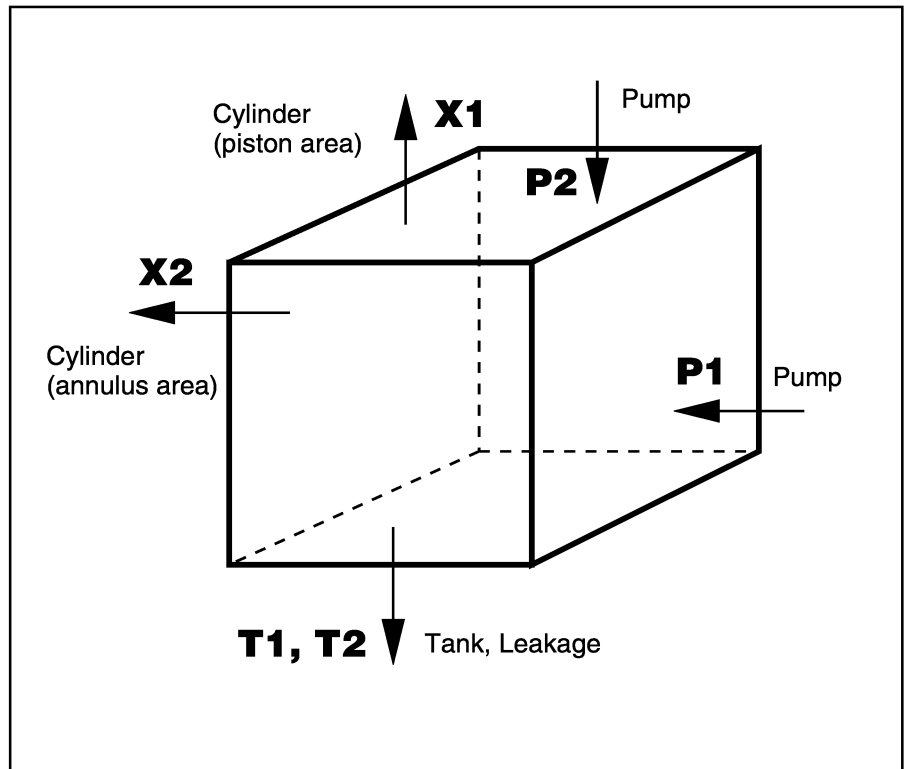


<b>MANNESMANN REXROTH</b>	<b>Press Modules Type B4</b>		<b>RE 63 150/08.92</b>
	up to 3000 L/min	up to 315 bar	Replaces:05.91

### Characteristics

- All controls comply with the safety regulations at present applicable in Germany.
- All valves are built on to and in to one control module.
- Individual control modules are bolted directly together without any intermediate piping.
- Controls are clearly arranged.
- The valves built on to and into the control manifolds are easily accessible.
- Controls are fully tested as standard.



<b>Index</b>	
<b>Contents</b>	<b>Page</b>
General Safety regulations, description, installation and commissioning	2
Technical Data	3 and 4
Ordering Code	5
Examples	6 to 23
Press modules: schematic diagrams, ordering details	24 to 65
<b>Press Modules with Functions</b>	Size 63   Size 80
- direction control of pressing ram - pressure control of main pump and low pressure bypass (unloaded condition) - decompression - control of downstroke - safety control complying with German safety regulations	24 to 57   58 to 65

## 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 separate cable laying towards the safety valves item .710 and .720 is to be recommended.

### Description

The safety circuit is completely assembled onto the 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 examples on pages 6 to 23.

### 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 24 to 65.

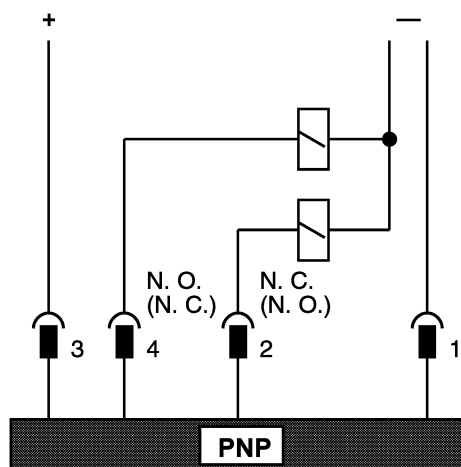
Other plugs on the press modules must not be removed.

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

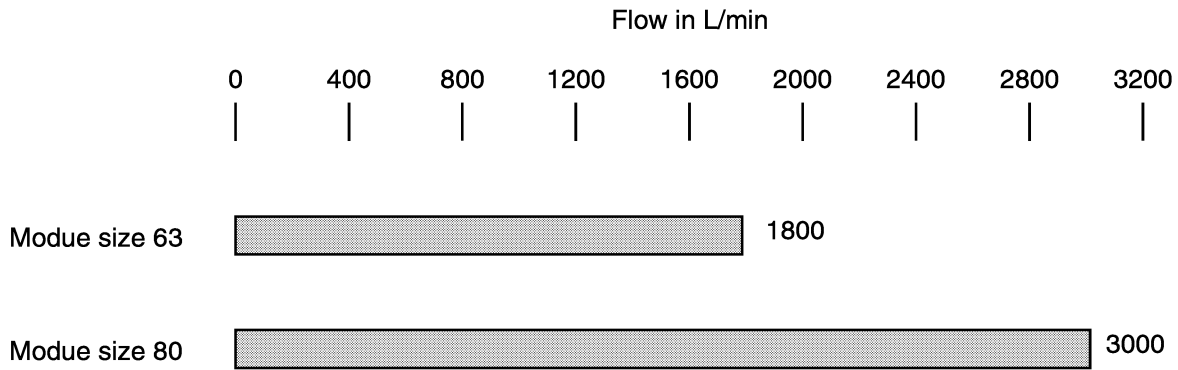
Mounting position	optional, horizontal preferred		
Ambient temperature range	-20 to +50		
Hydraulic fluid	Mineral oil (HL, HLP) to DIN 51 524; other fluids on enquiry		
Fluid temperature range	°C	-20 to +80	
Viscosity range	mm <sup>2</sup> /s	2.8 to 500	
Contamination level	Maximum permissible contamination 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:	P1, P2, X1, X2, X, E T Y		
Module size		63	80
Max. permissible flow	L/min	1800	3000

## Electrical Data of Inductive Limit Switches S71 and S72

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

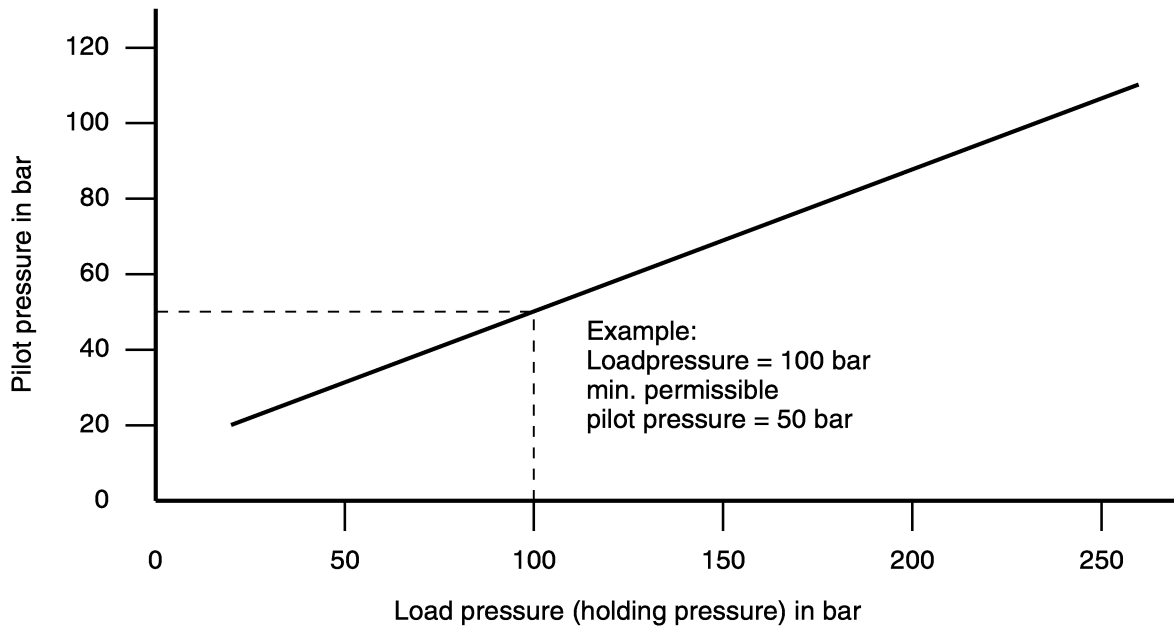


## Flow via modules



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

## Permissible pilot pressure



Permissible pilot pressure at port X in relation to load pressure (holding pressure) for modules E1..., F1..., G1..., and H1... (see examples pages 20 to 23).

## Ordering code

IH04	MS		B4		3X/	C				*
------	----	--	----	--	-----	---	--	--	--	---

Module acc. to UVV = **MS**  
(accident prevention regulations)

Size 63 = **63**  
Size 80 = **80**

Type = **B4**

### Module variations

The different module types are described on pages 24 to 65.

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

**Solenoids** = **C**  
oil immersed solenoid with removable coil

**Solenoid voltage**  
24 V DC = **G 24**  
220 V AC, 50 Hz = **W 220-50**  
110 V AC, 50 Hz (standard solenoids "A") = **W 110-50**

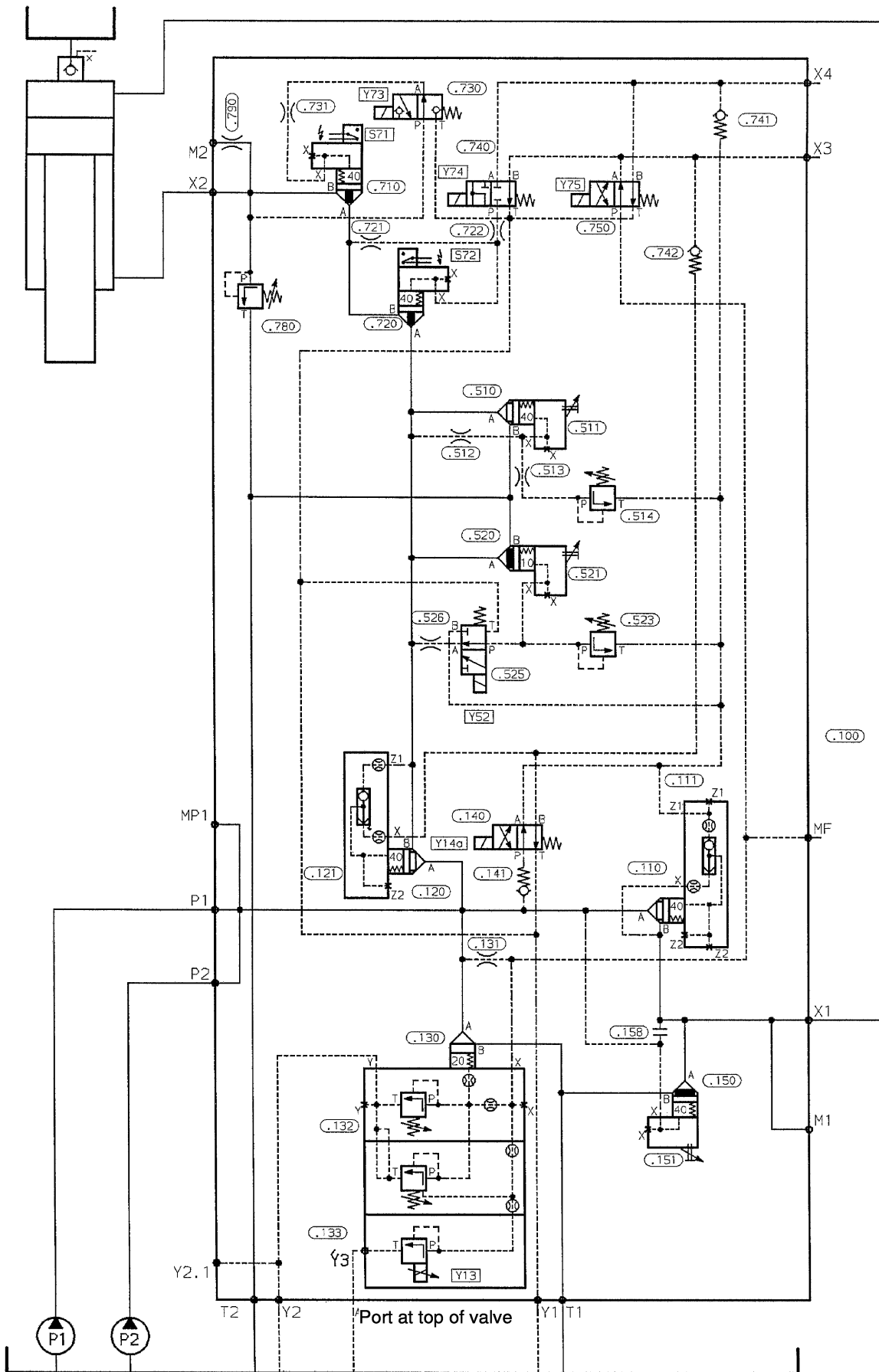
Without hand emergency button  
– for controls to UVV specification (Accident Prevention Regulations – = **no design.**  
With protected hand emergency button – not permissible on controls to UVV specification – = **N9**

### Electrical connections

Square plug to DIN 43 650	= <b>Z4</b>
Large square plug	= <b>Z5</b>
Large square plug with light	= <b>Z5L</b>
Large square plug with LED and varistor	= <b>Z5L1</b>
Large square plug with LED and protection diode	= <b>Z5L2</b>
Large square plug with LED	= <b>Z5L3</b>
Without square plug	= <b>K4</b>

Additional details in clear text

Flanges must be ordered separately !  
Further electrical connections, voltages and frequencies see data sheet RE 23 316.



## Application Conditions

- fast approach with own weight
- minimum holding pressure 25 bar

### Direction control of the press ram

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

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

Directional control valve item .140-symbol "D"-keeps the supply valve for the pressing operation 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 pressure of its closing spring of item.121. This means that only one press module can be connected to the main pump.

### Pressure control of the pump and low pressure bypass

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

### The valves necessary to comply with the UVV (German Accident Prevention Regulations).

The logic elements pos. 710 and .720 mounted in series in the rod end circuit of the press cylinder are electronically monitored to ensure that they are in the start position. This is checked each press cycle. Should either valve fail to reach its safe position, a false start to the next cycle cannot be made and any further dangerous closing stroke of the press cannot take place.

With the downstroke both valves (items .710 and .720) are opened via separate pilot valves (items .730 and .740). Additionally the valve item .740 is linked to the control oil circuit of the pump protection via item .750 in order to monitor the pressure build-up. By alternately switching the pilot valves (see function circuit) pressure valve item .130 is achieved each press cycle.

Logic elements items .710 and .720 act as non return valves during the return stroke.

### Start of fast approach:

Energising of solenoid Y52 causes the control oil chamber of logic element item.520 to be unloaded and permits oil to flow into the tank. The maximum speed is set at the stroke limiter of item .520.

### End of fast approach:

Solenoids Y52 is de-energized, logic element item .520 closes with the pressure which is set at the pressure control valve item .523. This means that the pressure setting determines whether the plunger is slowed down hard or gently to the pressing speed. The deceleration pressure, which is set at item .523 has to be set higher than the holding pressure for the counter balance pressure on the pressure control valve item .514.

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

### Pressing

The cylinder, which is restrained by the pressure control valve item .514, performs the pressing stroke. The maximum pressing speed is set at the stroke limiter of item .511.

### Decompression

Decompression of the system occurs after the pressing sequence via logic elements items .150 and .151. Duration of de-compression is set at the stroke limiter of the cover plate item .151. Pressure relief 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 modul above port X3.

A pressure relief valve, connected to X4, remotely controls the return force.

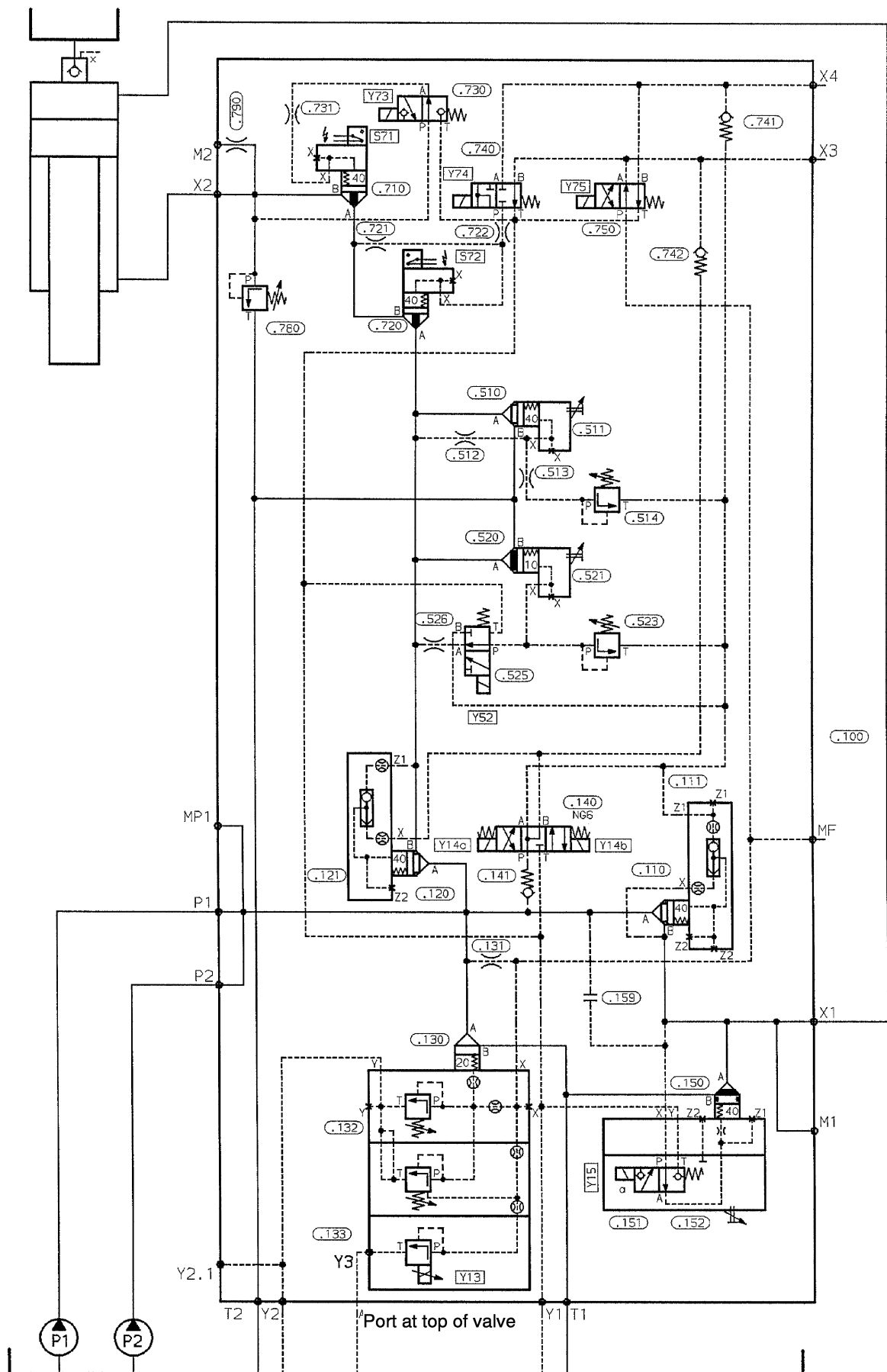
# Functional diagramm: Normal Press Cycle, ...A1001

Description	Ident.	Item	Position	Stationary	Fast downstroke	Pressing	Decompression	Return
Two-hand control			UD LD					
Pressure relief valve	Solenoid Y 13	.133						
Directional valve	Y 14a	.140						
Fast forward valve	Y 52	.525						
Poppet valve	Y 73	.730						
Directional valve	Y 74	.740						
Directional valve	Y 75	.750						
Safety valve	Limit switch S 71	.710	*1 0					
Safety valve	S 72	.720	*1 0					

\* Output signal at limit switch.

