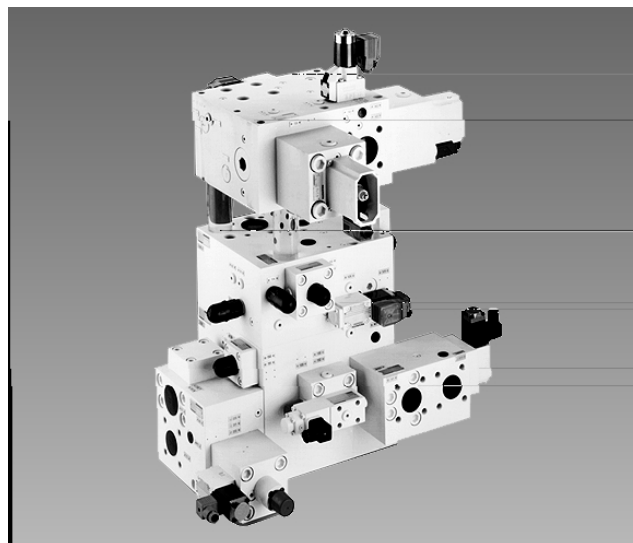
Replaces: 05.91

up to 1800 L/min

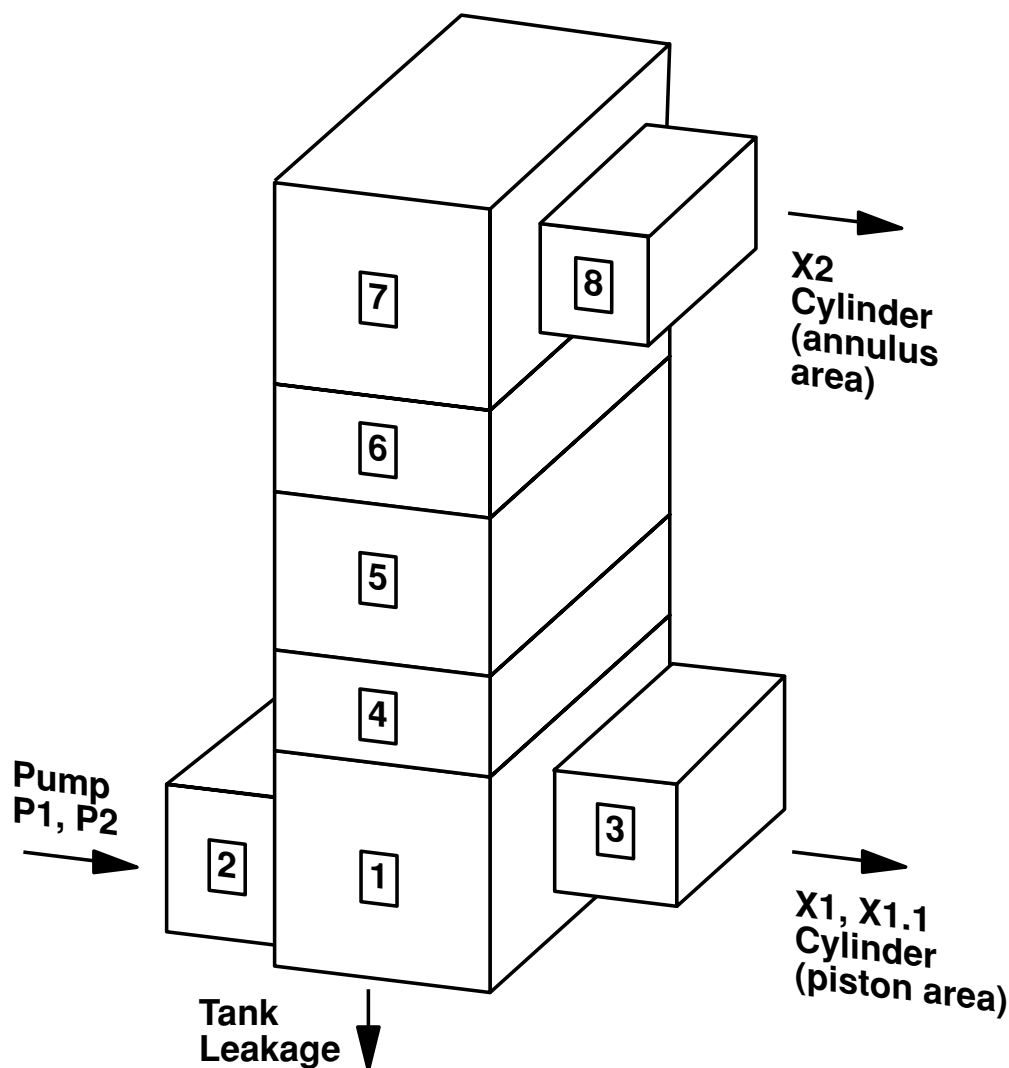
up to 315 bar

Characteristics

- All controls comply with the safety regulations at present applicable in Germany.
- Individual control modules are bolted directly together without any intermediate piping.
- Piping is only required to the cylinders and the pumps.
- The construction of a machine control is easily assimilated from the relationship of the various blocks.
- The valves built on to and into the control manifolds are easily accessible.
- Controls are fully tested as standard.



H/A 2584

A Graphic Illustration of the System

A press control can consist of a maximum of control modules 1 to 8.

A complete control to UVV (Accident Prevention Regulations) always contains modules 1, 5 and 7.

Controls without module 7 do not comply with the requirements of the UVV.

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Module 4 – extension options for additional functions				on request					
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Module 6 – extension options for additional functions				on request					
Module 7 – safety control complying with German safety regulations	—	—	33 to 40	—	—	55 to 63	—	—	75 to 79
Module 8 – extension options for additional functions				on request					

General

Safety Regulations

As a minimum, press controls must conform to the safety regulations of the country in which they are to be used, and often also to the country of origin. These press controls comply to the safety regulations at present in force in Germany, as applied by the Central Office for Accident Prevention and Industrial Medicine of the Main Union of Insurance Societies.

These regulations are contained in:

- a) The safety Regulations for the control of powered presses for metal working.
Edition 2.1978 (ZH 1/457)
- b) Safety regulations for two handed controls on power operated presses for metal working.
Edition 2.1978 (ZH 1/456)
- c) Accident prevention regulations for hydraulic presses 11.064 (VBG 7n 5.2).
Edition 1.10.87.

These regulations state that should a fault occur, continuation of the press cycle or the starting of a further press cycle must be prevented.

The failure of a component (valve) may not cause a new closing cycle to be started.

The press controls presented here fulfil these requirements.

A prerequisite for a safety control is the provision of an electrical control which complies with the above safety regulations a) to c) and also the following:

- d) The safety regulations covering contact free safety guards on power operated presses for metal working (ZH 1/281).
- e) VDE 0100
The specification of high power installations for supply voltages up to 1000 Volts.
- f) DIN 51 113(VDE 0113)
The specifications for electrical equipment on working and processing machinery up to a supply voltage of 1000 volts.
- g) VDI 3228
Technical Guidelines for machine tools and other production devices.
M- mechanical equipment
- h) VDI 3230
Technical Guidelines for machine tools and other production devices.
H-hydraulic equipment
- i) A cable laid separately to safety valves items .710 and .720 is recommended.

Description

The safety circuit is completely assembled onto a control module. All devices are easily accessible and are marked with the relevant item number.

In order to introduce a working cycle, two valves must always be operated together. Should one of these valves not operate, or should it remain in the operated condition, no further working stroke may be started.

In the de-energised condition, two valves installed in series must always prevent an unwanted closure of the press.

For a description of the safety circuit, see control modules 1 and 7.

Installation

The press module should be installed as near as possible to the press cylinder. The installation position is optional. The preferred orientation is with the spools of the directional valves and proportional valves horizontal.

The pipe between the press module and the press cylinder must be designed to accept the maximum set pressure at the pressure relief valve and also comply with the safety regulations ZH 1/457, section 5.2.

All connection point details are stamped into the press module and are to be connected to the pump, cylinder etc. as outlined in the circuits on pages 8 to 21a.

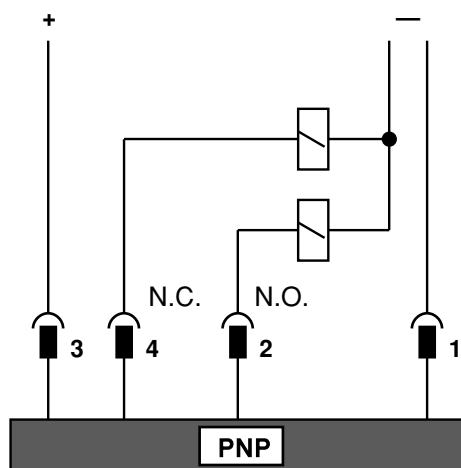
Other plugs on the press modules must not be removed.

Technical Data: General and Hydraulic (For applications outside these parameters, please enquire)


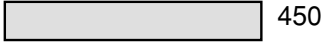


Mounting position		optional, horizontal preferred				
Ambient temperature range	°C	-20 to +50				
Hydraulic fluid		Mineral oil (HL, HLP) to DIN 51 524; other fluids on enquiry				
Fluid temperature range	°C	-20 to +80				
Viscosity range	mm ² /s	2.8 to 500				
Contamination level		Maximum permissible contamination level of hydraulic fluid: NAS 1638 grade 9. Recommended minimum filtration grade therefore $\beta_{10} \geq 75$.				
Operating pressure	bar	up to 315 up to 16 at zero pressure to tank				
Port:	P, X1, X1.1, X2 T Y					
Module size		25	32	40	50	63
Max permissible flow	l/min	250	450	700	1100	1800

Electrical Data of Inductive Limit Switches S71, S72 and S73



Positions '0' and 'a' monitored by solid state proximity switches.		
Supply voltage	VDC	24 (+20%, -10%)
Permissible residual ripple	%	≤ 10
Loading	mA	max. 400 (output in PNP)
Terminal connections (at plug Z)		4 \triangleq N. O. (high resistance → low resistance) 3 \triangleq 24 V + 2 \triangleq N. C. (low resistance → high resistance) 1 \triangleq 0 V-
Temperature range	°C	-10 to +70
Connection		plug-in connector
Protection to DIN 40 050		IP 65
Further details see		RE 24 830 and 81 010



Flow through modules

Control modules	Size	Flow in L/min
		0 200 400 600 800 1000 1200 1400 1600 1800
		 Max. permissible flow from the rod end chamber of the cylinder to connection X2 to T2 and from the pump to connection P to X2.
1 to 8	32	 450
1 to 8	40	 700
1 to 8	50	 1100

Combination of the control modules 1 and 5 in different sizes due to different flows.

 Max. permissible flow from the rod end of the cylinder to connection X2 to T2.
 Max. permissible flow from the pump to connection P to X1.













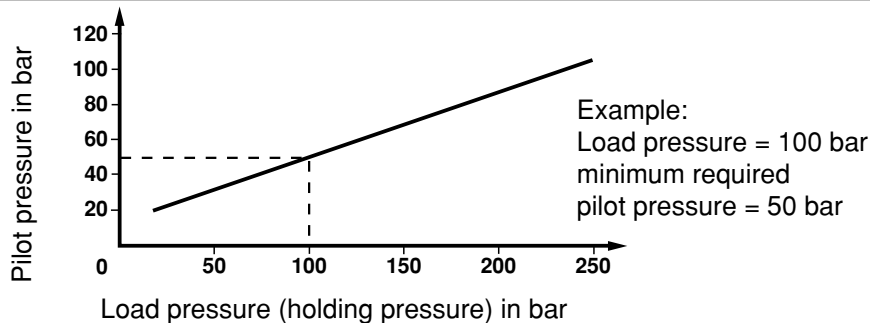
5	32	 450
1	32-25	 250
5	32	 450
1	32-40	 700
5	40	 700
1	40-32	 450
5	40	 700
1	40-50	 1100
5	50	 1100
1	50-40	 700
5	50	 1100
1	50-63	 1800

Diagram — Pilot pressure required



Required pilot pressure at port X related to load pressure (holding pressure) for module 7 -IH04M...P7B1...-3X/...

Ordering code

Module 1	IH04		P	1		3X/					*
Module 2	IH04		P	2		3X/					*
Module 3	IH04		P	3		3X/					*
Module 4	IH04		P	4		3X/					*
Module 5	IH04		P	5		3X/					*
Module 6	IH04		P	6		3X/					*
Module 7	IH04		P	7		3X/					*
Module 8	IH04		P	8		3X/					*

Module = **M**
 Single module = **ME**

Size 32-25 = **32-25**
 Size 32 = **32**
 Size 32-40 = **32-40**
 Size 40-32 = **40-32**
 Size 40 = **40**
 Size 40-50 = **40-50**
 Size 50-40 = **50-40**
 Size 50 = **50**
 Size 50-63 = **50-63**

Type = **P**

Module 1 = **1**
 Module 2 = **2**
 Module 3 = **3**
 Module 4 = **4**
 Module 5 = **5**
 Module 6 = **6**
 Module 7 = **7**
 Module 8 = **8**

Module variations
 The various module types are described on pages 18 to 76.

Series 3X (30 to 39, installation and connection dimensions unchanged) = **3X**

Solenoids
 oil-immersed standard solenoid = **A**
 high performance solenoid = **B**

Solenoid voltage
 24 V DC = **G 24**
 220 V AC, 50 Hz = **W 220-50**
 110 V AC, 50 Hz = **W 110-50**

Without hand emergency button – for controls to UVV specification (Accident Prevention Regulations) = **no code**
 With protected hand emergency button – not permissible on controls to UVV specification – = **N9**

Electrical connections
 Square plug to DIN 43 650 = **Z4**
 Large square plug = **Z5**
 Large square plug with light = **Z5L**
 Large square plug with LED and varistor = **Z5L1**
 Large square plug with LED and protection diode = **Z5L2**
 Large square plug with LED = **Z5L3**

Additional details in clear text

Notes on Ordering Code

Use a copy of page 6 opposite when ordering type P modules.

Fill in the details of each module required on a separate line.

To avoid possible confusion, those lines not required should be crossed out.

Should you require control variations not listed, please contact us.

For further electrical connections, voltages and frequencies, see data sheets RE 23 177 and RE 23 316.

Connection flanges must be ordered separately.

If the control module 2 is flanged to control module 1, the flange (P1) listed in the parts list control module 1 is redundant.

Corresponding flanges are to be found in the parts list for control module 2.

The same applies when the control module 3 is flanged on; the flange for connection X1 is redundant

Ordering Code for the Module (complete control system)

The ordering code for the complete control system (module) is determined for incoming orders according to the required components and the number of modules assembled.

Controls to the specifications of the Industrial Accident Insurance Societies, Specialist Committee Iron and Metal III, are identified by the letters **BS** in the ordering code.

Controls not corresponding to the above specifications, are identified by the letter **B** in the ordering code.

IH04			P			-3X/					*
------	--	--	---	--	--	------	--	--	--	--	---

Module acc. to UVV (accident prevention regulations) Module not acc. to UVV	= BS = B										
Size 32 Size 40 Size 50	= 32 = 40 = 50										
Type	= P										
Number of modules mounted											
Design modification is determined upon order receipt acc. to required components and the number of modules assembled.											
Series 3X (30 to 39, installation and connection dimensions unchanged)	= 3X										
Solenoids wet pin standard solenoid high performance solenoid	 = A = B										
Solenoid voltage 24 V DC 220 V AC, 50 Hz 110 V AC, 50 Hz	 = G 24 = W 220-50 = W 110-50										
Without hand emergency button—for controls to UVV specification (Accident Prevention Regulations)	= No code										
With protected hand emergency button—not permissible on controls to UVV specification	= N9										
Electrical connections Square plug to DIN 43 650 Large square plug Large square plug with light Large square plug with LED and varistor Large square plug with LED and protection diode Large square plug with LED Without plug	 = Z4 = Z5 = Z5L = Z5L1 = Z5L2 = Z5L3 = Z4										
Additional details in clear text											

Module 1	Type IH04M...P1A1002-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04M...P7A1001-3X/...	Size 32–50

Application Conditions

- fast approach under weight of parts, with a minimum holding pressure of 25 bar.

Control module 1, type 1A1002-3X/

Control module 1 is designed for the following three functions:

1. Direction control of the press ram

Item 110 and 121 function as supply valves for the operation "Press" sequence.

Item .120 and .121 function as supply valves for the return stroke of the press ram to the starting position.

Directional control valve item .140-symbol "M"- keeps the supply valves for pressing and return stroke closed in the starting position.

It is therefore possible to connect several press modules to one main pump or to run auxiliary movements.

2. Pressure control of the pump with low pressure unloading

The pump is protected via the logic elements item .130 and .132. The maximum working pressure is set at pressure control valve which is built into the cover plate item .132 as a pilot valve.

When all valves are in starting position logic element item 130 is open, the pump output is directed to tank against the spring of the logic element.

3. Decompression

Decompression of the system occurs after the press sequence via logic element items .150 and .151. The decompression time is set at the stroke limiter of the cover plate item 151.

Control Module 5, type 5A1001-3X/

This module controls the downstroke.

In this case the fast approach by gravity can be allowed provided that the holding pressure is 25 bar minimum.

In the case of lower holding pressures the fast approach should be achieved using a low pressure pump together with the main pump or with a fast approach cylinder (see examples page 13 and 15).

Start of fast approach:

Energising solenoid Y52 releases pressure from the control area of logic element item .520 and permits the oil to flow to tank. The maximum speed is set at the stroke limiter of item .521.

End of fast approach:

Solenoid Y52 is de-energised, logic element item .520 closes under the pressure set at pressure control valve item .523. The pressure set at this valve determines whether the ram is slowed down harshly or gently to the pressing speed. The deceleration pressure, which is set at item .523, must be set higher than the holding pressure for the counterbalance pressure on pressure control valve item .514.

During the deceleration period from fast forward into pressing speed logic element item .520 closes. Caused by the rising deceleration pressure and the relief of the control oil chamber of item 514, logic element item .510 opens smoothly.

Pressing:

At a maximum pressure set by pressure control valve item .514, the cylinder, executes the pressing stroke. The maximum pressing speed is set at the stroke limiter of item .511.

Pressure control valve item .580 prevents intensification in the rod end of the cylinder. This valve must be set 10% above the maximum working pressure and be sealed.

Module 1	Type IH04M...P1A1002-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04M...P7A1001-3X/...	Size 32–50

Control module 7 type 7A1001-3X/

The combined actions of modules 1 and 7 comply with the requirements of the UVV (German Accident Prevention Regulations).

Logic elements items 710 and 720 mounted in series with the rod end chamber of the press cylinder are electronically monitored to ensure that they start in the closed position. This must be monitored each machine cycle.

During the downstroke, both valves (items 710 and 720) are opened via separate pilot valves (items .730 and .740). Additionally valve item .740 is linked to the control oil circuit of the pump control via item .750 in order to maintain the control of the set pressure. By switching the the pilot valves alternately (see function diagram), a cyclic control of pressure valve item .130 is made possible.

Logic elements items .710 and .720 function as check valves on the return stroke.

Pressure control valve item .780 is set 10% above the maximum working pressure and sealed.

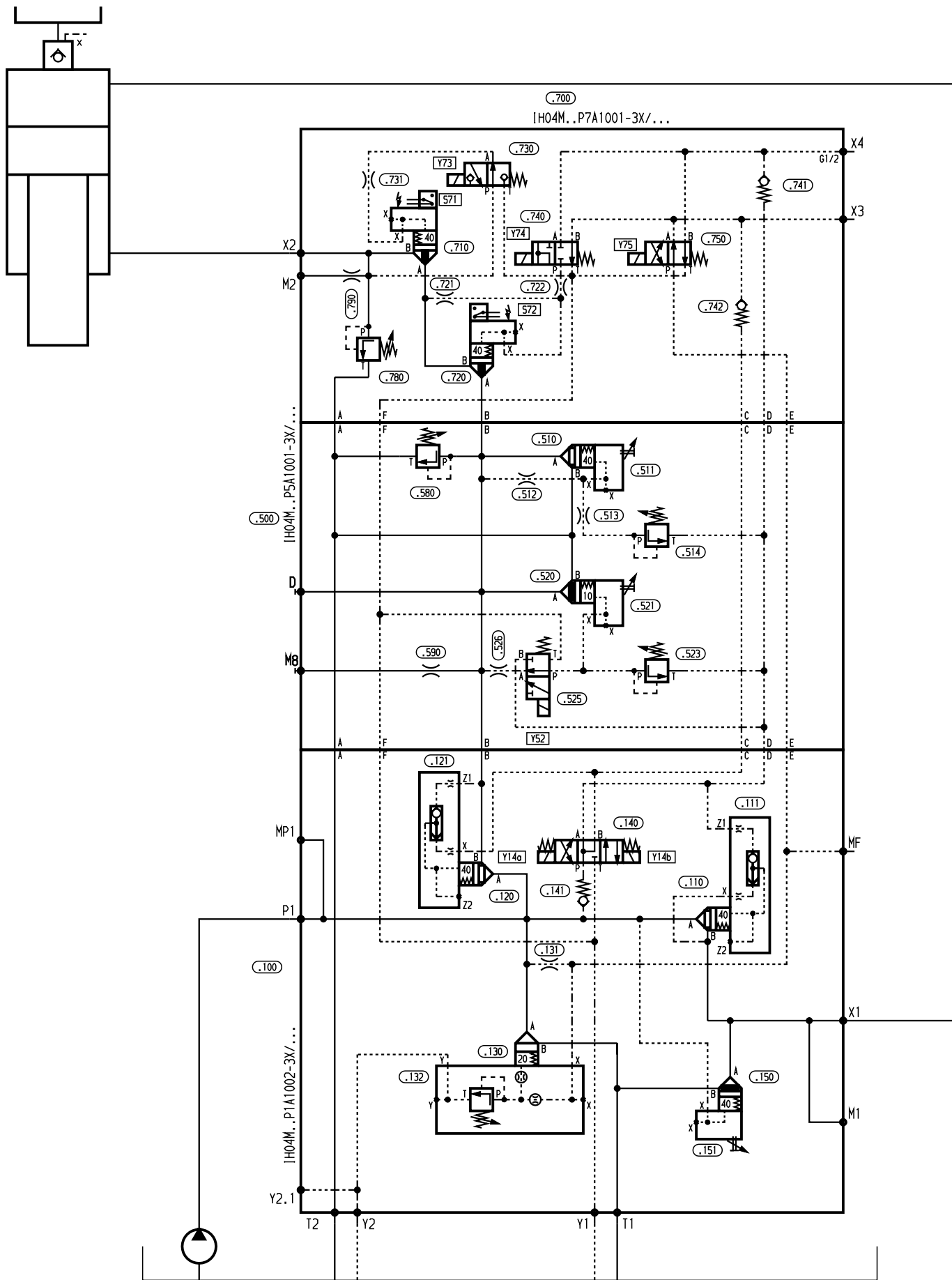
Pressure remote displacement – X3, X4

For remote control of the pressing force, an additional pressure relief valve can be mounted outside the press module above port X3.

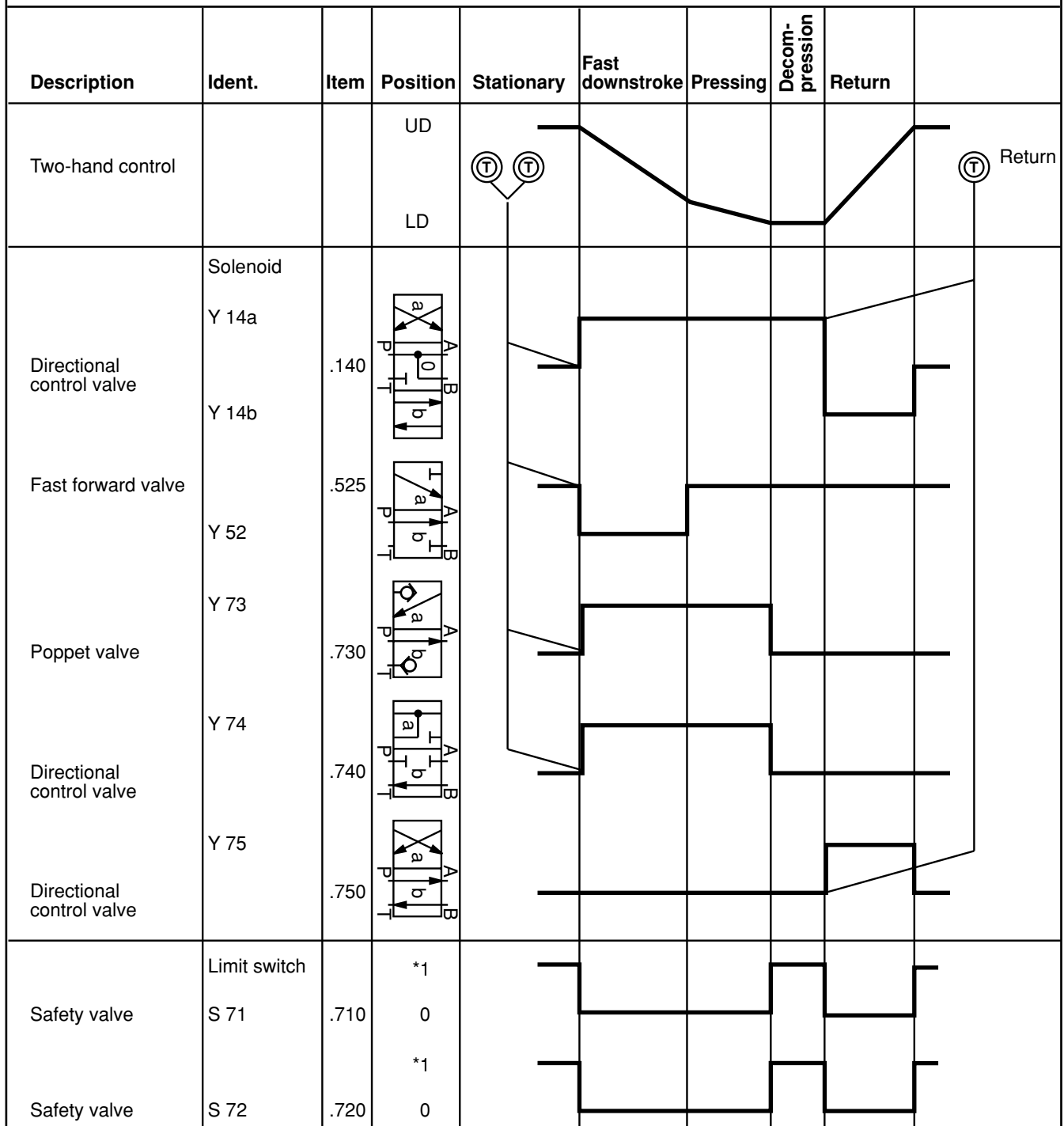
A pressure relief valve, which may be connected to X4, permits remote control of the return force.

Typical Circuit

Press module Control type P



**Functional diagram: Normal Press Cycle, Type ...1A1002-3X/...
...5A1001-3X/...
...7A1001-3X/...**



* Output signal at limit switch.

For controls to UVV (Accident Prevention Regulations) specification, automatic monitoring of the components within the machine cycle is necessary !

Module 1	Type IH04M...P1A1001-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04ME...P7A1001-3X/...	Size 32–50

Control modules 1 and 5 are assembled as one unit. Module 7 may be installed separately close to the cylinder. If need be connections X5-X8 to X5.1-X8.1 can also be used as hose connections.

.150 and .151 by operation of solenoid Y15. Compression time is set at the stroke limiter of the control cover. item 151.

Application Conditions

- fast approach under weight of parts, with a minimum holding pressure of 25 bar.
- pressure holding possible.

Control module 1, type 1A1001-3X/

Control module 1 is designed for the following three functions:

1. Direction control of the press ram

Items .110 and .111 function as supply valves for the operation of the "Press" sequence.

Items .120 and .121 function as supply valves for the return stroke of the ram into starting position.

Directional control valve item 140- symbol "D"- keeps the supply valve closed in the starting position. Logic element item .120, the supply valve for the return stroke, is open. It is held on its seat only by the force of spring of item 121.

This means that only one press module can be connected to the main pump.

2. Pressure control of the pump with low pressure unloading

The pump is protected via logic element item .130 and .132.

The maximum working pressure is set at pressure control valve which is built into the control cover item .132 as a pilot valve.

When all valves are in starting position logic element item 130 is open, the pump output is directed to tank against the spring of the logic element.

3. Pressure holding

On completion of the "Press" movement, pressure in the cylinder can be maintained by de-energising the solenoids. Logic elements items 150 and .110 effectively seal the press line X1.

4. Decompression

Decompression of the system occurs after the press sequence and pressure holding via logic element item

Control module 5, type 5A1001-3X/

This control module controls the downstroke as the end module when the control module 7 is mounted separately.

In this case the fast forward under weight of parts can be allowed provided that the holding pressure is 25 bar minimum.

In case of lower holding pressures the fast forward should be achieved using a low pressure pump together with the main pump or with a fast forward cylinder (see examples page 13 and 15).

Start of fast approach:

Energising solenoid Y52 releases pressure from the control area of logic element item .520 and permits the oil to flow to tank. The maximum speed is set at the stroke limiter of item .521.

End of fast approach:

Solenoid Y52 is de-energised, logic element closes under the pressure set at pressure control valve item .523. The pressure set at this valve determines whether the ram is slowed down harshly or gently to the pressing speed. The deceleration pressure, which is set at item .523, must be set higher than the holding pressure for the counterbalance pressure on pressure control valve item .514.

During the deceleration period from fast forward into pressing speed logic element item .520 closes. Caused by the rising deceleration pressure and the relief of the control oil chamber of item 514, logic element item .510 opens smoothly.

Pressing:

Module 1	Type IH04M...P1A1001-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04ME...P7A1001-3X/...	Size 32–50 (single module)

At a maximum pressure set by pressure control valve item .514, the cylinder, executes the pressing stroke. The maximum pressing speed is set at the stroke limiter of item .511.

Pressure control valve item .580 prevents intensification in the rod end of the cylinder. This valve must be set 10% above the maximum working pressure and be sealed.

Control Module 7, type 7A1001-3X/

The combined actions of modules 1 and 7 comply with the requirements of the UVV (German Accident Prevention Regulations).

Logic elements items 710 and 720 mounted in series with the rod end chamber of the press cylinder are electronically monitored to ensure that they start in the closed position. This must be monitored each machine cycle.

During the downstroke, both valves (items 710 and 720) are opened via separate pilot valves (items .730 and .740). Additionally valve item .740 is linked to the control oil circuit of the pump control via item .750 in order to maintain the control of the set pressure. By switching the the pilot valves alternately (see function diagram), a cyclic control of pressure valve item .130 is made possible.

Logic elements items .710 and .720 function as check valves on the return stroke.

Pressure control valve item .780 is set 10% above the maximum working pressure and sealed.

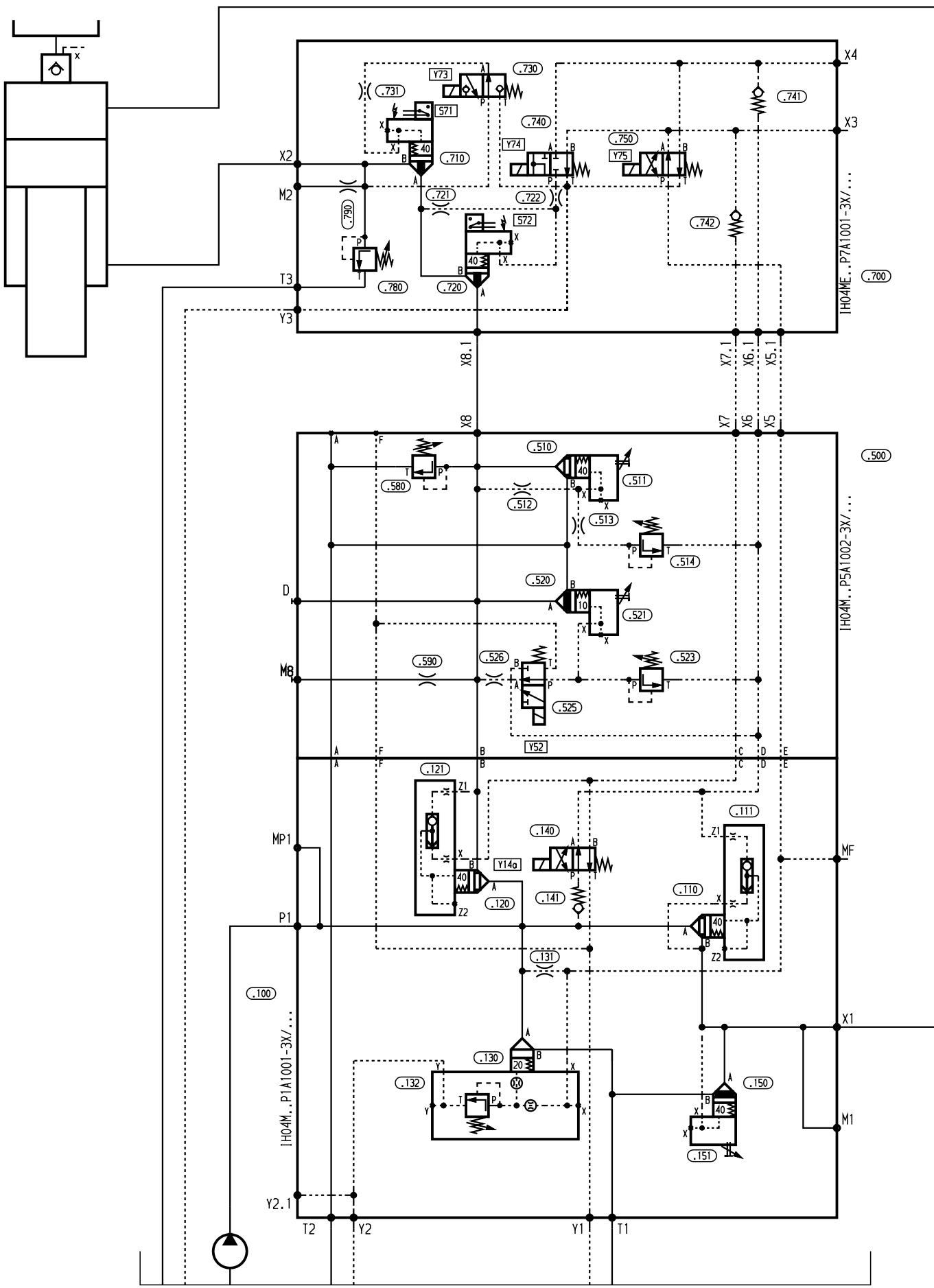
Pressure remote displacement – X3, X4

For remote control of the pressing force, an additional pressure relief valve can be mounted outside the press module above port X3.

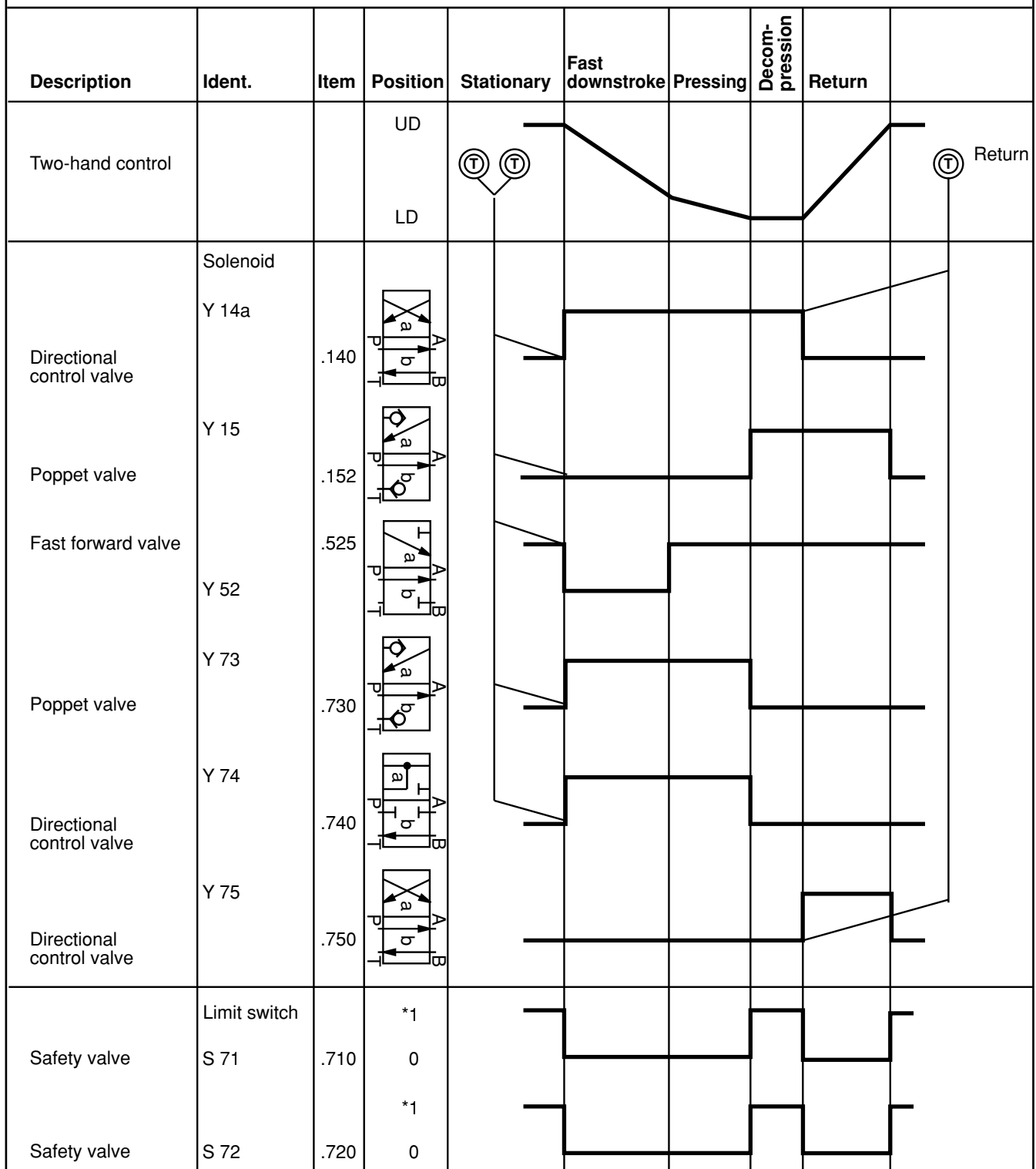
A pressure relief valve, which may be connected to X4, permits remote control of the return force.

Typical Circuit

Press module Control type P



**Functional diagram: Normal Press Cycle Type ...1A1001-3X/...
...5A1001-3X/...
...7A1001-3X/...**



* Output signal at limit switch.

For controls to UVV (Accident Prevention Regulations) specification, automatic monitoring of the components within the machine cycle is necessary !

Module 1	Type IH04M...P1A1003-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04M...P7A1002-3X/...	Size 32–50
Module 3	Type IH04M...P3A1001-3X/...	Size 32–50

Application Conditions

- fast forward under weight of parts is not possible, fast approach cylinders are required for this function

Control module 1, type 1A1003-3X/

Control module 1 is designed for the following three functions:

1. Direction control of the press ram

Items 110 and 111 function as supply valves for the "press" sequence.

Items .120 and .121 function as supply valves for the return stroke of the ram into the starting position.

Directional control valve item .140-symbol "D"-keeps the supply valve for pressing closed in the starting position. Logic element item .120, the supply valve for the return stroke open. It is held on its seat only by the force of spring of item .121.

This means that only one press module can be connected to the main pump.

2. Pressure control of the pump with low pressure unloading

The pump is protected via logic element items .130 and .132.

The maximum working pressure is set at pressure control valve which is mounted into the control cover item 132 as the pilot valve. When all valves are in starting position logic element item .130 is open the pump output is directed to tank against the spring of the unloading valve. The proportional pressure control valve item .133 continuously controls the working pressure dependent on the command value set in the electronics.

3. Decompression

Decompression of the system occurs after the press sequence via logic element item .150 and .151. The decompression time is set at the stroke limiter of the control cover item .151.

Control Module 5, type 5A1001-3X/

This control module controls the down stroke.

Start of fast forward:

Energising solenoid Y52 releases pressure from the control oil chamber of logic element item .520 and permits the oil to flow to tank. The maximum speed is set at the stroke limiter of item .521.

End of fast forward:

Solenoids Y31 and Y52 are de-energised, logic element item .520 closes with the pressure which is set at pressure control valve item .523. This means that the pressure setting determines whether the ram is slowed down harshly or gently to the pressing speed. The deceleration pressure, which is set at item .523 must be set higher than the holding pressure including a safety margin for the counterbalance pressure on pressure control valve item .514.

During the deceleration period from fast forward into pressing speed logic element item .520 closes. Caused by the rising deceleration pressure and de-energizing of the control oil chamber over item .514, logic element item .510 opens smoothly.

Pressing:

At a maximum pressure set by pressure control valve item .514, the cylinder executes the pressing stroke. The maximum pressing speed is set at the stroke limiter of item .511.

Pressure control valve item .580 prevents intensification in the rod end of the cylinder. This valve must be set 10% above the maximum working pressure and sealed.

Module 1	Type IH04M...P1A1003-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04M...P7A1002-3X/...	Size 32–50
Module 3	Type IH04M...P3A1001-3X/...	Size 32–50

Control Module 7, type 7A1002-3X/

The combined actions of modules 1 and 7 comply with the requirements of the UVV (German Accident Prevention Regulations).

When using fast approach cylinder:

Limit switch S73 on poppet valve item .730. In order to prevent pressure intensification when introducing the closing motion via the closed logic element the poppet valve item .730 must be operated first. Only then, will limit switch S73 release the valves needed for the downstroke.

Logic elements items 710 and 720 mounted in series with the rod end chamber of the press cylinder are electronically monitored to ensure that they start in the closed position. All electronically controlled valves have to be tested within a machine cycle.

During the downstroke, both valves (item 710 and 720) are opened via separate pilot valves (items .730 and .740). Additionally valve item .740 is linked to the control oil circuit of the pump protection via item .750 in order to maintain the control of the set pressure. By switching the the pilot valves alternately (see function diagram), a cyclic control of the pressure valve item .130 is made possible.

Logic elements items .710 and .720 function as check valves on the return stroke.

Pressure control valve item .780 is set 10% above the maximum working pressure and sealed.

Pressure remote displacement – X3, X4

For remote control of the pressing force, an additional pressure relief valve can be mounted outside the press module above port X3.

A pressure relief valve, which may be connected to X4, permits remote control of the return force.

Control Module 3, type 3A1001-3X/

When used in machines with fast approach cylinders, control module 3 is mounted directly onto control module 1.

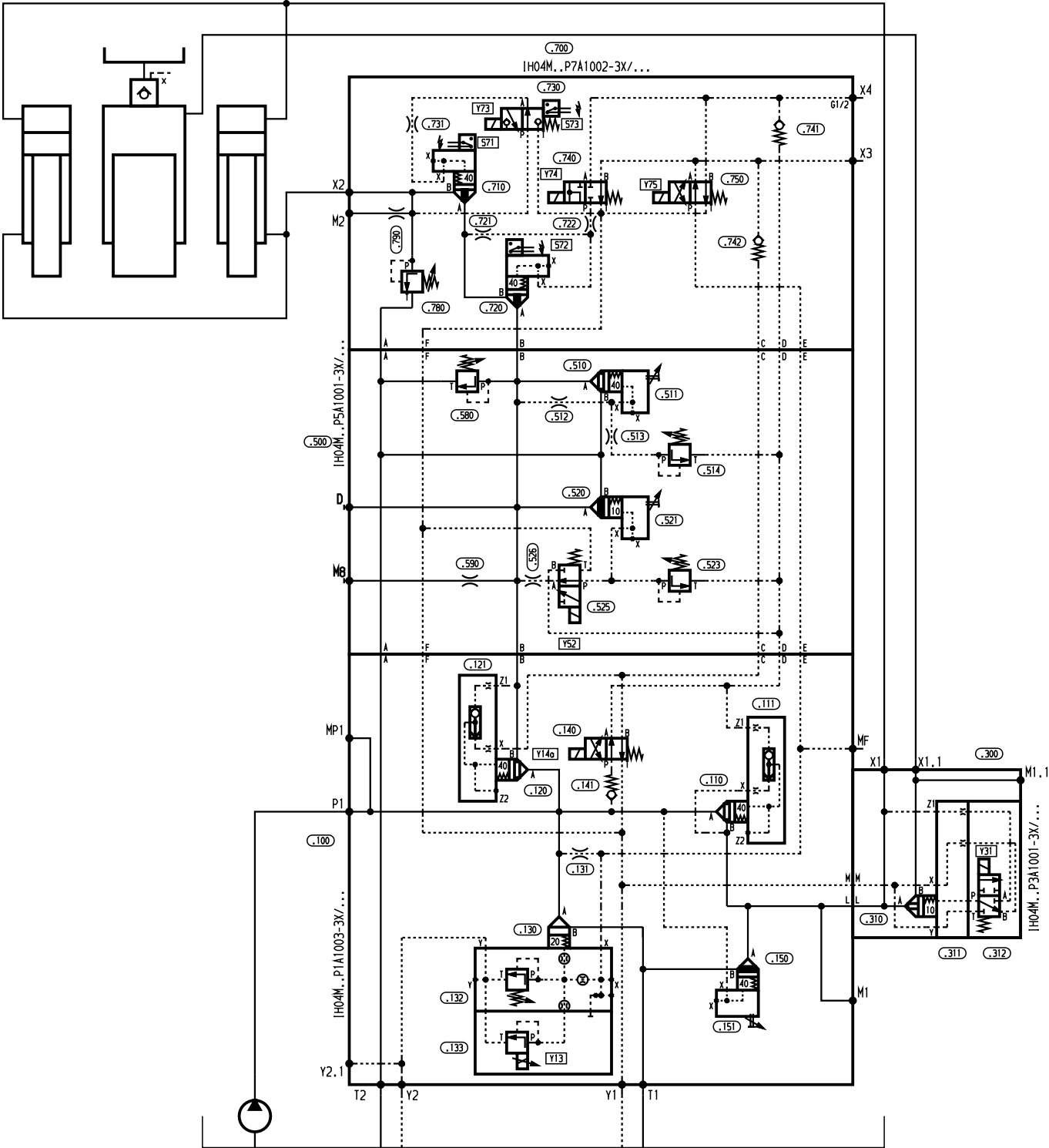
When starting the fast forward, directional control valve item .312 is energised. Logic element item .310 closes, the pump output can only flow towards the fast forward cylinders and controls the speed.

At the end of the fast forward stroke, directional control valve item .312 is de-energised signalled from the ram position. The main cylinder is operated in parallel to the fast approach cylinders via logic element item .310.

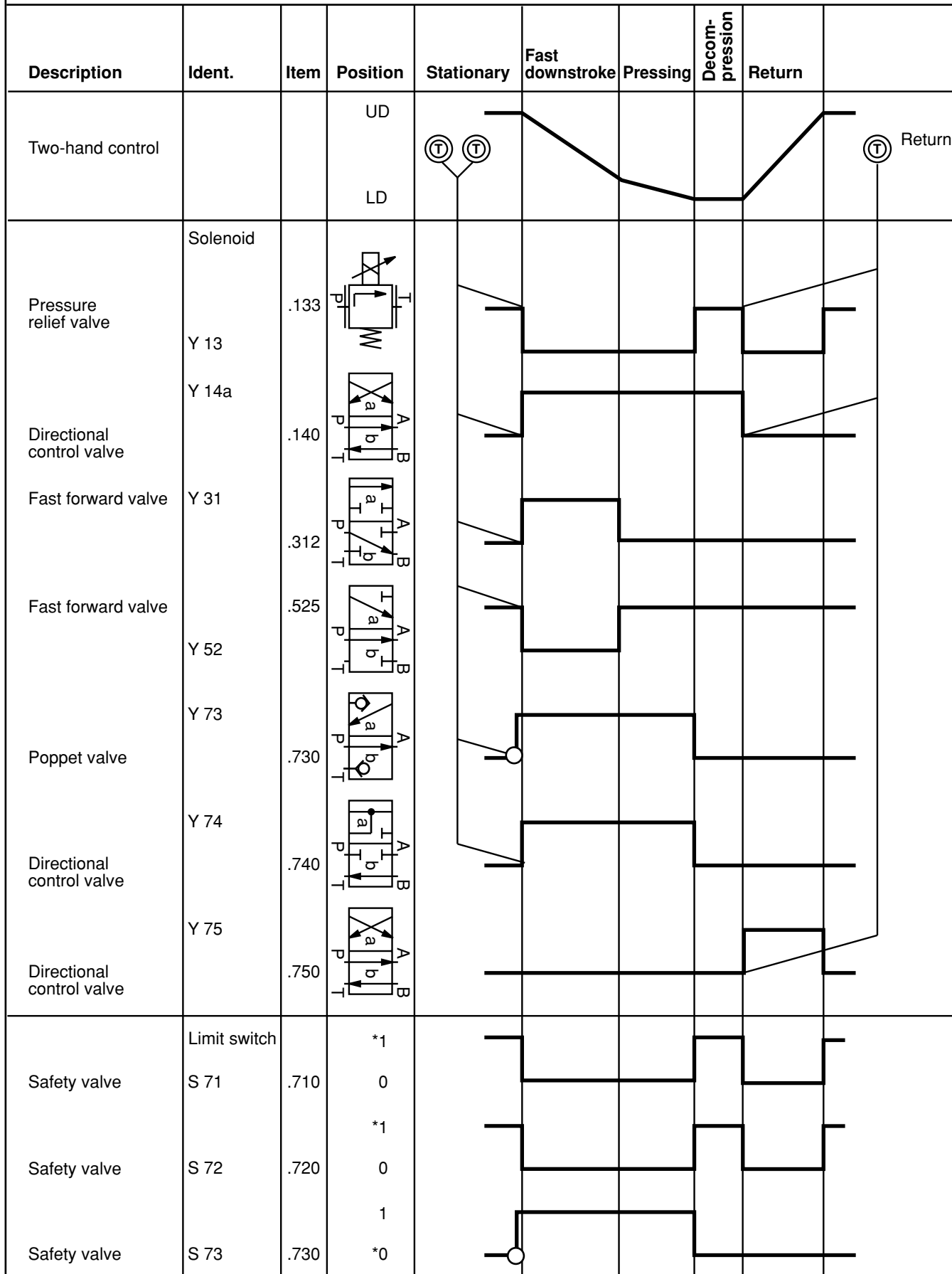
After pressing, the solenoid Y31 remains deenergised so that the decompression of all cylinders can occur simultaneously via the logic elements item 150 and 151.

Typical Circuit

Press module
Control type P



Functional diagram: Normal Press Cycle Type ...1A1003-3X/...
 ...5A1001-3X/...
 ...7A1002-3X/...
 ...3A1001-3X/...



* Output signal at limit switch.
 For controls to UVV (Accident Prevention Regulations) specification, automatic monitoring of the components within the machine cycle is necessary !
 ○ Only with signal 1 from the limit switch S73 can the switching of the valves for the downstroke be released.

Module 1	Type IH04M...P1A1009-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04M...P7A1002-3X/...	Size 32–50
Module 2	Type IH04M...P2A1002-3X/...	Size 25–40

Application Conditions

- fast forward under weight of parts not possible the pumps control the fast forward speed

Control Module 1, type 1A1009-3X/

Control module 1 is designed for the following three functions:

1. Direction control of press ram

Items .110 and .111 function as supply valves for the operation sequence pressing.

Items .120 and .121 function as supply valves for the return stroke of the ram into starting position.

Directional control valve item .140 - symbol "D"- keeps the supply valve for pressing closed in the starting position. Logic element item .120, the supply valve for the return stroke is open. It is held on its seat only by the force of spring of item .121.

This means that only one control module can be connected to the main pump.

2. Pressure control of the pump with low pressure unloading

The pump is protected via the logic elements items .130 and .132. The maximum working pressure is set at pressure control valve which is mounted onto the control cover item .132 as a pilot valve. When all valves are in starting position logic element item .130 is open, the pump output is directed to tank against the spring of the logic element.

3. Decompression

Decompression occurs after the pressing sequence via the proportional throttle valve item .150. The decompression time is set by adjusting the command value in electronic control to proportional solenoid Y15.

Control Module 5, type 5A1001-3X/

This control module controls the downstroke.

Start of fast forward:

The switching of the solenoid Y52 releases pressure from of the control oil chamber of logic element item .520 and permits the oil to flow into the tank. The maximum speed is set at the stroke limiter of item .521.

End of fast forward:

Solenoids Y22 and Y52 are de-energised, logic element closes under the pressure set at pressure control valve item .523. The pressure set at this valve determines whether the ram is slowed down harshly or gently to the pressing speed. The deceleration pressure, which is set at item.523, must be set higher than the holding pressure including a safety margin for the counterbalance pressure on pressure control valve item .514.

During the deceleration period from fast forward into pressing speed logic element item .520 closes. Caused by the rising deceleration pressure and de-energising of the control oil chamber over item .514, logic element item .510 opens smoothly.

Pressing:

At a maximum pressure set by pressure control valve item .514, the cylinder, executes the pressing stroke. The maximum pressing speed is set at the stroke limiter of item .511.

Pressure control valve item .580 prevents intensification in the rod end of the cylinder. This valve must be set 10% above the maximum working pressure and sealed.

Module 1	Type IH04M...P1A1009-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04M...P7A1002-3X/...	Size 32–50
Module 2	Type IH04M...P2A1002-3X/...	Size 25–40

Application Conditions

- fast forward under weight of parts not possible
the pumps determine the fast forward and pressing speeds

Control Module 7, type 7A1002-3X/

The combined actions of modules 1 and 7 comply with the requirements of the UVV (German Accident Prevention Regulations).

When using fast approach cylinder:

Limit switch S73 on poppet valve item .730

In order to prevent pressure intensification when introducing the closing motion via the closed logic element the poppet valve item .730 must be operated first. Only then, will limit switch S73 release the valves needed for the downstroke.

Logic elements items .710 and .720 mounted in series with the rod end chamber of the press cylinder are electronically monitored to ensure that they start in the closed position. All electronically controlled valves must be tested within each machine cycle.

During the downstroke, both valves (items 710 and 720) are opened via separate pilot valves (items .730 and .740). Additionally valve item .740 is linked to the control oil circuit of the pump protection via item .750 in order to maintain the control of the set pressure. By switching the the pilot valves alternately (see function diagram), a cyclic control of the pressure valve item .130 is made possible.

Logic elements items .710 and .720 function as check valves on the return stroke.

Pressure control valve item .780 is set 10% above the maximum working pressure and sealed.

Pressure remote displacement – X3, X4

For remote control of the pressing force, an additional pressure relief valve can be mounted outside the press module above port X3.

A pressure relief valve, which may be connected to X4, permits remote control of the return force.

Control Module 2, type 2A1002-3X/

With control module 2 a second pump, for example a low pressure pump, can be used for the fast forward motion.

The loading and unloading of the second pump can be achieved via logic elements items .220, .221 and .222, dependent on either ram position or pressure.

The unloading pressure is set at pressure control valve item .221.

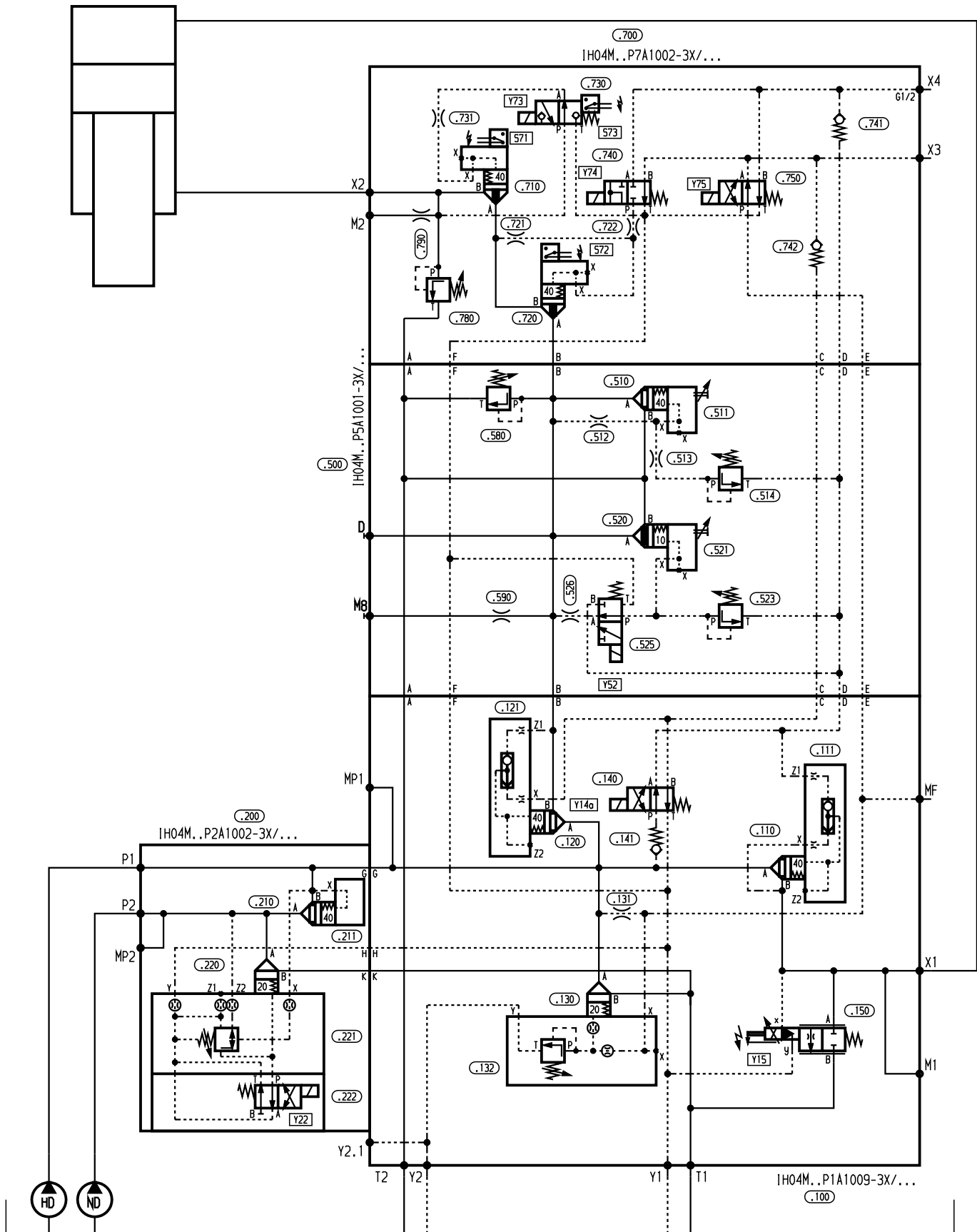
By operating solenoid Y22 the second pump is connected to or separated from the system dependent on ram position.

For pressure dependent operation, solenoid Y22 is again operated. The second pump supplies the cylinder until the set unloading pressure is reached.

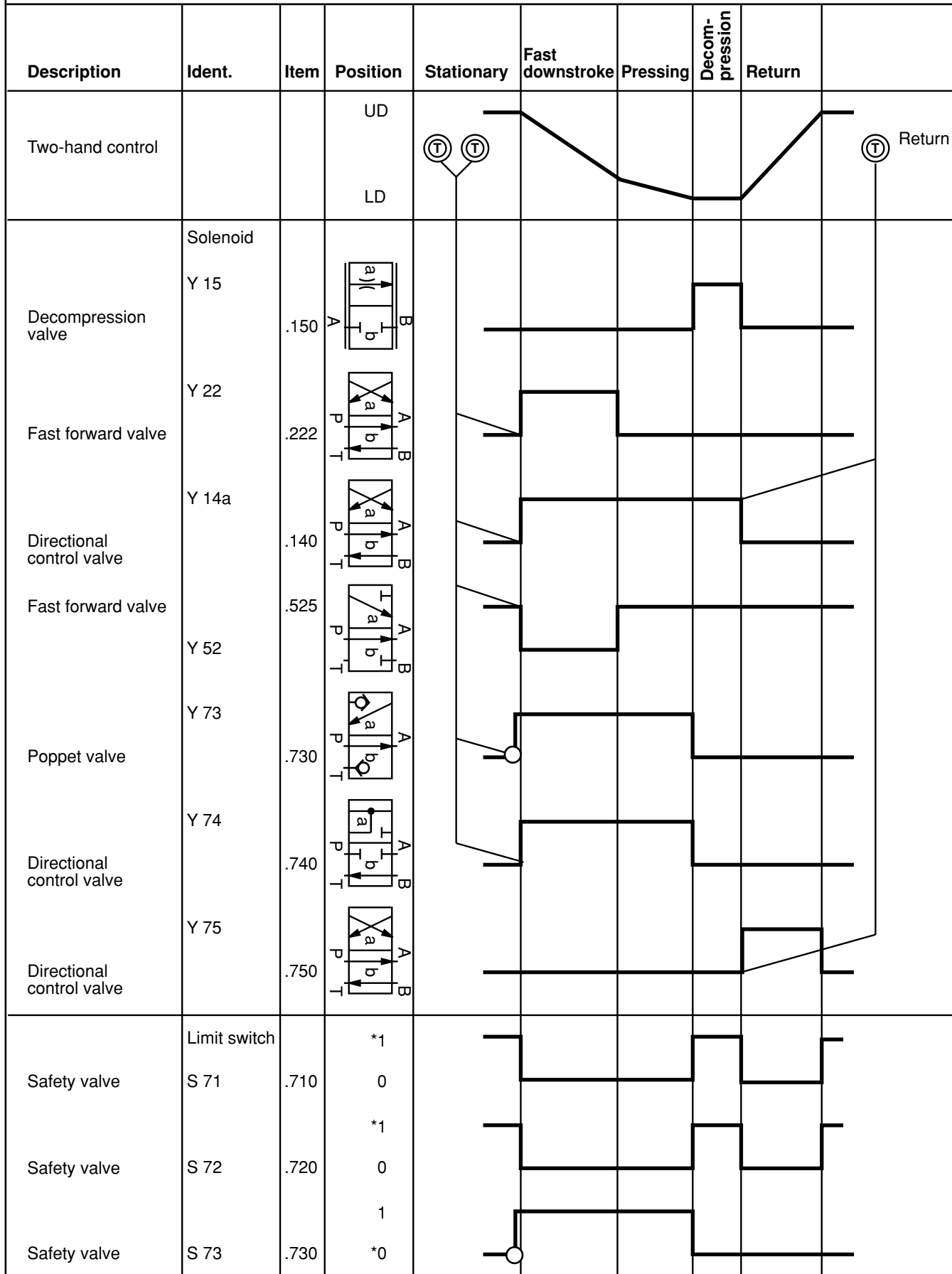
Non return valve item .210 separates the two pump circuits P1 and P2.

Typical Circuit

Press module Control type P



**Functional diagram: Normal Press Cycle Type ...1A1009-3X/...
...5A1001-3X/...
...7A1002-3X/...
...2A1002-3X/...**



* Output signal at limit switch.

For controls to UVV (Accident Prevention Regulations) specification, automatic monitoring of the components within the machine cycle is necessary!

○ Only with signal 1 from the limit switch S73 can the switching of the valves for the downstroke be released.

Module 1
Module 5
Module 7

Type IH04M...P1A1004-3X/...
Type IH04M...P5B1001-3X/...
Type IH04M...P7A1001-3X/...

Size 25–63
Size 32–50
Size 32–50

Application Conditions

- fast forward under weight of parts, holding pressure minimum of 25 bar

Control Module 1, type 1A1004-3X/

Control module 1 is designed for the following three functions:

1. Directon control of press ram

Items .110 and .111 function as supply valves for the "press" sequence.

Items .120 and .121 function as supply valves for the return stroke of the ram into the starting position.

Directional control valve item .140 -symbol "M"- keeps the supply valves for pressing and return stroke closed in the starting position.

It is therefore possible to connect several press modules to one main pump or to run auxiliary movements.

2. Pressure Control of the pump with low pressure unloading

Control of the pump is achieved via the logic elements items .130 and .132. The maximum working pressure is set at pressure control valve which is mounted as pilot valve at the control cover item .132. When all valves are in starting position logic element item .130 is open, the pump output is directed to tank against the closing spring of the valve.

Proportional pressure control valve item .133 permits the working pressure to be steplessly varied depending on the electrical command value.

3. Decompression

After the pressing sequence, decompression of the system occurs via the logic elements items .150 and .151. The decompression time is set at the stroke limiter of the control cover item .151.

Control Module 5, type 5B1001-3X/

This control module controls the downstroke.

Programming the proportional throttle valve item .510 with an electrical command value determines the fast forward speed under weight of parts (holding pressure > 25 bar)

The fast forward speed and deceleration to the pressing speed can be steplessly varied by the changing of the electrical command value of proportional solenoid Y51.

Should a loss of electrical power occur, the proportional throttle valve item .510 switches to the start position. Together with item .514, it then operates as a pilot operated pressure control valve.

Holding pressure including a safety margin is set at pressure relief valve item .514.

Pressure control valve item .580 prevents intensification in the rod end of the cylinder. This valve must be set 10% above the maximum working pressure and sealed.

Module 1	Type IH04M...P1A1004-3X/...	Size 25–63
Module 5	Type IH04M...P5B1001-3X/...	Size 32–50
Module 7	Type IH04M...P7A1001-3X/...	Size 32–50

Control Module 7, type 7A1001-3X/

The combined actions of modules 1 and 7 comply with the requirements of the UVV (German Accident Prevention Regulations).

Logic elements items .710 and .720 mounted in series with the rod end chamber of the press cylinder are electronically monitored to ensure that they start in the closed position. This must be monitored each machine cycle.

During the downstroke, both valves (item .710 and .720) are opened via separate pilot valves (items .730 and .740). Additionally valve item .740 is linked to the control oil circuit of the pump protection via item .750 in order to maintain the control of the set pressure. By switching the the pilot valves alternately (see function diagram), a cyclic control of the pressure valve item .130 is made possible.

Logic elements items .710 and .720 function as check valves on the return stroke.

Pressure control valve item .780 is set 10% above the maximum working pressure and sealed.