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





### Application Conditions

- fast approach with own weight
- minimum holding pressure 25 bar

### Direction control of the press ram

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

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

Directional control valve item .140-symbol "M"-keeps the supply valve for the pressing operation closed in the starting position. This makes it possible to connect a number of press modules to the main pump or to operate an auxiliary circuit. For this to take place, pressure valve item .130 must be closed by energising solenoid Y75.

### Pressure control of the pump and low pressure bypass

The pump is protected by means of logic element items .130 and .132. The maximum working pressure is set at the pressure control valve which is mounted as a pilot valve into the cover plate item .132. When all valves are in starting position logic element item .130 is open, the pump output passes to tank against the closing spring of item .130. The proportional pressure control valve item .133 continuously controls the working pressure - dependent on the setting of the electrical command signal.

### The valves necessary to comply with the UVV (German Accident Prevention Regulations).

The logic elements pos. 710 and 720 mounted in series in the rod end circuit of the press cylinder are electronically monitored to ensure that they are in the start position. This is checked each press cycle. Should either valve fail to reach its safe position, a false start to the next cycle cannot be made and any further dangerous closing stroke of the press cannot take place.

With the downstroke both valves (items .710 and .720) are opened via separate pilot valves (items .730 and .740). Additionally the valve item .740 is linked to the control oil circuit of the pump protection via item .750 in order to monitor the pressure build-up. By alternately switching the pilot valves (see function circuit) pressure valve item .130 is achieved each press cycle.

Logic elements items .710 and .720 act as non return valves during the return stroke.

### Start of fast approach:

Energising of solenoid Y52 causes the control oil chamber of logic element item .520 to be unloaded and permits oil to flow into the tank. The maximum speed is set at the stroke limiter of item .520.

### End of fast approach:

Solenoids Y52 is de-energized, logic element item .520 closes with the pressure which is set at the pressure control valve item .523. This means that the pressure setting determines whether the plunger is slowed down hard or gently to the pressing speed. The deceleration pressure, which is set at item .523 has to be set higher than the holding pressure for the counter balance pressure on the pressure control valve item .514.

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

### Pressing

The cylinder, which is restrained by the pressure control valve item .514, performs the pressing stroke. The maximum pressing speed is set at the stroke limiter of item .511.

### Maintaining pressure

At the end of the pressing stroke, pressure may be maintained in the cylinder by de-energising the solenoids. Logic elements items .150 and .110 close to seal connection X1 to the press cylinder

### Decompression

Decompression of the system occurs after the pressing sequence via logic elements items .150 and .151. Duration of de-compression is set at the stroke limiter of the cover plate item .151. Pressure relief 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.

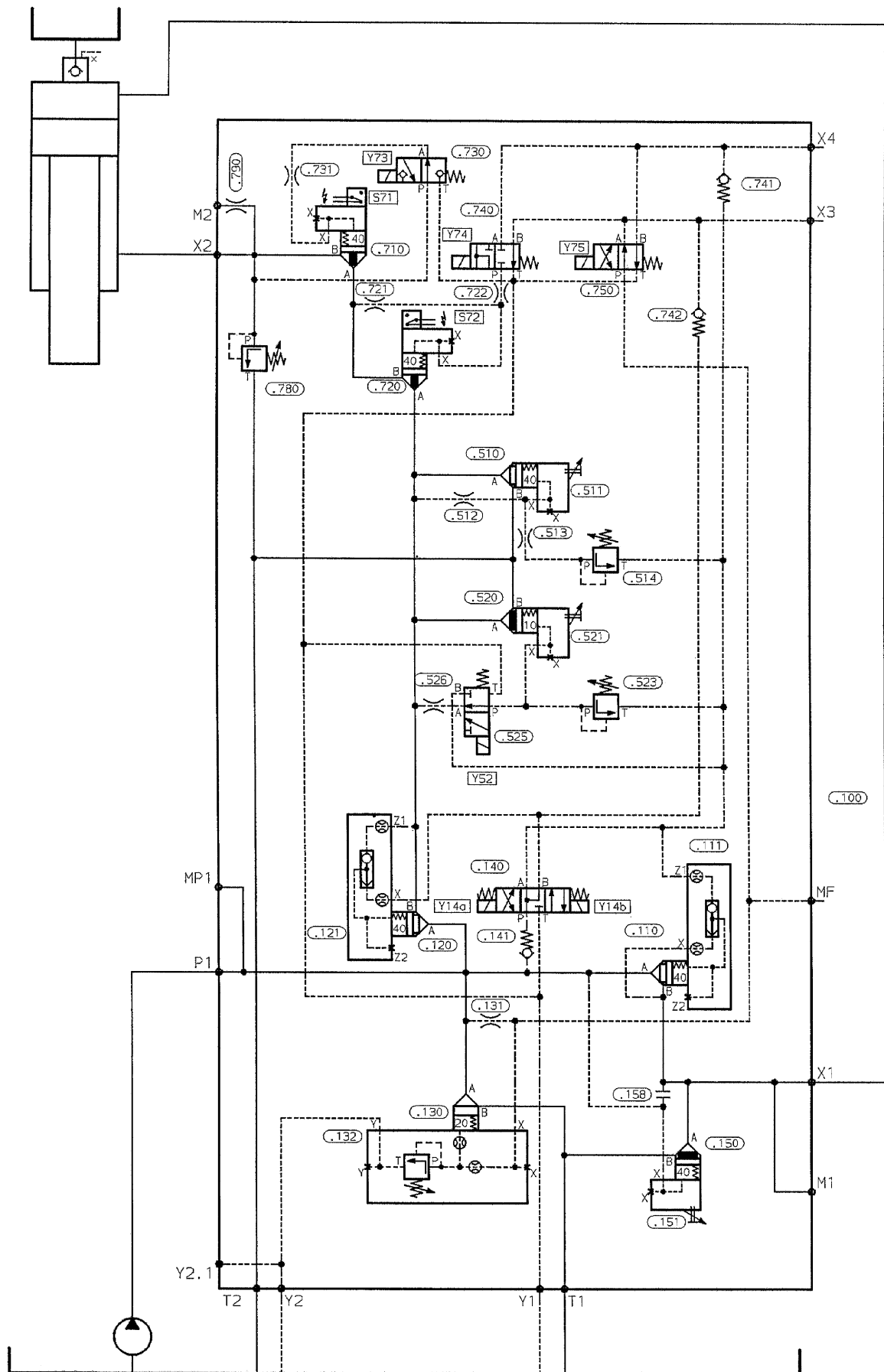
A pressure relief valve, connected to X4, remotely controls the return force.

# Functional diagramm: Normal Press Cycle, ...A1005

Description	Ident.	Item	Position	Stationary	Fast downstroke	Pressing	Decom-pression	Return
Two-hand control			UD LD					
Pressure relief valve	Solenoid Y 13	.133						
Directional valve	Y 14a	.140						
	Y 14b							
Poppet valve	Y 15	.152						
Fast forward valve	Y 52	.525						
	Y 73							
Poppet valve	Y 74	.730						
Directional valve	Y 74	.740						
	Y 75							
Safety valve	Limit switch S 71	.710	*1 0					
Safety valve	S 72	.720	*1 0					

\* Output signal at limit switch.

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



### Application Conditions

- fast approach with own weight
- minimum holding pressure 25 bar

### Direction control of the press ram

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

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

Directional control valve item .140-symbol "M"-keeps the supply valve for the pressing operation closed in the starting position. This makes it possible to connect a number of press modules to the main pump or to operate an auxiliary circuit. For this to take place, pressure valve item .130 must be closed by energising solenoid Y75.

### Pressure control of the pump and low pressure bypass

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

### The valves necessary to comply with the UVV (German Accident Prevention Regulations).

The logic elements pos. 710 and 720 mounted in series in the rod end circuit of the press cylinder are electronically monitored to ensure that they are in the start position. This is checked each press cycle. Should either valve fail to reach its safe position, a false start to the next cycle cannot be made and any further dangerous closing stroke of the press cannot take place.

With the downstroke both valves (items .710 and .720) are opened via separate pilot valves (items .730 and .740). Additionally the valve item .740 is linked to the control oil circuit of the pump protection via item .750 in order to monitor the pressure build-up. By alternately switching the pilot valves (see function circuit pressure valve item .130 is achieved each press cycle.

Logic elements items .710 and .720 act as non return valves during the return stroke.

### Start of fast approach:

Energising of solenoid Y52 causes the control oil chamber of logic element item .520 to be unloaded and permits oil to flow into the tank. The maximum speed is set at the stroke limiter of item .520.

### End of fast approach:

Solenoids Y52 is de-energized, logic element item .520 closes with the pressure which is set at the pressure control valve item .523. This means that the pressure setting determines whether the plunger is slowed down hard or gently to the pressing speed. The deceleration pressure, which is set at item .523 has to be set higher than the holding pressure for the counter balance pressure on the pressure control valve item .514.

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

### Pressing

The cylinder, which is restrained by the pressure control valve item .514, performs the pressing stroke. The maximum pressing speed is set at the stroke limiter of item .511.

### Decompression

Decompression of the system occurs after the pressing sequence via logic element s items .150 and .151. Duration of de-compression is set at the stroke limiter of the cover plate item .151. Pressure relief 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 modul above port X3.

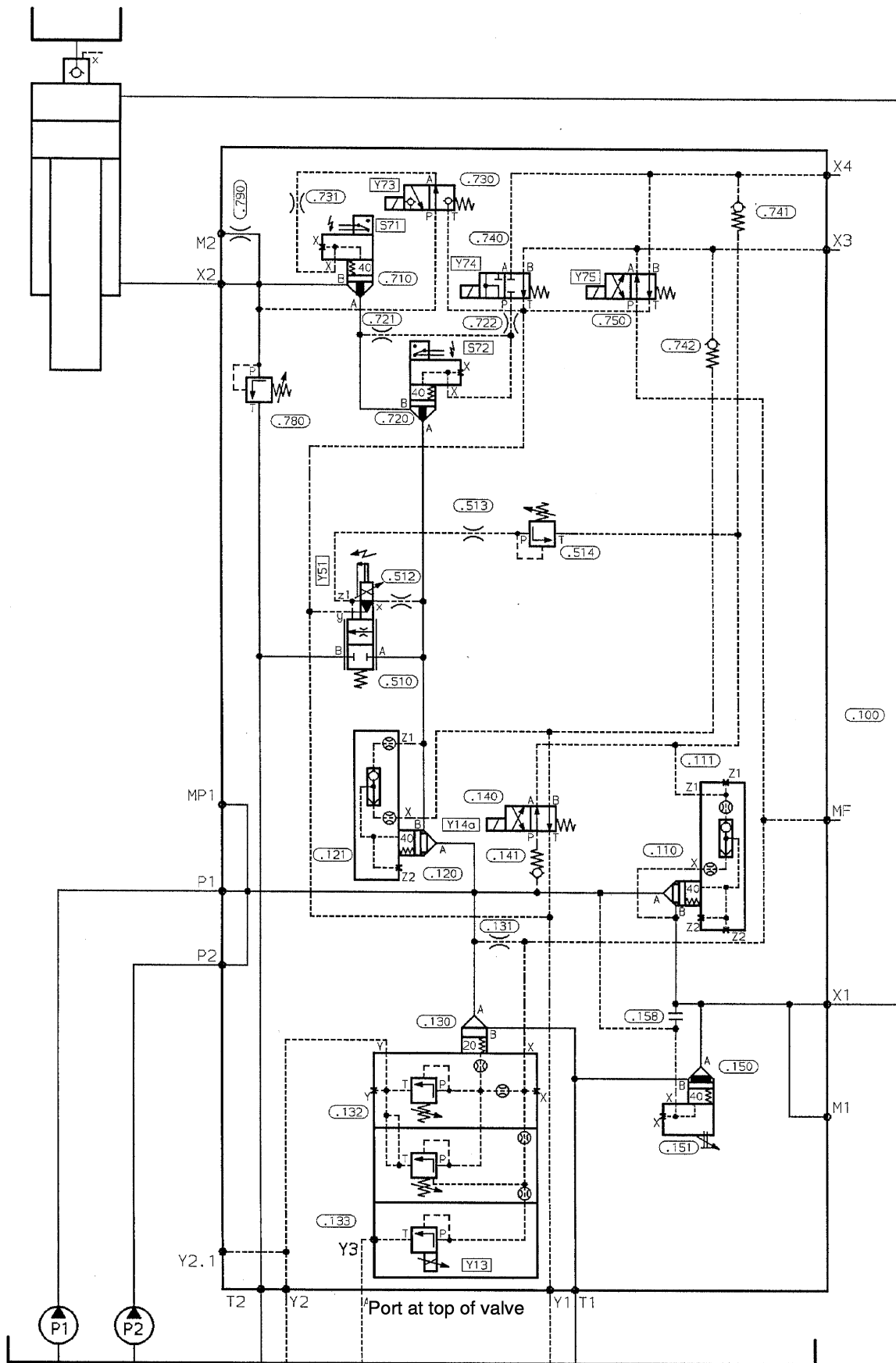
A pressure relief valve, connected to X4, remotely controls the return force.

# Functional diagramm: Normal Press Cycle, ...B1004

Description	Ident.	Item	Position	Stationary	Fast downstroke	Pressing	Decom-pression	Return
Two-hand control			UD LD					
Directional valve	Solenoid Y 14a	.140						
Fast forward valve	Y 14b							
Fast forward valve	Y 52	.525						
Poppet valve	Y 73	.730						
Directional valve	Y 74	.740						
Directional valve	Y 75	.750						
Safety valve	Limit switch S 71	.710	*1 0					
Safety valve	S 72	.720	*1 0					

\* Output signal at limit switch.

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



### Application Conditions

- fast approach with own weight
- minimum holding pressure 25 bar

#### Direction control of the press ram

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

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

Directional control valve item .140-symbol "D"-keeps the supply valve for the pressing operation 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 pressure of its closing spring of item.121. This means that only one press module can be connected to the main pump.

#### Pressure control of the pump and low pressure bypass

The pump is protected by means of logic element items.130 and .132. The maximum working pressure is set at the pressure control valve which is mounted as a pilot valve into the cover plate item .132. When all valves are in starting position logic element item .130 is open, the pump output passes to tank against the closing spring of item .130. The proportional pressure control valve item .133 continuously controls the working pressure - dependent on the setting of the electrical command signal.

#### The valves necessary to comply with the UVV (German Accident Prevention Regulations).

The logic elements pos. 710 and 720 mounted in series in the rod end circuit of the press cylinder are electronically monitored to ensure that they are in the start position. This is checked each press cycle. Should either valve fail to reach its safe position, a false start to the next cycle cannot be made and any further dangerous closing stroke of the press cannot take place.

With the downstroke both valves (items .710 and .720) are opened via separate pilot valves (items .730 and .740). Additionally the valve item .740 is linked to the control oil circuit of the pump protection via item .750 in order to monitor the pressure build-up. By alternately switching the pilot valves (see function circuit) pressure valve item .130 is achieved each press cycle.

Logic elements items .710 and .720 act as non return valves during the return stroke.

#### Fast approach and pressing:

Presetting an electrical command value for proportional throttle valve item .510 determines the fast approach speed due to gravity (holding pressure 25 bar). The fast approach speed and the change-over to the pressing speed can be controlled by varying the command value to proportional solenoid Y51. Should the power fail, proportional throttle valve item .510 returns to the start position. In conjunction with pressure relief valve item .514, it then acts as a pilot operated pressure relief valve. The holding pressure to compensate for the weight of parts, together with a safety factor is set at item .514.

#### Decompression

Decompression of the system occurs after the pressing sequence via logic elements items .150 and .151. Duration of de-compression is set at the stroke limiter of the cover plate item .151. Pressure relief valve item .780 is set 10 % above the maximum working pressure and sealed.

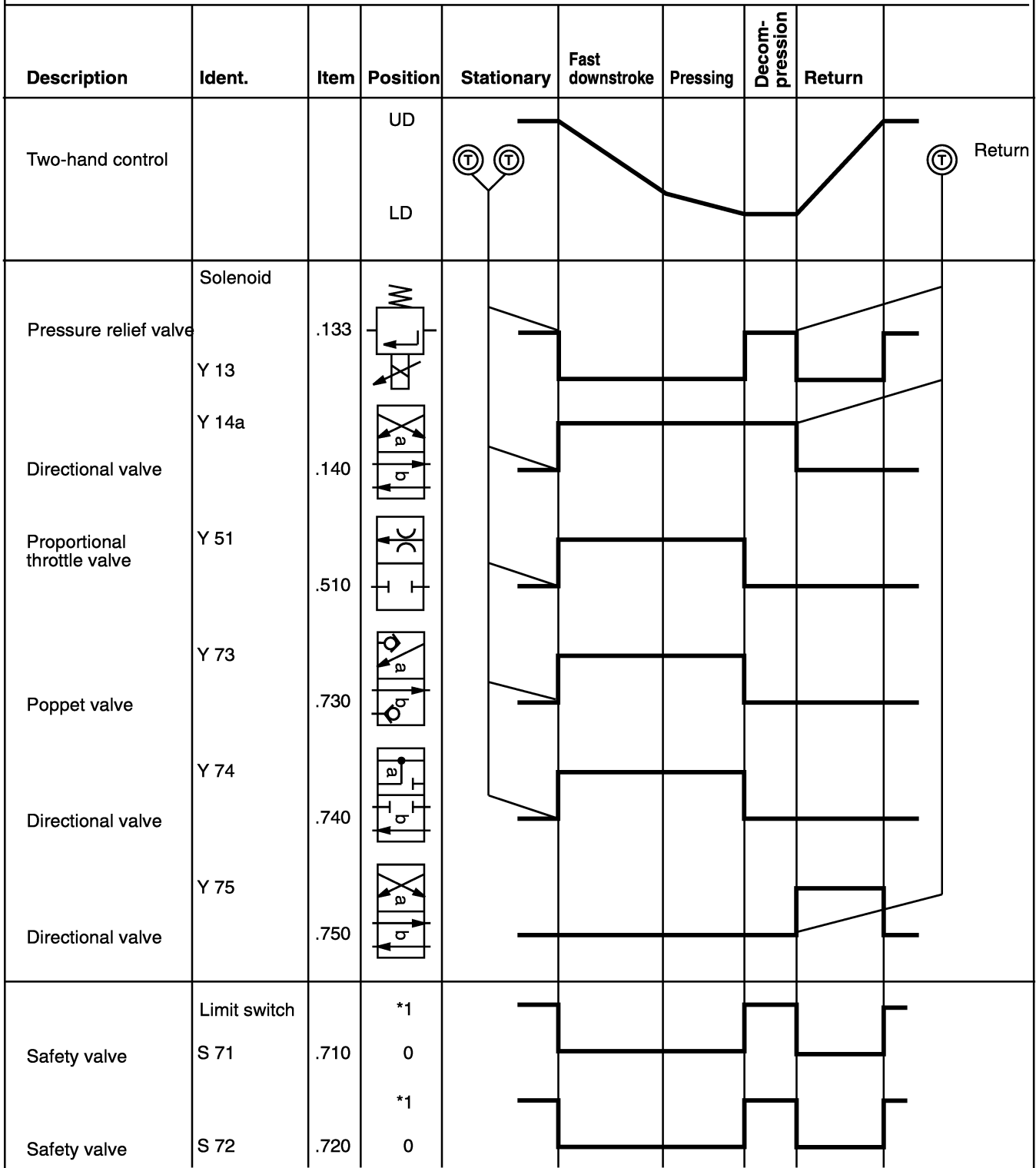
#### Pressure remote displacement – X3, X4

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, connected to X4, remotely controls the return force.

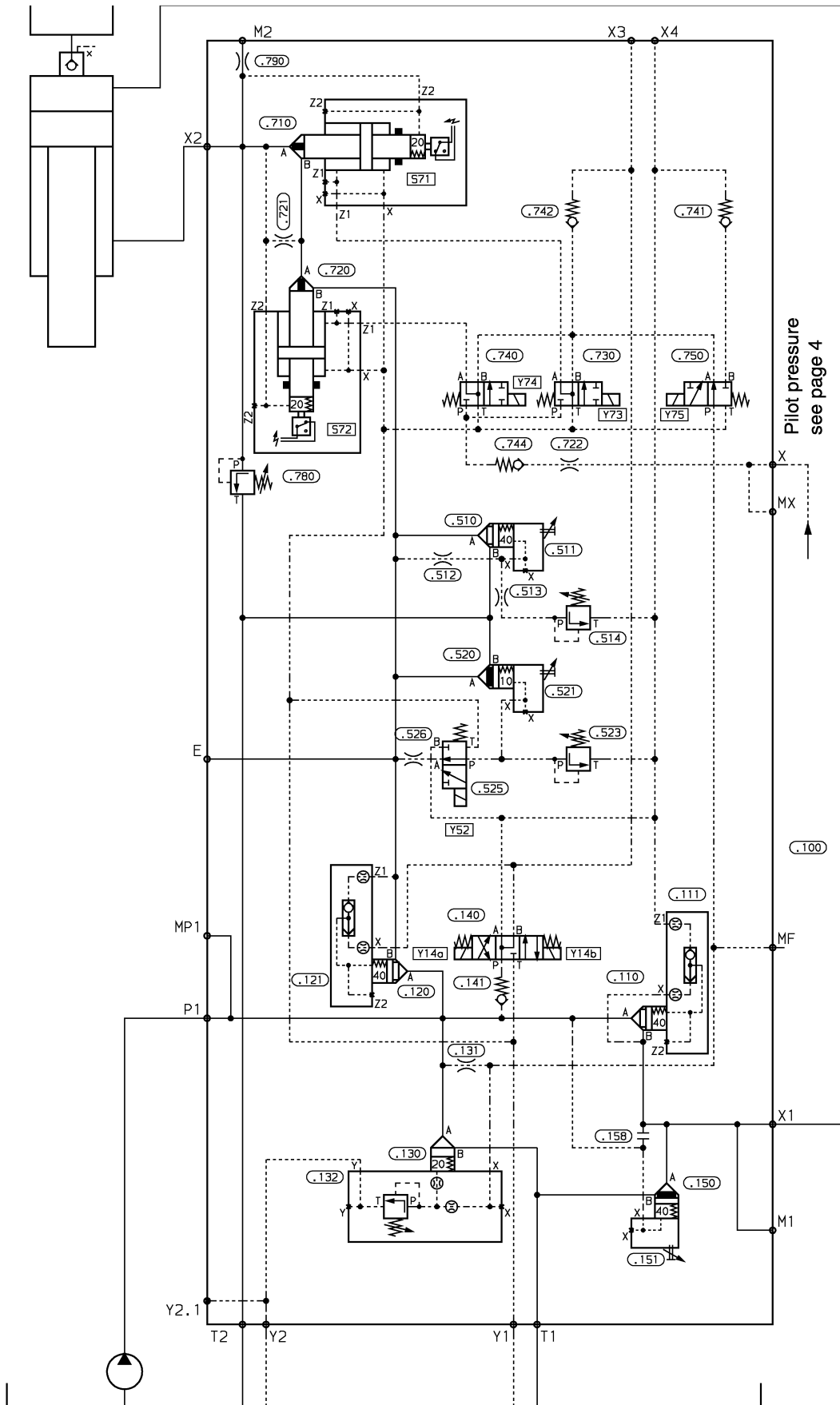


# Functional diagramm: Normal Press Cycle, ...C1001



\* Output signal at limit switch.

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



Pilot pressure  
see page 4

### Application Conditions

- fast approach with own weight
- minimum holding pressure 25 bar
- pilot pressure pump required, for pilot pressure details, see page 4.

### Direction control of the press ram

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

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

Directional control valve item .140 symbol "M"-keeps the supply valve for the pressing operation closed in the starting position. This makes it possible to connect a number of press modules to the main pump or to operate an auxiliary circuit. For this to take place, pressure valve item .130 must be closed by energising solenoid Y75.

### Pressure control of the pump and low pressure bypass

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

### The valves necessary to comply with the UVV (German Accident Prevention Regulations).

The logic elements pos. 710 and 720 mounted in series in the rod end circuit of the press cylinder are electronically monitored to ensure that they are in the start position. This is checked each press cycle. Should either valve fail to reach its safe position, a false start to the next cycle cannot be made and any further dangerous closing stroke of the press cannot take place.

With the downstroke both valves (items .710 and .720) are opened via separate pilot valves (items .730 and .740). Additionally the valve item .740 is linked to the control oil circuit of the pump protection via item .750 in order to monitor the pressure build-up. By alternately switching the pilot valves (see function circuit) pressure valve item .130 is achieved each press cycle.

Logic elements items .710 and .720 act as non return valves during the return stroke.

### Start of fast approach:

Energising of solenoid Y52 causes the control oil chamber of logic element item .520 to be unloaded and permits oil to flow into the tank. The maximum speed is set at the stroke limiter of item .520.

### End of fast approach:

Solenoids Y52 is de-energized, logic element item .520 closes with the pressure which is set at the pressure control valve item .523. This means that the pressure setting determines whether the plunger is slowed down hard or gently to the pressing speed. The deceleration pressure, which is set at item .523 has to be set higher than the holding pressure for the counter balance pressure on the pressure control valve item .514.

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

### Pressing

The cylinder, which is restrained by the pressure control valve item .514, performs the pressing stroke. The maximum pressing speed is set at the stroke limiter of item .511.

### Decompression

Decompression of the system occurs after the pressing sequence via logic elements items .150 and .151. Duration of de-compression is set at the stroke limiter of the cover plate item .151. Pressure relief 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.

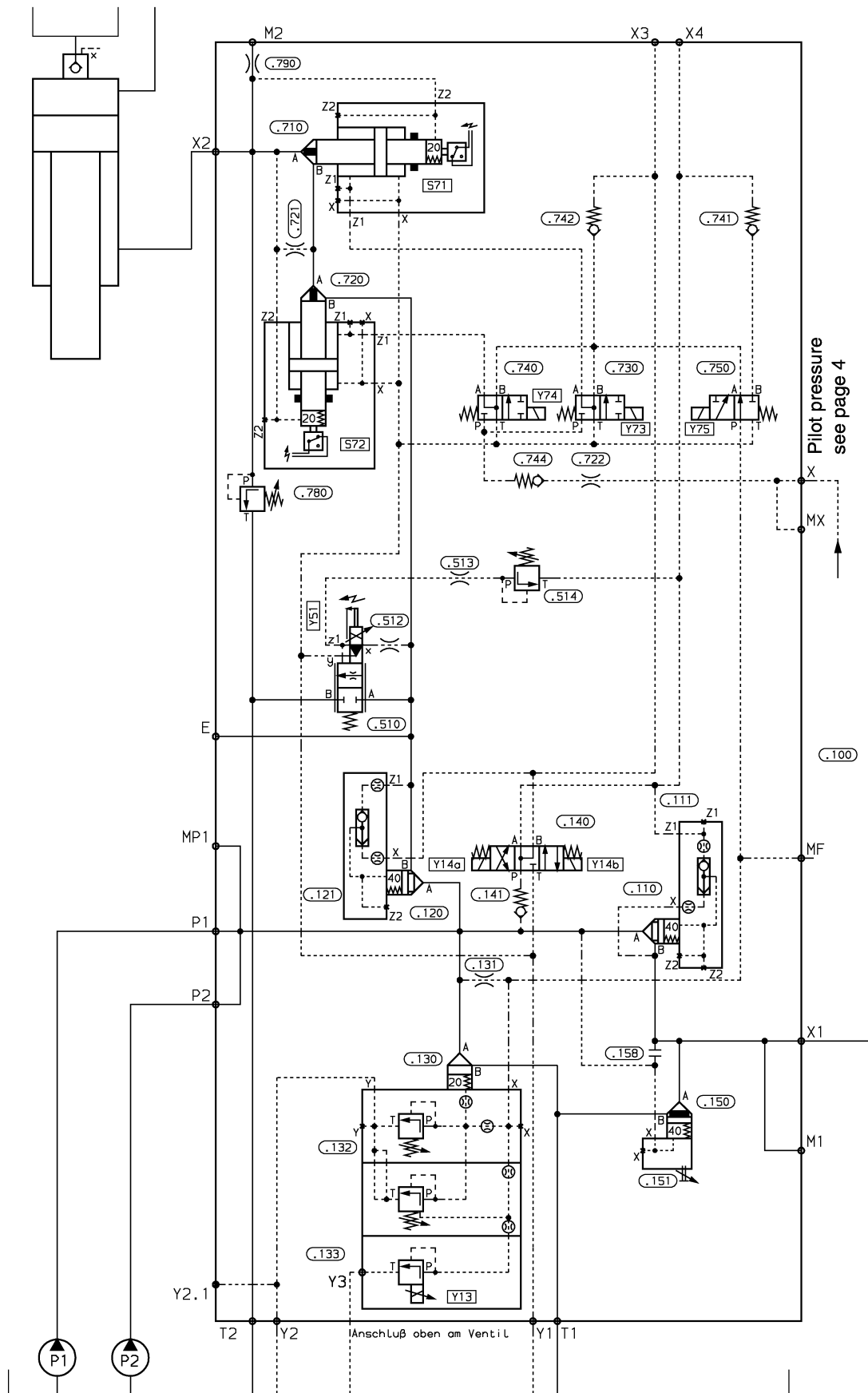
A pressure relief valve, connected to X4, remotely controls the return force.

# Functional diagramm: Normal Press Cycle, ...F1004

Description	Ident.	Item	Position	Stationary	Fast downstroke	Pressing	Decompression	Return
Two-hand control			UD LD					
Directional valve	Solenoid Y 14a	.140						
Fast forward valve	Y 14b	.525						
Directional valve	Y 52	.730						
Directional valve	Y 73	.730						
Directional valve	Y 74	.740						
Directional valve	Y 75	.750						
Safety valve	Limit switch S 71	.710	*1 0					
Safety valve	S 72	.720	*1 0					

\* Output signal at limit switch.

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



### Application Conditions

- fast approach with own weight
- minimum holding pressure 25 bar

### Direction control of the press ram

items .110 and .111 function as supply valves for the working sequence pressing.

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

Directional control valve item .140-symbol "M"-keeps the supply valve for the pressing operation closed in the starting position. This makes it possible to connect a number of press modules to the main pump or to operate an auxiliary circuit. For this to take place, pressure valve item .130 must be closed by energising solenoid Y75.

### Pressure control of the pump and low pressure bypass

The pump is protected by means of logic element items .130 and .132. The maximum working pressure is set at the pressure control valve which is mounted as a pilot valve into the cover plate item .132. When all valves are in starting position logic element item .130 is open, the pump output passes to tank against the closing spring of item .130. the proportional pressure control valve item .133 continuously controls the working pressure - dependent on the setting of the electrical command signal.

### The valves necessary to comply with the UVV (German Accident Prevention Regulations).

The logic elements pos. 710 and 720 mounted in series in the rod end circuit of the press cylinder are electronically monitored to ensure that they are in the start position. This is checked each press cycle. Should either valve fail to reach its safe position, a false start to the next cycle cannot be made and any further dangerous closing stroke of the press cannot take place.

With the downstroke both valves (items .710 and .720) are opened via separate pilot valves (items .730 and .740). Additionally the valve item .740 is linked to the control oil circuit of the pump protection via item .750 in order to monitor the pressure build-up. By alternately switching the pilot valves (see function circuit) pressure valve item .130 is achieved each press cycle.

Logic elements items .710 and .720 act as non return valves during the return stroke.

### Fast approach and pressing:

Presetting an electrical command value for proportional throttle valve item .510 determines the fast approach speed due to gravity ( holding pressure 25 bar). The fast approach speed and the change-over to the pressing speed can be controlled by varying the command value to proportional solenoid Y51. Should the power fail, proportional throttle valve item .510 returns to the start position. In conjunction with pressure relief valve item .514, it then acts as a pilot operated pressure relief valve. The holding pressure to compensate for the weight of parts, together with a safety factor is set at item .514.

### Decompression

Decompression of the system occurs after the pressing sequence via logic elements items .150 and .151. Duration of de-compression is set at the stroke limiter of the cover plate item .151. Pressure relief 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, connected to X4, remotely controls the return force.

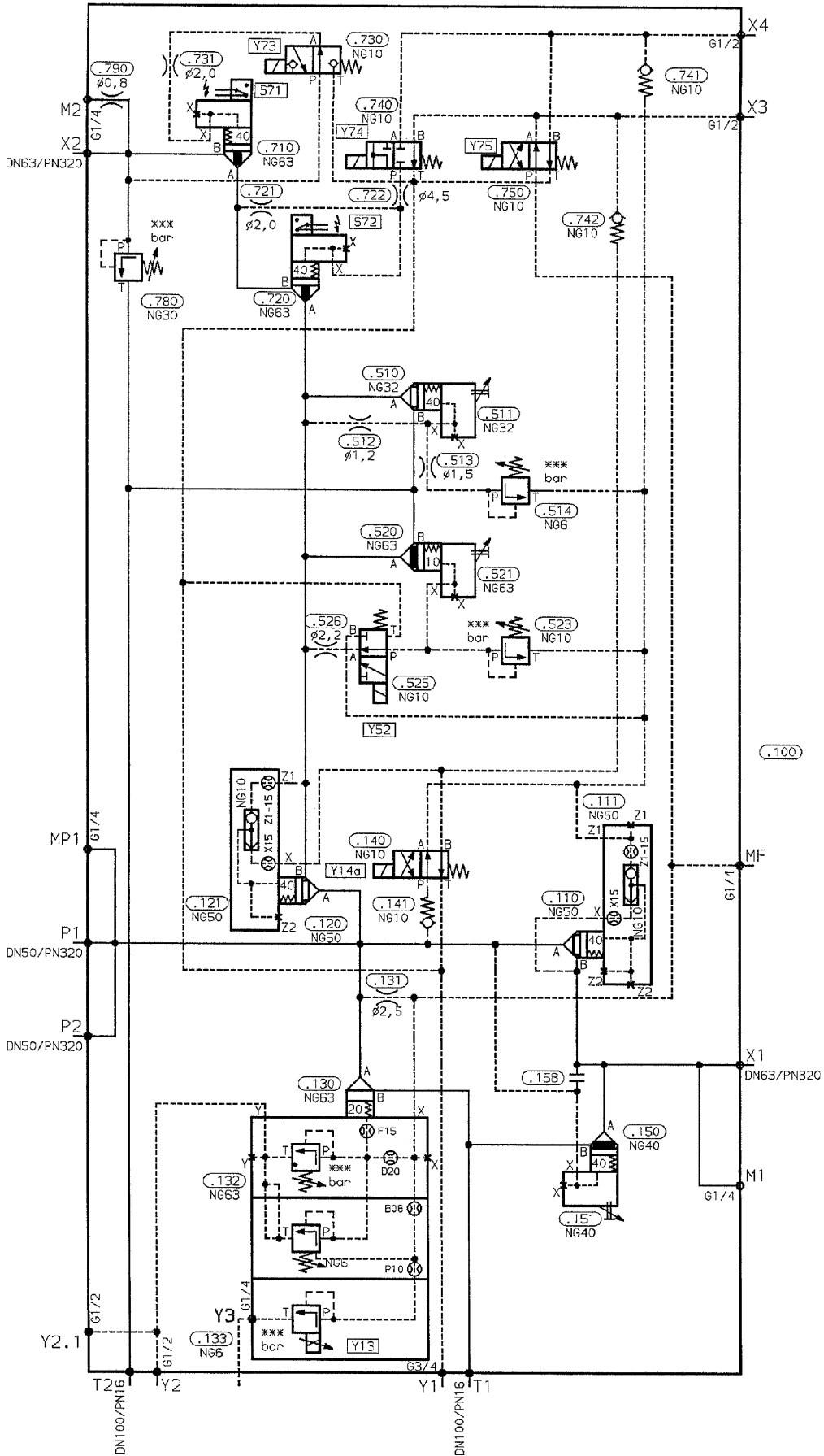
# Functional diagramm: Normal Press Cycle, ...G1002

Description	Ident.	Item	Position	Stationary	Fast downstroke	Pressing	Decom-pression	Return
Two-hand control			UD LD					
Pressure relief valve	Solenoid Y 13	.133						
Directional valve	Y 14a	.140						
	Y 14b							
Proportional throttle valve	Y 51	.510						
	Y 73							
Directional valve	Y 74	.730						
	Y 75							
Directional valve	Y 74	.740						
Directional valve	Y 75	.750						
Safety valve	Limit switch S 71	.710	*1 0					
Safety valve	S 72	.720	*1 0					

\* Output signal at limit switch.