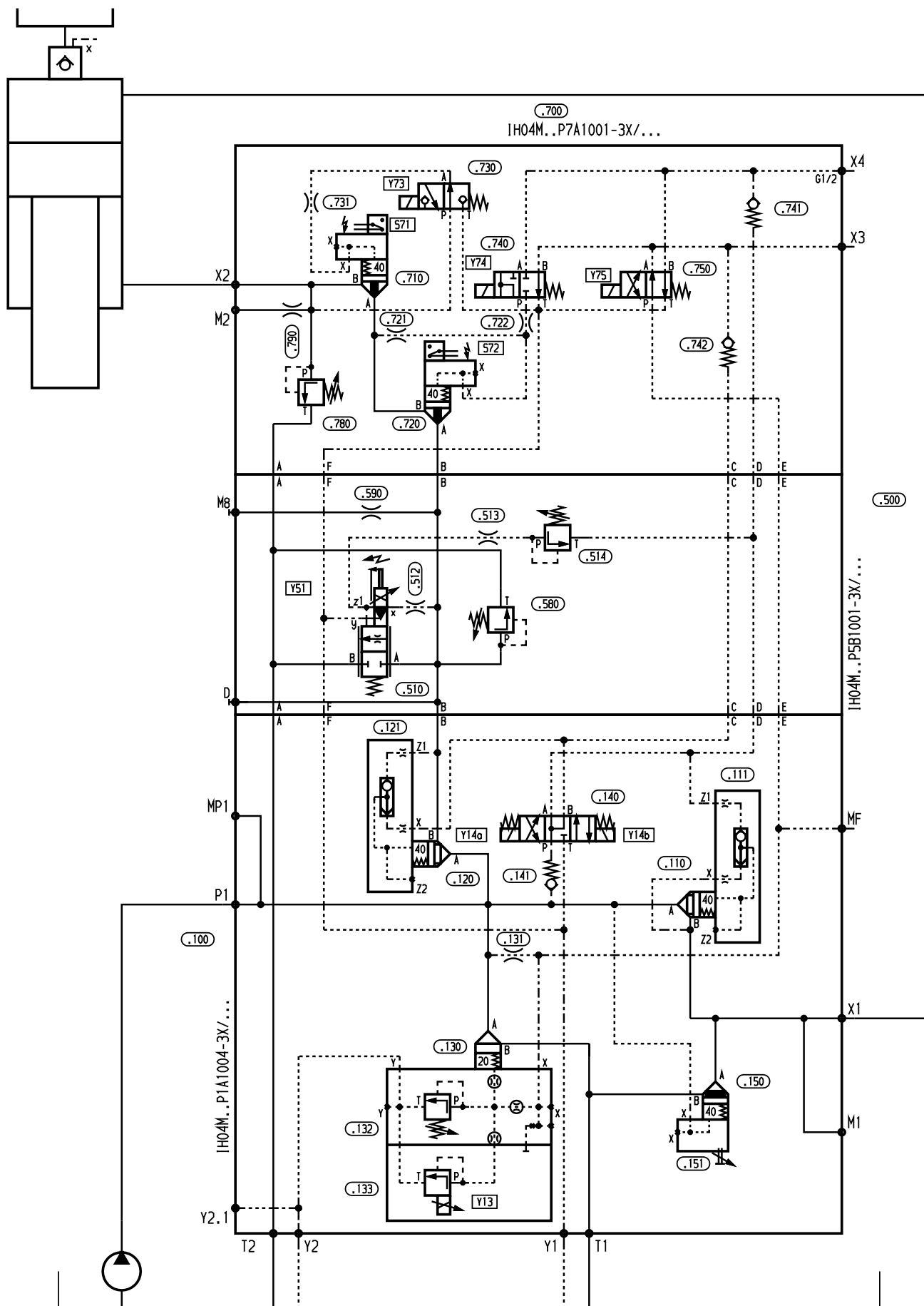
Pressure remote displacement – X3, X4

For remote control of the pressing force, an additional pressure relief valve can be mounted outside the press module above port X3.

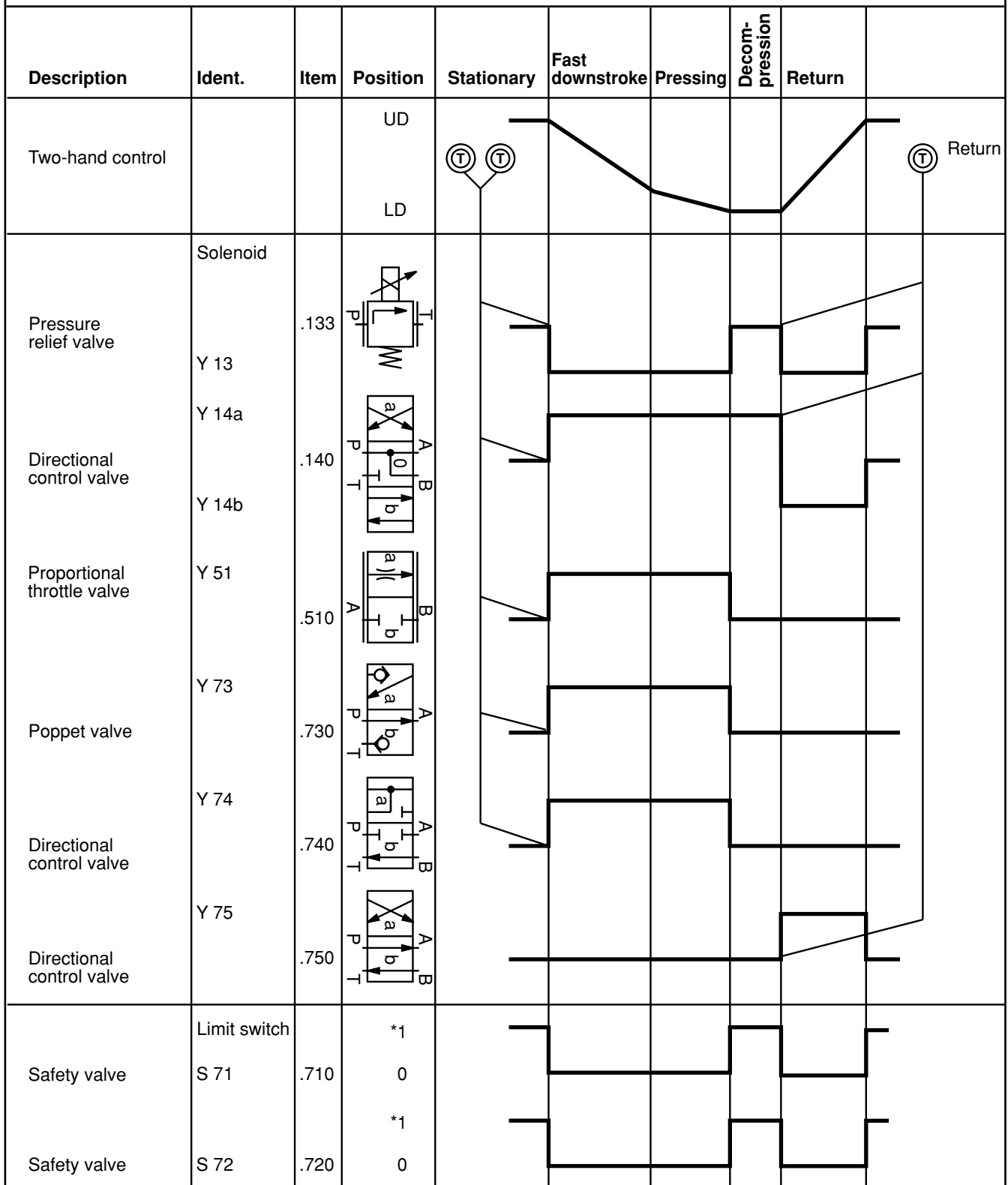
A pressure relief valve, which may be connected to X4, permits remote control of the return force.

Typical Circuit

Press module
Control type P



**Functional diagram: Normal Press Cycle Type ...1A1004-3X/...
...5B1001-3X/...
...7A1001-3X/...**



* Output signal at limit switch.

For controls to UVV (Accident Prevention Regulations) specification, automatic monitoring of the components within the machine cycle is necessary !

Module 1	Type IH04M...P1A1022-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04M...P7B1001-3X/...	Size 32–50

Application Conditions

- fast approach with own weight
- holding pressure min 25 bar
- Pilot oil pump required, see page 4 for pilot pressure required.

Control module 1, type 1A1022-3X/

The control module 1 is designed for the following three functions:

1. Direction control of the press ram

Items .110 and .121 function as supply valves for the "Press" sequence.

Items .120 and .121 function as supply valves for the return stroke of the press ram into starting position.

The directional control valve Item .140-symbol "M"-keeps the supply valves for pressing and return stroke closed in the starting position.

It is therefore possible to connect several press modules to one main pump or to run auxiliary movements.

2. Pressure control of the pump with low pressure unloading

The pump is protected via the logic elements item .130 and .132. The maximum working pressure is set at pressure control valve which is built into the cover plate item .132 as a pilot valve.

When all valves are in starting position logic element item 130 is open, the pump output is directed to tank against the spring of the logic element.

3. Decompression

Decompression of the system occurs after the press sequence via logic element item .150. by means of the proportional pressure relief valve item .152. The decompression time is steplessly adjustable via a ramp which is set electronically.

Control cover item .151 contains a maximum pressure safety valve.

Control Module 5, type 5A1001-3X/

This module controls the downstroke.

In this case the fast approach by gravity can be allowed providing the holding pressure is 25 bar minimum.

In the case of lower holding pressures the fast approach should be achieved using a low pressure pump together with the main pump or with a fast approach cylinder

(see examples page 13 and 15).

Start of fast approach:

Energising solenoid Y52 releases pressure from the control area of logic element item .520 and permits the oil to flow to tank. The maximum speed is set at the stroke limiter of item .521.

End of fast approach:

Solenoid Y52 is de-energised, logic element closes under the pressure set at pressure control valve item .523. The pressure set at this valve determines whether the ram is slowed down harshly or gently to the pressing speed. The deceleration pressure, which is set at item .523, must be set higher than the holding pressure for the counterbalance pressure on pressure control valve item .514.

During the deceleration period from fast forward into pressing speed logic element item .520 closes. Caused by the rising deceleration pressure and the relief of the control oil chamber of item .514, logic element item .510 opens smoothly.

Pressing:

At a maximum pressure set by pressure control valve item .514, the cylinder executes the pressing stroke. The maximum pressing speed is set at the stroke limiter of item .511.

Pressure control valve item .580 prevents intensification in the rod end of the cylinder. This valve must be set 10% above the maximum working pressure and be sealed.

Module 1	Type IH04M...P1A1022-3X/...	Size 25–63
Module 5	Type IH04M...P5A1001-3X/...	Size 32–50
Module 7	Type IH04M...P7B1001-3X/...	Size 32–50

Control module 7 type 7B1001-3X/

The combined actions of modules 1 and 7 comply with the requirements of the UVV (German Accident Prevention Regulations).

Logic elements items .710 and .720 mounted in series with the rod end chamber of the press cylinder are electronically monitored to ensure that they start in the closed position. This must be monitored each machine cycle.

Should one of the valves not achieve its safe position, faulty operation cannot engage another dangerous press closing cycle.

During the downstroke, both valves (items .710 and 720) are opened via separate pilot valves (items .730 and .740) by means of pilot pressure applied to port X. Additionally valve items .730 and .760 are linked to the control oil circuit of the pump control via item .750 in order to maintain the control of the set pressure.

By switching the the pilot valves alternately (see function diagram), a cyclic control of pressure valve item .130 is made possible.

Logic elements items .710 and .720 function as check valves on the return stroke.

Pressure control valve item .780 is set 10% above the maximum working pressure and sealed.

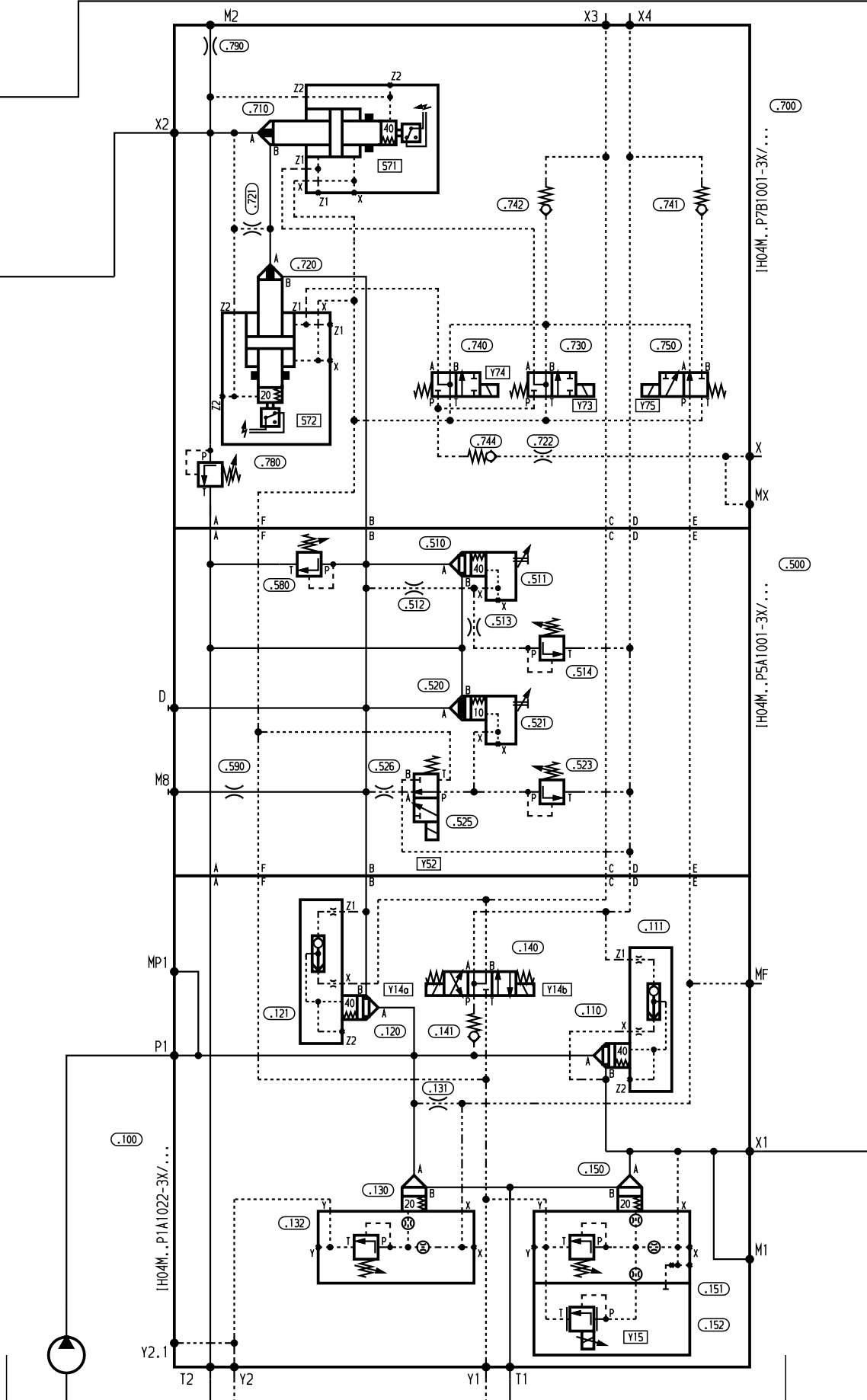
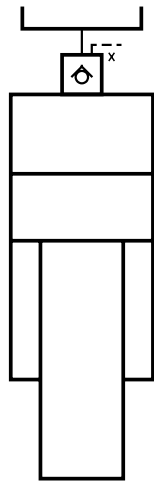
Pressure remote displacement – X3, X4

For remote control of the pressing force, an additional pressure relief valve can be mounted outside the press module above port X3.

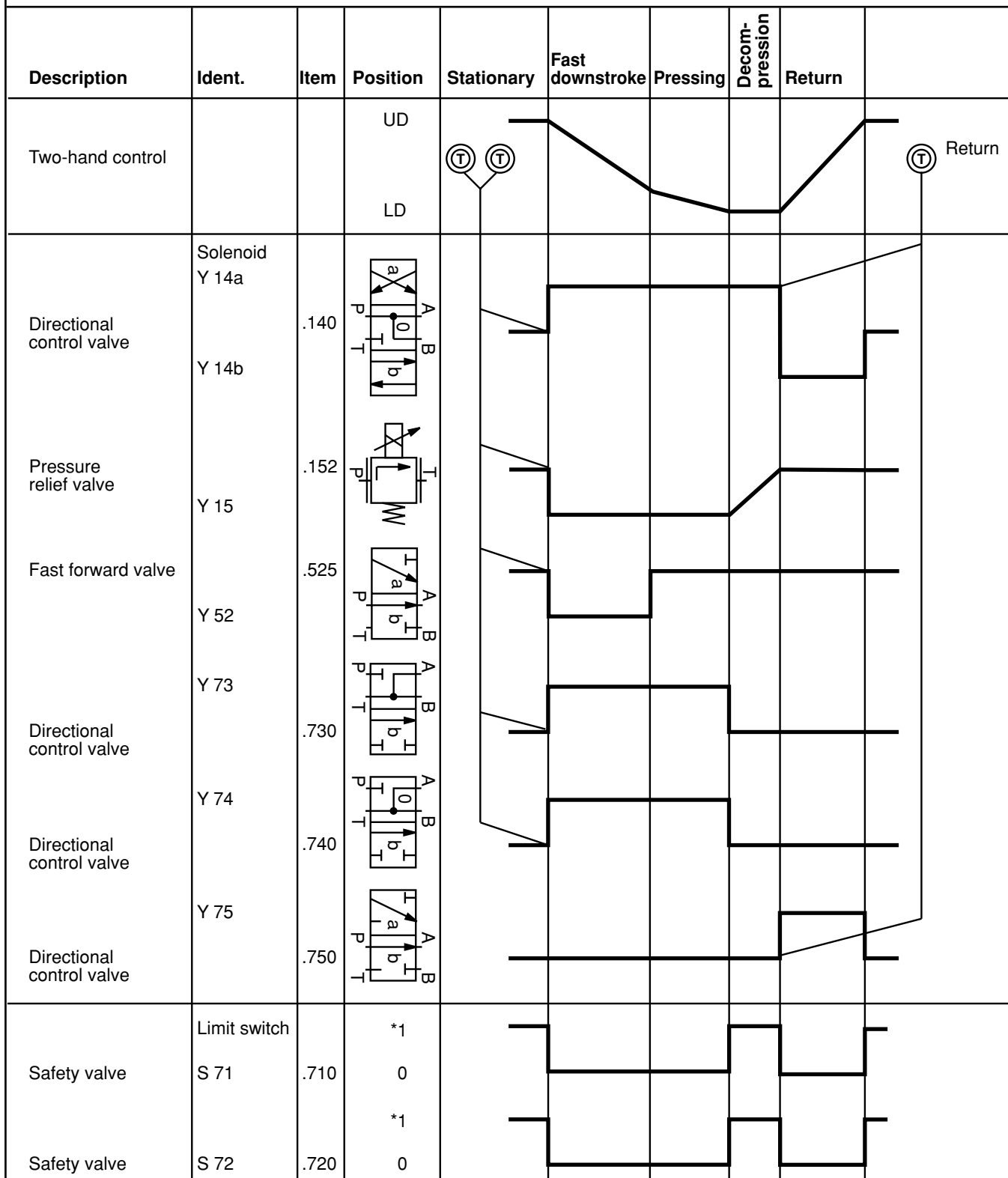
A pressure relief valve, which may be connected to X4, permits remote control of the return force.

Typical Circuit

Press module
Control type P



**Functional diagram: Normal Press Cycle, Type ...1A1022-3X/...
...5A1001-3X/...
...7B1001-3X/...**



For controls to UVV (Accident Prevention Regulations) specification, automatic monitoring of the components within the machine cycle necessary!

* Output signal at limit switch.

Module 1 Type IH04M...P1A1002-3X/...
Module 5 Type IH04M...P5A1001-3X/...
Module 7 Type IH04M...P7A1006-3X/...

Application Conditions

- Free-fall downstroke under weight of parts.
- holding pressure min 25 bar

Control module 7 type 7A1006-3X/

The maximum set speed of 10mm/s is determined by orifice item .772. This velocity must be checked on commissioning and the orifice adjusted as required. This movement is engaged by switching item .771.

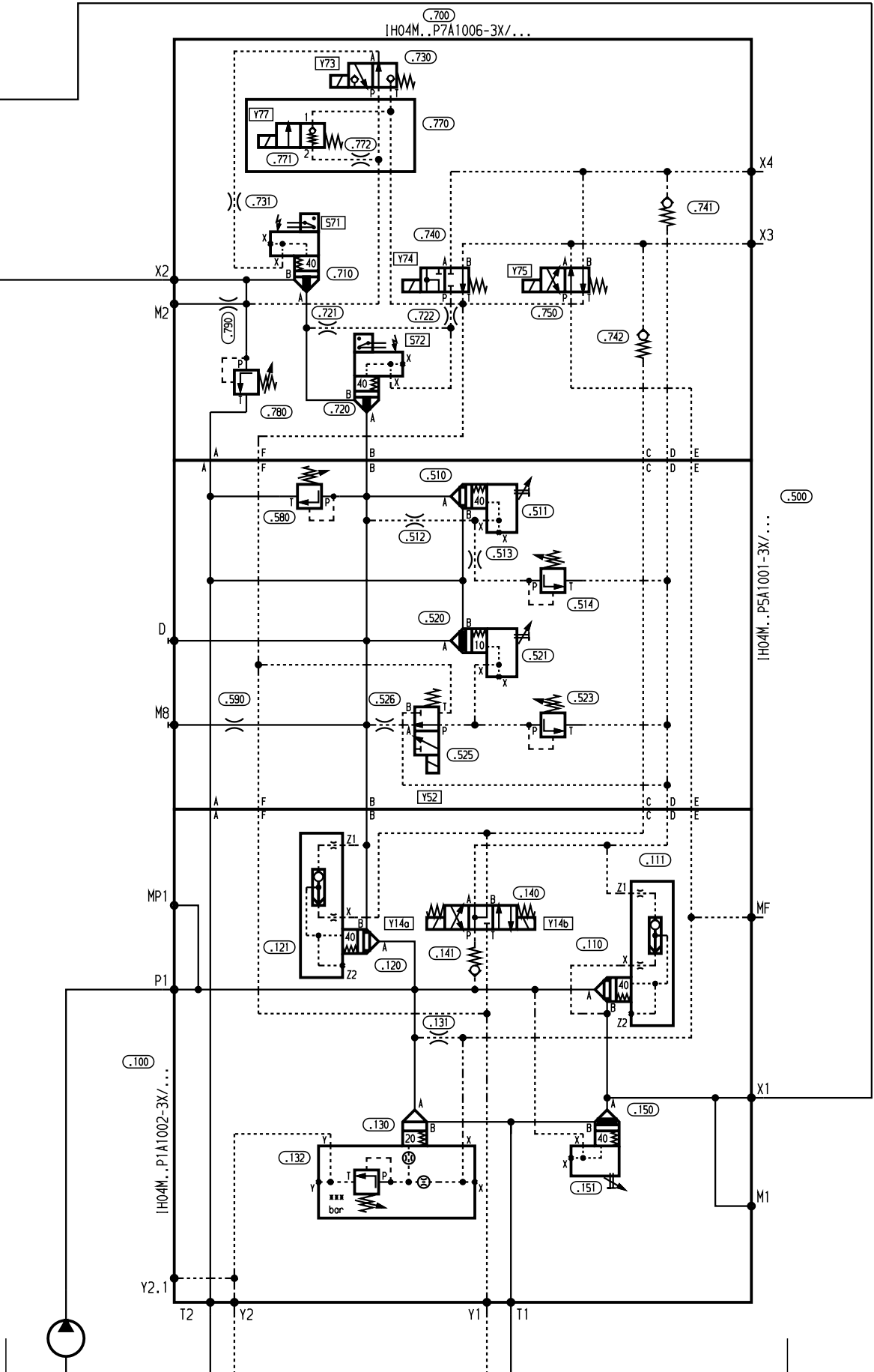
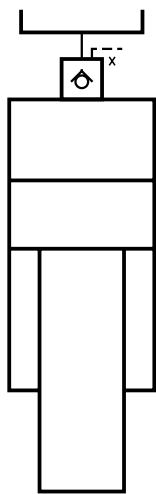
See pages 8 and 8a for a description of a normal press cycle.

Note

The accident prevention regulations covered by 11.064 Hydraulic Presses § 3 – Para. 5 must be observed.

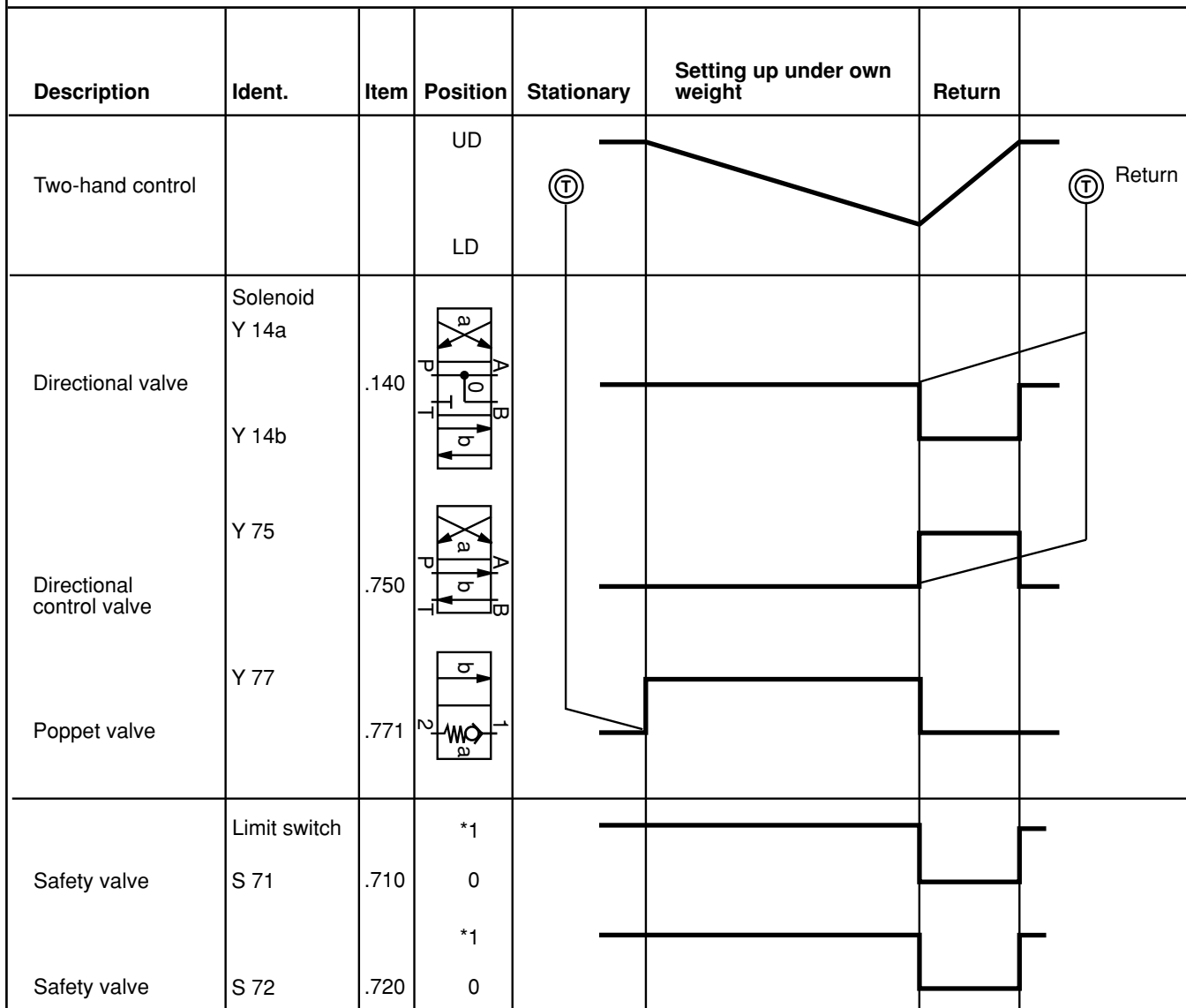
Typical Circuit
Fast approach under weight of parts

Press module
Control type P



Functional diagram:
Setting up under own weight – zero pressure
Return via pump

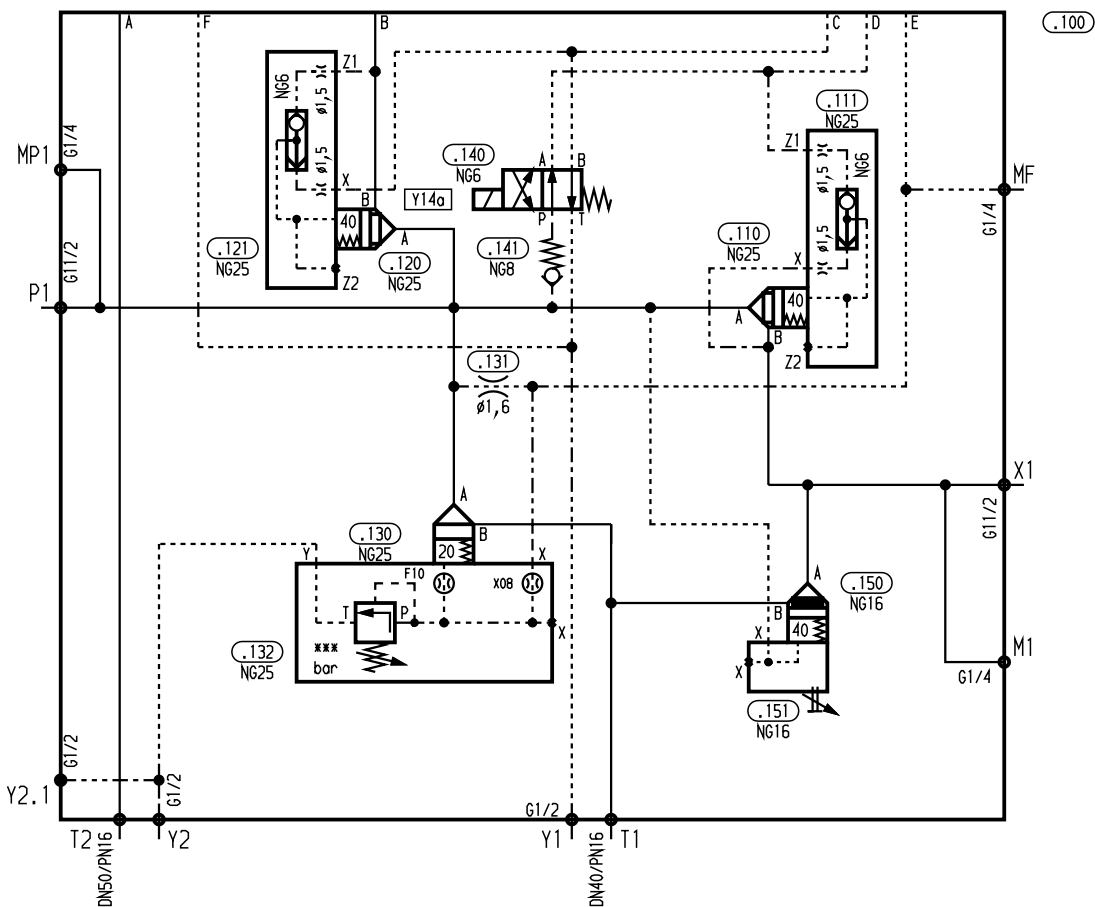
Type ...P1A1002-3X/...
 ...P5A1001-3X/...
 ...P7A1006-3X/...



* Output signal at limit switch.

Module 1

**Press Module Size 32-25
Control Type P
IH04M32-25P1A1001-3X/...**

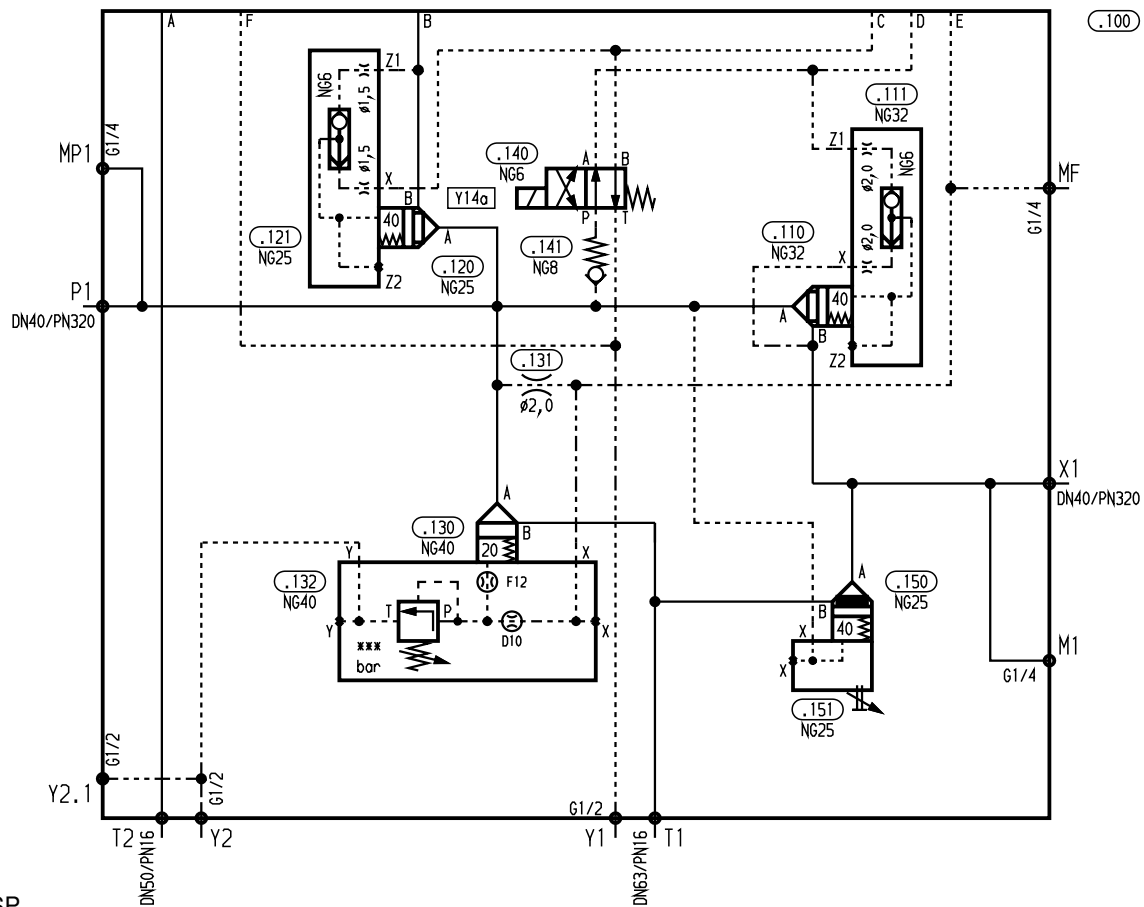


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.110	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.111	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.120	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.121	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.130	1	Logic element, size 25	LC25DB20E6X/	RE 81 078
.131	1	Orifice	DUESE 1,6 M10x25-45H	DIN 913
.132	1	Cover plate, size 25	LFA25DB2-6X/315	RE 81 078
.140	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.150	1	Logic element, size 16	LC16B40D6X/	RE 81 010
.151	1	Cover plate, size 16	LFA16H2-6X/F	RE 81 010
T1	1	*Flange	DN40PN16	PN 012 938
T2	1	*Flange	DN50PN16	PN 012 939
*(Not included in supply; please order separately)				

Module 1

Press Module Size 32-40
Control Type P
IH04M32-40P1A1001-3X/...

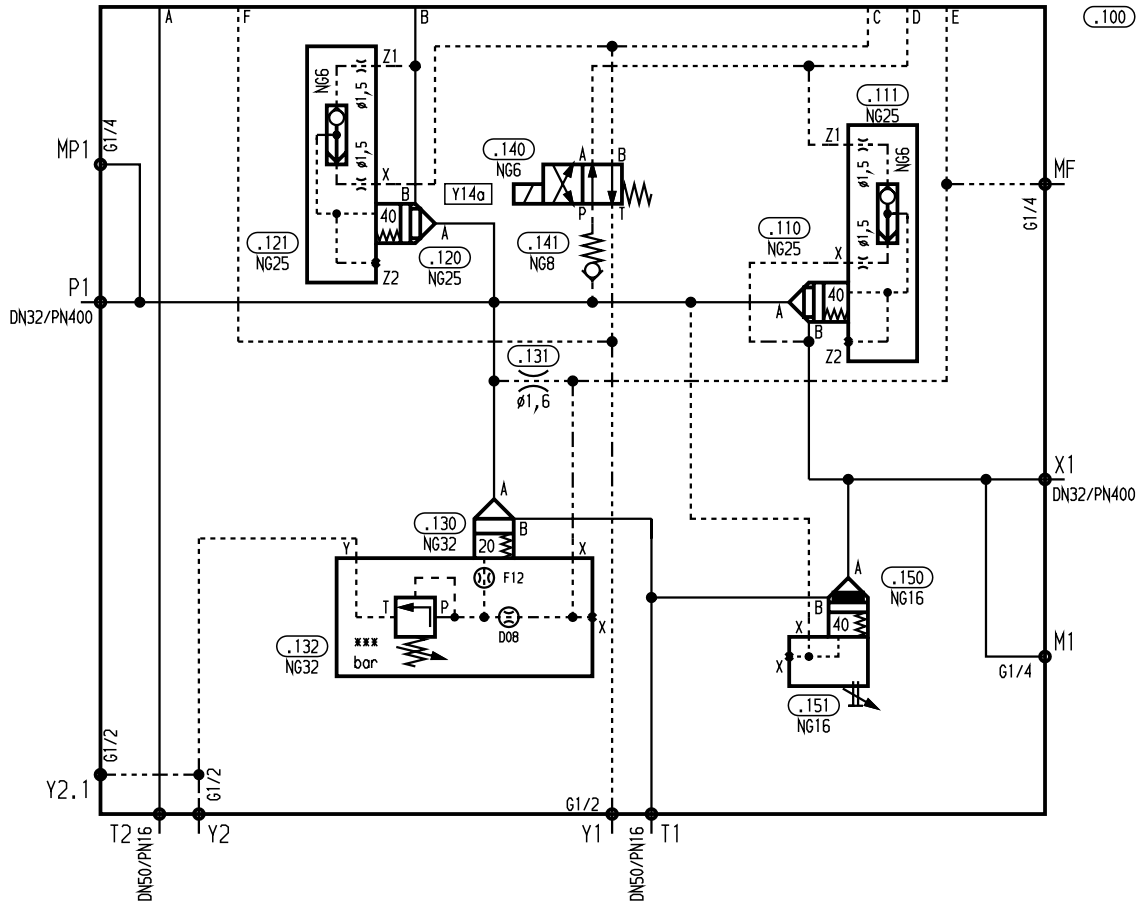


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.111	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.120	1	Logic element, size 25	LC25B40E6X/	RE 81 010	
.121	1	Cover plate, size 25	LFA25G-6X/	RE 81 010	
.130	1	Logic element, size 40	LC40DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 40	LFA40DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6D5X/	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 25	LC25B40D6X/	RE 81 010	
.151	1	Cover plate, size 25	LFA25H2-6X/F	RE 81 010	
P1, X1	2	*Flange	DN40PN320	PN 303 921	RE 45 501
T1	1	*Flange	DN63PN16	PN 012 336	AB 22-15
T2	1	*Flange	DN50PN16	PN 012 939	AB 22-15
*(Not included in supply; please order separately)					

Module 1

**Press Module Size 32
Control Type P
IH04M32P1A1001-3X/...**

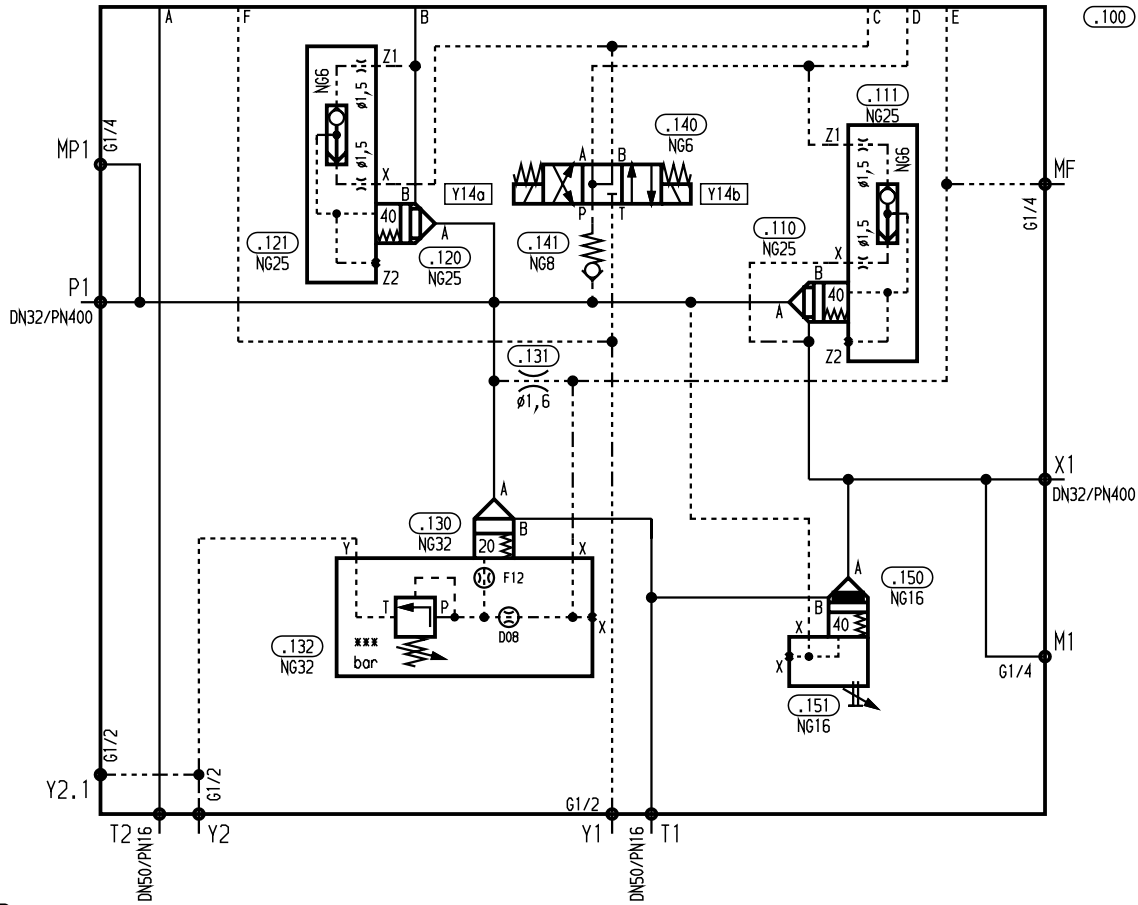


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.110	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.111	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.120	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.121	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.130	1	Logic element, size 32	LC32DB20E6X/	RE 81 078
.131	1	Orifice	DUESE 1,6 M10x25-45H	DIN 913
.132	1	Cover plate, size 32	LFA32DB2-6X/315	RE 81 078
.140	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.150	1	Logic element, size 16	LC16B40D6X/	RE 81 010
.151	1	Cover plate, size 16	LFA16H2-6X/F	RE 81 010
P1, X1	2	*Flange	DN32PN400	PN 013772
T1, T2	2	*Flange	DN50PN16	PN 012 939
*(Not included in supply; please order separately)				

Module 1

**Press Module Size 32
Control Type P
IH04M32P1A1002-3X/...**

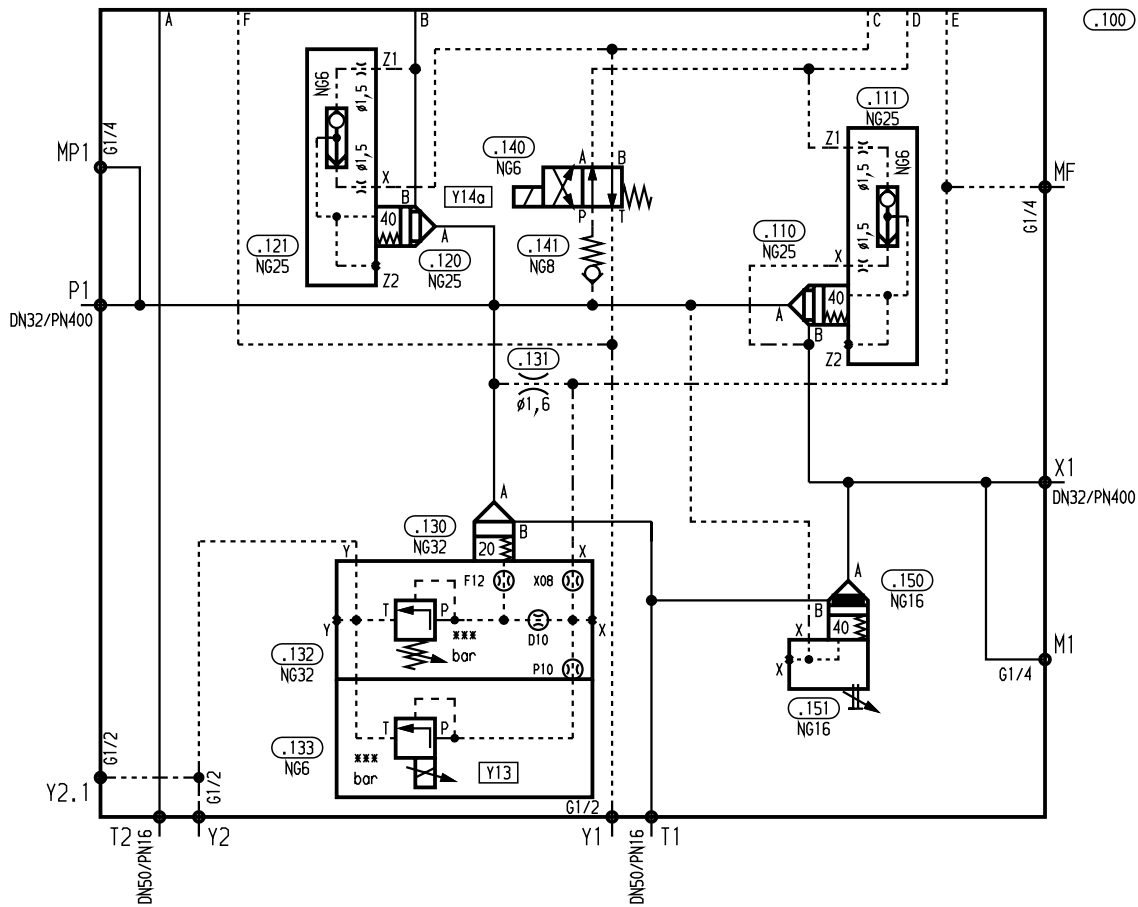


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.110	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.111	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.120	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.121	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.130	1	Logic element, size 32	LC32DB20E6X/	RE 81 078
.131	1	Orifice	DUESE 1,6 M10x25-45H	DIN 913
.132	1	Cover plate, size 32	LFA32DB2-6X/315	RE 81 078
.140	1	Directional control valve, size 6	4WE6M5X/...	RE 23 177
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.150	1	Logic element, size 16	LC16B40D6X/	RE 81 010
.151	1	Cover plate, size 16	LFA16H2-6X/F	RE 81 010
P1, X1	2	*Flange	DN32PN400	PN 013772
T1, T2	2	*Flange	DN50PN16	PN 012 939
*(Not included in supply; please order separately)				

Module 1

**Press Module Size 32
Control Type P
IH04M32P1A1003-3X/...**

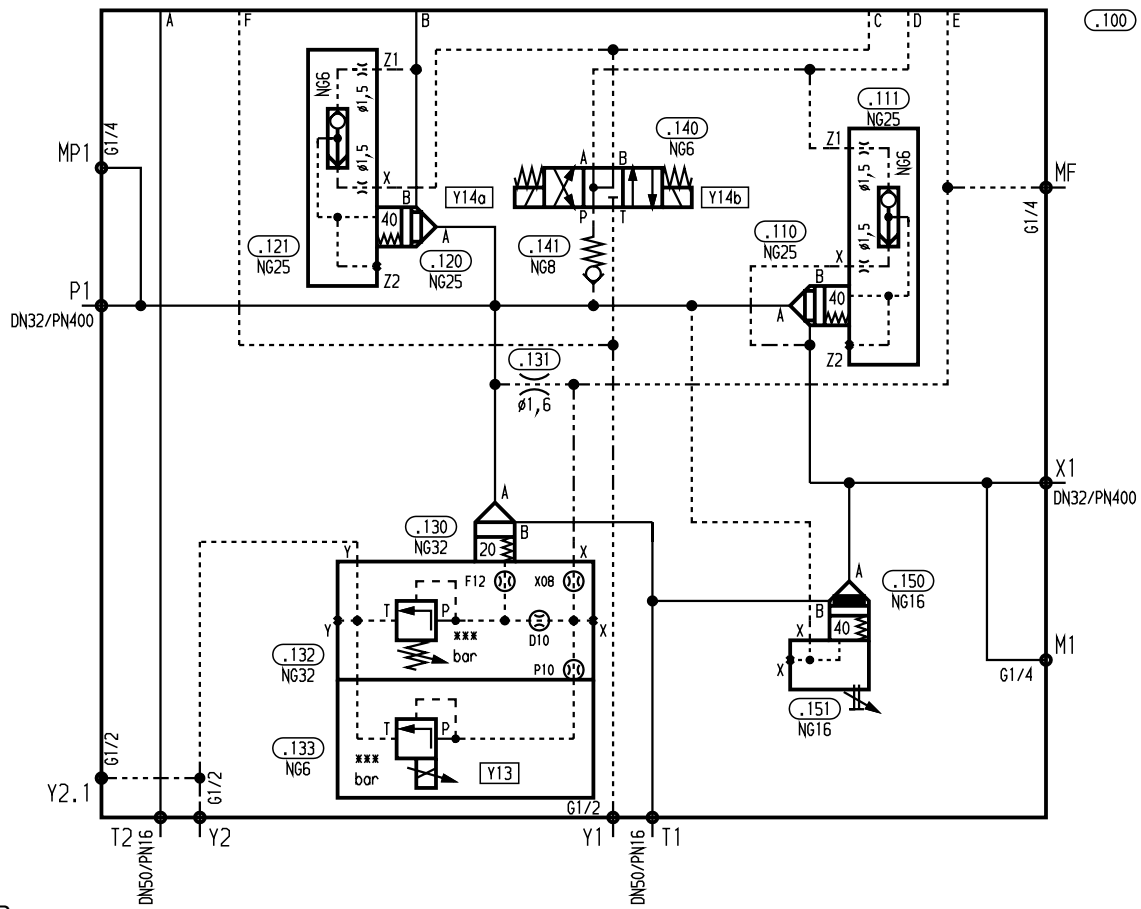


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.110	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.111	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.120	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.121	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.130	1	Logic element, size 32	LC32DB20E6X/	RE 81 078
.131	1	Orifice	DUESE 1,6 M10x25-45H	DIN 913
.132	1	Cover plate, size 32	LFA32DBEM-6X/315	RE 81 078
.133	1	Proportionalventil	DBET-5X/315G24-1	RE 29 142
.140	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.150	1	Logic element, size 16	LC16B40D6X/	RE 81 010
.151	1	Cover plate, size 16	LFA16H2-6X/F	RE 81 010
P1, X1	2	*Flange	DN32PN400	PN 013772
T1, T2	2	*Flange	DN50PN16	PN 012 939
*(Not included in supply; please order separately)				

Module 1

**Press Module Size 32
Control Type P
IH04M32P1A1004-3X/...**

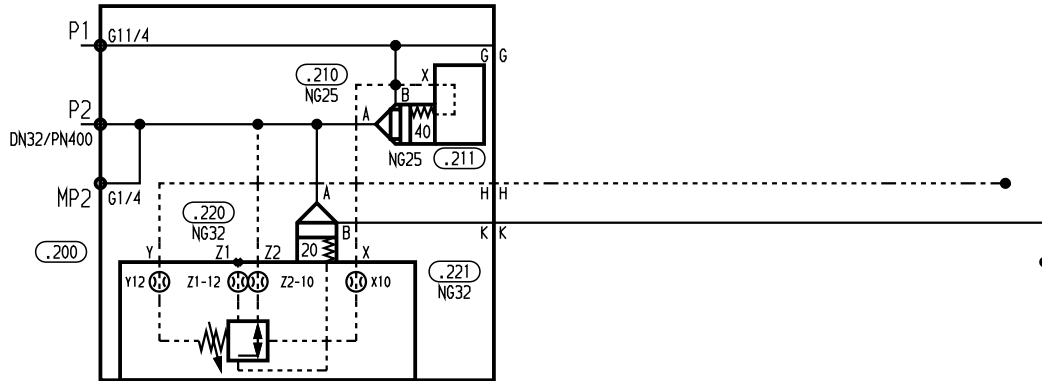


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.110	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.111	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.120	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.121	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.130	1	Logic element, size 32	LC32DB20E6X/	RE 81 078
.131	1	Orifice	DUESE 1,6 M10x25-45H	DIN 913
.132	1	Cover plate, size 32	LFA32DBEM-6X/315	RE 81 078
.133	1	Proportional pressure relief valve	DBET-5X/315G24-1	RE 29 142
.140	1	Directional control valve, size 6	4WE6M5X/...	RE 23 177
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.150	1	Logic element, size 16	LC16B40D6X/	RE 81 010
.151	1	Cover plate, size 16	LFA16H2-6X/F	RE 81 010
P1, X1	2	*Flange	DN32PN400	PN 013772
T1, T2	2	*Flange	DN50PN16	PN 012 939
*(Not included in supply; please order separately)				

Module 2

**Press Module Size 32
Control Type P
IH04M32P2A1001-3X/...**

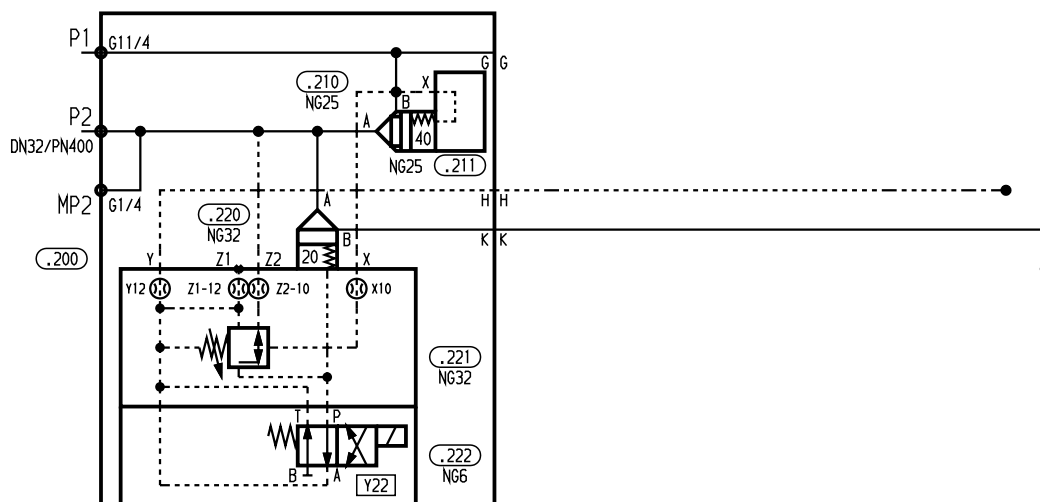


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.210	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.211	1	Cover plate, size 25	LFA25D6X/	RE 81 010
.220	1	Logic element, size 32	LC32DB20E6X/	RE 81 078
.221	1	Cover plate, size 32	LFA32DZ2-6X/315X	RE 81 078
P2	1	*Flange	DN32PN400	PN 013772
*(Not included in supply; please order separately)				

Module 2

**Press Module Size 32
Control Type P
IH04M32P2A1002-3X/...**



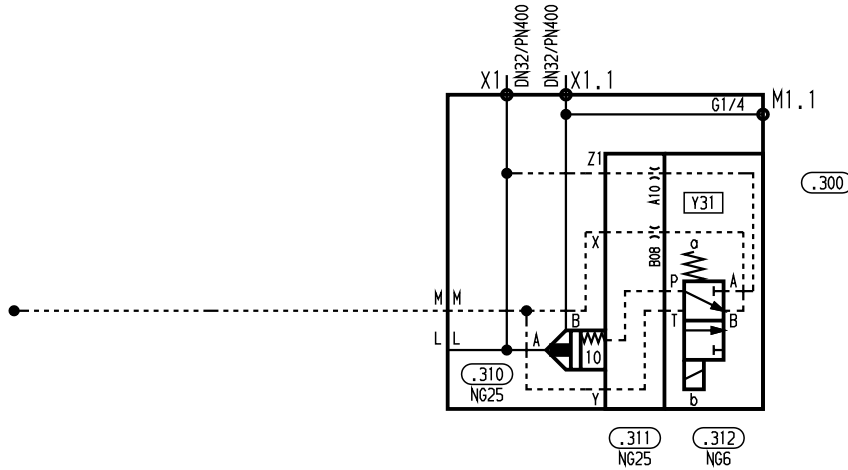
G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.210	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.211	1	Cover plate, size 25	LFA25D6X/	RE 81 010
.220	1	Logic element, size 32	LC32DB20E6X/	RE 81 078
.221	1	Cover plate, size 32	LFA32DZWB2-6X/315X	RE 81 078
.222	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
P2	1	*Flange	DN32PN400	PN 013772

*(Not included in supply; please order separately)

Module 3

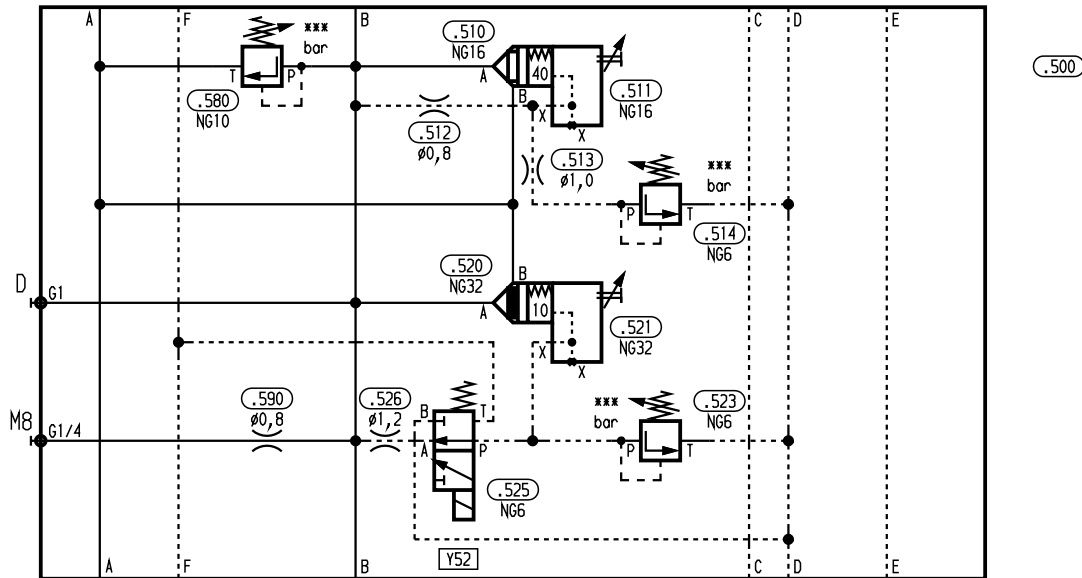
**Press Module Size 32
Control Type P
IH04M32P3A1001-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.310	1	Logic element, size 25	LC25A10E6X/	RE 81 010
.311	1	Cover plate, size 25	LFA25WEA9-6X/A10B08	RE 81 010
.312	1	Directional control valve, size 6	3WE6B9-5X/...	RE 23 177
X1, X1.1	2	*Flange *(Not included in supply; please order separately)	DN32PN400	PN 013772

Module 5

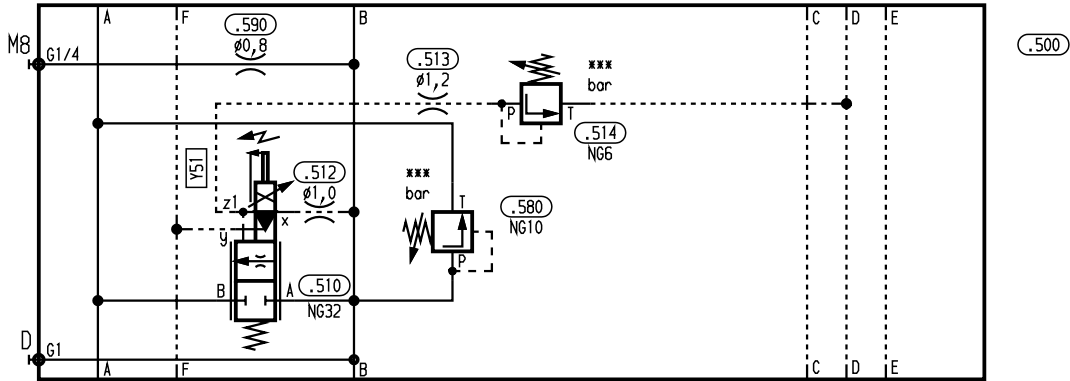
Press Module Size 32
Control Type P
IH04M32P5A1001-3X/...

G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.510	1	Logic element, size 16	LC16B40E6X/	RE 81 010
.511	1	Cover plate, size 16	LFA16H2-6X/F	RE 81 010
.512	1	Orifice	DUESE 0,8 R1/8 DIN 906	RN 115.06
.513	1	Orifice	DUESE 1,0 R1/8 DIN 906	RN 115.06
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402
.520	1	Logic element, size 32	LC32B10D6X/	RE 81 010
.521	1	Cover plate, size 32	LFA32H2-6X/F	RE 81 010
.523	1	Pressure relief valve, size 6	DBDS6K1X/315	RE 25 402
.525	1	Directional control valve, size 6	3WE6A5X/...	RE 23 177
.526	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.580	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.590	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8	1	*Flange Only necessary if control module 5 is included in the control. (See page 11.) *(Not included in supply; please order separately)	DN32PN400	PN 013772

Module 5

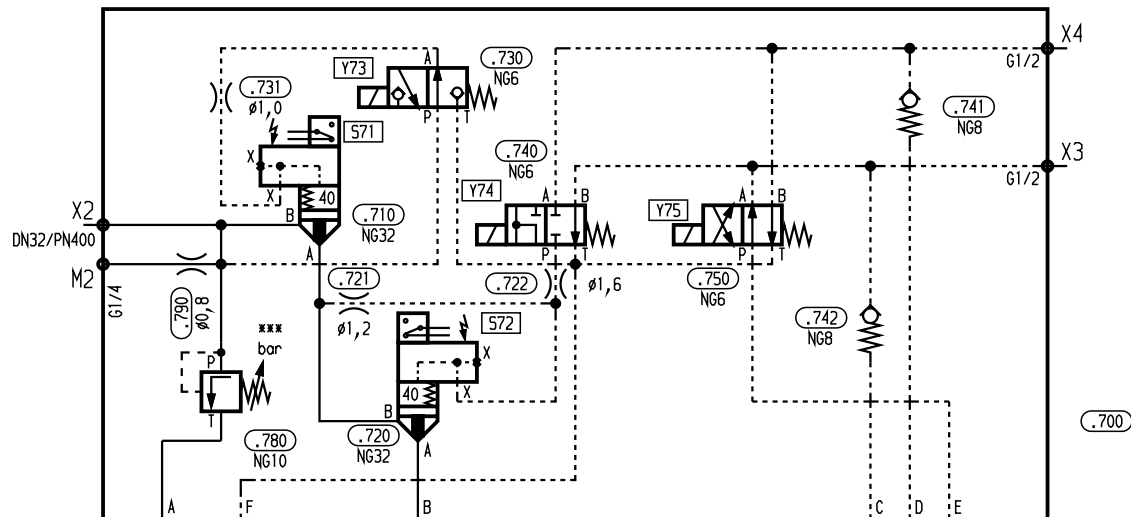
**Press Module Size 32
Control Type P
IH04M32P5B1001-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.510	1	Proportional throttle valve, size 32	FE32C1X/450LM-7	RE 29 204
.512	1	Orifice	DUESE 1,0 R1/8 DIN 906	RN 115.06
.513	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.514	1	Pressure relief valve, size 6	DBDS6K1X/315	RE 25 402
.580	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.590	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8	1	*Flange Only necessary if control module 5 is included in the control. (See page 11.) *(Not included in supply; please order separately)	DN32PN400	PN 013772

Module 7

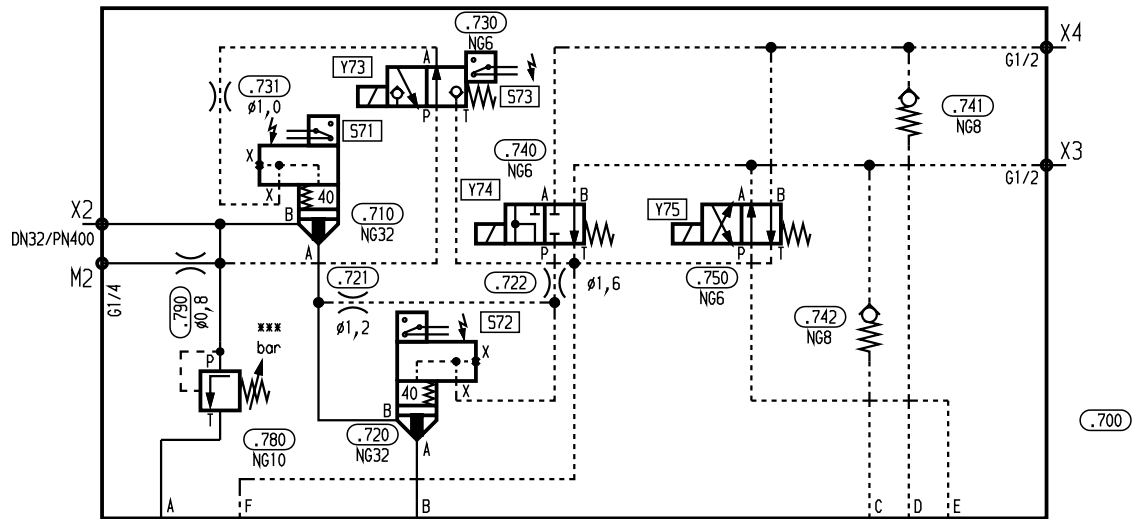
Press Module Size 32
Control Type P
IH04M32P7A1001-3X/...

G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 1,6 R1/8 DIN 906	RN 115.06
.730	1	Poppet valve, size 6	M-3SEW6U2X/...	RE 22 048
.731	1	Orifice	DUESE 1,0 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X2	1	*Flange	DN32PN400	PN 013772
*(Not included in supply; please order separately)				

Module 7

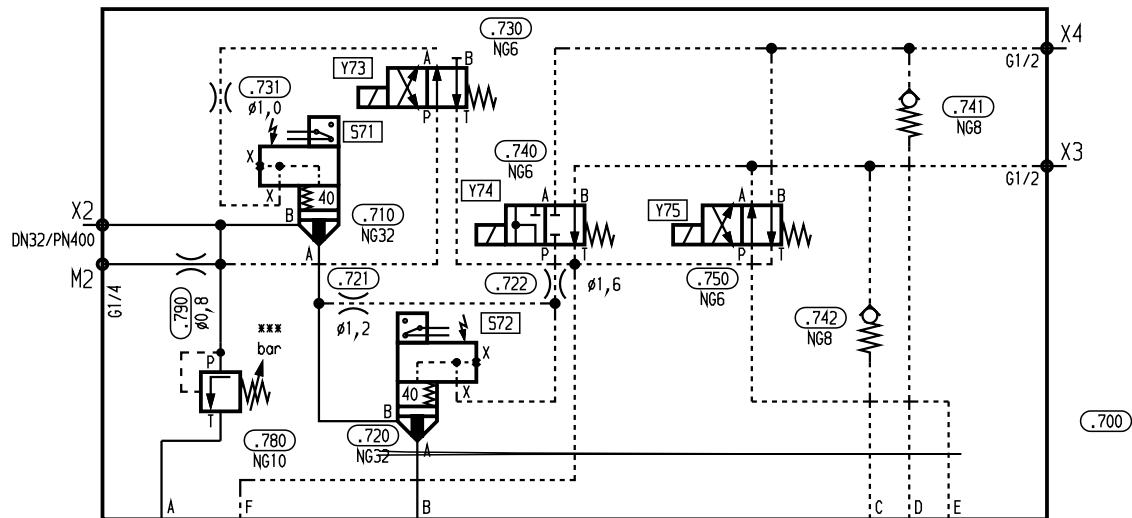
**Press Module Size 32
Control Type P
IH04M32P7A1002-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 1,6 R1/8 DIN 906	RN 115.06
.730	1	Poppet valve, size 6	M-3SEW6U2X/...QAG24	RE 22 048
.731	1	Orifice	DUESE 1,0 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X2	1	*Flange	DN32PN400	PN 013772
*(Not included in supply; please order separately)				

Module 7

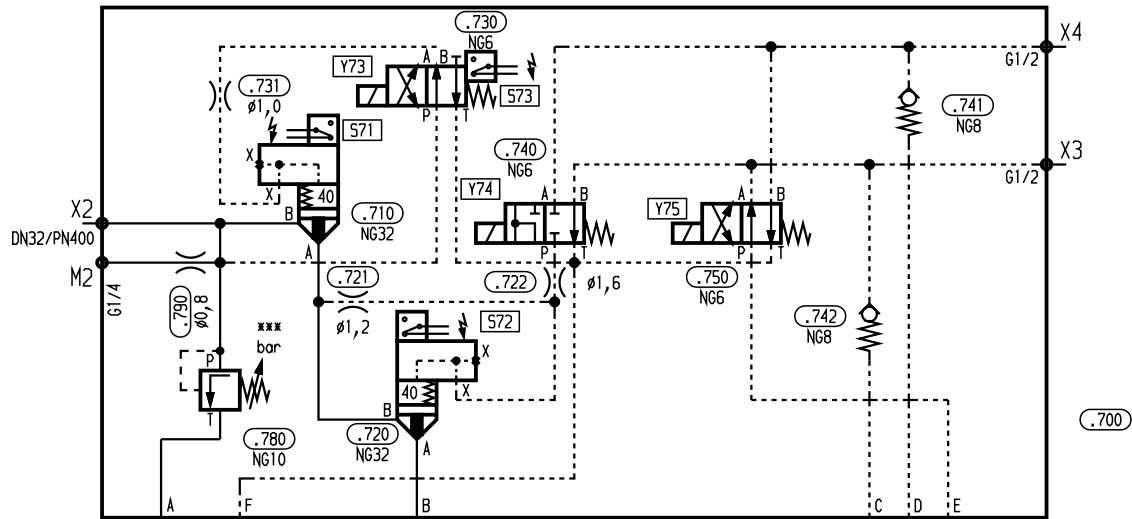
Press Module Size 32
Control Type P
IH04M32P7A1003-3X/...