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

**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4A1001-3X/...**

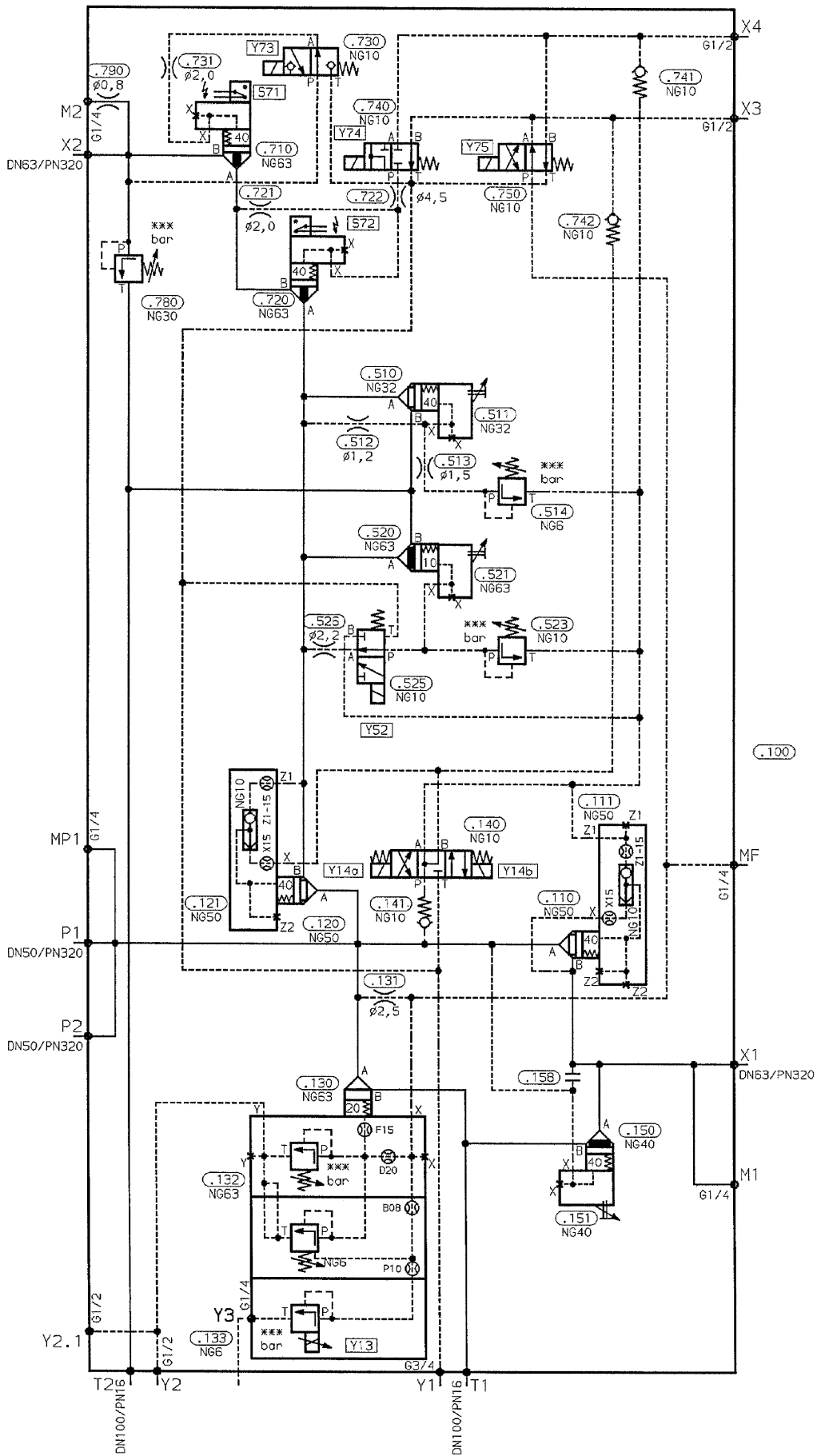




**Press Module Size 63  
Control Type B4  
IH04MS63B4A1001-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/...	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

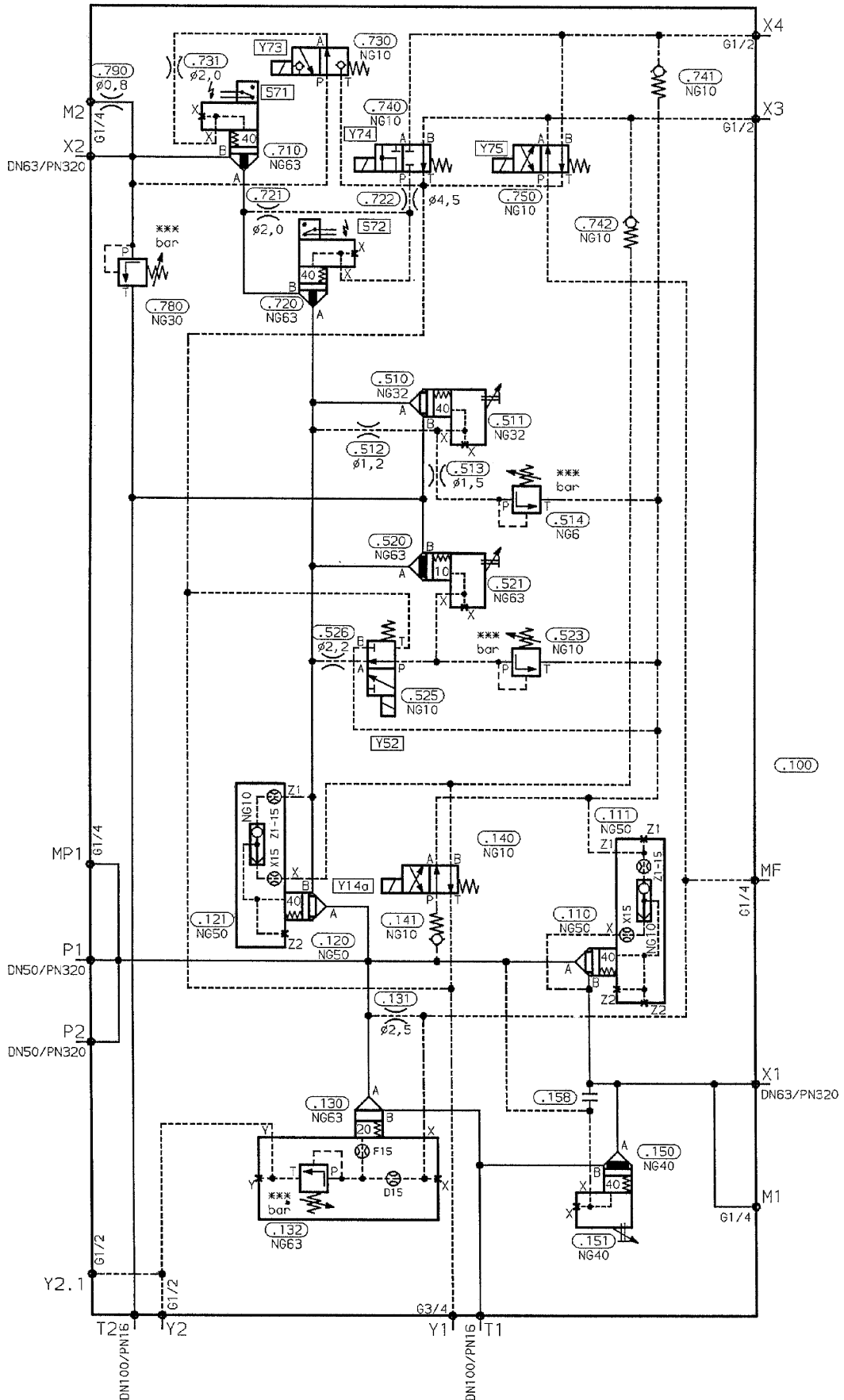
**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4A1002-3X/...**



**Press Module Size 63  
Control Type B4  
IH04MS63B4A1002-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 10	4WE10M3X/...	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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

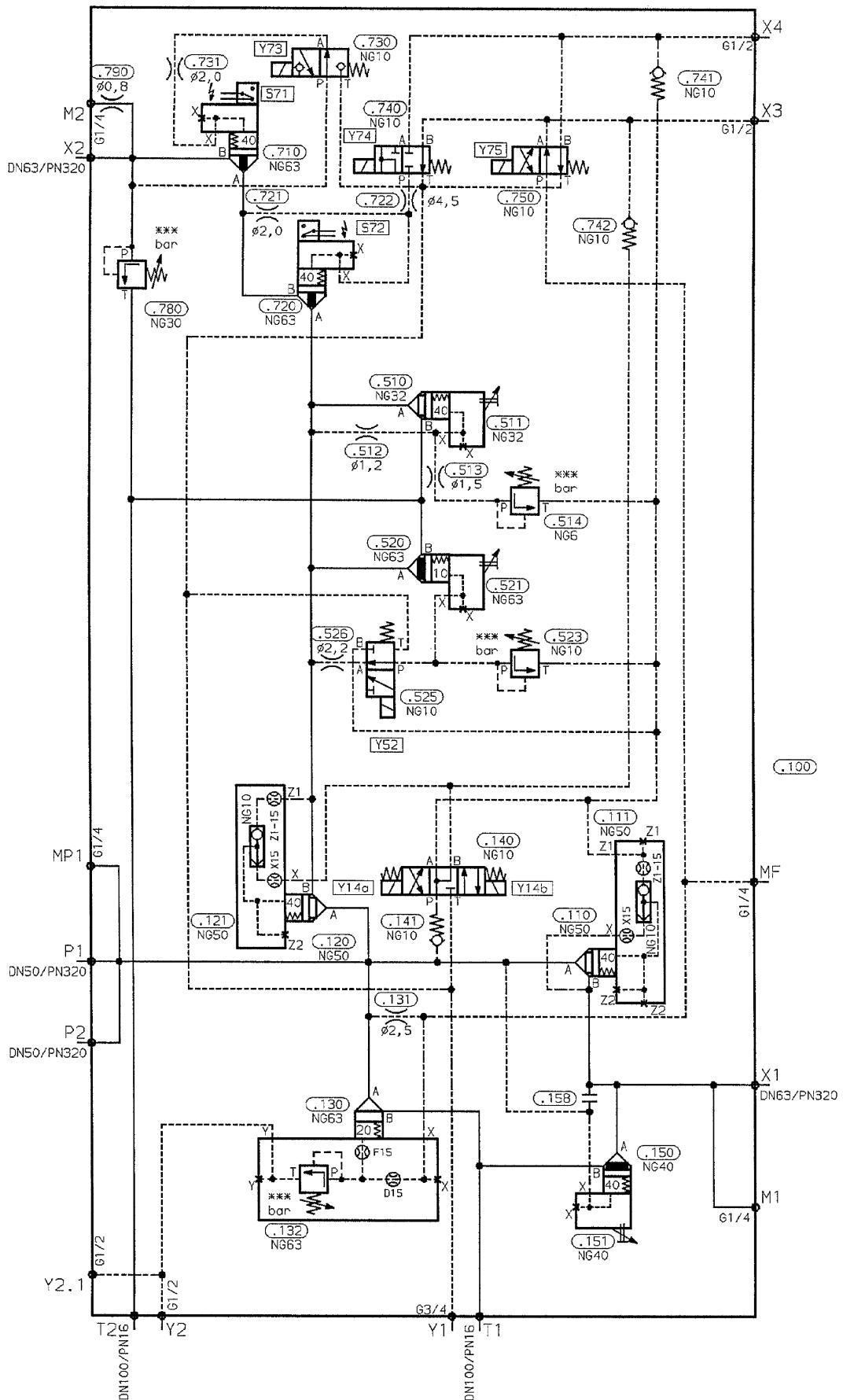
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**Control Type B4**  
**IH04MS63B4A1003-3X/...**



**Press Module Size 63  
Control Type B4  
IH04MS63B4A1003-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/315	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, 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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/...	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

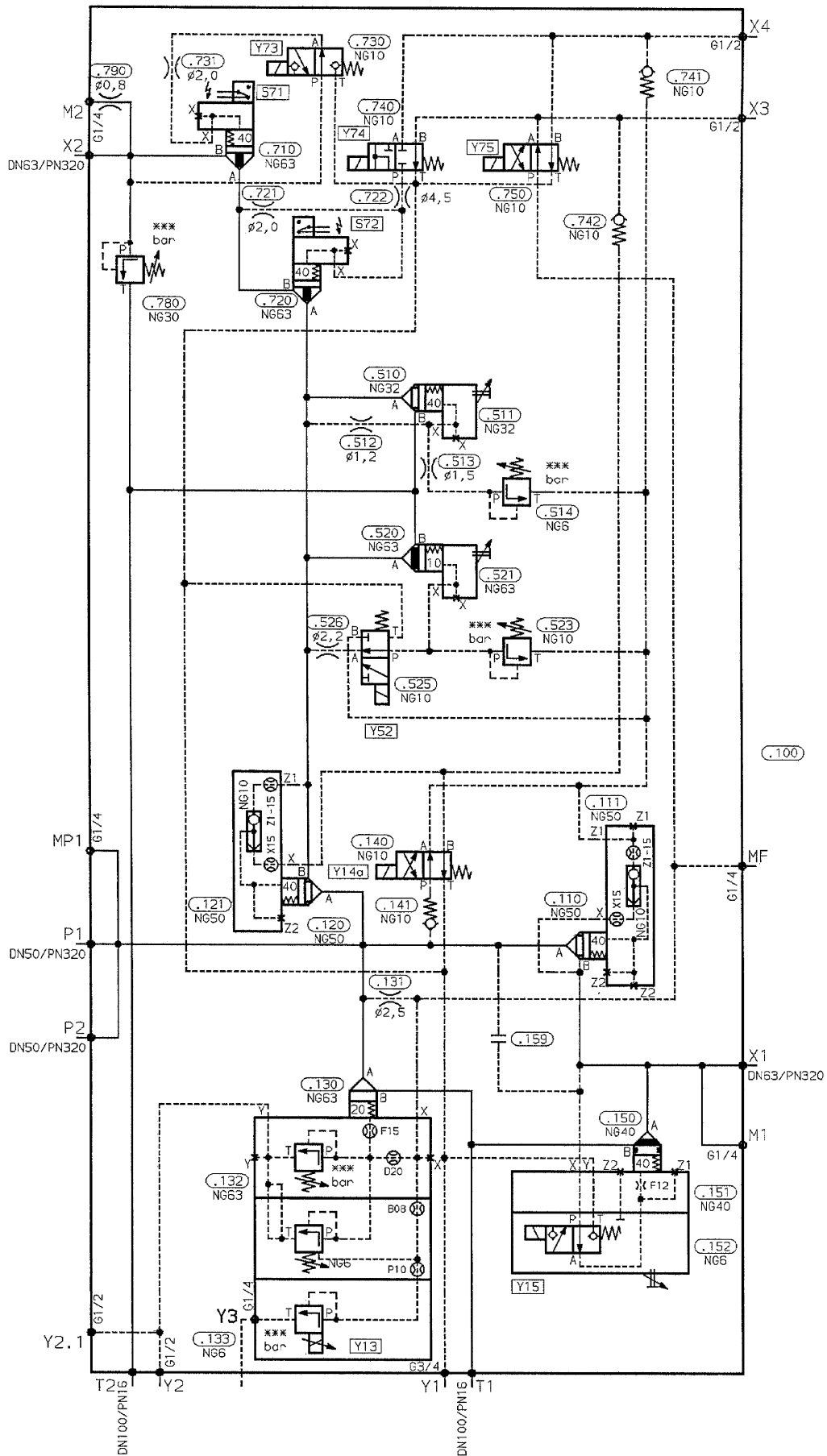
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**Control Type B4**  
**IH04MS63B4A1004-3X/...**



**Press Module Size 63  
Control Type B4  
IH04MS63B4A1004-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 10	4WE10M3X/...	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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/...	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/...	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315...	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4A1005-3X/...**