G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 1,6 R1/8 DIN 906	RN 115.06
.730	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
.731	1	Orifice	DUESE 1,0 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X2	1	*Flange	DN32PN400	PN 013772
*(Not included in supply; please order separately)				

Module 7

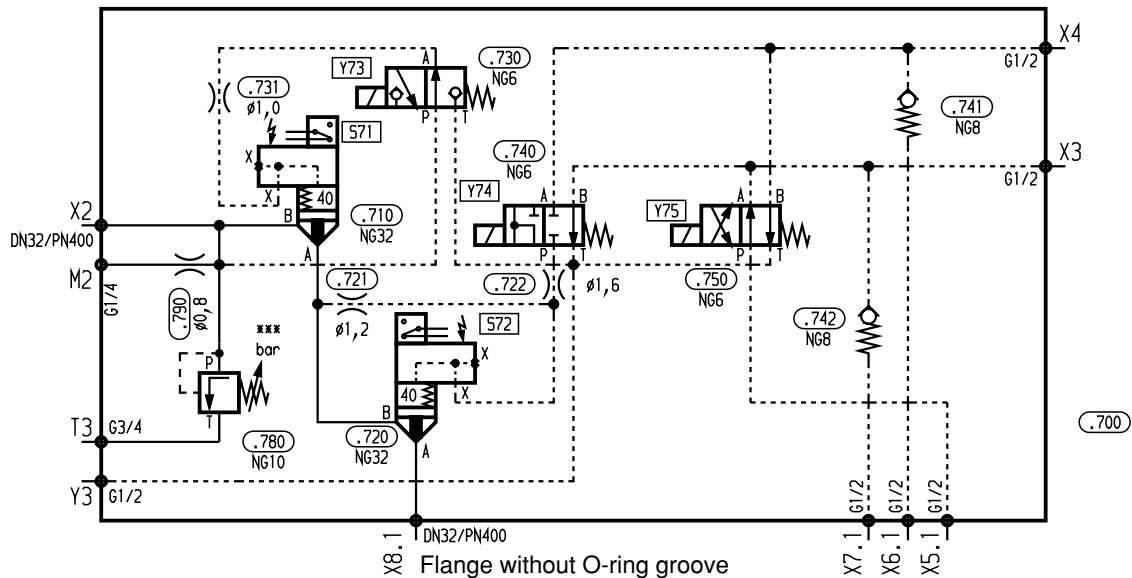
**Press Module Size 32
Control Type P
IH04M32P7A1004-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 1,6 R1/8 DIN 906	RN 115.06
.730	1	Directional control valve, size 6	4WE6D5X/...QAG24	RE 23 177
.731	1	Orifice	DUESE 1,0 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X2	1	*Flange	DN32PN400	PN 013772
*(Not included in supply; please order separately)				

Module 7

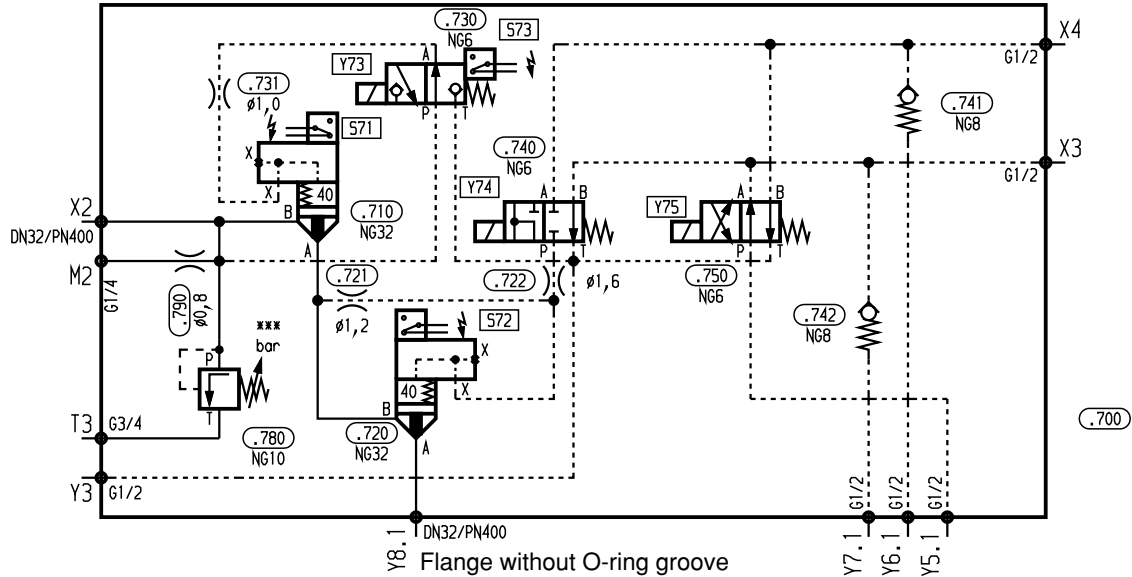
Press Module Size 32
Control Type P
IH04ME32P7A1001-3X/...

G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 32	LFA32E-6X/CA40DQOG24 F	RE 81 010
.720	1	Logic element, size 32	LFA32E-6X/CA40DQOG24 F	RE 81 010
.721	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 1,6 R1/8 DIN 906	RN 115.06
.730	1	Poppet valve, size 6	M-3SEW6U2X/...	RE 22 048
.731	1	Orifice	DUESE 1,0 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8.1	1	*Flange	DN32PN400 (without O-ring-groove)	
X2	1	*Flange	DN32PN400	PN 013 772
*(Not included in supply; please order separately)				

Module 7

**Press Module Size 32
Control Type P
IH04ME32P7A1002-3X/...**

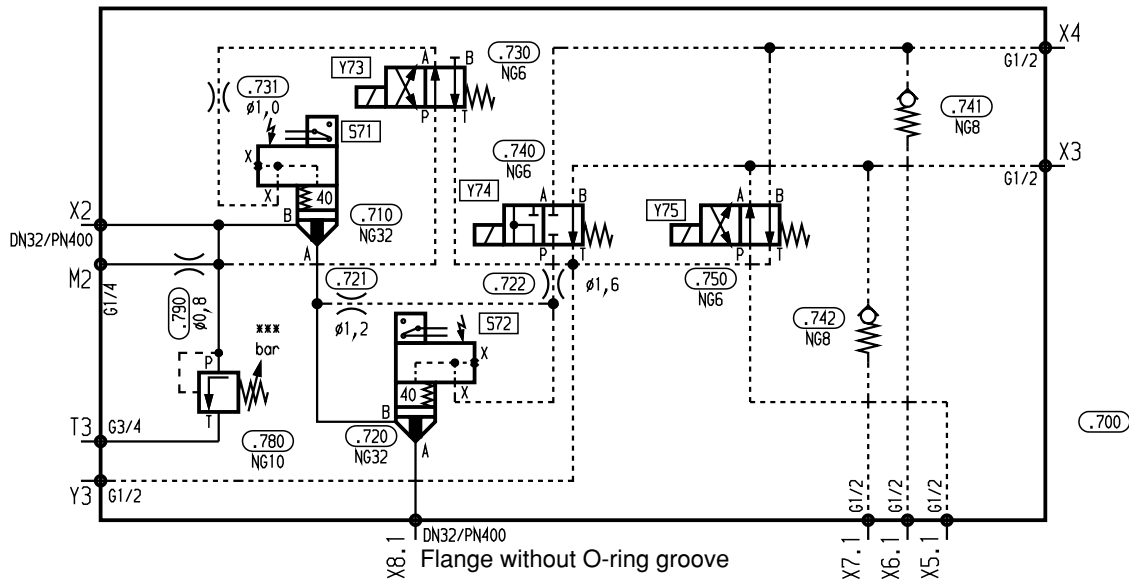


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 1,6 R1/8 DIN 906	RN 115.06
.730	1	Poppet valve, size 6	M-3SEW6U2X/...QAG24	RE 22 048
.731	1	Orifice	DUESE 1,0 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8.1	1	*Flange	DN32PN400 (without O-ring-groove)	
X2	1	*Flange	DN32PN400	PN 013 772
*(Not included in supply; please order separately)				

Module 7

Press Module Size 32
Control Type P
IH04ME32P7A1003-3X/...

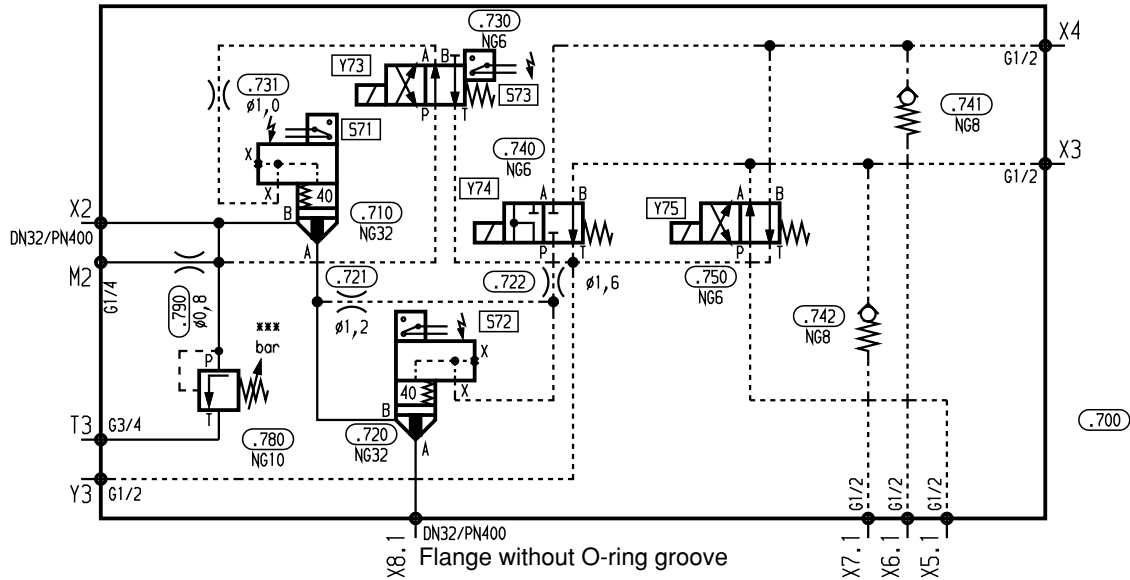


G... = BSP
 NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 1,6 R1/8 DIN 906	RN 115.06
.730	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
.731	1	Orifice	DUESE 1,0 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8.1	1	*Flange	DN32PN400 (without O-ring-groove)	
X2	1	*Flange	DN32PN400	PN 013 772
*(Not included in supply; please order separately)				

Module 7

**Press Module Size 32
Control Type P
IH04ME32P7A1004-3X/...**

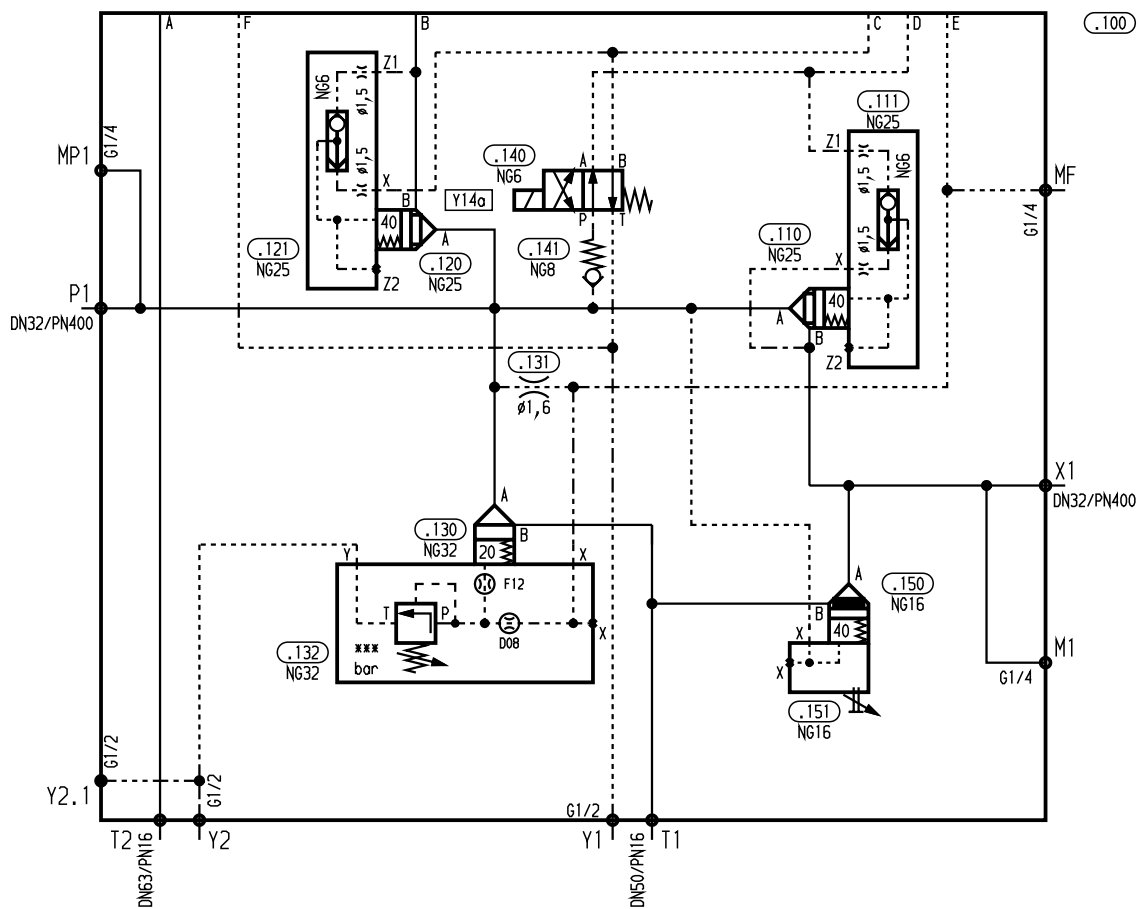


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 32	LFA32E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 1,6 R1/8 DIN 906	RN 115.06
.730	1	Directional control valve, size 6	4WE6D5X/...QAG24	RE 23 177
.731	1	Orifice	DUESE 1,0 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 G1/4-ZYLINDRISCH	AEH.DIN 906
X8.1	1	*Flange	DN32PN400 (without O-ring-groove)	
X2	1	*Flange	DN32PN400	PN 013 772
*(Not included in supply; please order separately)				

Module 1

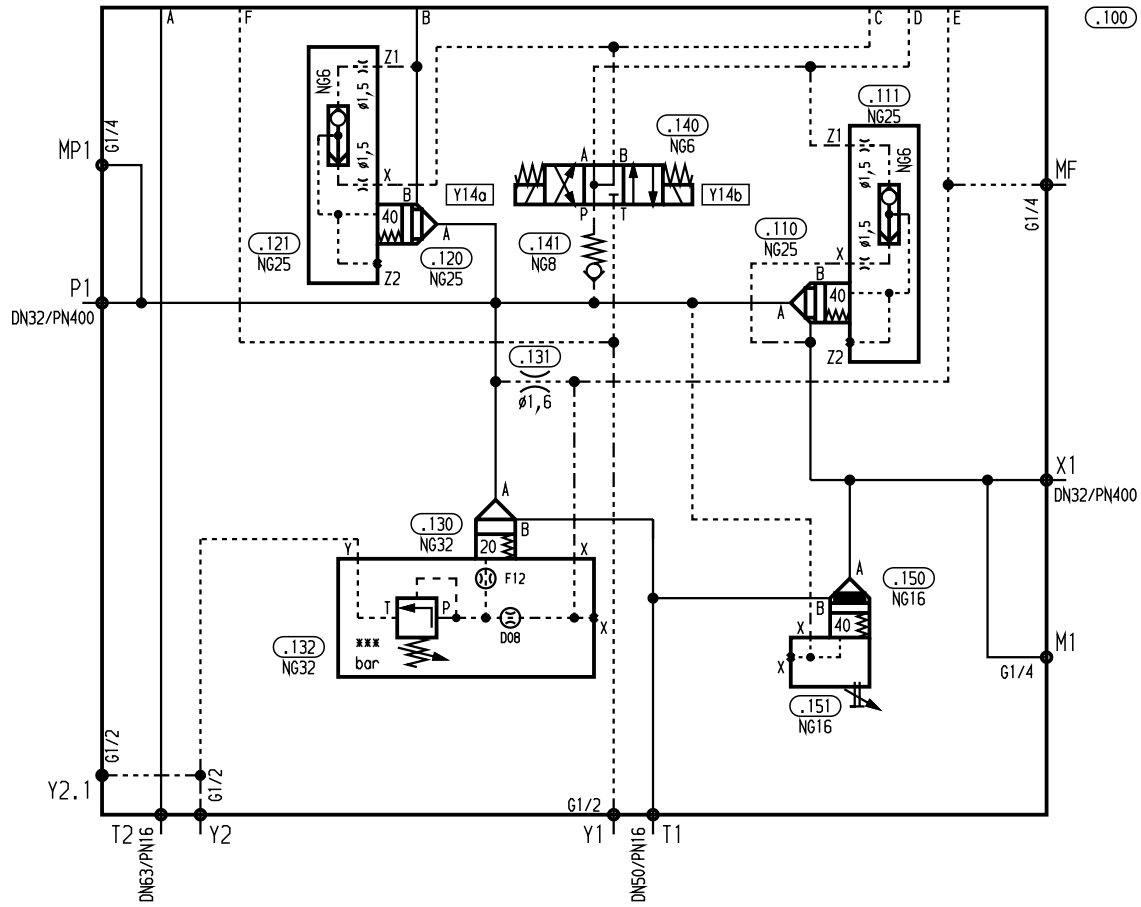
Press Module Size 40-32
Control Type P
IH04M40-32P1A1001-3X/...



Item	Qty.	Description	Type	Further details
.110	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.111	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.120	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.121	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.130	1	Logic element, size 32	LC32DB20E6X/	RE 81 078
.131	1	Orifice	DUESE 1,6 M10x25-45H	DIN 913
.132	1	Cover plate, size 32	LFA32DB2-6X/315	RE 81 078
.140	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.150	1	Logic element, size 16	LC16B40D6X/	RE 81 010
.151	1	Cover plate, size 16	LFA16H2-6X/F	RE 81 010
X1,P1	2	*Flange	DN32PN400	PN 013 772
T2	1	*Flange	DN63PN16	PN 012 336
T1	1	*Flange	DN50PN16	PN 012 939
*(Not included in supply; please order separately)				

Module 1

**Press Module Size 40-32
Control Type P
IH04M40-32P1A1002-3X/...**

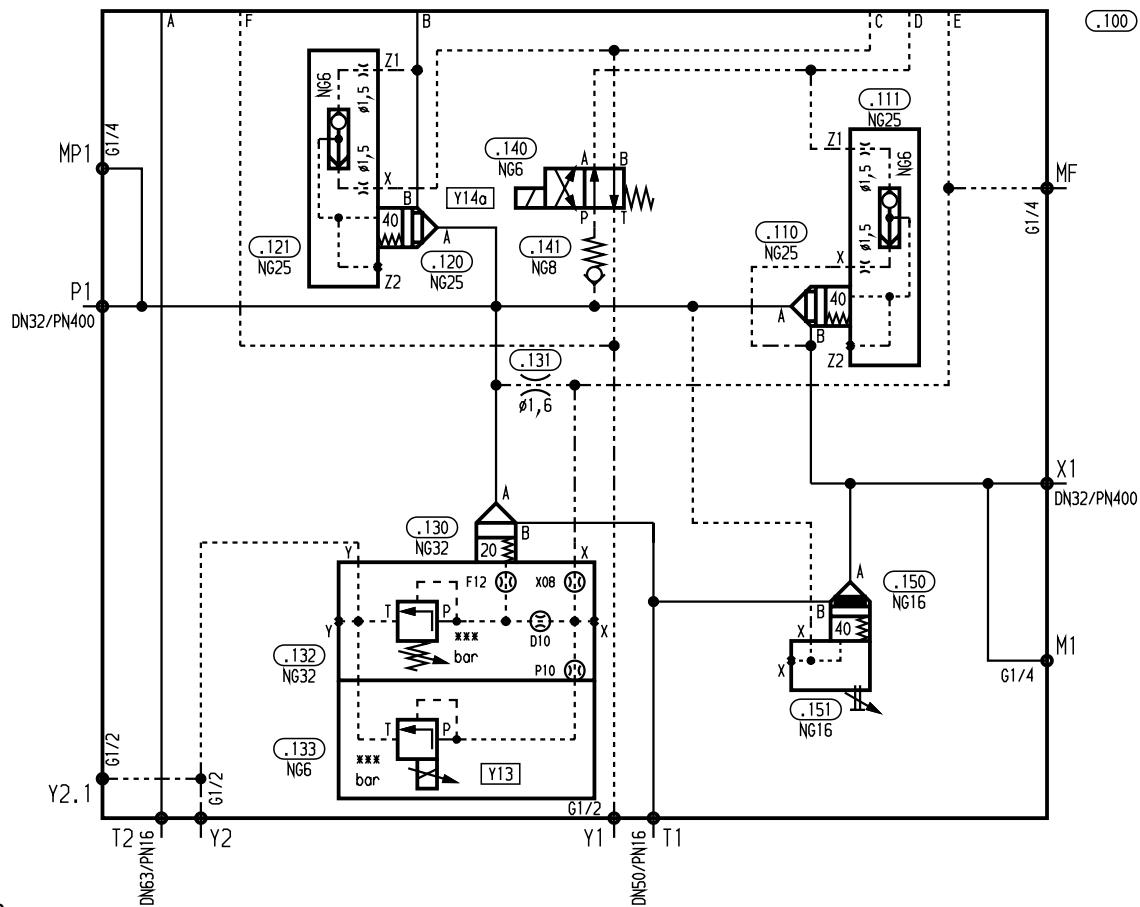


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.110	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.111	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.120	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.121	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.130	1	Logic element, size 32	LC32DB20E6X/	RE 81 078
.131	1	Orifice	DUESE 1,6 M10x25-45H	DIN 913
.132	1	Cover plate, size 32	LFA32DB2-6X/315	RE 81 078
.140	1	Directional control valve, size 6	4WE6M5X/...	RE 23 177
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.150	1	Logic element, size 16	LC16B40D6X/	RE 81 010
.151	1	Cover plate, size 16	LFA16H2-6X/F	RE 81 010
X1,P1	2	*Flange	DN32PN400	PN 013 772
T2	1	*Flange	DN63PN16	PN 012 336
T1	1	*Flange	DN50PN16	PN 012 939
*(Not included in supply; please order separately)				

Module 1

Press Module Size 40-32
Control Type P
IH04M40-32P1A1003-3X/...

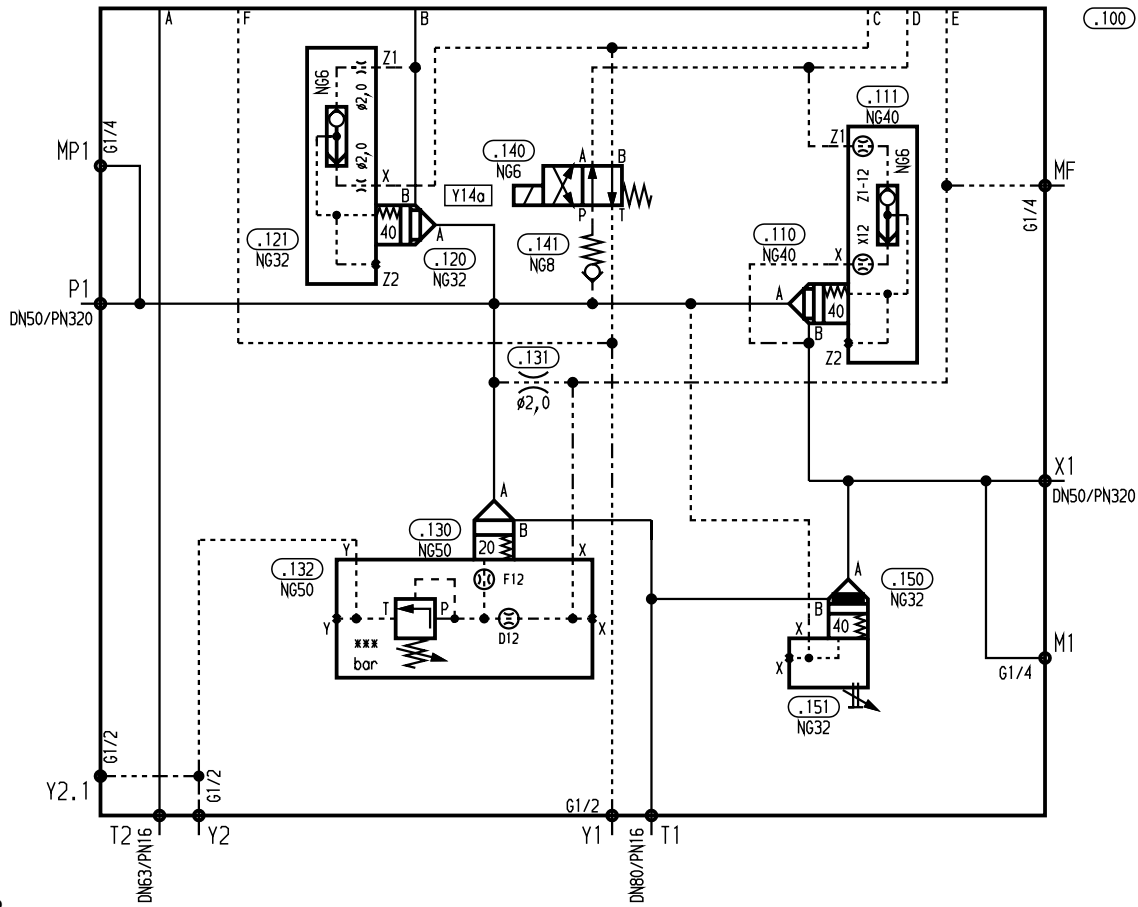


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.110	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.111	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.120	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.121	1	Cover plate, size 25	LFA25G-6X/	RE 81 010
.130	1	Logic element, size 32	LC32DB20E6X/	RE 81 078
.131	1	Orifice	DUESE 1,6 M10x25-45H	DIN 913
.132	1	Cover plate, size 32	LFA32DBEM-6X/315	RE 81 078
.133	1	Proportional pressure relief valve	DBET-5X/315G24-1	RE 29 142
.140	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.150	1	Logic element, size 16	LC16B40D6X/	RE 81 010
.151	1	Cover plate, size 16	LFA16H2-6X/F	RE 81 010
X1,P1	2	*Flange	DN32PN400	PN 013 772
T2	1	*Flange	DN63PN16	PN 012 336
T1	1	*Flange	DN50PN16	PN 012 939
*(Not included in supply; please order separately)				

Module 1

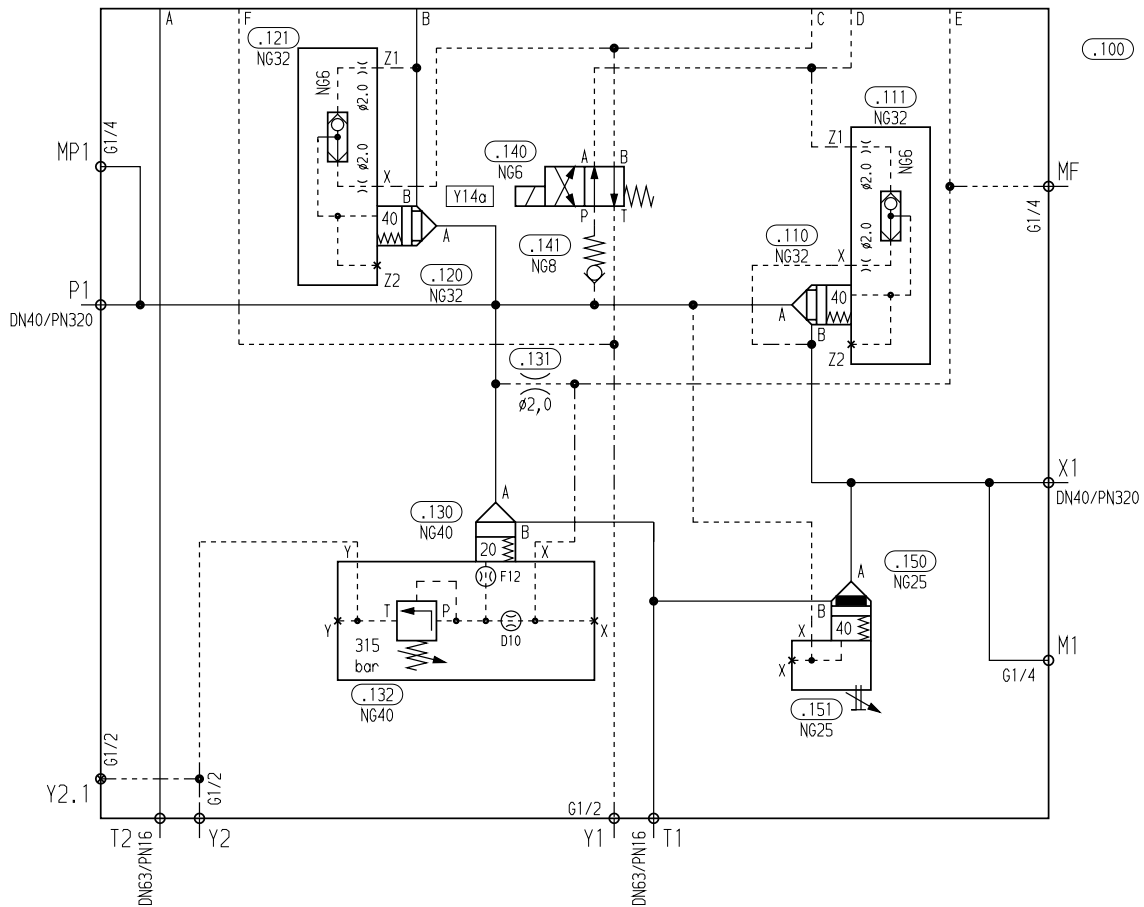
**Press Module Size 40-50
Control Type P
IH04M40-50P1A1001-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.111	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.120	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.121	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.130	1	Logic element, size 50	LC50DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 50	LFA50DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 32	LC32B40D6X/	RE 81 010	
.151	1	Cover plate, size 32	LFA32H2-6X/F	RE 81 010	
X1,P1	2	*Flange	DN50PN320	PN 303 923	RE 45 501
T1	1	*Flange	DN80PN16	PN 012 940	AB 22-15
T2	1	*Flange	DN63PN16	PN 012 336	AB 22-15
*(Not included in supply; please order separately)					