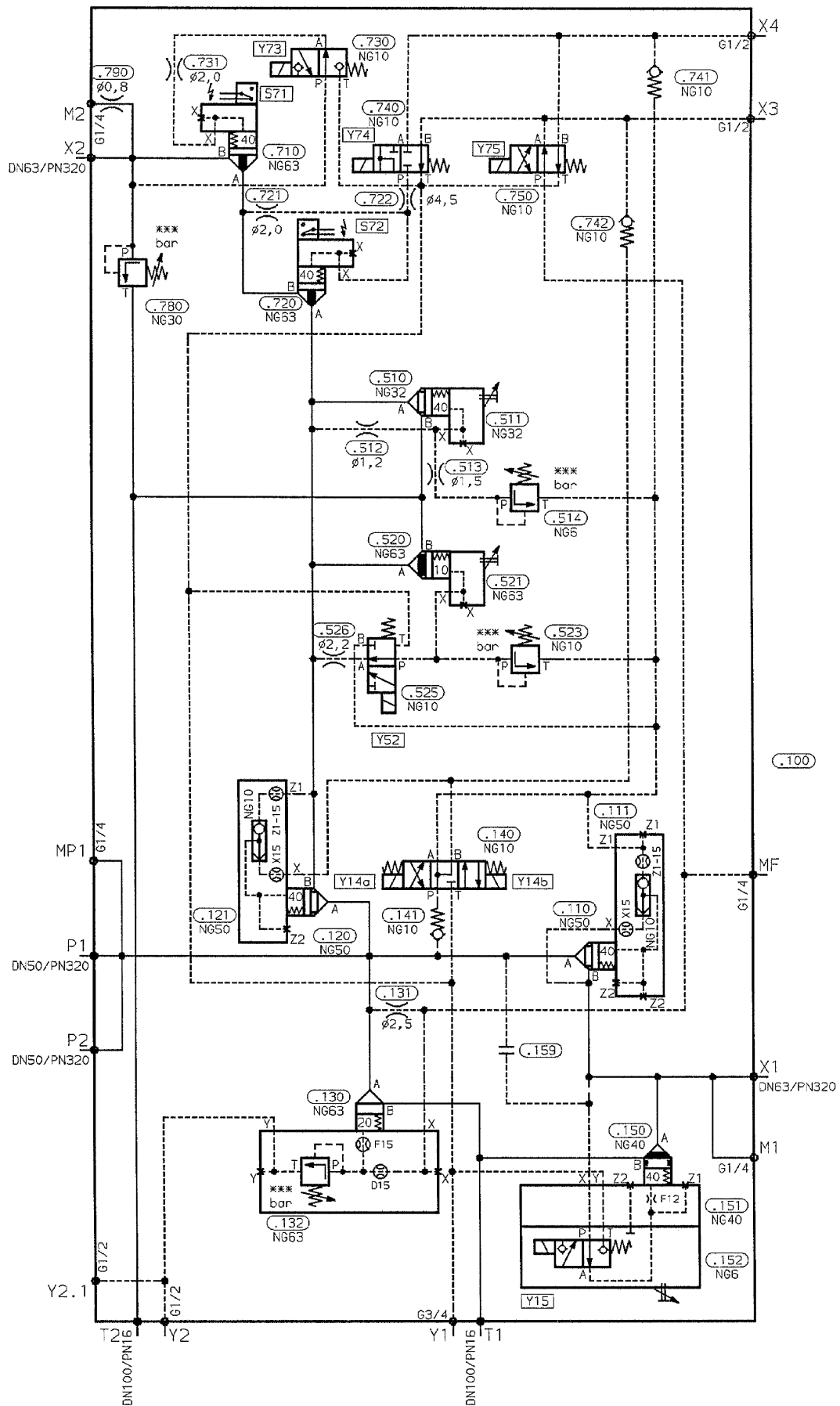




**Press Module Size 63  
Control Type B4  
IH04MS63B4A1005-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.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	LC40DB40D6X/004	RE 81 010	
.151	1	Control cover, size 40	LFA40HWA2-8-6X/DRF12	RE 81 010	
.152	1	Poppet valve, size 6	M-3SEW6U2X/420...SO101	RE 22 057	
.510	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

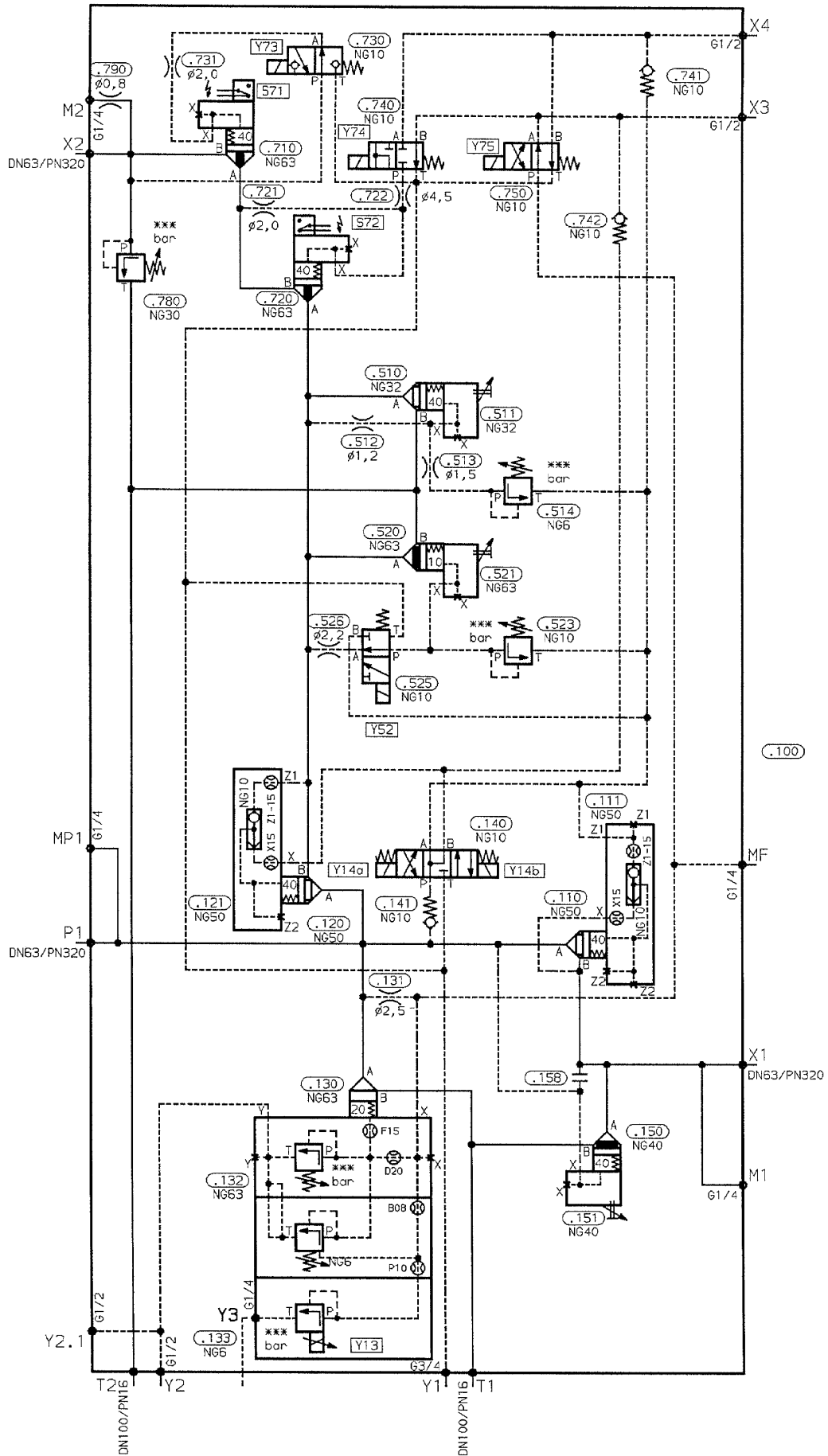
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**Control Type B4**  
**IH04MS63B4A1008-3X/...**



**Press Module Size 63  
Control Type B4  
IH04MS63B4A1008-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/315	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 10	4WE10M3X/...	RE 23 316	
.141	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.150	1	Logic element, size 40	LC40DB40D6X/004	RE 81 010	
.151	1	Control cover, size 40	LFA40HWA2-8-6X/DRF12	RE 81 010	
.152	1	Poppet valve, size 6	M-3SEW6U2X/420...SO101	RE 22 057	
.510	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

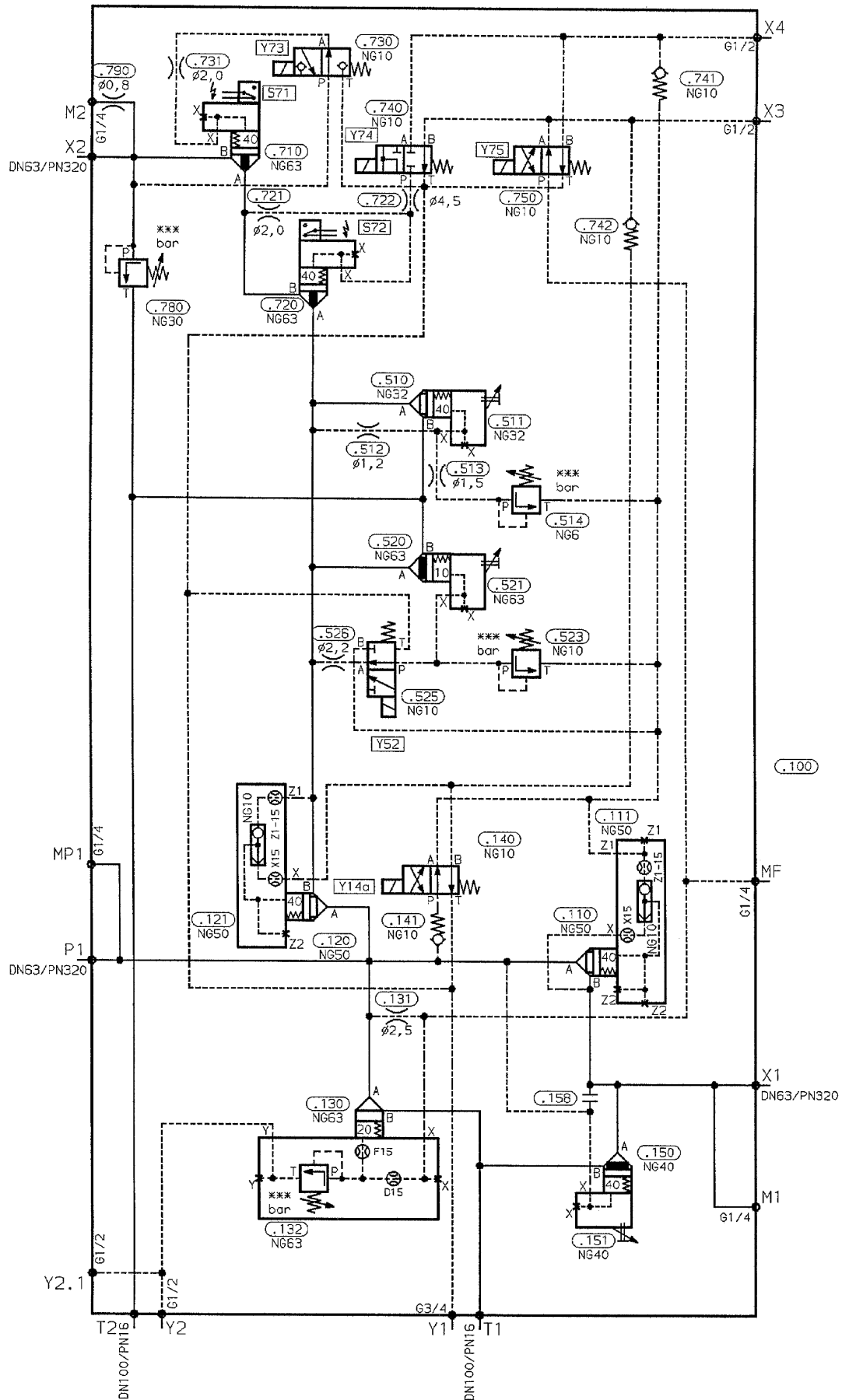
**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4B1002-3X/...**



**Press Module Size 63  
Control Type B4  
IH04MS63B4B1002-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 10	4WE10M3X/...	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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/...	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1	1	*Flange	DN63PN320	PN 303 925	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
		*(Not included in supply; please order separately !)			

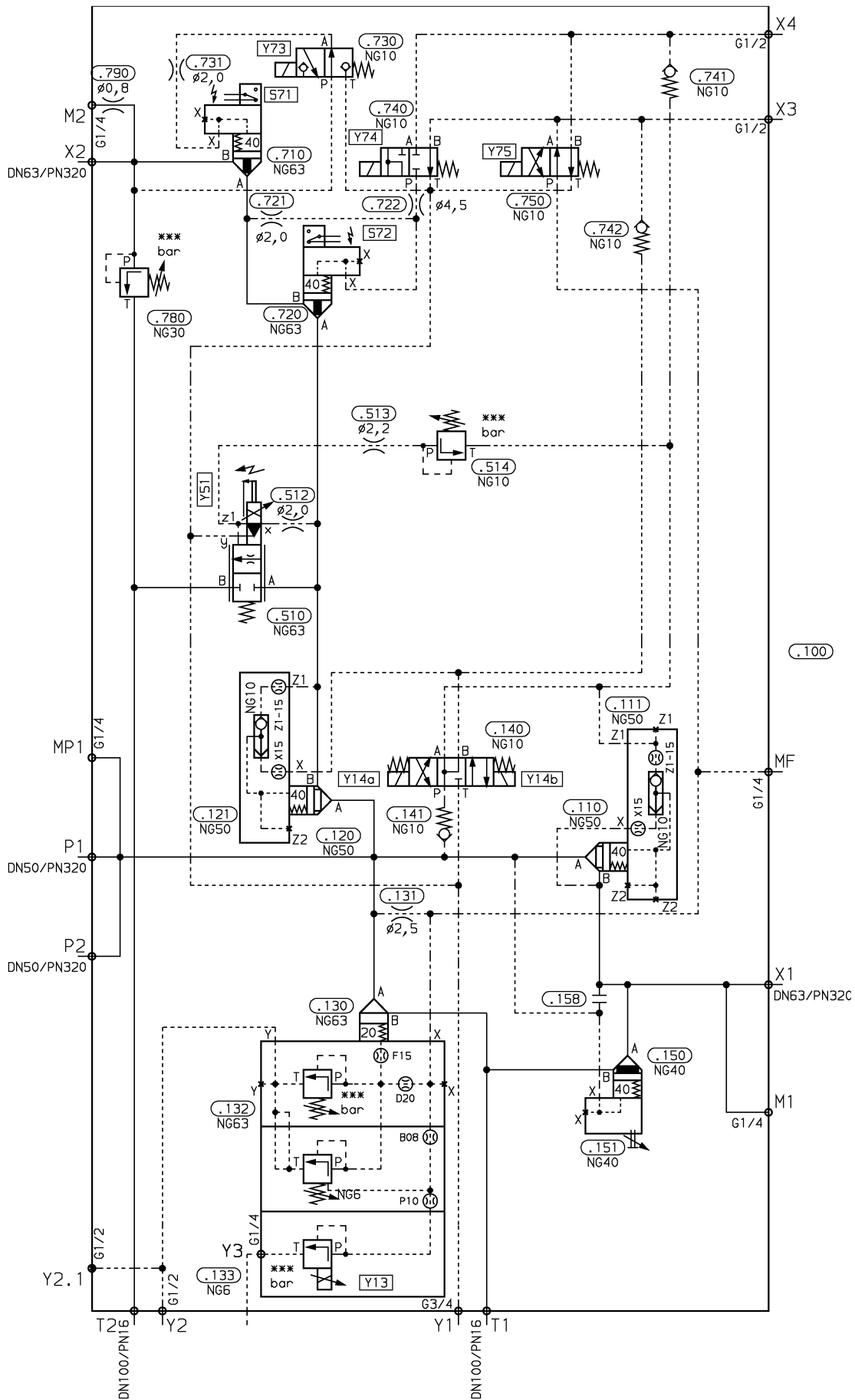
**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4B1003-3X/...**



**Press Module Size 63  
Control Type B4  
IH04MS63B4B1003-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/315	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, 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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/...	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1	1	*Flange	DN63PN320	PN 303 925	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4C1002-3X/...**

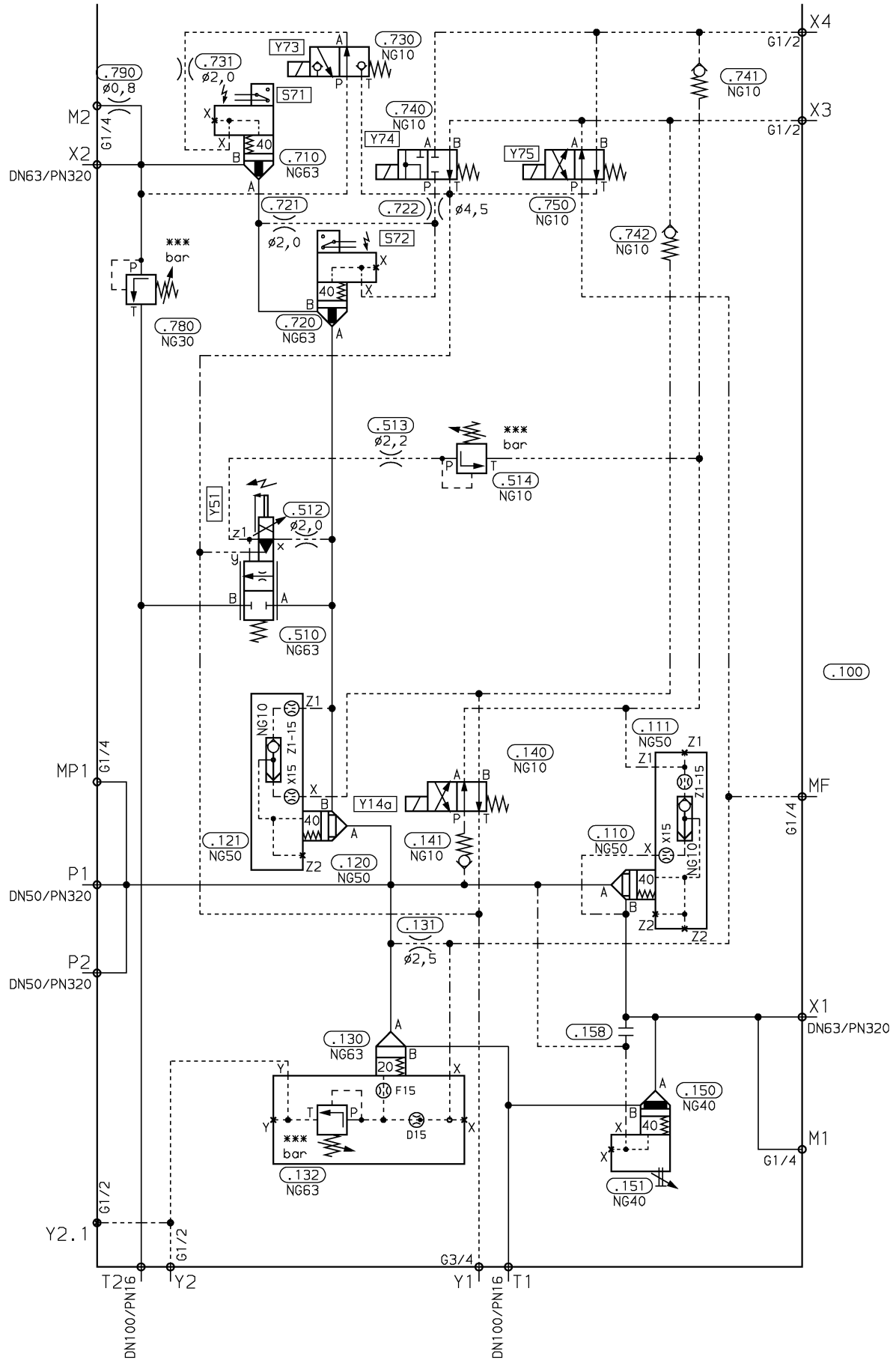




**Press Module Size 63  
Control Type B4  
IH04MS63B4C1002-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 10	4WE10M3X/...	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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Proportional throttle valve, size 63	FE63C1X/...1800LM-7	RE 29 204	
.512	1	Orifice	DUESE Ø2,0 G1/8		
.513	1	Orifice	DUESE Ø2,2 G1/4		
.514	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

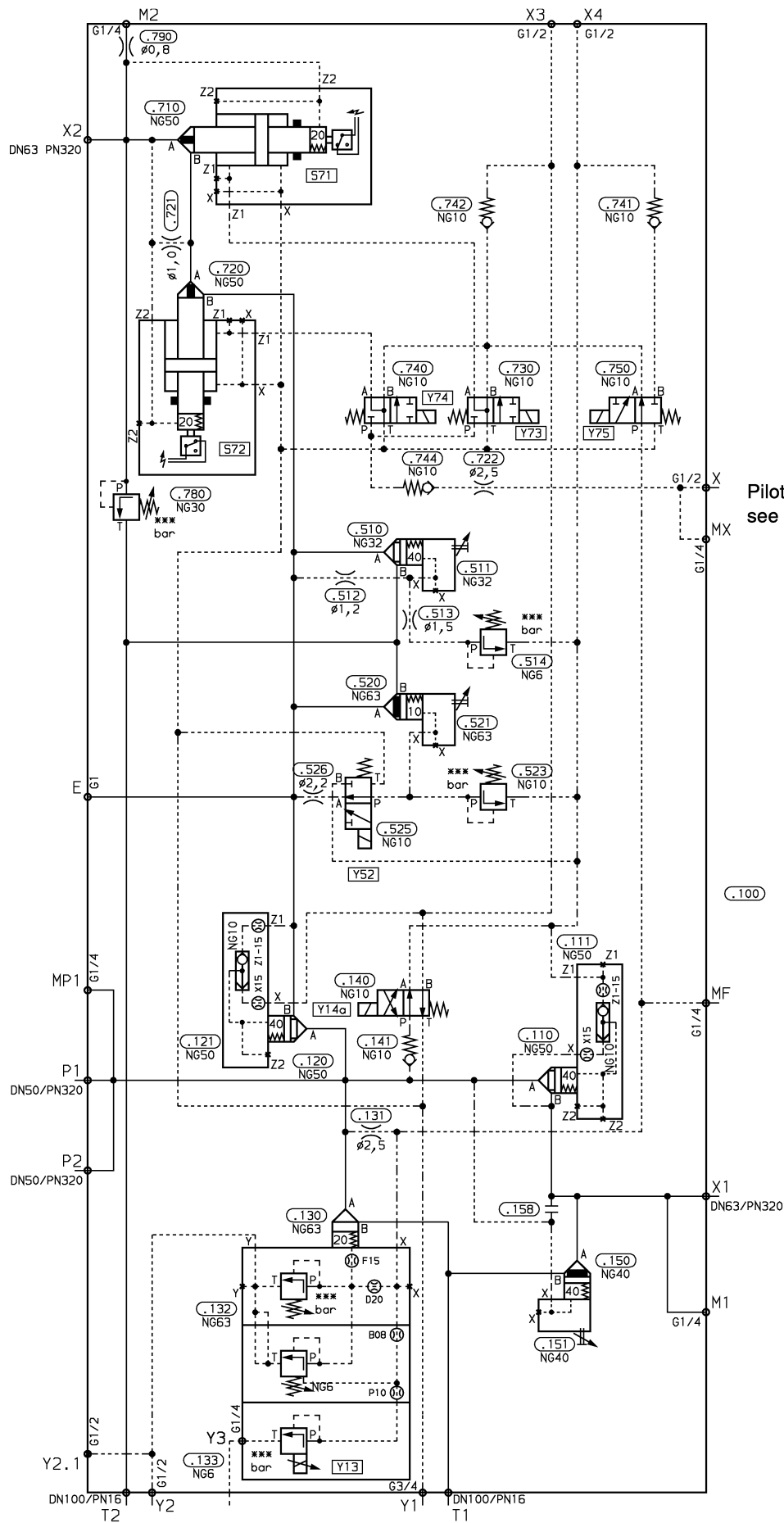
**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4C1003-3X/...**



**Press Module Size 63  
Control Type B4  
IH04MS63B4C1003-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/315	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, 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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Proportional throttle valve, size 63	FE63C1X/...1800LM-7	RE 29 204	
.512	1	Orifice	DUESE Ø2,0 G1/8		
.513	1	Orifice	DUESE Ø2,2 G1/4		
.514	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.710	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63E-6X/CA40DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø2 G1/4		
.722	1	Orifice	DUESE Ø4,5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 63  
Control Type B4  
IH04MS63B4E1001-3X/...**

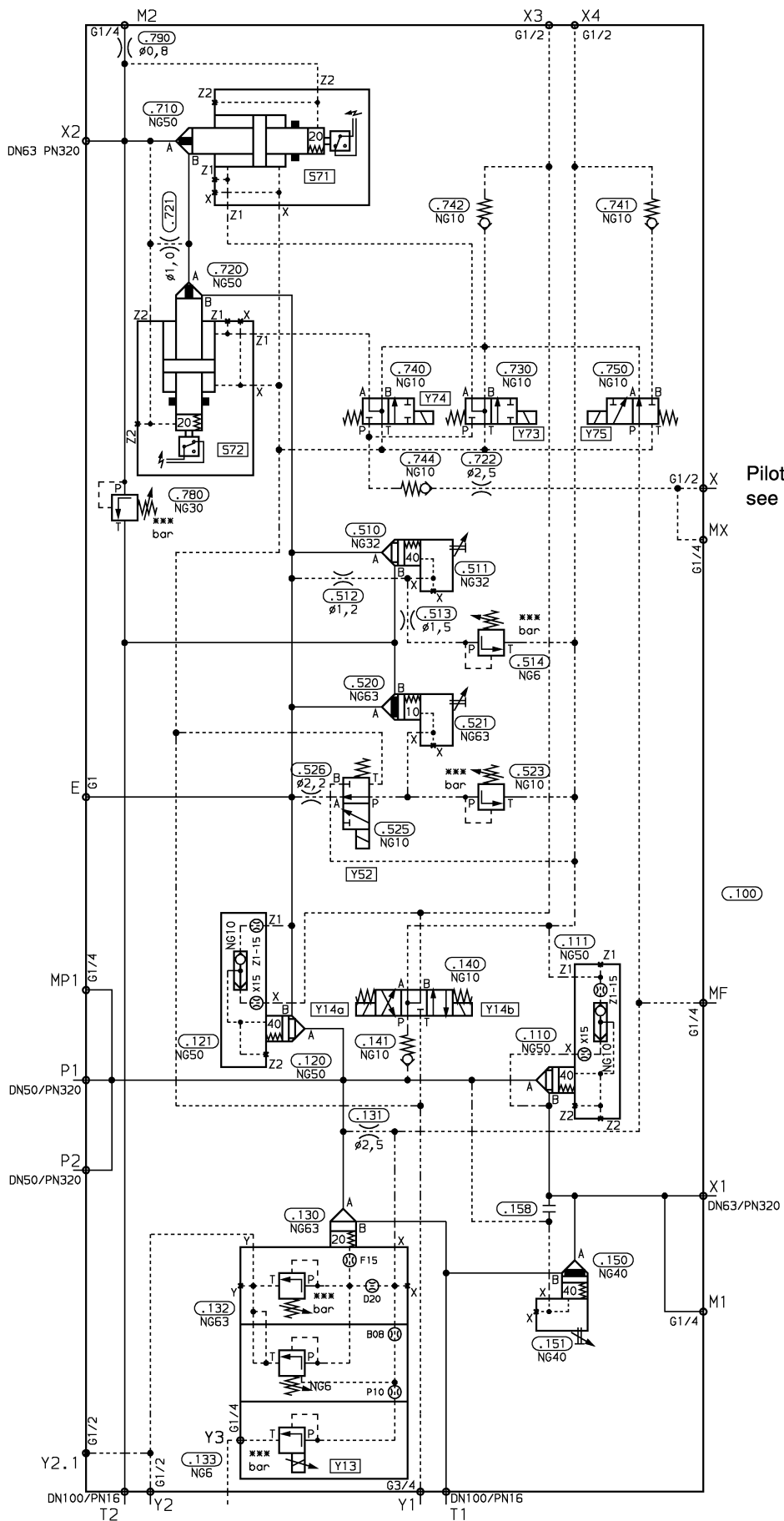


Pilot pressure  
see page 4

**Press Module Size 63  
Control Type B4  
IH04MS63B4E1001-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DBE206X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 50	LFA50ER7-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 50	LFA50ER7-6X/CA20DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø1 G1/4		
.722	1	Orifice	DUESE Ø2,5 G1/4		
.730	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.740	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.744	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	3WE10A4-3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4E1002-3X/...**

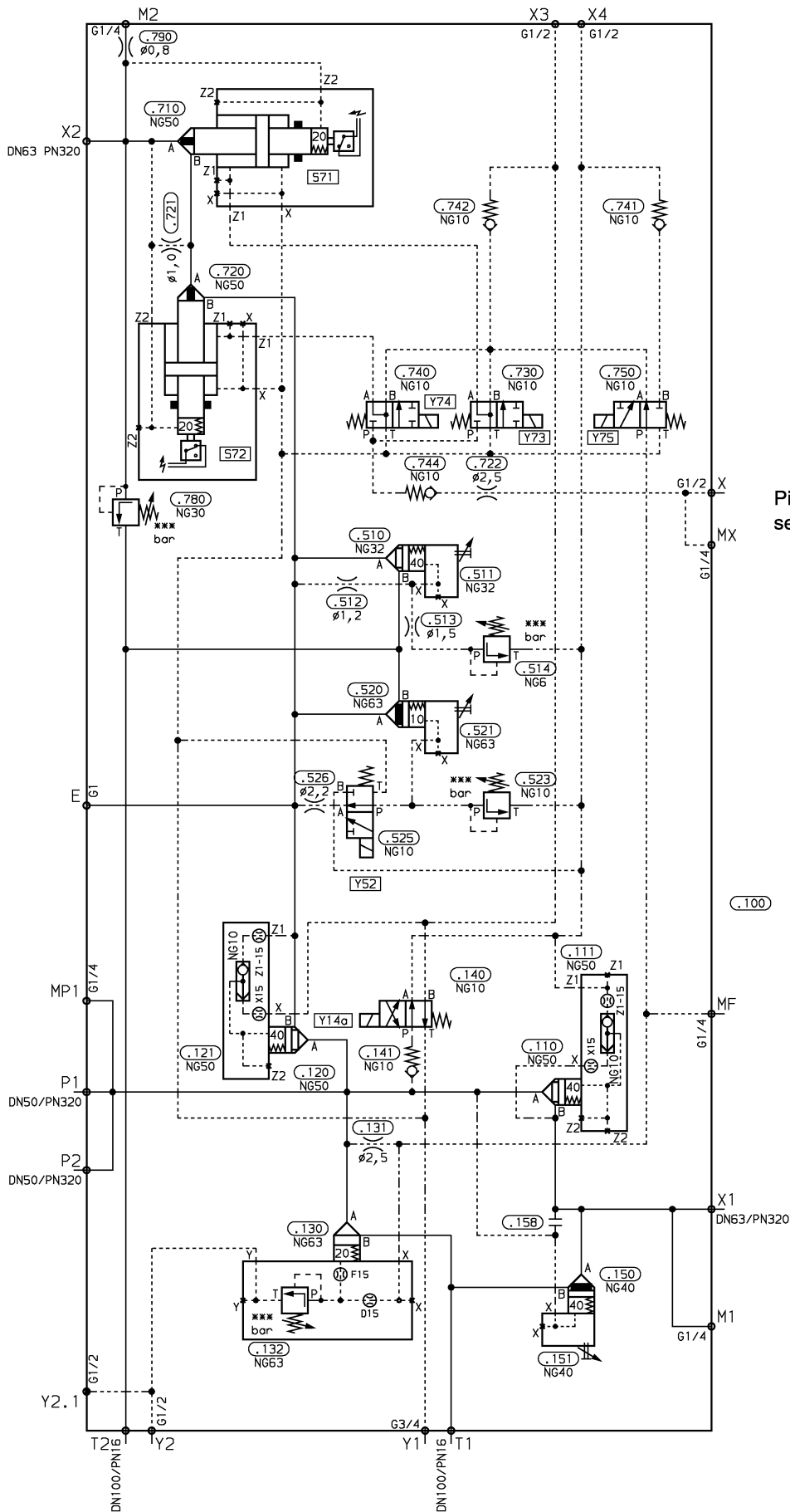


Pilot pressure  
see page 4

**Press Module Size 63  
Control Type B4  
IH04MS63B4E1002-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 10	4WE10M3X/...	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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/...	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 50	LFA50ER7-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 50	LFA50ER7-6X/CA20DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø1 G1/4		
.722	1	Orifice	DUESE Ø2,5 G1/4		
.730	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.740	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.744	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	3WE10A4-3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4E1003-3X/...**



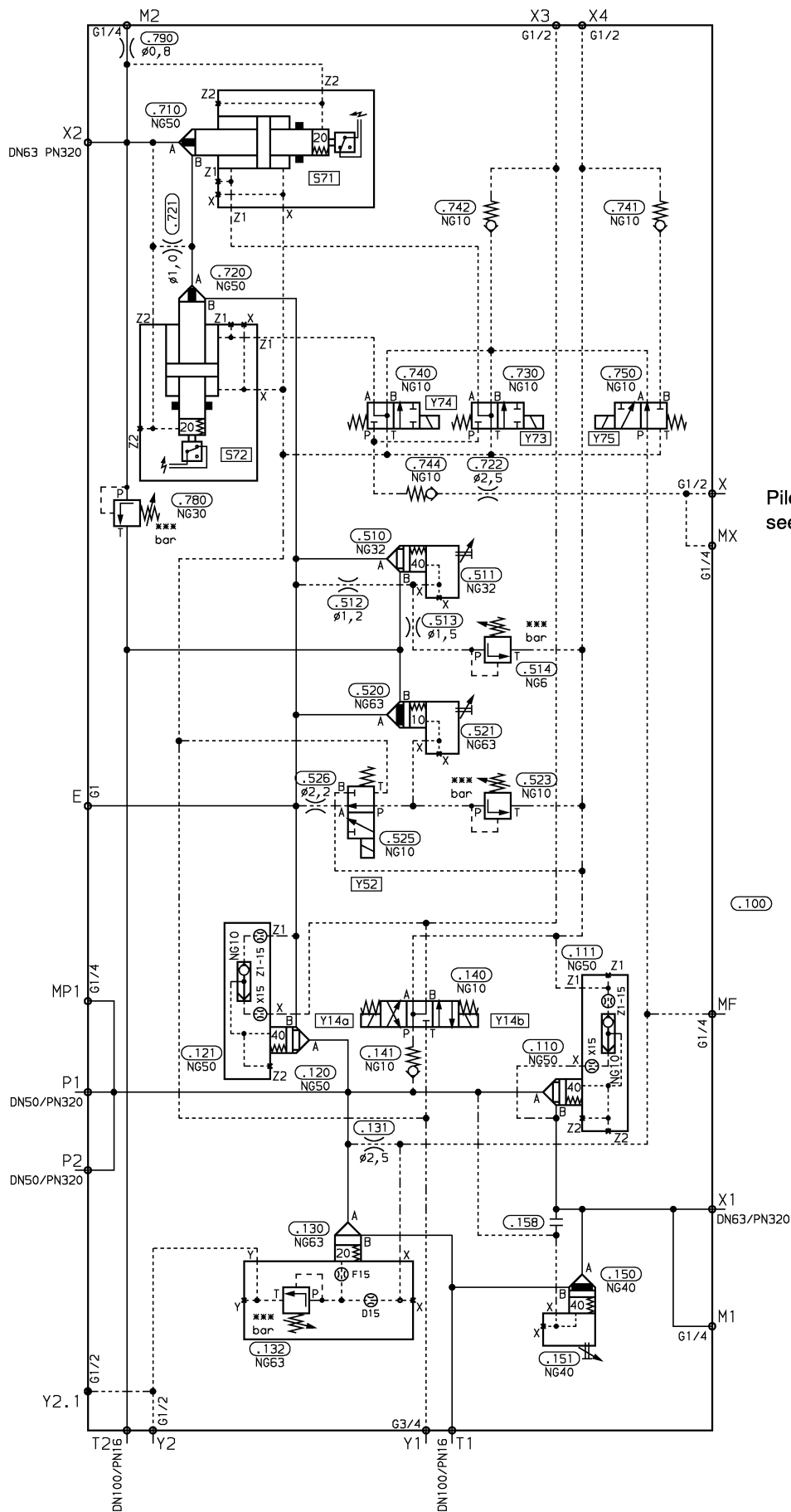
Pilot pressure  
see page 4



**Press Module Size 63  
Control Type B4  
IH04MS63B4E1003-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/315	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, 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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/...	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 50	LFA50ER7-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 50	LFA50ER7-6X/CA20DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø1 G1/4		
.722	1	Orifice	DUESE Ø2,5 G1/4		
.730	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.740	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.744	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	3WE10A4-3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4E1004-3X/...**