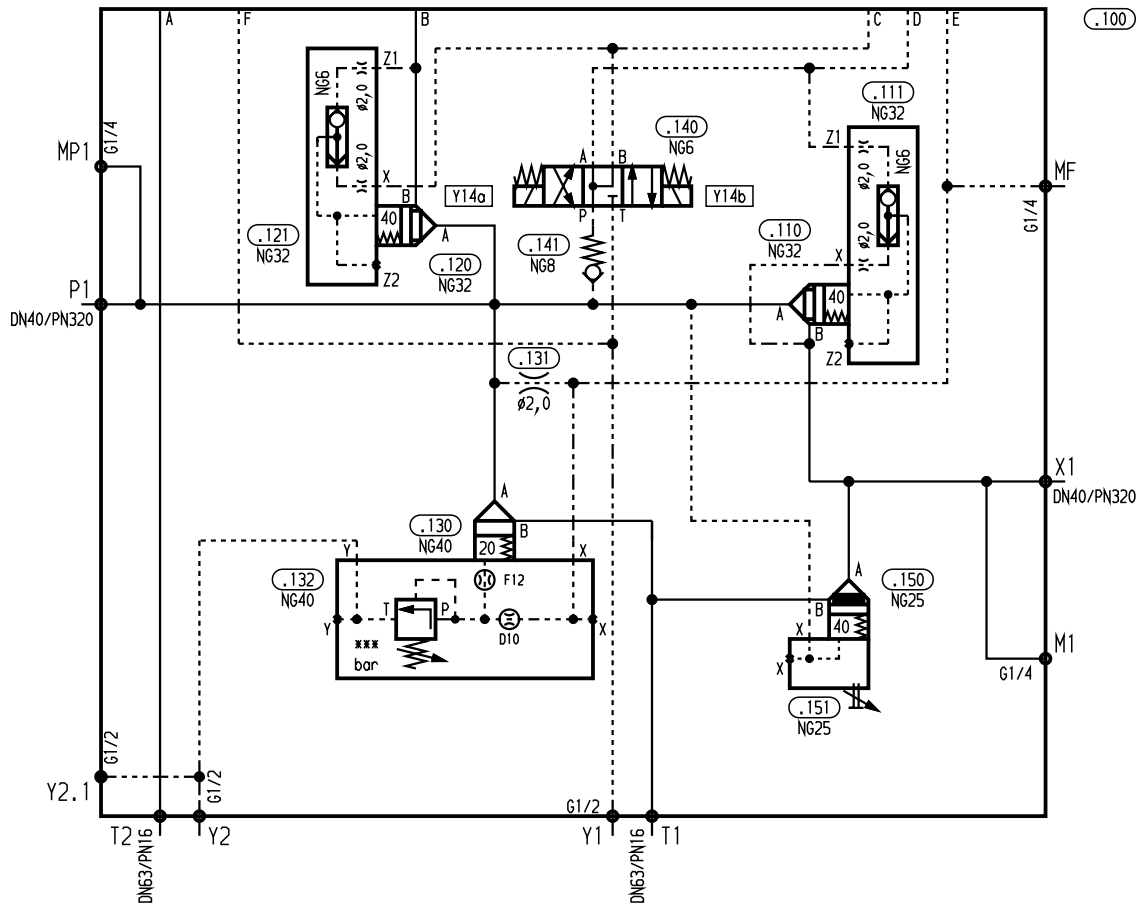
Module 1

**Press Module Size 40
Control Type P
IH04M40P1A1001-3X/...**


Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.111	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.120	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.121	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.130	1	Logic element, size 40	LC40DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 40	LFA40DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 25	LC25B40D6X/	RE 81 010	
.151	1	Cover plate, size 25	LFA25H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN40PN320	PN 303 921	RE 45 501
T1,T2	2	*Flange	DN63PN16	PN 012 336	AB 22-15
*(Not included in supply; please order separately)					

Module 1

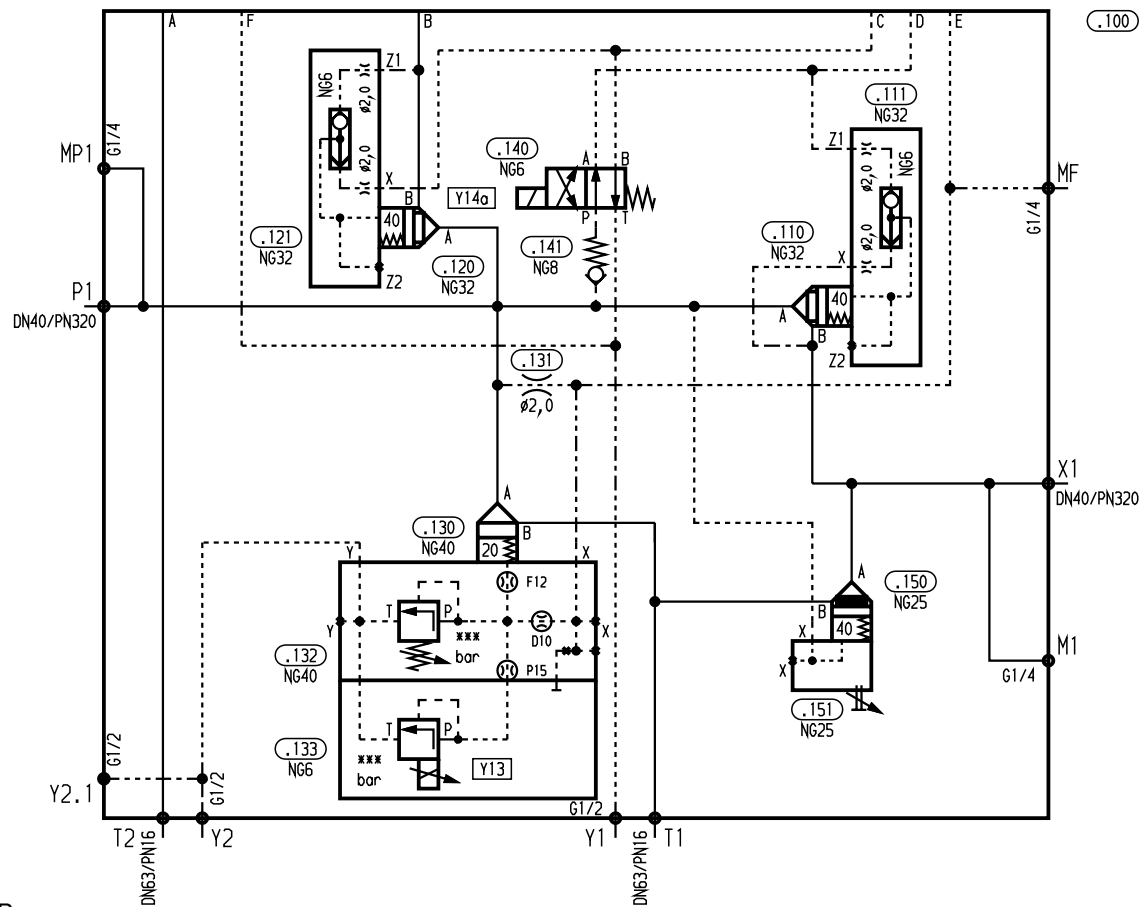
**Press Module Size 40
Control Type P
IH04M40P1A1002-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.111	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.120	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.121	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.130	1	Logic element, size 40	LC40DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 40	LFA40DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6M5X/...	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 25	LC25B40D6X/	RE 81 010	
.151	1	Cover plate, size 25	LFA25H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN40PN320	PN 303 921	RE 45 501
T1,T2	2	*Flange	DN63PN16	PN 012 336	AB 22-15
*(Not included in supply; please order separately)					

Module 1

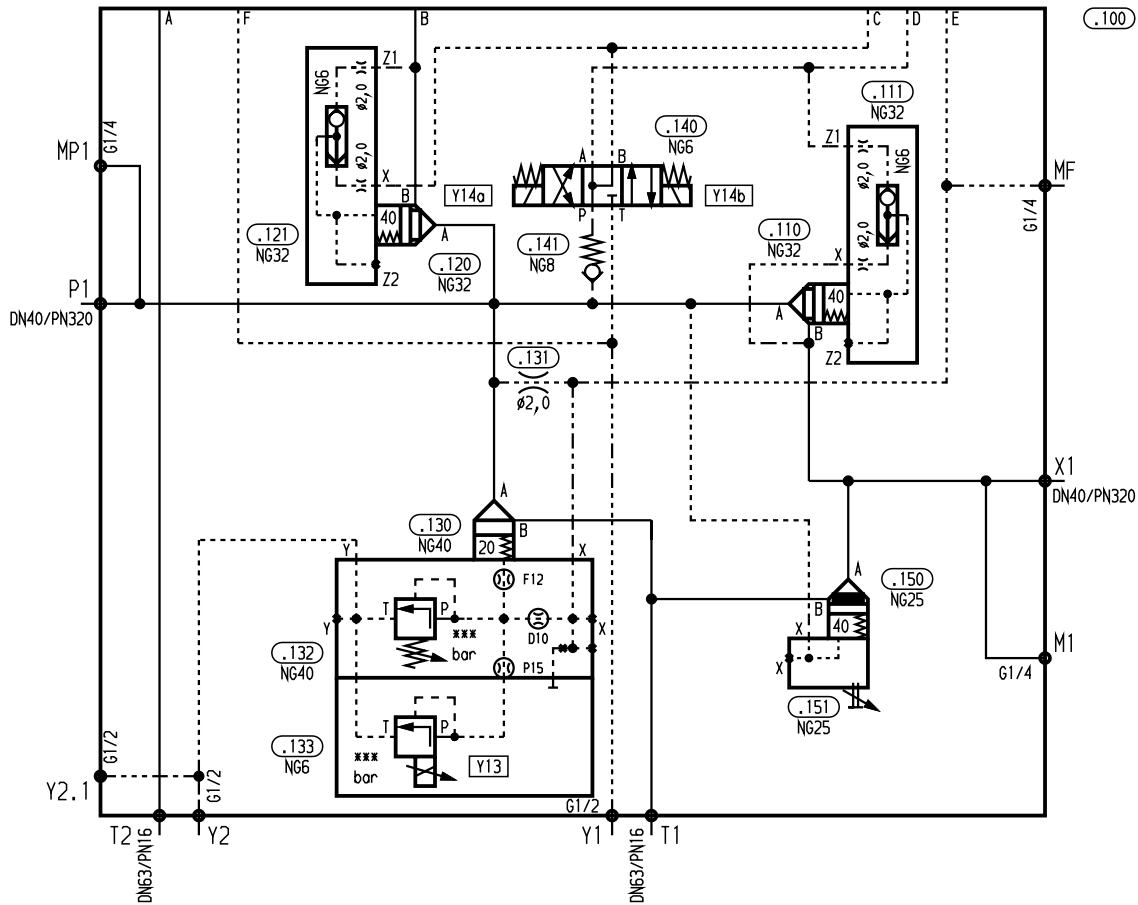
**Press Module Size 40
Control Type P
IH04M40P1A1003-3X/...**


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.111	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.120	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.121	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.130	1	Logic element, size 40	LC40DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 40	LFA40DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure valve	DBET-5X/315G24	RE 29 142	
.140	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 25	LC25B40D6X/	RE 81 010	
.151	1	Cover plate, size 25	LFA25H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN40PN320	PN 303 921	RE 45 501
T1,T2	2	*Flange	DN63PN16	PN 012 336	AB 22-15
*(Not included in supply; please order separately)					

Module 1

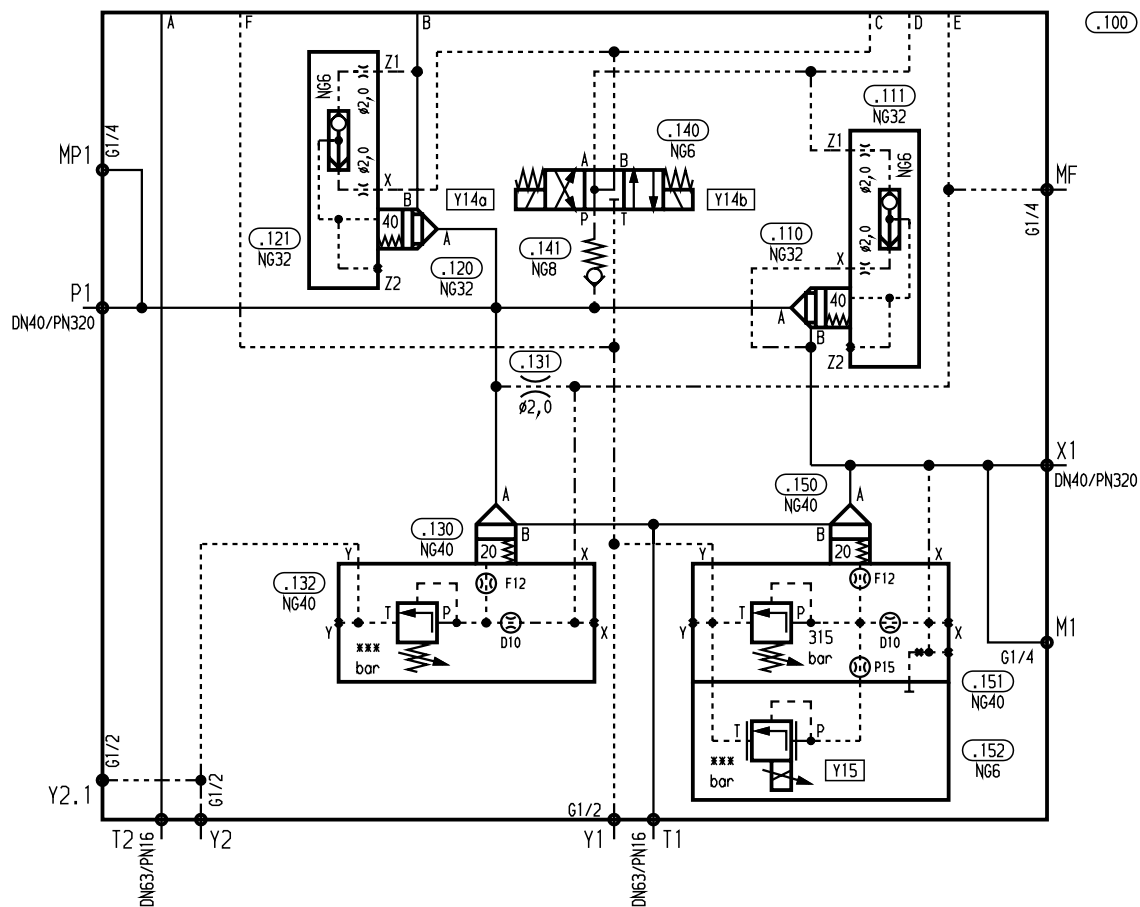
**Press Module Size 40
Control Type P
IH04M40P1A1004-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.111	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.120	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.121	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.130	1	Logic element, size 40	LC40DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 40	LFA40DBEM-6X/315	RE 81 078	
.133	1	Proportional valve	DBET-5X/315G24	RE 29 142	
.140	1	Directional control valve, size 40	4WE6M5X/...	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 25	LC25B40D6X/	RE 81 010	
.151	1	Cover plate, size 25	LFA25H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN40PN320	PN 303 921	RE 45 501
T1,T2	2	*Flange	DN63PN16	PN 012 336	AB 22-15
*(Not included in supply; please order separately)					

Module 1

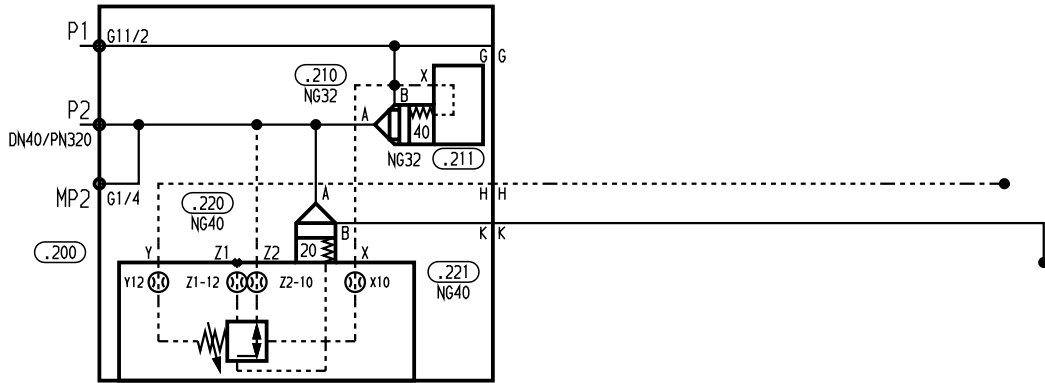
Press Module Size 40
Control Type P
IH04M40P1A1022-3X/...

G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.111	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.120	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.121	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.130	1	Logic element, size 40	LC40DB20E6X	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 40	LFA40DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6M5X/...	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 40	LC40DB20E6X	RE 81 078	
.151	1	Cover plate, size 40	LFA40DBEM-6X/315	RE 81 078	
.152	1	Proportional valve	DBET-5X/315G24-1	RE 29 165	
P1, X1	1	*Flange	DN40PN320	PN 303 921	RE 45 501
T1, T2	1	*Flange	DN63PN16	PN 012 336	AB 22-15
*(Not included in supply; please order separately)					

Module 2

**Press Module Size 40
Control Type P
IH04M40P2A1001-3X/...**

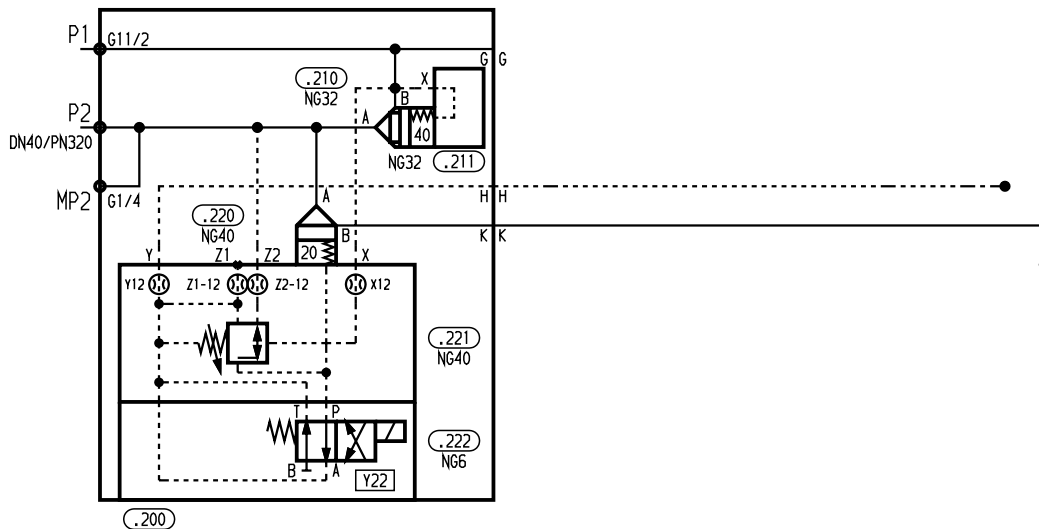


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.210	1	Logic element, size 32	LC32B40E6X/	RE 81 010
.211	1	Cover plate, size 32	LFA32D6X/	RE 81 010
.220	1	Logic element, size 40	LC40DB20E6X/	RE 81 078
.221	1	Logic element, size 40	LFA40DZ2-6X/315X	RE 81 078
P2	1	*Flange	DN40PN320	PN 303 921
*(Not included in supply; please order separately)				

Module 2

**Press Module Size 40
Control Type P
IH04M40P2A1002-3X/...**

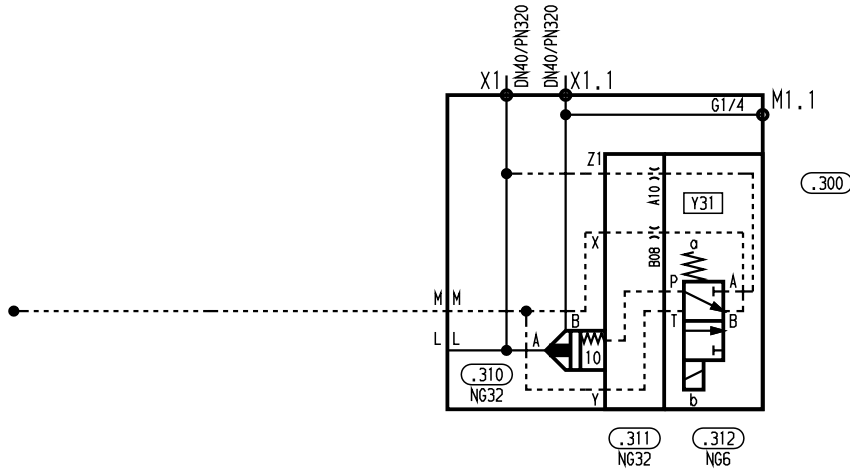


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.210	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.211	1	Cover plate, size 32	LFA32D6X/	RE 81 010	
.220	1	Logic element, size 40	LC40DB20E6X/	RE 81 078	
.221	1	Cover plate, size 40	LFA40DZWB2-6X/315X	RE 81 078	
.222	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177	
P2	1	*Flange	DN40PN320	PN 303 921	RE 45 501
*(Not included in supply; please order separately)					

Module 3

**Press Module Size 40
Control Type P
IH04M40P3A1001-3X/...**

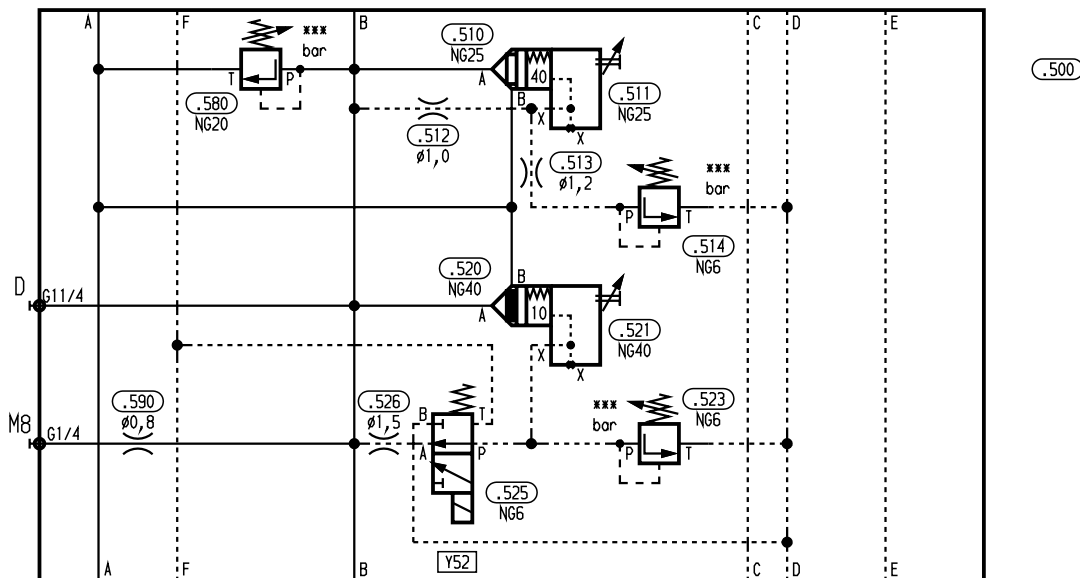


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.310	1	Logic element, size 32	LC32A10E6X/	RE 81 010
.311	1	Cover plate, size 32	LFA32WEA9-6X/A10B08	RE 81 010
.312	1	Directional control valve, size 6	3WE6B9-5X/...	RE 23 177
X1,X1.1	2	*Flange *(Not included in supply; please order separately)	DN40PN320	PN 303 921 RE 45 501

Module 5

**Press Module Size 40
Control Type P
IH04M40P5A1001-3X/...**

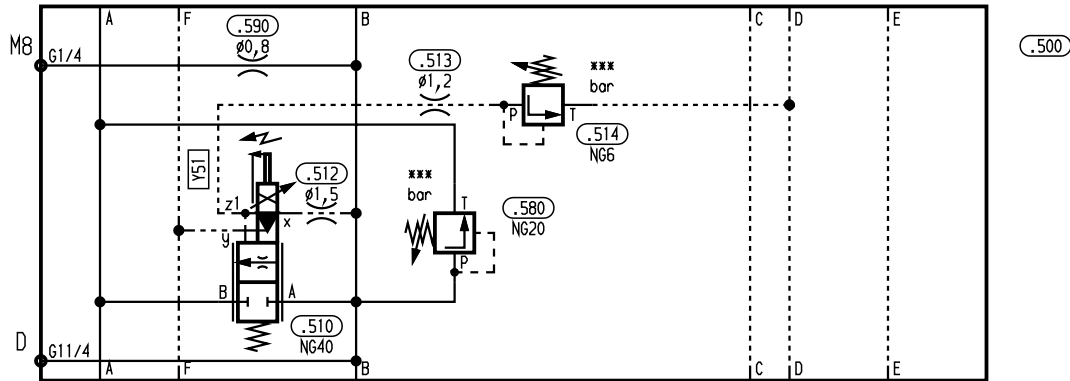


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.510	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.511	1	Cover plate, size 25	LFA25H2-6X/F	RE 81 010
.512	1	Orifice	DUESE 1,0 R1/8 DIN 906	RN 115.06
.513	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402
.520	1	Logic element, size 40	LC40B10D6X/	RE 81 010
.521	1	Cover plate, size 40	LFA40H2-6X/F	RE 81 010
.523	1	Pressure relief valve, size 6	DBDS6K1X/315	RE 25 402
.525	1	Directional control valve, size 6	3WE6A5X/...	RE 23 177
.526	1	Orifice	DUESE 1,5 R1/8 DIN 906	RN 115.06
.580	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.590	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8	1	*Flange Only necessary if control module 5 is included in the control. (See page 11.) *(Not included in supply; please order separately)	DN40PN320	PN 303 921 RE 45 501

Module 5

**Press Module Size 40
Control Type P
IH04M40P5B1001-3X/...**

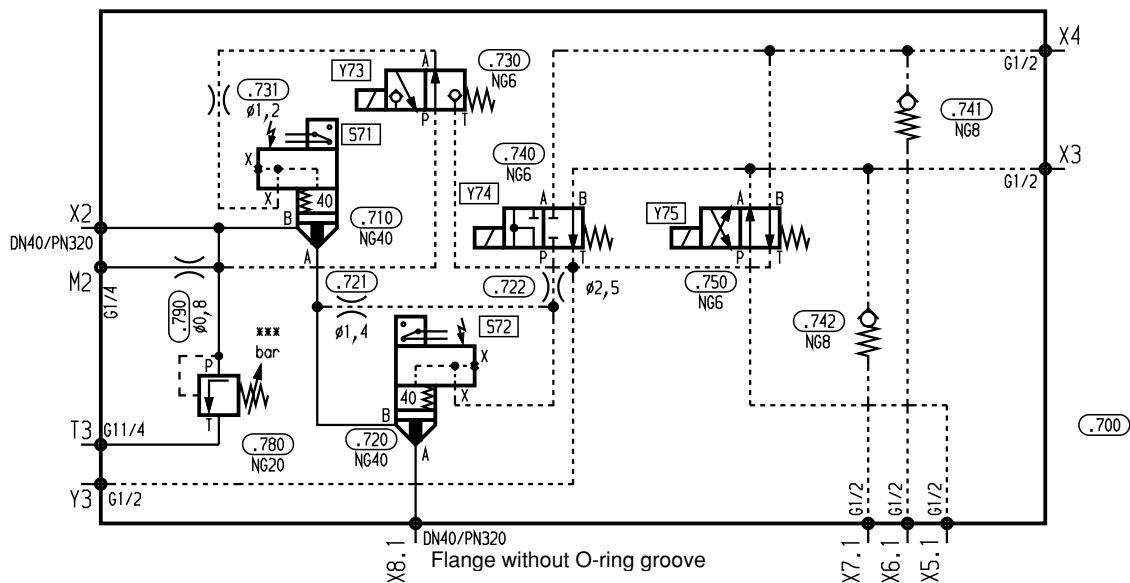


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.510	1	Proportional throttle valve, size 40	FE40C1X/670LM-7	RE 29 204
.512	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.513	1	Orifice	DUESE 1,5 R1/8 DIN 906	RN 115.06
.514	1	Pressure relief valve, size 6	DBDS6K1X/315	RE 25 402
.580	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.590	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8	1	*Flange Only necessary if control module 5 is included in the control. (See page 11.) *(Not included in supply; please order separately)	DN40PN320	PN 303 921 RE 45 501

Module 7

**Press Module Size 40
Control Type P
IH04M40P7A1001-3X/...**



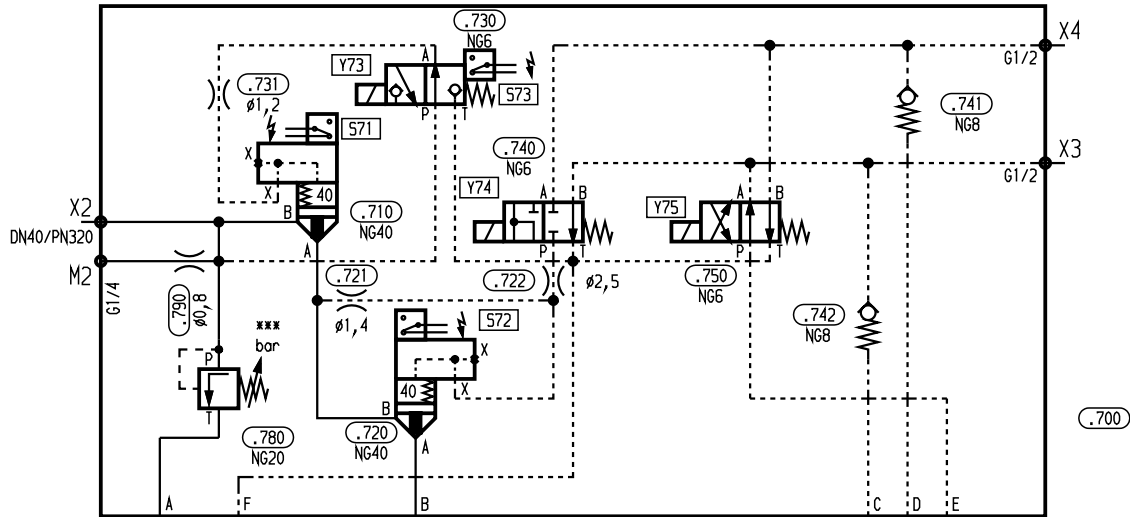
G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.710	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010	
.720	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010	
.721	1	Orifice	DUESE 1,4 R1/8 DIN 906	RN 115.06	
.722	1	Orifice	DUESE 2,5 R1/8 DIN 906	RN 115.06	
.730	1	Poppet valve, size 6	M-3SEW6U2X/...	RE 22 048	
.731	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06	
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177	
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177	
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402	
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906	
X2	1	*Flange	DN40PN320	PN 303 921	RE 45 501

*(Not included in supply; please order separately)

Module 7

**Press Module Size 40
Control Type P
IH04M40P7A1002-3X/...**

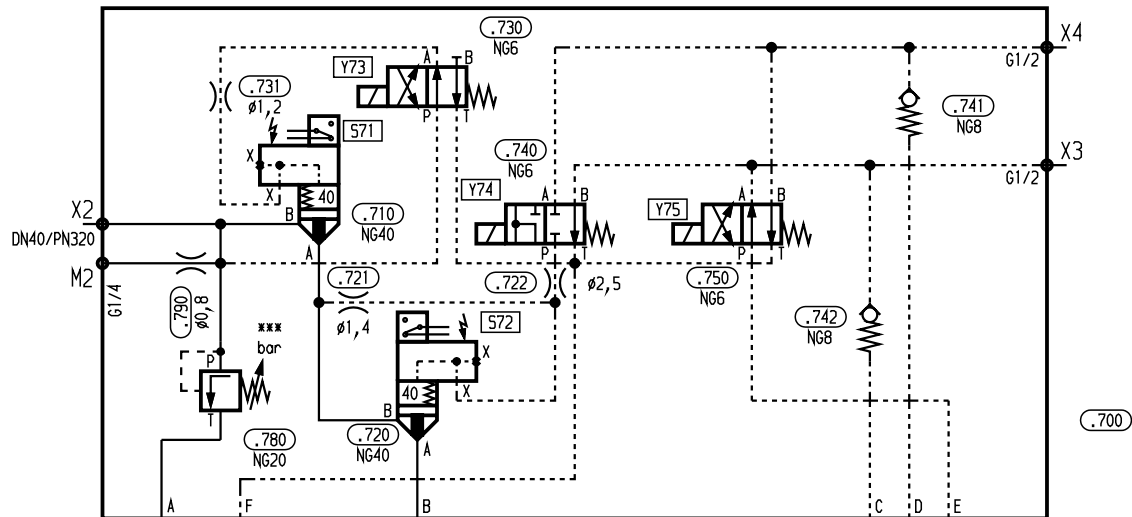


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.710	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010	
.720	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010	
.721	1	Orifice	DUESE 1,4 R1/8 DIN 906	RN 115.06	
.722	1	Orifice	DUESE 2,5 R1/8 DIN 906	RN 115.06	
.730	1	Poppet valve, size 6	M-3SEW6U2X/...QAG24	RE 22 048	
.731	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06	
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177	
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177	
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402	
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906	
X2	1	*Flange	DN40PN320	PN 303 921	RE 45 501

*(Not included in supply; please order separately)

Module 7

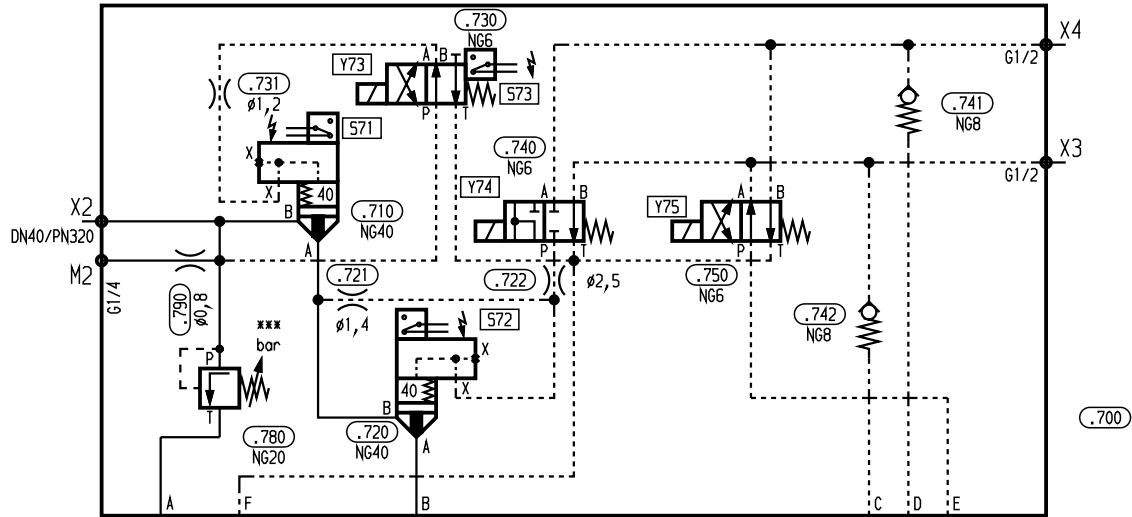
Press Module Size 40
Control Type P
IH04M40P7A1003-3X/...