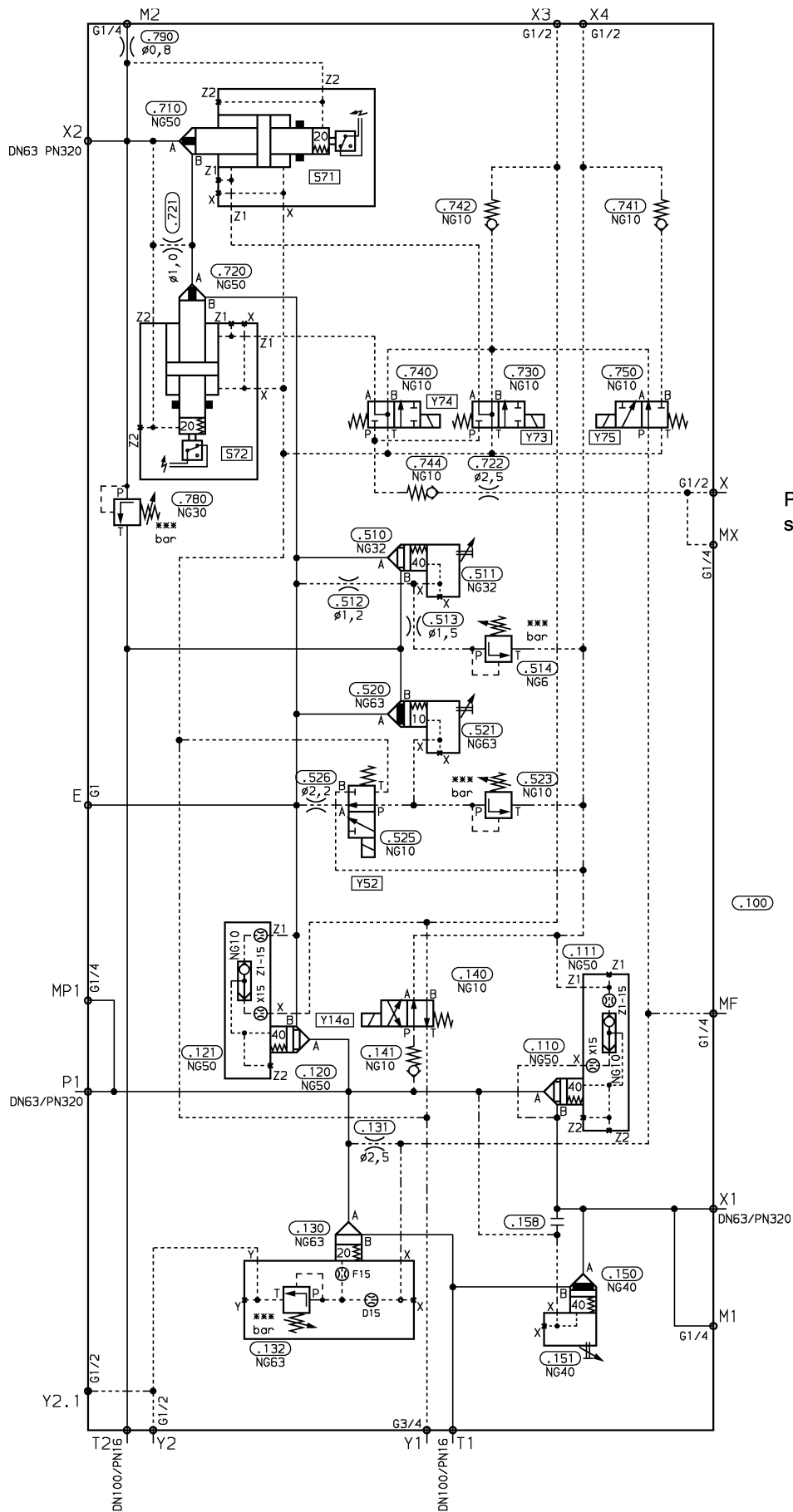


Pilot pressure  
see page 4

**Press Module Size 63  
Control Type B4  
IH04MS63B4E1004-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/315	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DB2-6X/315	RE 81 078	
.140	1	Directional control valve, size 10	4WE10M3X/...	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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/...	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 50	LFA50ER7-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 50	LFA50ER7-6X/CA20DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø1 G1/4		
.722	1	Orifice	DUESE Ø2,5 G1/4		
.730	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.740	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.744	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	3WE10A4-3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4F1003-3X/...**

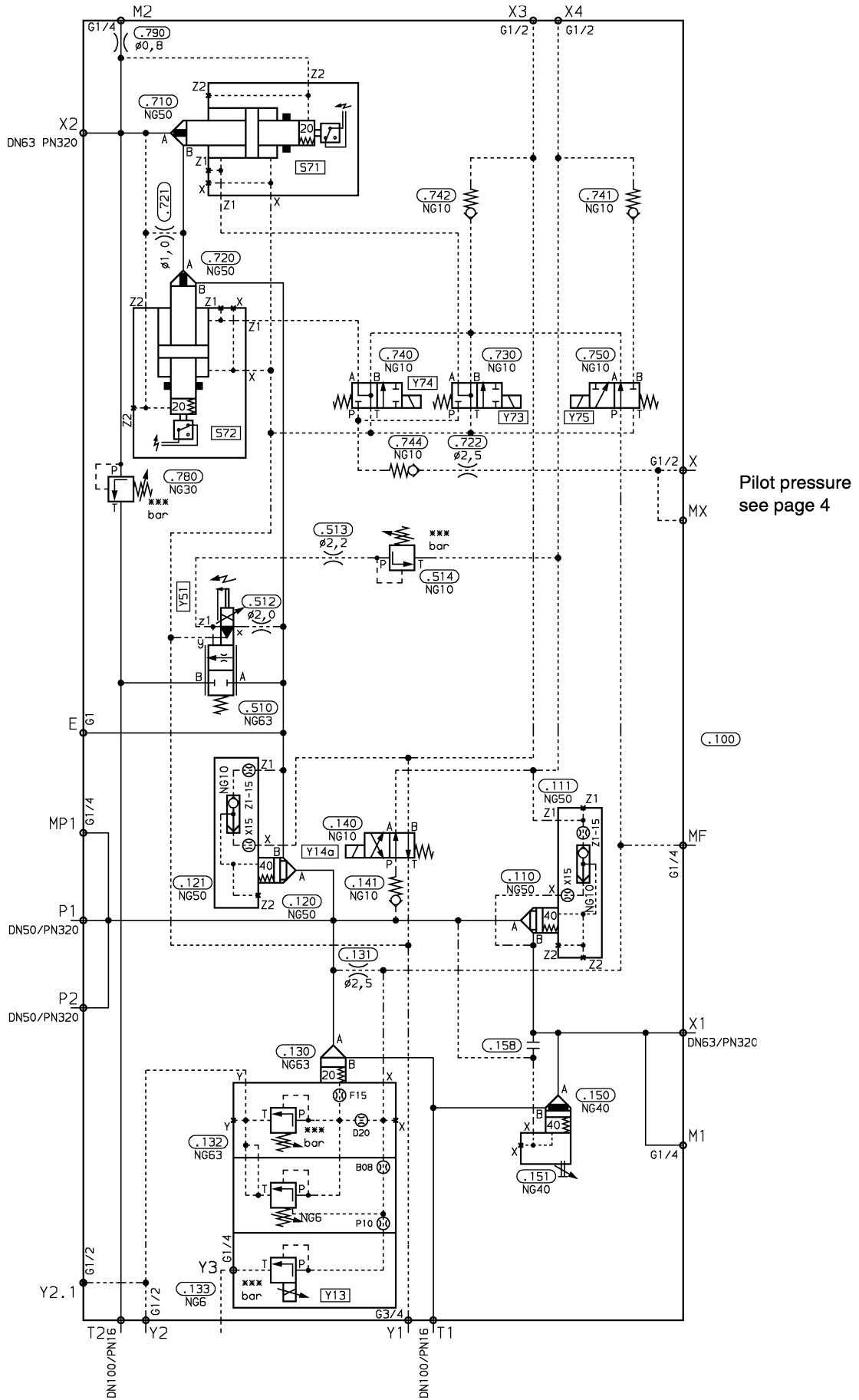


Pilot pressure  
see page 4

**Press Module Size 63  
Control Type B4  
IH04MS63B4AF1003-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/315	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, 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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Logic element, size 32	LC32B40E6X/	RE 81 010	
.511	1	Control cover, size 32	LFA32H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,2 G1/8		
.513	1	Orifice	DUESE Ø1,5 G1/4		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 63	LC63B10D6X/...	RE 81 010	
.521	1	Control cover, size 63	LFA63H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,2 G1/4		
.710	1	Logic element, size 50	LFA50ER7-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 50	LFA50ER7-6X/CA20DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø1 G1/4		
.722	1	Orifice	DUESE Ø2,5 G1/4		
.730	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.740	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.744	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	3WE10A4-3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1	1	*Flange	DN63PN320	PN 303 925	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4G1001-3X/...**

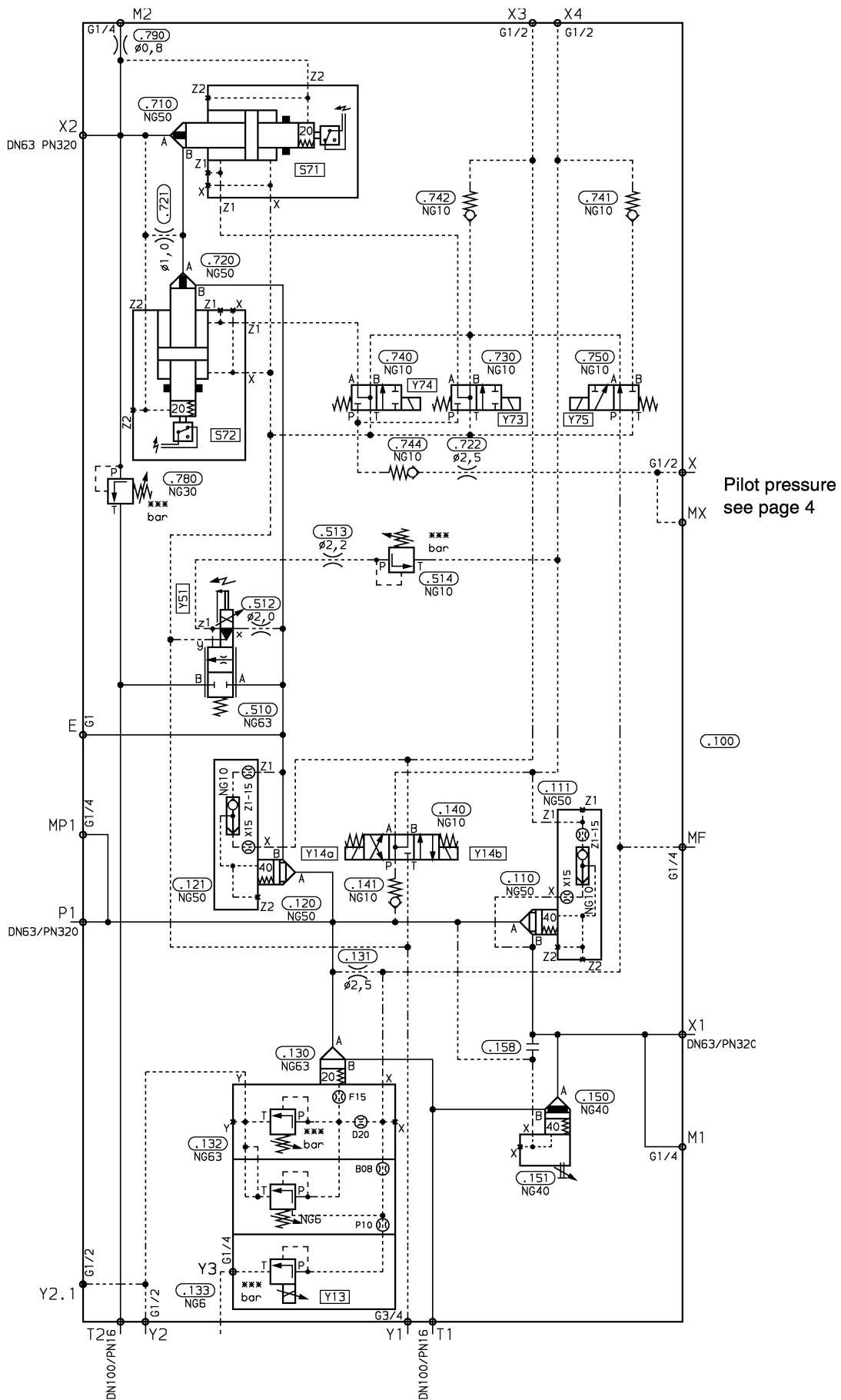


Pilot pressure  
see page 4

**Press Module Size 63  
Control Type B4  
IH04MS63B4G1001-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Proportional throttle valve, size 63	FE63C1X/...1800LM-7	RE 29 204	
.512	1	Orifice	DUESE Ø2,0 G1/8		
.513	1	Orifice	DUESE Ø2,2 G1/4		
.514	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.710	1	Logic element, size 50	LFA50ER7-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 50	LFA50ER7-6X/CA20DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø1 G1/4		
.722	1	Orifice	DUESE Ø2,5 G1/4		
.730	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.740	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.744	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	3WE10A4-3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN50PN320	PN 303 923	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 63**  
**Control Type B4**  
**IH04MS63B4H1002-3X/...**



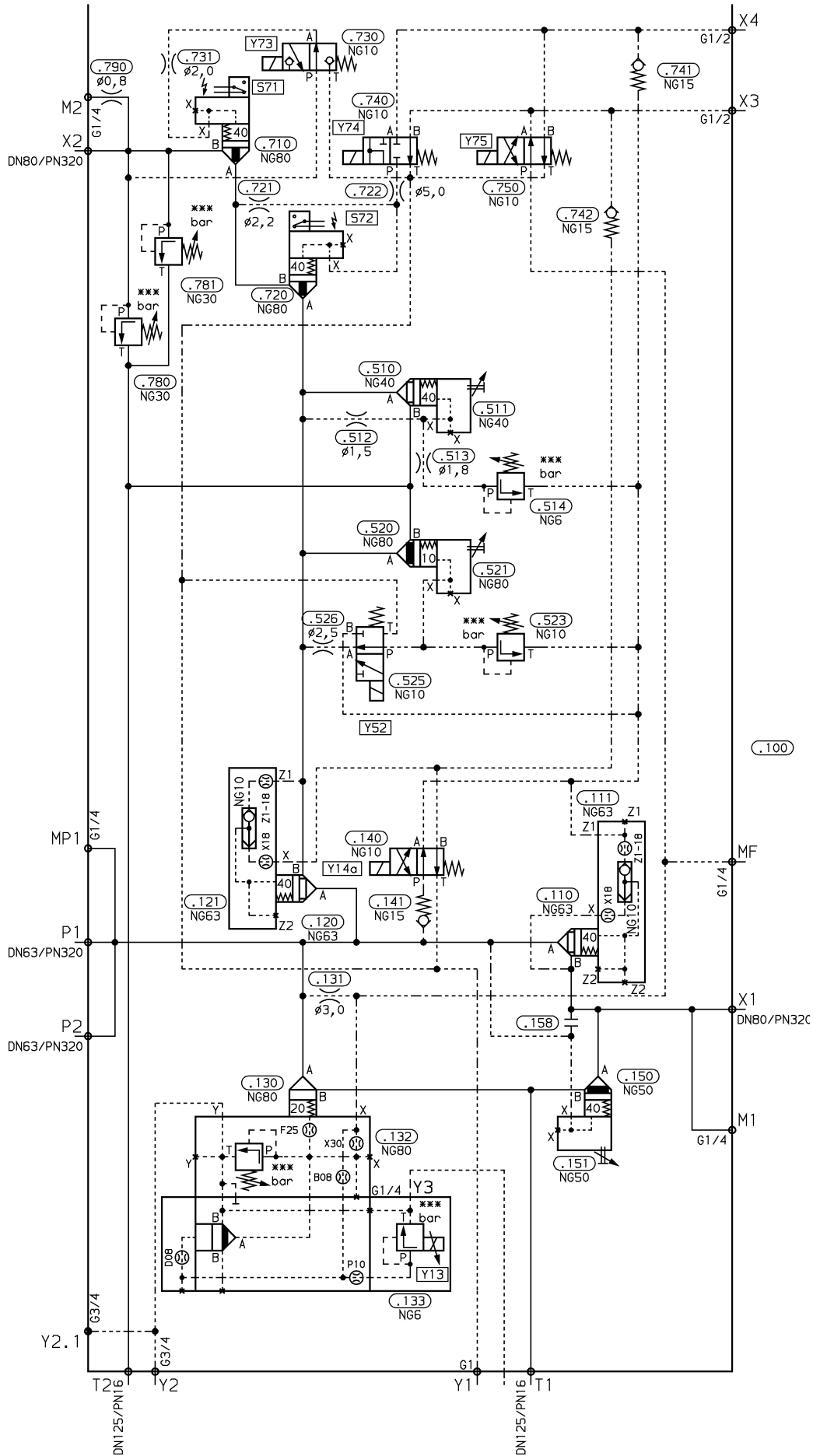
Pilot pressure  
see page 4



**Press Module Size 63  
Control Type B4  
IH04MS63B4H1002-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.111	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.120	1	Logic element, size 50	LC50B40E6X/...	RE 81 010	
.121	1	Control cover, size 50	LFA50G-6X/...	RE 81 010	
.130	1	Logic element, size 63	LC63DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø2,5 M10X25		
.132	1	Control cover, size 63	LFA63DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 10	4WE10M3X/...	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	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.510	1	Proportional throttle valve, size 63	FE63C1X/...1800LM-7	RE 29 204	
.512	1	Orifice	DUESE Ø2,0 G1/8		
.513	1	Orifice	DUESE Ø2,2 G1/4		
.514	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.710	1	Logic element, size 63	LFA50ER7-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA50ER7-6X/CA20DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø1 G1/4		
.722	1	Orifice	DUESE Ø2,5 G1/4		
.730	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.740	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.741	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.742	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.744	1	Check valve, size 10	M-SR10KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	3WE10A4-3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1	1	*Flange	DN63PN320	PN 303 925	RE 45 501
X1, X2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
T1, T2	2	*Flange	DN100PN16	PN 012 942	AB 22-15
*(Not included in supply; please order separately !)					

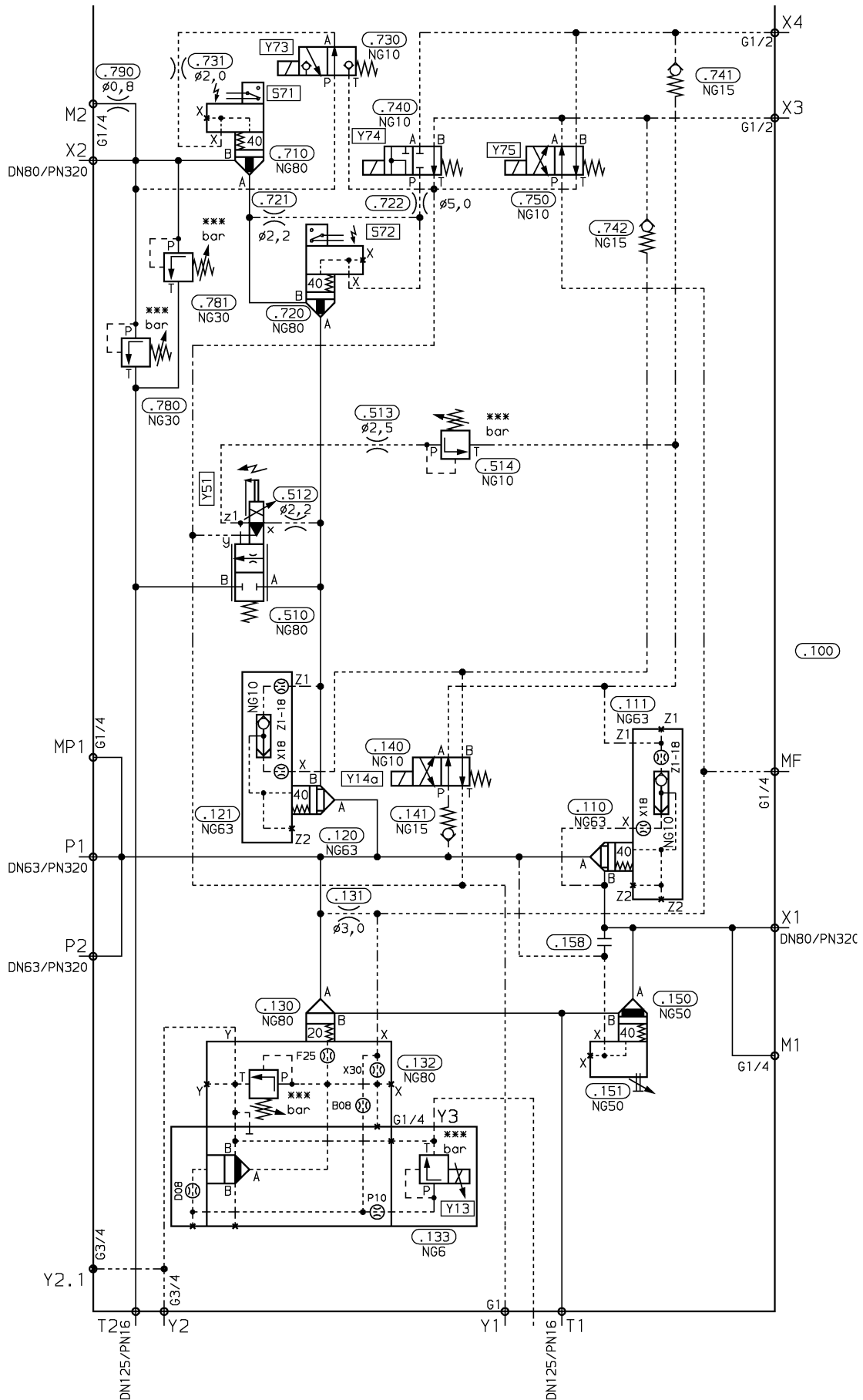
**Press Module Size 80**  
**Control Type B4**  
**IH04MS80B4A1001-3X/...**



**Press Module Size 80  
Control Type B4  
IH04MS80B4A1001-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 63	LC63B40E6X/...	RE 81 010	
.111	1	Control cover, size 63	LFA63G-6X/...	RE 81 010	
.120	1	Logic element, size 63	LC63B40E6X/...	RE 81 010	
.121	1	Control cover, size 63	LFA63G-6X/...	RE 81 010	
.130	1	Logic element, size 80	LC80DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø3		
.132	1	Control cover, size 80	LFA80DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 10	4WE10D3X/...	RE 23 316	
.141	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.150	1	Logic element, size 50	LC50B40D6X/	RE 81 010	
.151	1	Control cover, size 50	LFA50H2-6X/F	RE 81 010	
.510	1	Logic element, size 40	LC40B40E6X/...	RE 81 010	
.511	1	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,5		
.513	1	Orifice	DUESE Ø1,8		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 80	LC80B10D6X/...	RE 81 010	
.521	1	Control cover, size 80	LFA80H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,5 G1/4		
.710	1	Logic element, size 80	LFA80E-6X/CA40DQ6G24Z	RE 81 010	
.720	1	Logic element, size 80	LFA80E-6X/CA40DQ6G24Z	RE 81 010	
.721	1	Orifice	DUESE Ø2,2 G1/4		
.722	1	Orifice	DUESE Ø5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.742	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.781	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
X1, X2	2	*Flange	DN80PN320	PN 303 927	RE 45 501
T1, T2	2	*Flange	DN125PN16	PN 012 338	AB 22-15
*(Not included in supply; please order separately !)					

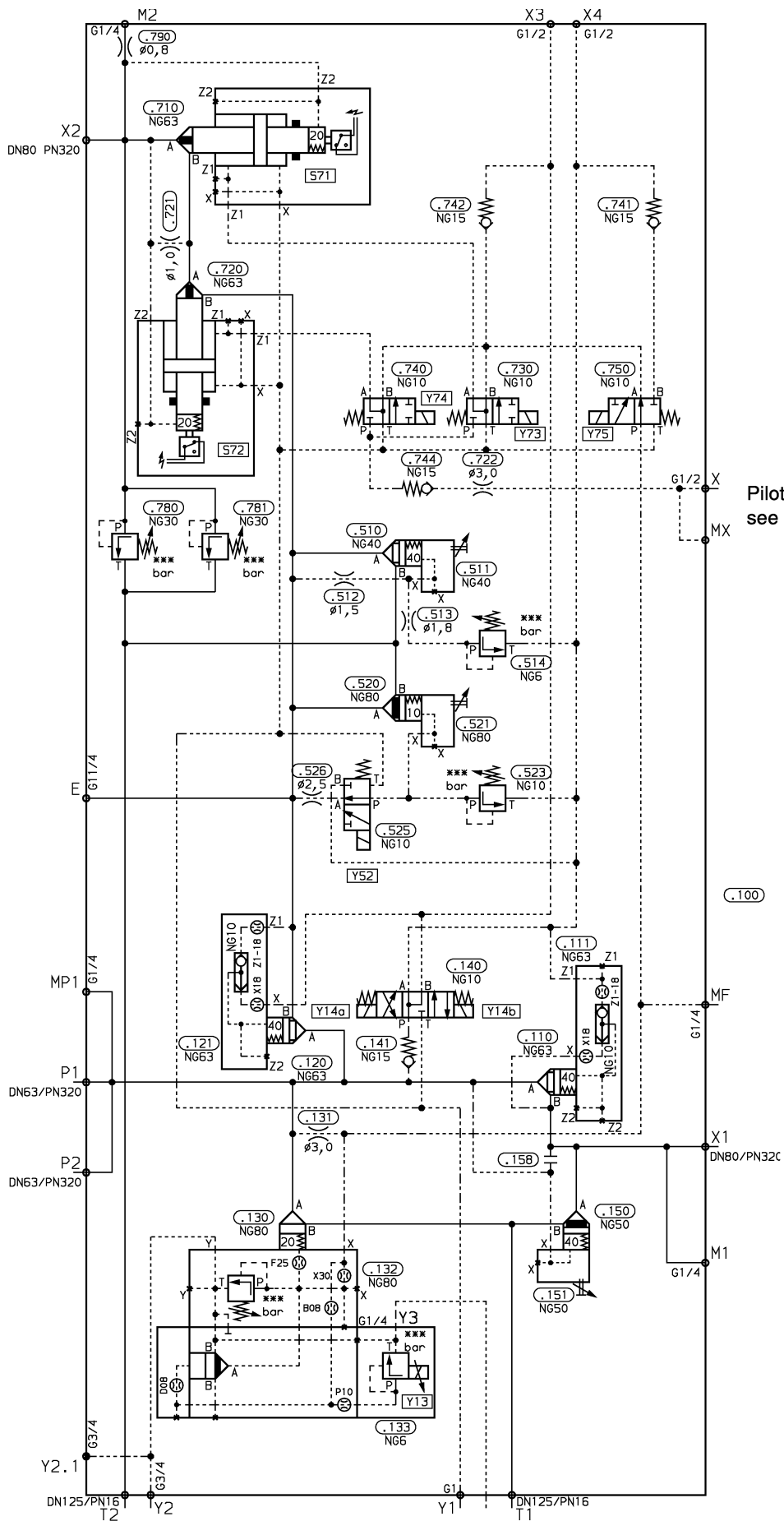
**Press Module Size 80**  
**Control Type B4**  
**IH04MS80B4C1001-3X/...**



**Press Module Size 80  
Control Type B4  
IH04MS80B4C1001-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 63	LC63B40E6X/	RE 81 010	
.111	1	Control cover, size 63	LFA63G-6X/	RE 81 010	
.120	1	Logic element, size 63	LC63B40E6X/	RE 81 010	
.121	1	Control cover, size 63	LFA63G-6X/	RE 81 010	
.130	1	Logic element, size 80	LC80DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE Ø3		
.132	1	Control cover, size 80	LFA80DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 10	4WE10D3X/...	RE 23 316	
.141	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.150	1	Logic element, size 50	LC50B40D6X/	RE 81 010	
.151	1	Control cover, size 50	LFA50H2-6X/F	RE 81 010	
.510	1	Proportional throttle valve, size 80	FES80CA1X/...2500LM-7	RE 29 204	
.512	1	Orifice	DUESE Ø2,2		
.513	1	Orifice	DUESE Ø2,5		
.514	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.710	1	Logic element, size 80	LFA80E-6X/CA40DQ6G24Z	RE 81 010	
.720	1	Logic element, size 80	LFA80E-6X/CA40DQ6G24Z	RE 81 010	
.721	1	Orifice	DUESE Ø2,2 G1/4		
.722	1	Orifice	DUESE Ø5 G1/4		
.730	1	Poppet valve, size 10	M-3SE10U2X/315	RE 22 088	
.731	1	Orifice	DUESE Ø2 G1/8		
.740	1	Directional control valve, size 10	4WE10U12-3X/...	RE 23 316	
.741	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.742	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	4WE10C3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.781	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
X1, X2	2	*Flange	DN80PN320	PN 303 927	RE 45 501
T1, T2	2	*Flange	DN125PN16	PN 012 338	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 80**  
**Control Type B4**  
**IH04MS80B4E1002-3X/...**

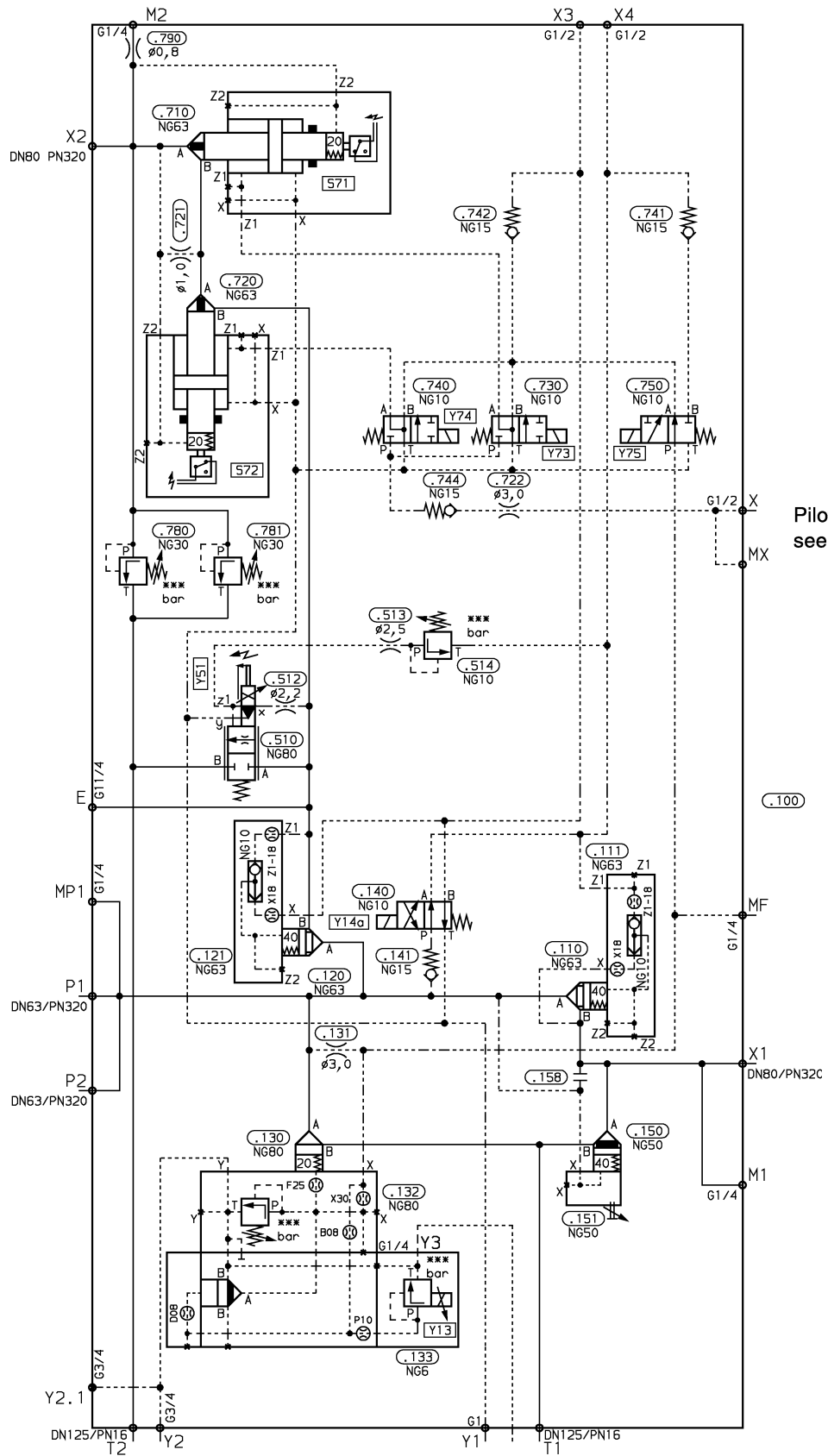


Pilot pressure  
see page 4

**Press Module Size 80  
Control Type B4  
IH04MS80B4E1002-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 63	LC63B40E6X/...	RE 81 010	
.111	1	Control cover, size 63	LFA63G-6X/...	RE 81 010	
.120	1	Logic element, size 63	LC63B40E6X/...	RE 81 010	
.121	1	Control cover, size 63	LFA63G-6X/...	RE 81 010	
.130	1	Logic element, size 80	LC80DB20E6X/...	RE 81 078	
.131	1	Orifice	DUESE Ø3		
.132	1	Control cover, size 80	LFA80DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 10	4WE10M3X/...	RE 23 316	
.141	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.150	1	Logic element, size 50	LC50B40D6X/...	RE 81 010	
.151	1	Control cover, size 50	LFA50H2-6X/F	RE 81 010	
.510	1	Logic element, size 40	LC40B40E6X/	RE 81 010	
.511	1	Control cover, size 40	LFA40H2-6X/F	RE 81 010	
.512	1	Orifice	DUESE Ø1,5		
.513	1	Orifice	DUESE Ø1,8		
.514	1	Pressure relief valve, size 6	DBDS6K1X/100	RE 25 402	
.520	1	Logic element, size 80	LC80B10D6X/...	RE 81 010	
.521	1	Control cover, size 80	LFA80H2-6X/F	RE 81 010	
.523	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.525	1	Directional control valve, size 10	3WE10A3X/...	RE 23 316	
.526	1	Orifice	DUESE Ø2,5 G1/4		
.710	1	Logic element, size 63	LFA63ER7-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63ER7-6X/CA20DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø1,2 G1/4		
.722	1	Orifice	DUESE Ø3 G1/4		
.730	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.740	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.741	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.742	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.744	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	3WE10A4-3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.781	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
X1, X2	2	*Flange	DN80PN320	PN 303 927	RE 45 501
T1, T2	2	*Flange	DN125PN16	PN 012 338	AB 22-15
*(Not included in supply; please order separately !)					

**Press Module Size 80**  
**Control Type B4**  
**IH04MS80B4AG1001-3X/...**



Pilot pressure  
 see page 4



**Press Module Size 80  
Control Type B4  
IH04MS80B4G1001-3X/...**

Item	Qty.	Description	Type	Further details	
.110	1	Logic element, size 63	LC63B40E6X/	RE 81 010	
.111	1	Control cover, size 63	LFA63G-6X/	RE 81 010	
.120	1	Logic element, size 63	LC63B40E6X/	RE 81 010	
.121	1	Control cover, size 63	LFA63G-6X/	RE 81 010	
.130	1	Logic element, size 80	LC80DB20E6X/	RE 81 078	
.131	1	Orifice	DUESE Ø3		
.132	1	Control cover, size 80	LFA80DBEM-6X/315	RE 81 078	
.133	1	Proportional pressure relief valve	DBET-5X/315YG24-1	RE 29 142	
.140	1	Directional control valve, size 10	4WE10D3X/...	RE 23 316	
.141	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.150	1	Logic element, size 50	LC50B40D6X/	RE 81 010	
.151	1	Control cover, size 50	LFA50H2-6X/F	RE 81 010	
.510	1	Proportional throttle valve, size 80	FES80CA1X/...2500LM-7	RE 29 204	
.512	1	Orifice	DUESE Ø2,2		
.513	1	Orifice	DUESE Ø2,5		
.514	1	Pressure relief valve, size 10	DBDS10K1X/315	RE 25 402	
.710	1	Logic element, size 63	LFA63ER7-6X/CA40DQ0G24F	RE 81 010	
.720	1	Logic element, size 63	LFA63ER7-6X/CA20DQ0G24F	RE 81 010	
.721	1	Orifice	DUESE Ø1,2		
.722	1	Orifice	DUESE Ø3		
.730	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.740	1	Directional control valve, size 10	4WE10J5B3X/...	RE 23 316	
.741	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.742	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.744	1	Check valve, size 15	M-SR15KE05-1X/	RE 20 380	
.750	1	Directional control valve, size 10	3WE10A4-3X/...	RE 23 316	
.780	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.781	1	Pressure relief valve, size 30	DBDS30K1X/315	RE 25 402	
.790	1	Orifice	DUESE Ø0,8 G1/4		
P1, P2	2	*Flange	DN63PN320	PN 303 925	RE 45 501
X1, X2	2	*Flange	DN80PN320	PN 303 927	RE 45 501
T1, T2	2	*Flange	DN125PN16	PN 012 338	AB 22-15
*(Not included in supply; please order separately !)					

## Notes



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