G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,4 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 2,5 R1/8 DIN 906	RN 115.06
.730	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
.731	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X2	1	*Flange	DN40PN320	PN 303 921
*(Not included in supply; please order separately)				

Module 7

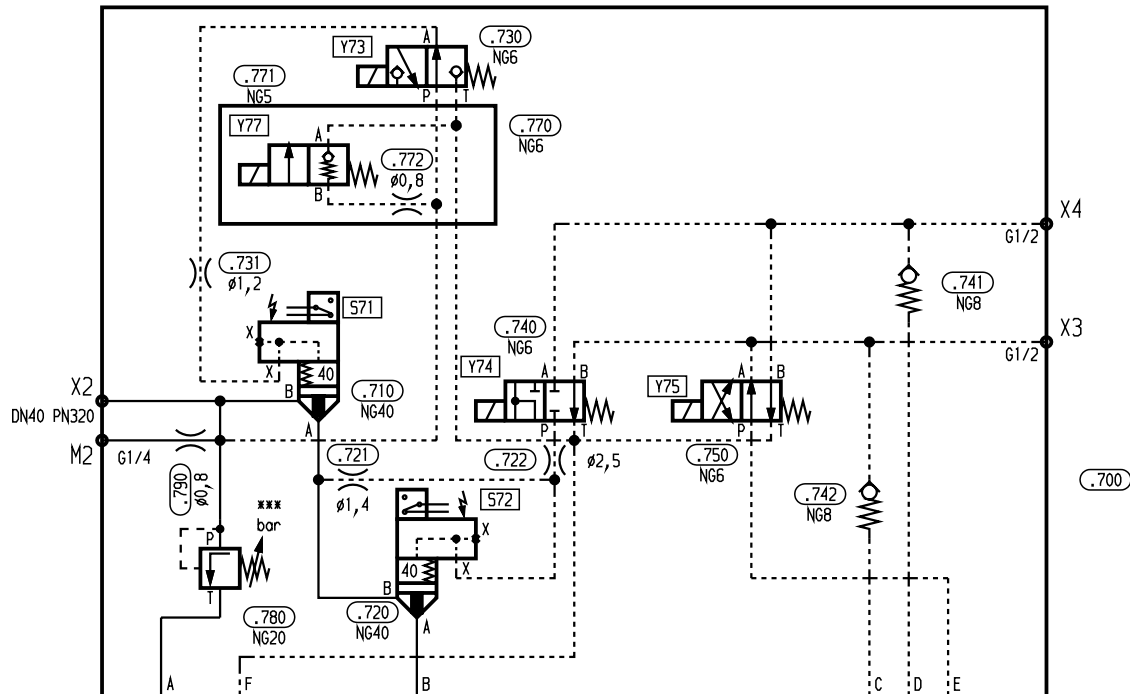
**Press Module Size 40
Control Type P
IH04M40P7A1004-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.710	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010	
.720	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010	
.721	1	Orifice	DUESE 1,4 R1/8 DIN 906	RN 115.06	
.722	1	Orifice	DUESE 2,5 R1/8 DIN 906	RN 115.06	
.730	1	Directional control valve, size 6	4WE6D5X/...QAG24	RE 23 177	
.731	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06	
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177	
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177	
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402	
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906	
X2	1	*Flange	DN40PN320	PN 303 921	RE 45 501
*(Not included in supply; please order separately)					

Module 7

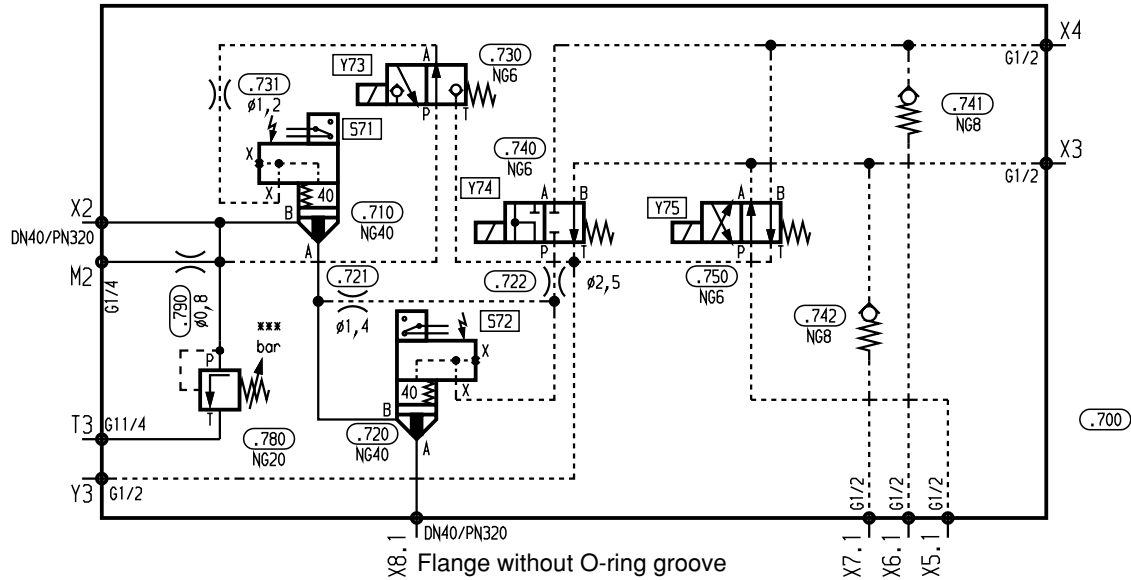
Press Module Size 40
Control Type P
IH04M40P7A1003-3X/...

G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,4 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 2,5 R1/8 DIN 906	RN 115.06
.730	1	Poppet valve, size 6	M-3SEW6U2X/...	RE 22 048
.731	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 40	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.770	1	Sandwich plate, size 6	HSZ06A559-3X	RE 48 050
.771	1	2/2-way poppet valve	FL-2SV5E2Z.0/	
.772	1	Orifice	DUESE 0,8 R1/8 DIN 906	RN 115.06
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X2	1	*Flange	DN40PN320	PN 303 921
*(Not included in supply; please order separately)				

Module 7

**Press Module Size 40
Control Type P
IH04ME40P7A1001-3X/...**

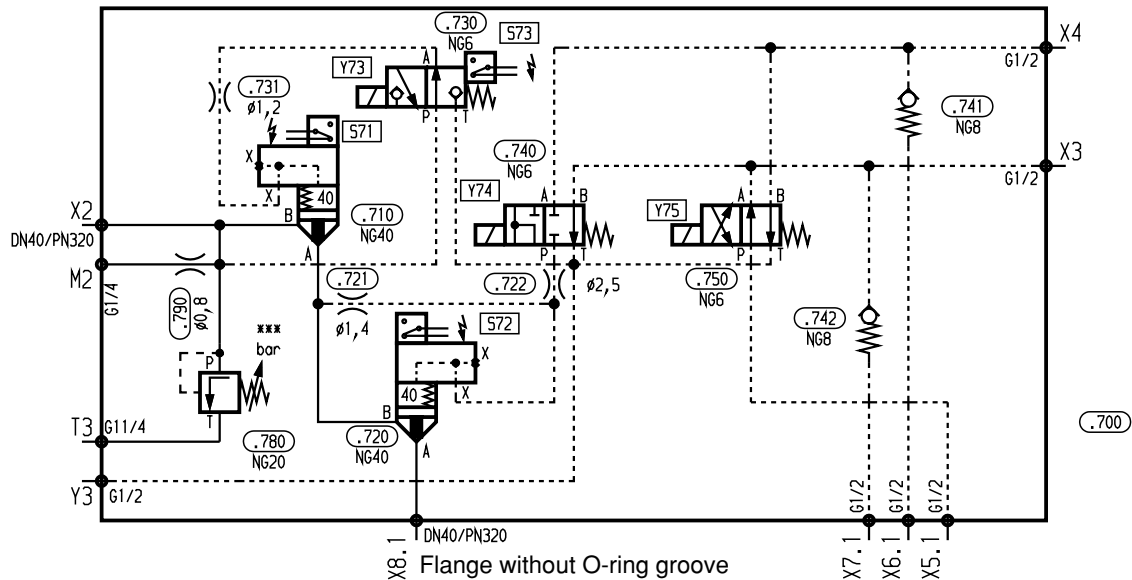


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,4 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 2,5 R1/8 DIN 906	RN 115.06
.730	1	Poppet valve, size 6	M-3SEW6U2X/...	RE 22 048
.731	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8.1	1	*Flange	DN40PN320 (without O-ring-groove)	PN 541 401 RE 45 501
X2	1	*Flange	DN40PN320	PN 303 921 RE 45 501
*(Not included in supply; please order separately)				

Module 7

**Press Module Size 40
Control Type P
IH04ME40P7A1002-3X/...**



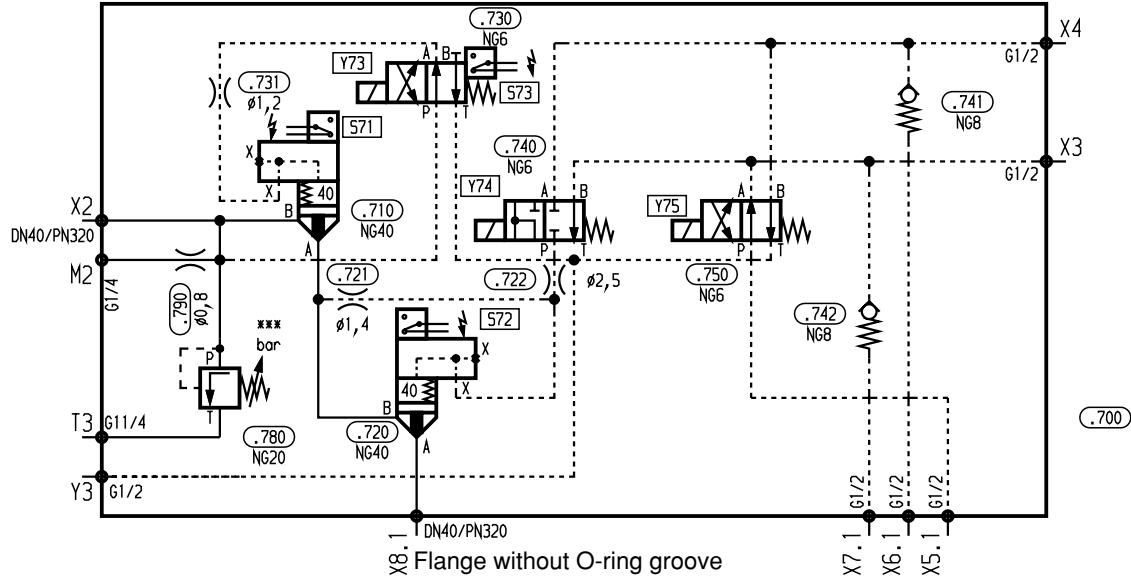
G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,4 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 2,5 R 1/8 DIN 906	RN 115.06
.730	1	Poppet valve, size 6	M-3SEW6U2X/...QAG24	RE 22 048
.731	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8.1	1	*Flange	DN40PN320 (without O-ring-groove)	PN 541 401 RE 45 501
X2	1	*Flange	DN40PN320	PN 303 921 RE 45 501

*(Not included in supply; please order separately)

Module 7

**Press Module Size 40
Control Type P
IH04ME40P7A1003-3X/...**

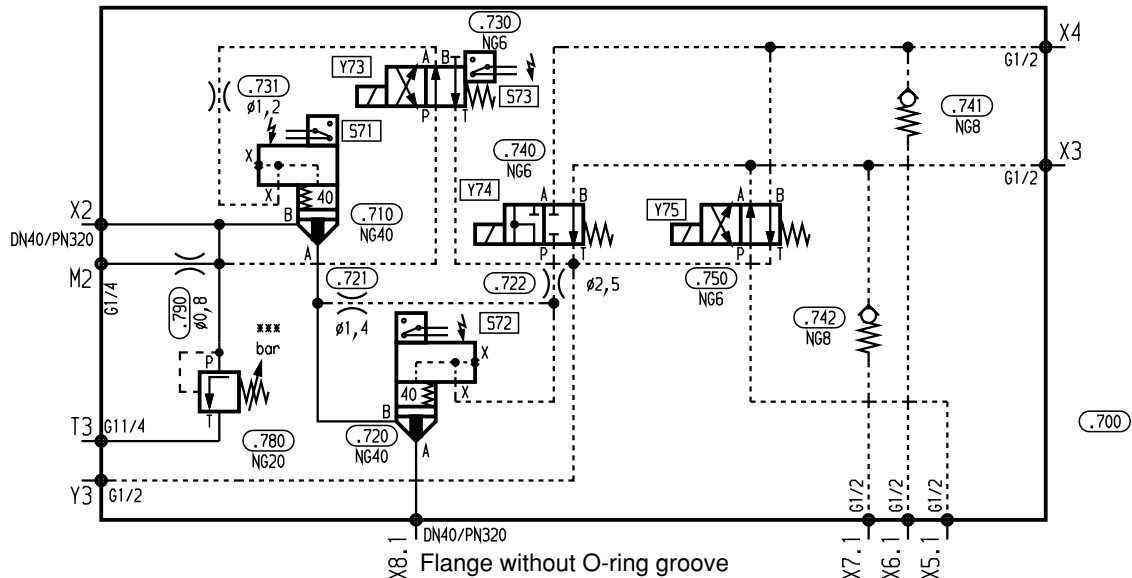


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,4 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 2,5 R1/8 DIN 906	RN 115.06
.730	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177
.731	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8.1	1	*Flange	DN40PN320 (without O-ring-groove)	PN 541 401 RE 45 501
X2	1	*Flange	DN40PN320	PN 303 921 RE 45 501
*(Not included in supply; please order separately)				

Module 7

**Press Module Size 40
Control Type P
IH04ME40P7A1004-3X/...**

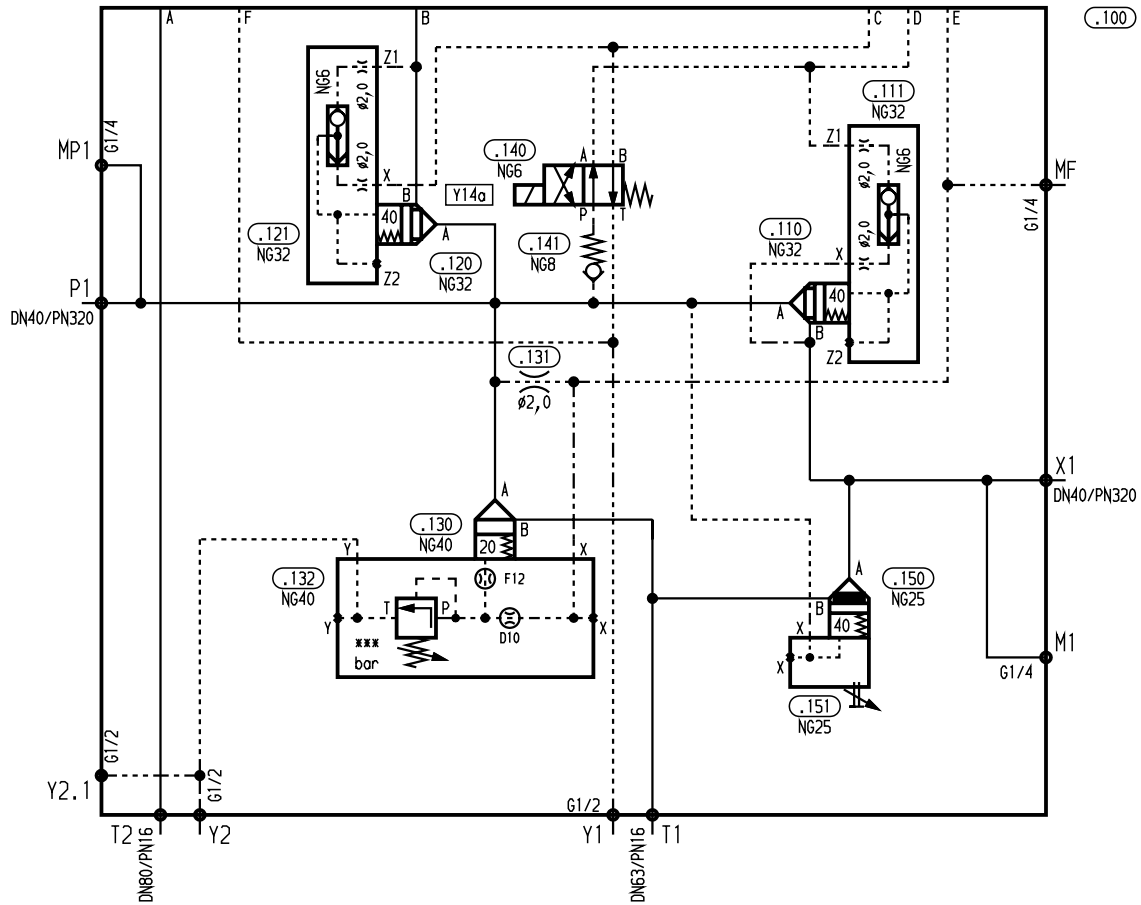


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 40	LFA40E-6X/CA40DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,4 R1/8 DIN 906	RN 115.06
.722	1	Orifice	DUESE 2,5 R1/8 DIN 906	RN 115.06
.730	1	Directional control valve, size 6	4WE6D5X/...QAG24	RE 23 177
.731	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
X8.1	1	*Flange	DN40PN320 (without O-ring-groove)	PN 541 401
X2	1	*Flange	DN40PN320	PN 303 921
*(Not included in supply; please order separately)				

Module 1

**Press Module Size 50-40
Control Type P
IH04M50-40P1A1001-3X/...**

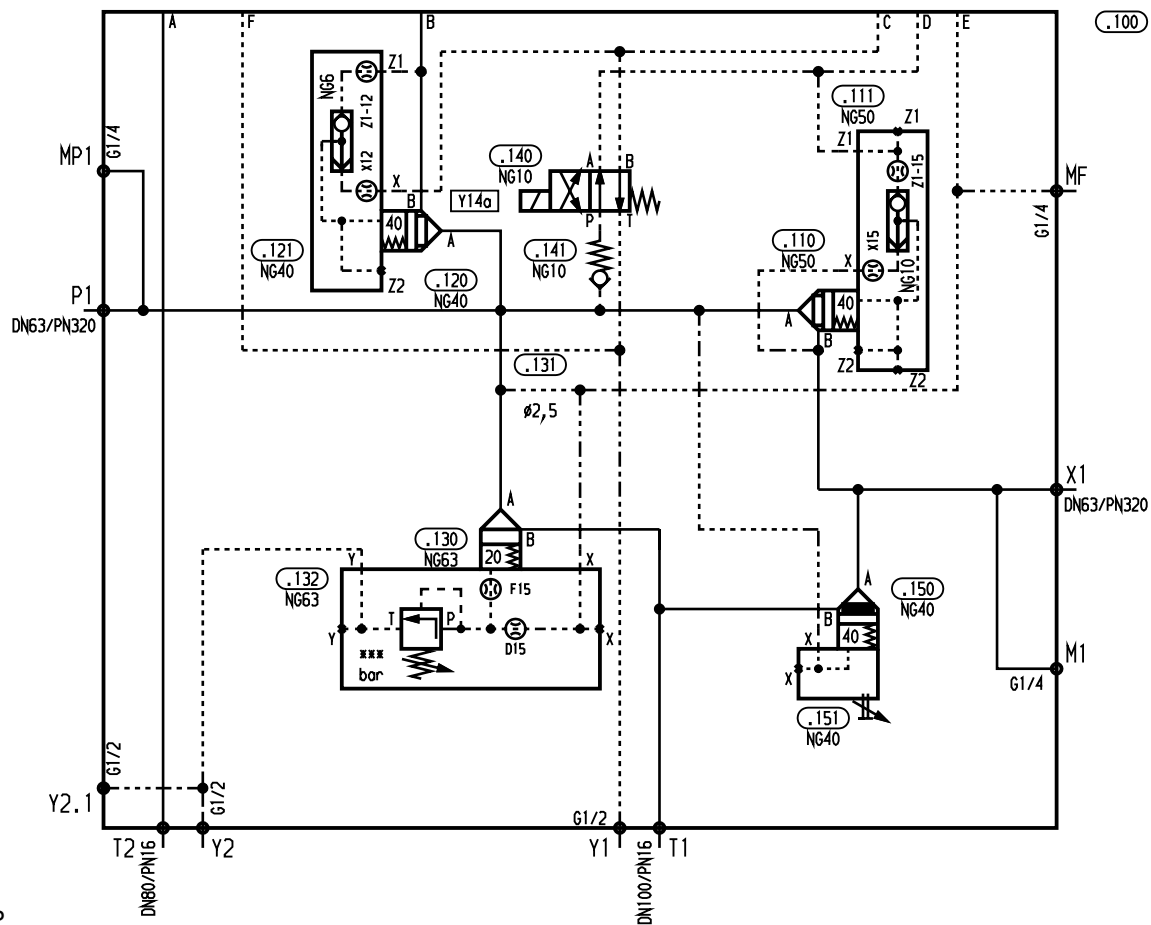


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.111	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.120	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.121	1	Cover plate, size 32	LFA32G-6X/	RE 81 010	
.130	1	Logic element, size 40	LC40DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 40	LFA40DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6D5X/	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/		
.150	1	Logic element, size 25	LC25B40D6X/	RE 81 010	
.151	1	Cover plate, size 25	LFA25H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN40PN320	PN 303 921	RE 45 501
T2	1	*Flange	DN80PN16	PN 012 940	AB 22-15
T1	1	*Flange	DN63PN16	PN 012 336	AB 22-15
*(Not included in supply; please order separately)					

Module 1

Press Module Size 50-63
Control Type P
IH04M50-63P1A1001-3X/...

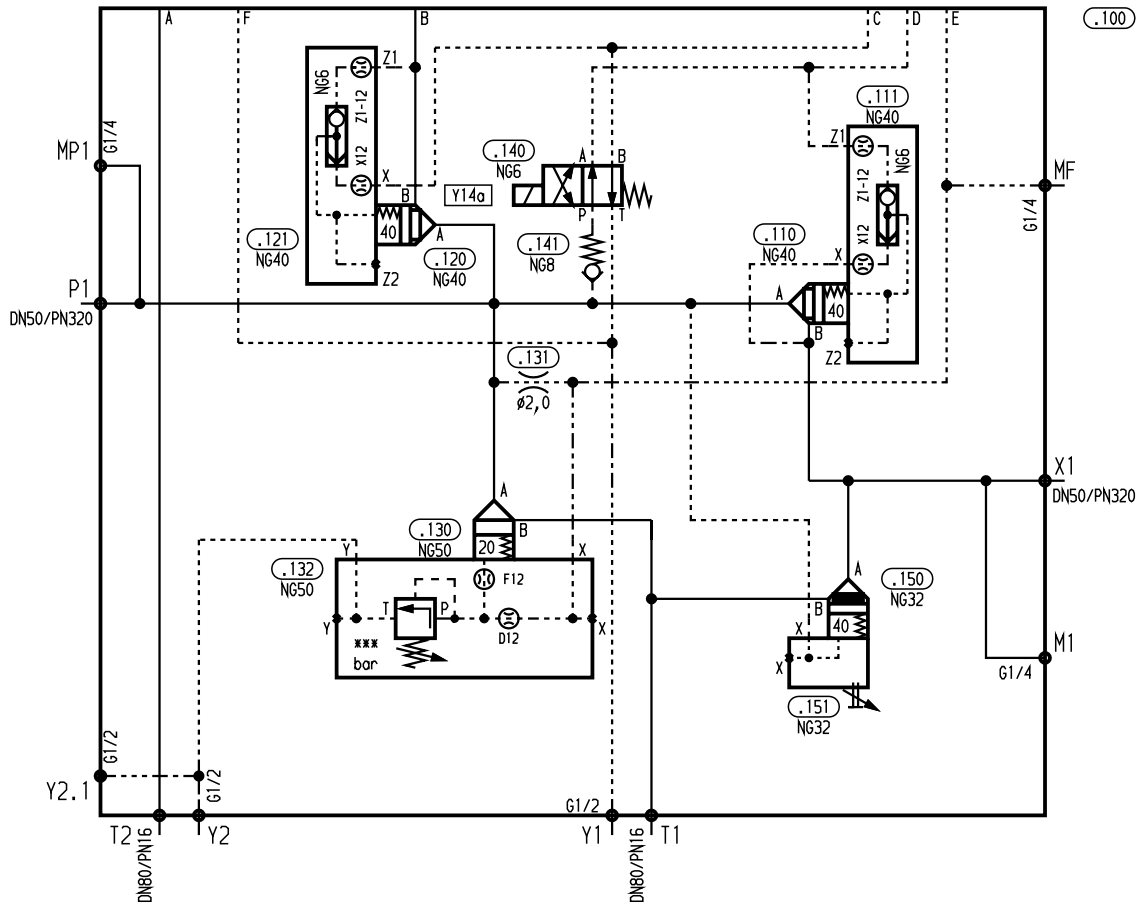


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/	RE 81 010	
.111	1	Cover plate, size 50	LFA50G-6X/	RE 81 010	
.120	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.121	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,5 M10x25-45H	DIN 916	
.132	1	Cover plate, size 63	LFA63DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 10	4WE10D3X/...	RE 23 316	
.141	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.150	1	Logic element, size 40	LC40B40D6X/	RE 81 010	
.151	1	Cover plate, size 40	LFA40H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T2	1	*Flange	DN80PN16	PN 012 940	AB 22-15
T1	1	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately)					

Module 1

**Press Module Size 50
Control Type P
IH04M50P1A1001-3X/...**

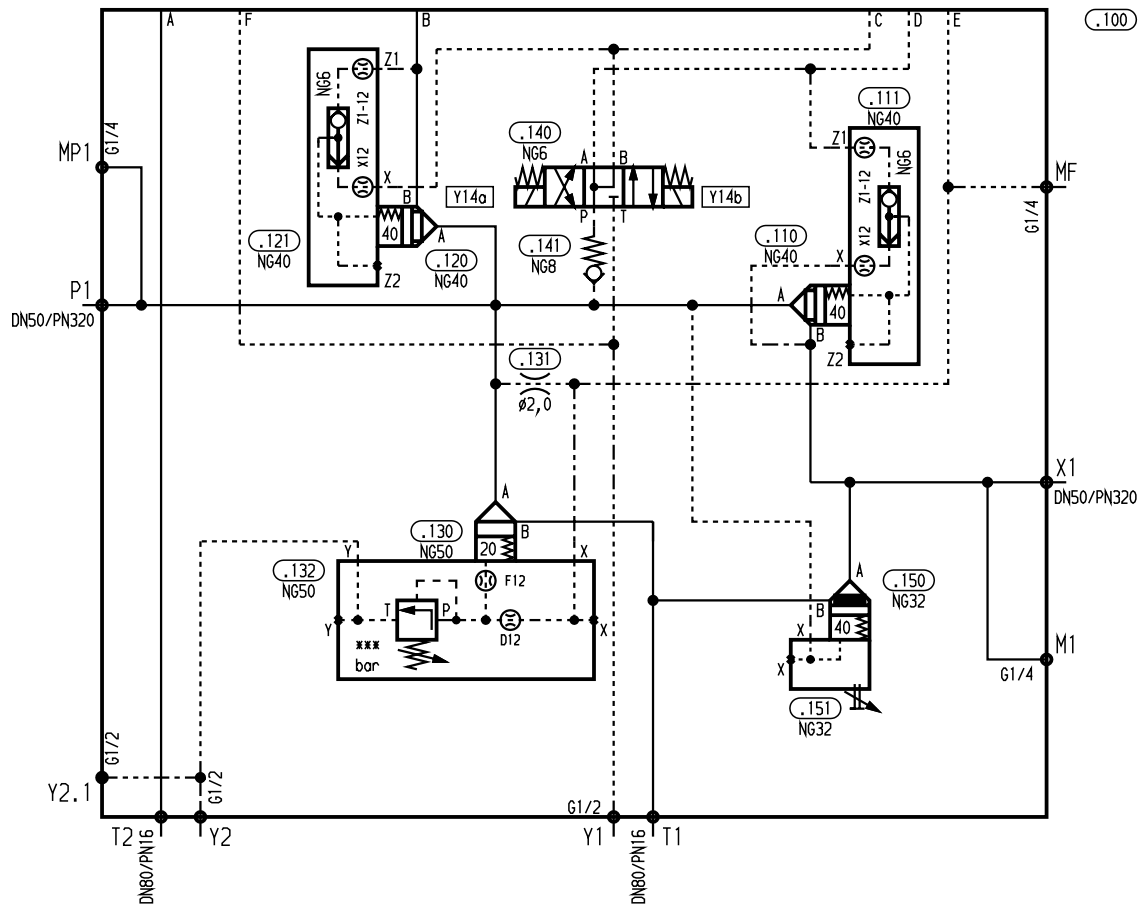


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.111	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.120	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.121	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.130	1	Logic element, size 50	LC50DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 50	LFA50DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6D5X/	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 32	LC32B40D6X/	RE 81 010	
.151	1	Cover plate, size 32	LFA32H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN50PN320	PN 303 923	RE 45 501
T1,T2	2	*Flange	DN80PN16	PN 012 940	AB 22-15
*(Not included in supply; please order separately)					

Module 1

**Press Module Size 50
Control Type P
IH04M50P1A1002-3X/...**

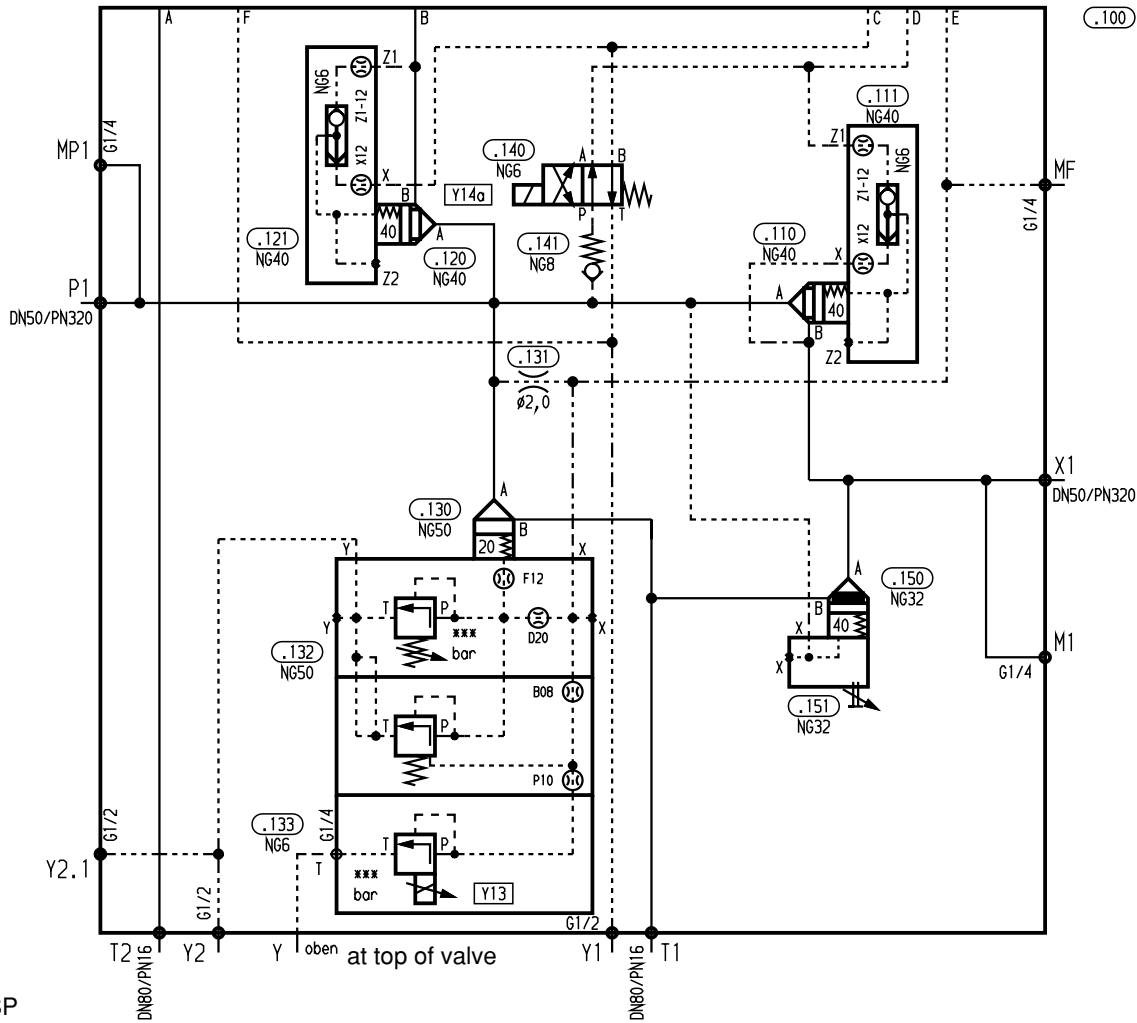


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.111	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.120	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.121	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.130	1	Logic element, size 50	LC50DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 50	LFA50DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6M5X/	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 32	LC32B40D6X/	RE 81 010	
.151	1	Cover plate, size 32	LFA32H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN50PN320	PN 303 923	RE 45 501
T1,T2	2	*Flange	DN80PN16	PN 012 940	AB 22-15
*(Not included in supply; please order separately)					

Module 1

**Press Module Size 50
Control Type P
IH04M50P1A1003-3X/...**

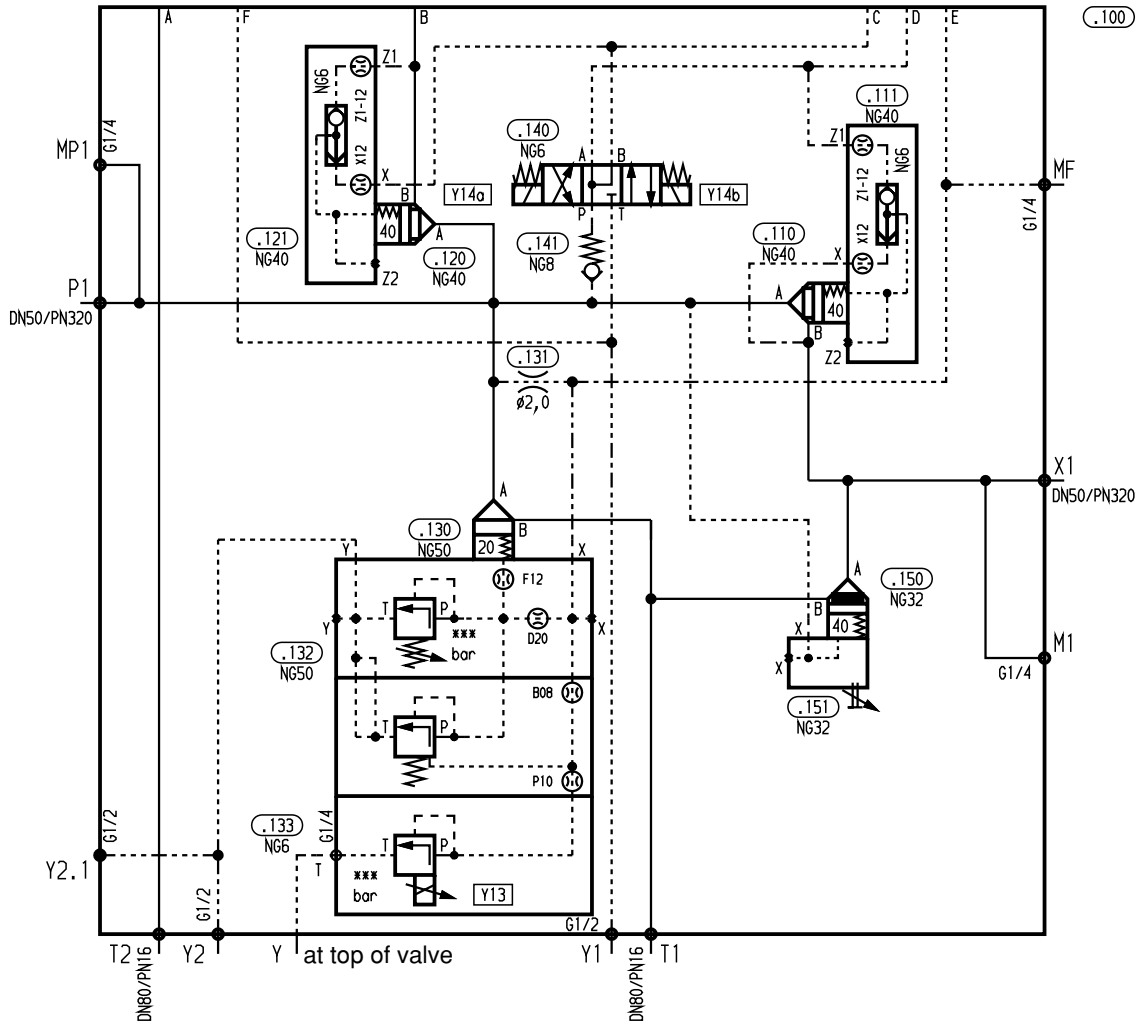


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.111	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.120	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.121	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.130	1	Logic element, size 50	LC50DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 50	LFA50DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 6	4WE6D5X/	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 32	LC32B40D6X/	RE 81 010	
.151	1	Cover plate, size 32	LFA32H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN50PN320	PN 303 923	RE 45 501
T1,T2	2	*Flange	DN80PN16	PN 012 940	AB 22-15
*(Not included in supply; please order separately)					

Module 1

**Press Module Size 50
Control Type P
IH04M50P1A1004-3X/...**

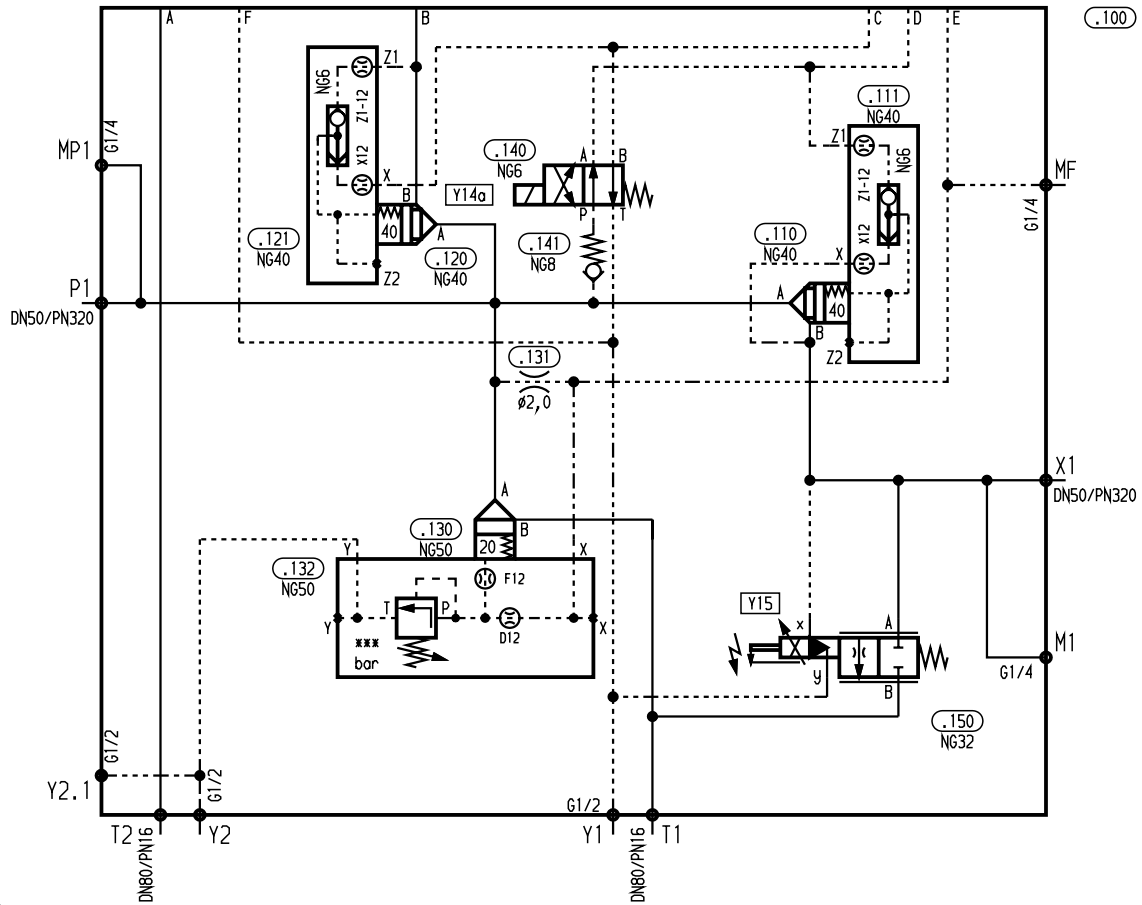


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.111	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.120	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.121	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.130	1	Logic element, size 50	LC50DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 50	LFA50DBEM-6X/315	RE 81 078	
.133	1	Proportional valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 6	4WE6M5X/...	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 32	LC32B40D6X/	RE 81 010	
.151	1	Cover plate, size 32	LFA32H2-6X/F	RE 81 010	
P1,X1	2	*Flange	DN50PN320	PN 303 923	RE 45 501
T1,T2	2	*Flange	DN80PN16	PN 012 940	AB 22-15
*(Not included in supply; please order separately)					

Module 1

**Press Module Size 50
Control Type P
IH04M50P1A1001-3X/...**

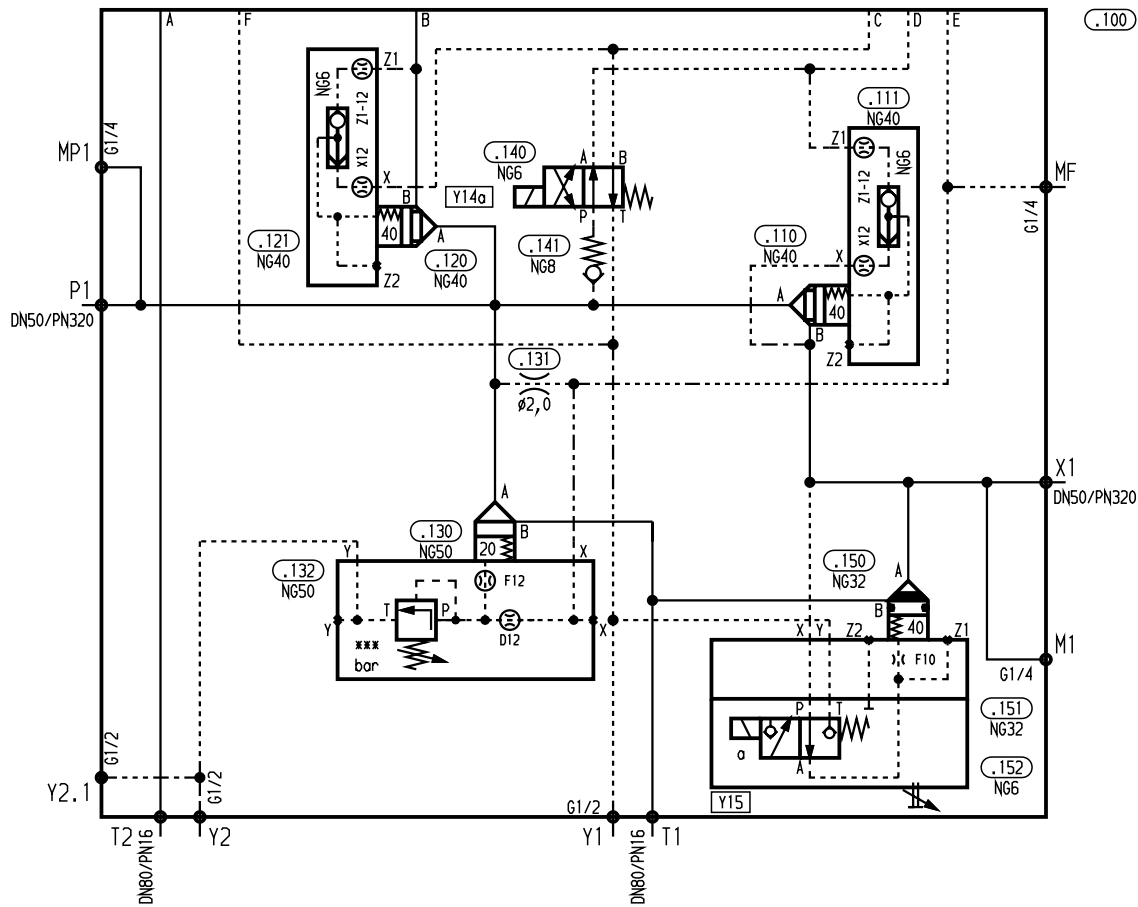


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.111	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.120	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.121	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.130	1	Logic element, size 50	LC50DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 50	LFA50DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6D5X/	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Proportional throttle valve, size 32	FE32C1X/450LM	RE 29 204	
P1,X1	2	*Flange	DN50PN320	PN 303 923	RE 45 501
T1,T2	2	*Flange	DN80PN16	PN 012 940	AB 22-15
*(Not included in supply; please order separately)					

Module 1

**Press Module Size 50
Control Type P
IH04M50P1A1001-3X/...**

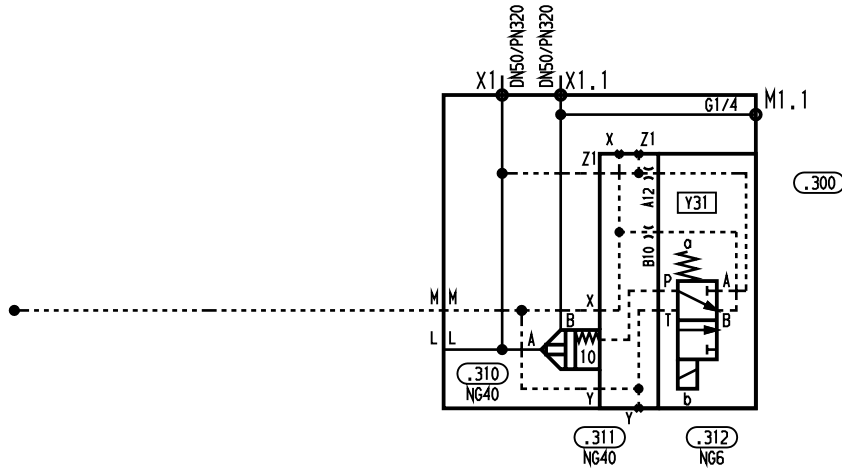


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.111	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.120	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.121	1	Cover plate, size 40	LFA40G-6X/	RE 81 010	
.130	1	Logic element, size 50	LC50DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE 2,0 M10x25-45H	DIN 913	
.132	1	Cover plate, size 50	LFA50DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 6	4WE6D5X/	RE 23 177	
.141	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.150	1	Logic element, size 32	LC32DB40D6X/004	RE 81 010	
.151	1	Cover plate, size 32	LFA32HWA2-8-6X/DRF10	RE 81 010	
.152	1	Poppet valve, size 6	M-3SEW6U2X/420...SO101	RE 22 057	
P1,X1	2	*Flange	DN50PN320	PN 303 923	RE 45 501
T1,T2	2	*Flange	DN80PN16	PN 012 940	AB 22-15
*(Not included in supply; please order separately)					

Module 3

**Press Module Size 50
Control Type P
IH04M50P3A1001-3X/...**

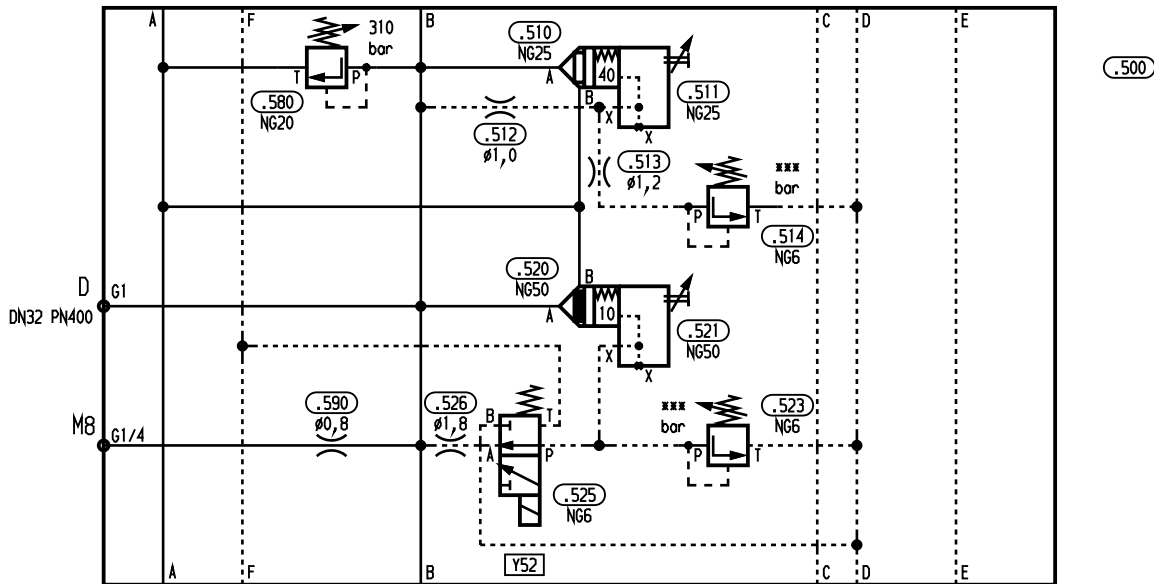


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.310	1	Logic element, size 40	LC40A10E6X/	RE 81 010
.311	1	Cover plate, size 40	LFA40WEA9-6X/A12B10	RE 81 010
.312	1	Directional control valve, size 6	3WE6B9-5X/...	RE 23 177
x1,x1.1	2	*Flange	DN50PN320	PN 303 923
		*(Not included in supply; please order separately)		

Module 5

**Press Module Size 50
Control Type P
IH04M50P5A1001-3X/...**

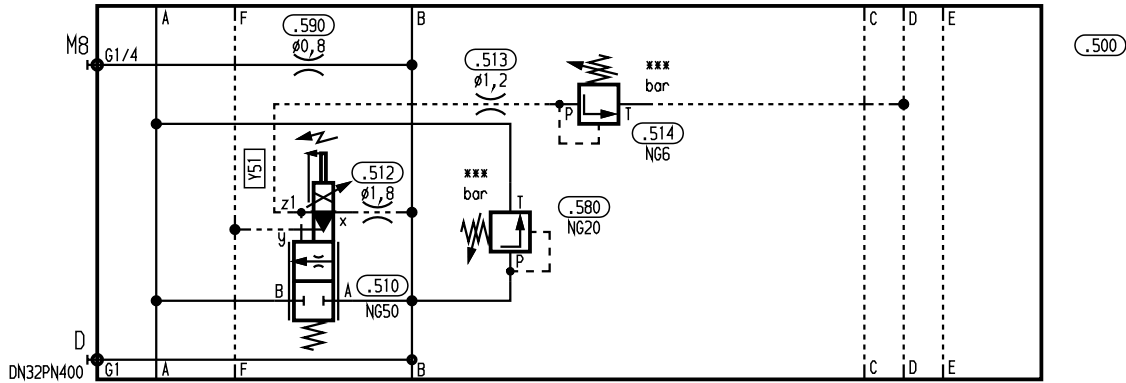


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.510	1	Logic element, size 25	LC25B40E6X/	RE 81 010
.511	1	Cover plate, size 25	LFA25H2-6X/F	RE 81 010
.512	1	Orifice	DUESE 1,0 R1/8 DIN 906	RN 115.06
.513	1	Orifice	DUESE 1,2 R1/8 DIN 906	RN 115.06
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402
.520	1	Logic element, size 50	LC50B10D6X/	RE 81 010
.521	1	Cover plate, size 50	LFA50H2-6X/F	RE 81 010
.523	1	Pressure relief valve, size 6	DBDS6K1X/315	RE 25 402
.525	1	Directional control valve, size 6	3WE6A5X/...	RE 23 177
.526	1	Orifice	DUESE 1,8 M6 DIN 906	RN 115.06
.580	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.590	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
D	1	*Flange	DN32PN400	PN 013 772
X8	1	*Flange	DN50PN320	PN 303 923
Only necessary if control module 5 is included in the control. (See page 11.) *(Not included in supply; please order separately)				

Module 5

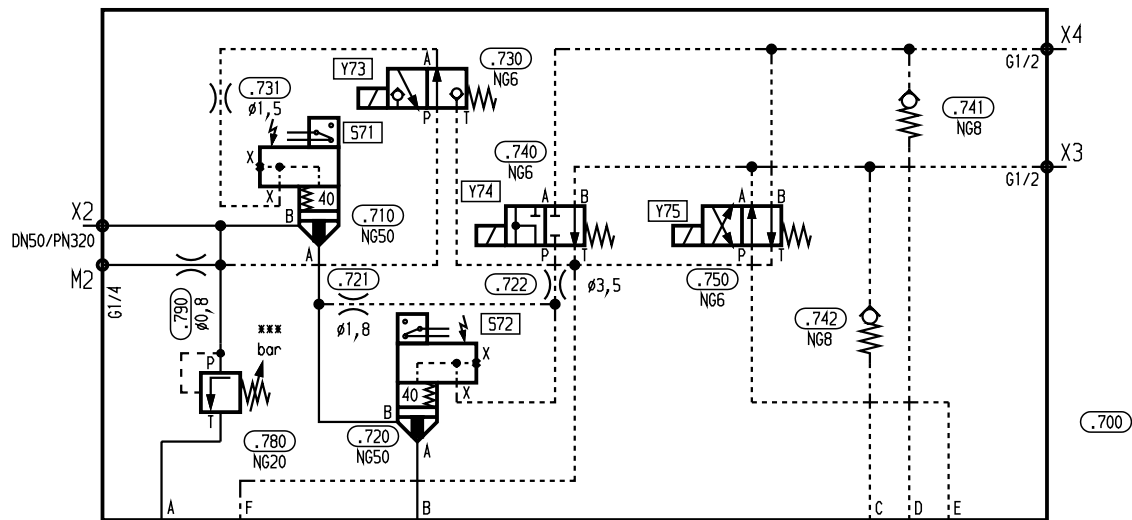
**Press Module Size 50
Control Type P
IH04M50P5B1001-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.510	1	Proportional throttle valve, size 50	FE50C1X/1180LM-7	RE 29 204
.512	1	Orifice	DUESE 1,5 R1/8 DIN 906	RN 115.06
.513	1	Orifice	DUESE 1,8 G1/8 FORM 7	RN 115.06
.514	1	Pressure relief valve, size 6	DBDS6K1X/315	RE 25 402
.580	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.590	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
D	1	*Flange	DN32PN400	PN 013 772
X8	1	*Flange	DN50PN320	PN 303 923
		Only necessary if control module 5 is included in the control. (See page 11.) *(Not included in supply; please order separately)		

Module 7

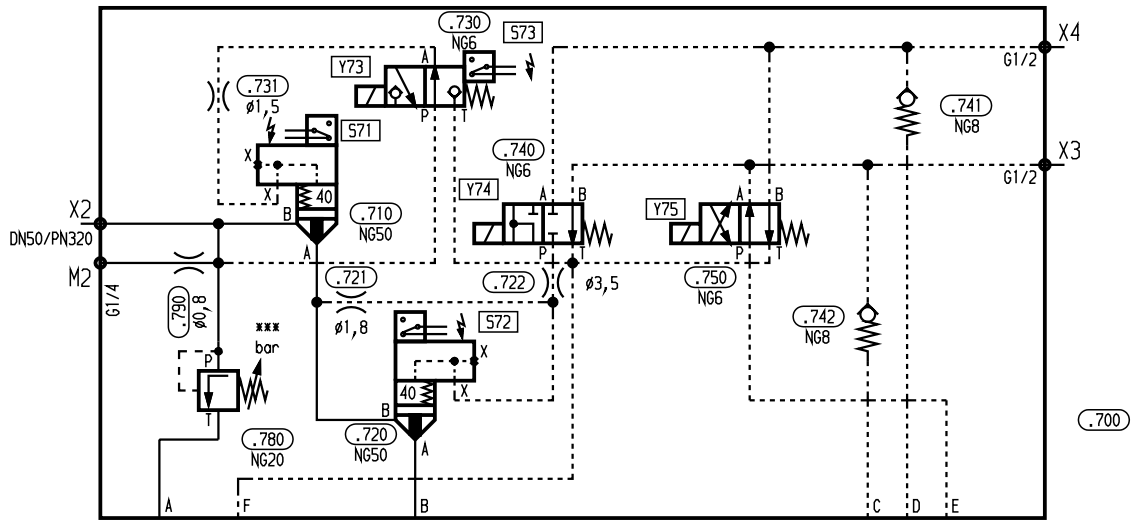
Press Module Size 50
Control Type P
IH04M50P7A1001-3X/...

G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.710	1	Logic element, size 50	LFA50E-6X/CA40DQOG24F	RE 81 010	
.720	1	Logic element, size 50	LFA50E-6X/CA40DQOG24F	RE 81 010	
.721	1	Orifice	DUESE 1,8 G1/8 FORM 7	RN 115.06	
.722	1	Orifice	DUESE 3,5 R1/8 DIN 906	RN 115.06	
.730	1	Poppet valve, size 6	M-3SEW6U2X/...	RE 22 048	
.731	1	Orifice	DUESE 1,5 M6 DIN 906	RN 115.06	
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177	
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177	
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402	
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906	
X2	1	*Flange	DN50PN320	PN 303 923	RE 45 501
*(Not included in supply; please order separately)					

Module 7

**Press Module Size 50
Control Type P
IH04M50P7A1002-3X/...**

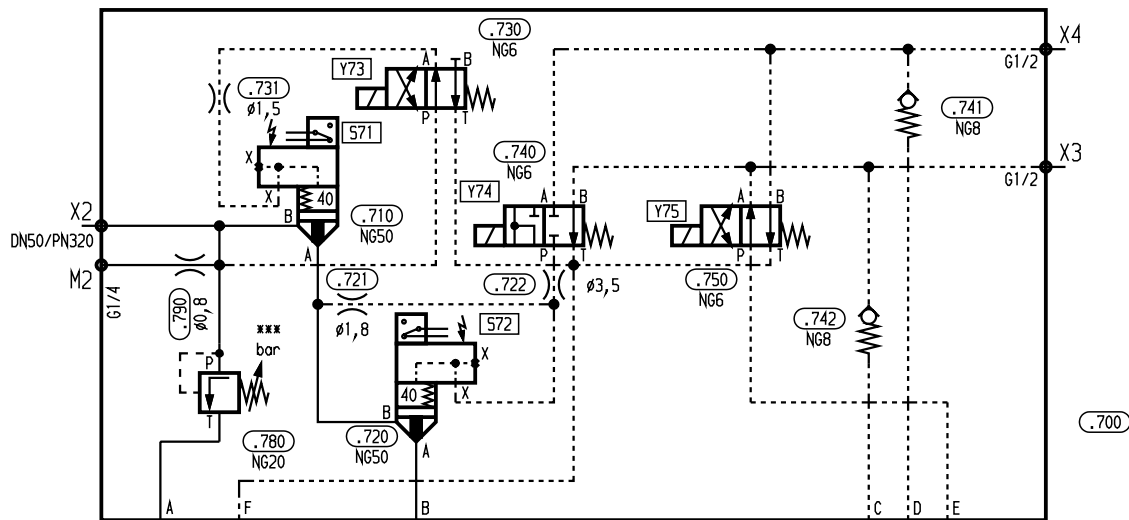


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.710	1	Logic element, size 50	LFA50E-6X/CA40DQOG24F	RE 81 010	
.720	1	Logic element, size 50	LFA50E-6X/CA40DQOG24F	RE 81 010	
.721	1	Orifice	DUESE 1,8 G1/8 FORM 7	RN 115.06	
.722	1	Orifice	DUESE 3,5 R1/8 DIN 906	RN 115.06	
.730	1	Poppet valve, size 6	M-3SEW6U2X/...QAG24	RE 22 048	
.731	1	Orifice	DUESE 1,5 M6 DIN 906	RN 115.06	
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177	
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177	
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402	
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906	
X2	1	*Flange	DN50PN320	PN 303 923	RE 45 501

*(Not included in supply; please order separately)

Module 7

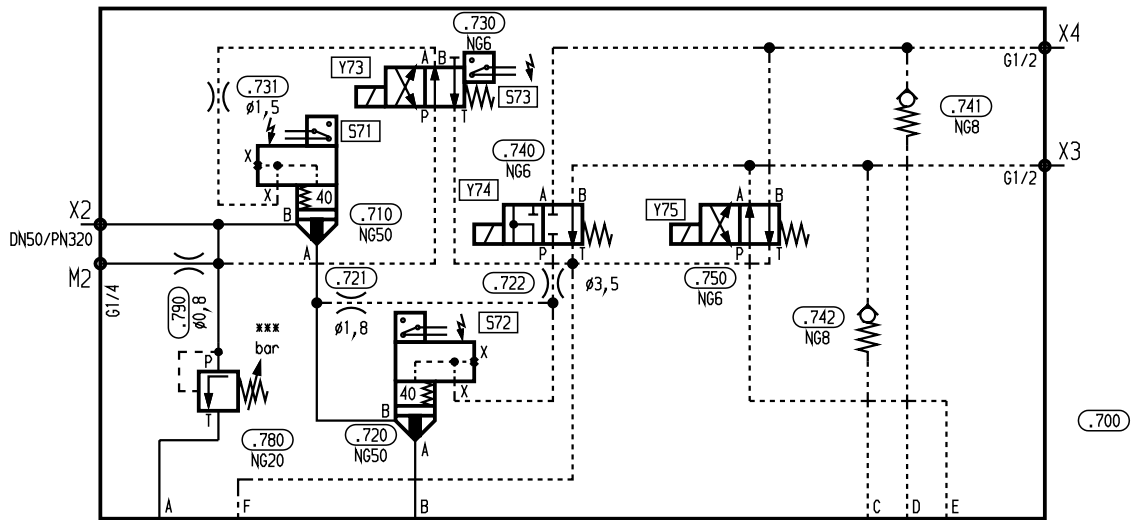
Press Module Size 50
Control Type P
IH04M50P7A1003-3X/...

G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.710	1	Logic element, size 50	LFA50E-6X/CA40DQOG24F	RE 81 010	
.720	1	Logic element, size 50	LFA50E-6X/CA40DQOG24F	RE 81 010	
.721	1	Orifice	DUESE 1,8 G1/8 FORM 7	RN 115.06	
.722	1	Orifice	DUESE 3,5 R1/8 DIN 906	RN 115.06	
.730	1	Directional control valve, size 6	4WE6D5X/...	RE 23 177	
.731	1	Orifice	DUESE 1,5 M6 DIN 906	RN 115.06	
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177	
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177	
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402	
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906	
X2	1	*Flange	DN50PN320	PN 303 923	RE 45 501
*(Not included in supply; please order separately)					

Module 7

**Press Module Size 50
Control Type P
IH04M50P7A1004-3X/...**

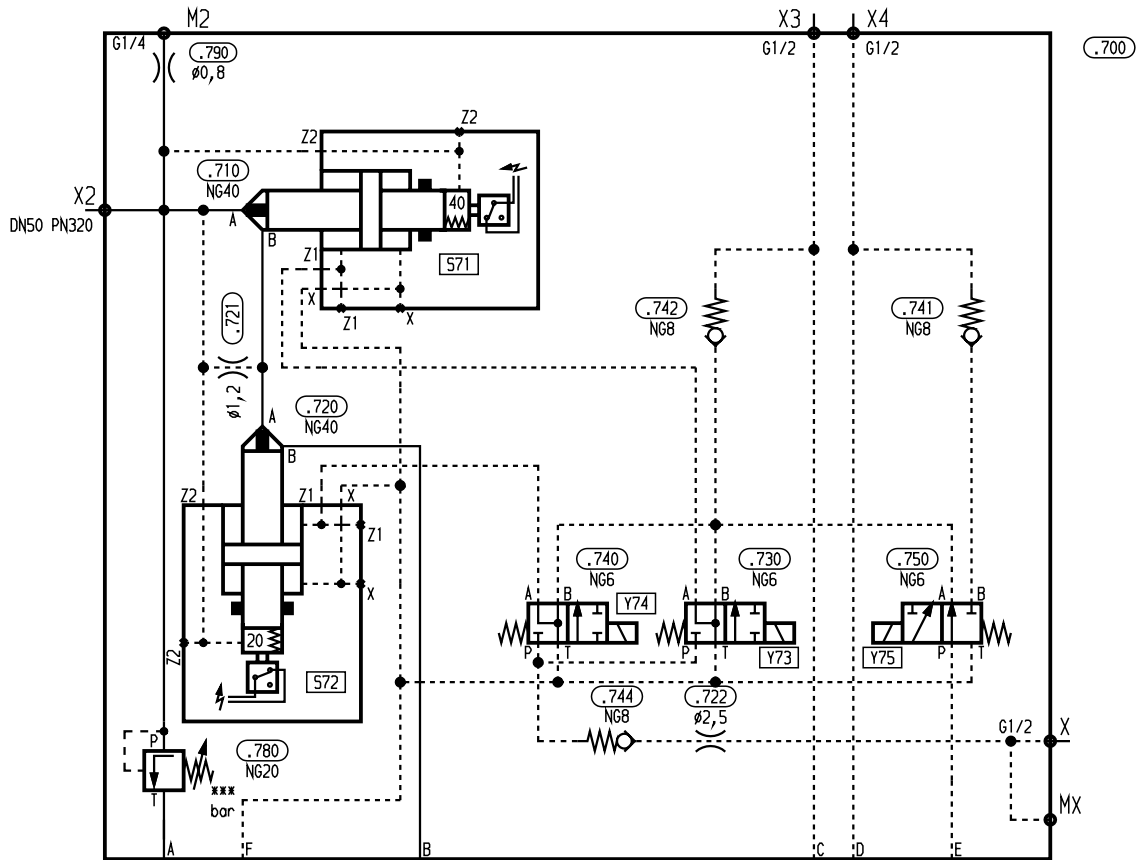


G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details	
.710	1	Logic element, size 50	LFA50E-6X/CA40DQOG24F	RE 81 010	
.720	1	Logic element, size 50	LFA50E-6X/CA40DQOG24F	RE 81 010	
.721	1	Orifice	DUESE 1,8 G1/8 FORM 7	RN 115.06	
.722	1	Orifice	DUESE 3,5 R1/8 DIN 906	RN 115.06	
.730	1	Directional control valve, size 6	4WE6D5X/...QAG24	RE 23 177	
.731	1	Orifice	DUESE 1,5 M6 DIN 906	RN 115.06	
.740	1	Directional control valve, size 6	4WE6U12-5X/...	RE 23 177	
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 6	4WE6C5X/...	RE 23 177	
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402	
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906	
X2	1	*Flange	DN50PN320	PN 303 923	RE 45 501
*(Not included in supply; please order separately)					

Module 7

**Press Module Size 50
Control Type P
IH04M50P7B1001-3X/...**



G... = BSP
NG = Size

Item	Qty.	Description	Type	Further details
.710	1	Logic element, size 40	LFA40ER7-6X/CA40DQOG24F	RE 81 010
.720	1	Logic element, size 40	LFA40ER7-6X/CA20DQOG24F	RE 81 010
.721	1	Orifice	DUESE 1,2 M6 DIN 906	RN 115.06
.722	1	Orifice	DUESE 2,5 R1/8 DIN 906	RN 115.06
.730	1	Directional control valve, size 6	4WE6J5B5X	RE 23 177
.740	1	Directional control valve, size 6	4WE6J5B5X	RE 23 177
.741	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.742	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.744	1	Check valve, size 8	M-SR8KE05-1X/	RE 20 380
.750	1	Directional control valve, size 6	3WE6A-5X/...	RE 23 177
.780	1	Pressure relief valve, size 20	DBDS20K1X/315	RE 25 402
.790	1	Orifice	DUESE 0,8 R1/4-ZYLINDRISCH	AEH.DIN 906
1, 2	1	*Flange	DN50PN320	PN 303 923
*(Not included in supply; please order separately)				

Notes



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