

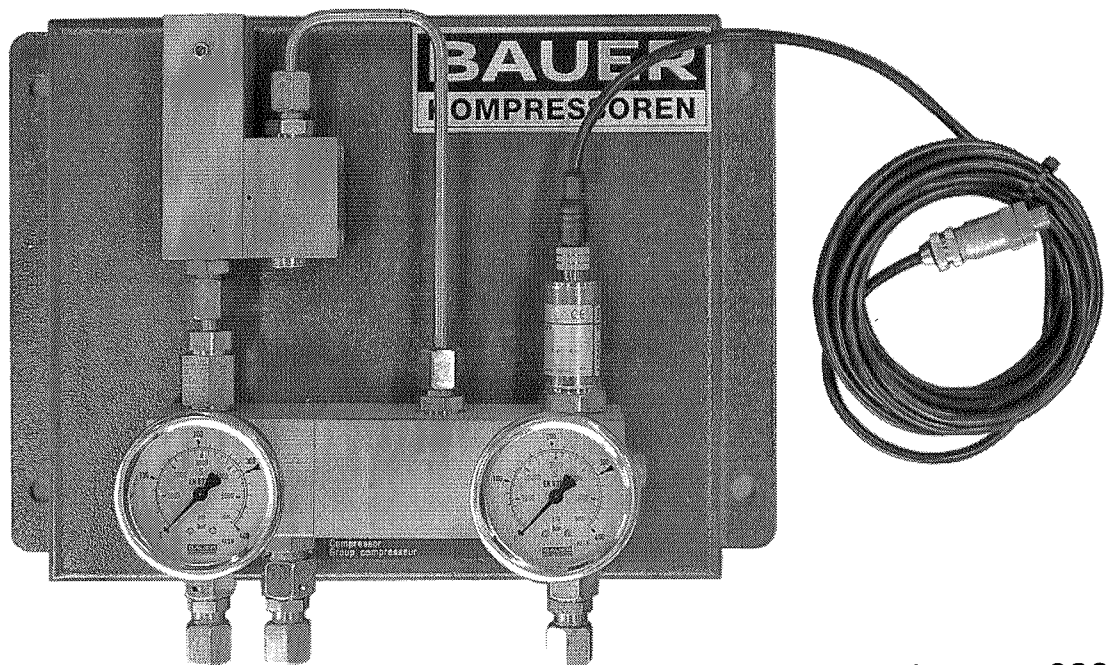
INSTRUCTION MANUAL AND PARTS LIST

Automatic Selector Units

82116 350 bar

82117 420 bar

for Compressor Units with
B-Control Compressor Control System



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Instruction Manual Automatic Selector Unit

INTRODUCTION

This manual contains operating instructions and maintenance schedules for the

**Automatic Selector Units
P/N 82116 and P/N 82117**

All instructions should be observed and carried out in the order laid down to prevent damage and premature wear to the equipment.

While every effort is made to ensure the accuracy of the particulars contained in this manual, the manufacturing company will not, under any circumstances, be held liable for any inaccuracies or the consequences thereof.

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Instruction Manual Automatic Selector Unit

1. GENERAL

Purpose

The automatic selector units are used to facilitate and accelerate the filling of compressed air bottles. This is performed by:

- Filling the air bottles to operating pressure with compressed air directly from the compressor without pressurizing the storage reservoirs.
- Filling the reservoirs to storage pressure for the next filling procedure.
- Filling the air bottles by overflow from the storage reservoirs, until pressure balance is achieved.

Description

The automatic selector unit is mounted externally, i.e. interconnecting lines must be laid between compressor and selector unit, between filling panel and selector unit, as well as between storage reservoirs and selector unit.

The tube diameter to be used is 10 mm.

The automatic selector unit operates pneumatically:

When the air bottles at the filling panel are filled and the adjusted pressure is reached, the pressure maintaining valve opens and leads the air coming from the compressor into the storage reservoirs.

The non-return valve permits the overflow of the compressed air from the storage reservoirs to the air bottles at the filling panels and assures that the air flows through the selector unit only in the predetermined direction.

The pressure switch/pressure sensor starts and shuts off the compressor depending on the storage reservoirs.

The two pressure gauges show the filling pressure and the storage pressure.

Technical data

Operating pressure P/N 82116 max. 350 bar
 Operating pressure P/N 82117 max. 420 bar
 Flow rate at:
 $\Delta P = 50 \text{ bar}$: 2,750 l/min.
 $\Delta P = 200 \text{ bar}$: 3,500 l/min.
 $\Delta P = 300 \text{ bar}$: 3,700 l/min.
 Pressure gauge range P/N 82116: 0 to 400 bar
 Pressure gauge range P/N 82117: 0 to 600 bar
 Inlet/outlet connections 10 mm
 (tube dia. O.D.)

Preparation for operation

Before taking the selector unit into operation observe the following:

- Check whether the operating pressure of the compressor corresponds with the pressure setting of the selector unit and the permissible pressure of the air bottles and the storage reservoirs.
- Do not attach air bottles unless rated for the approved pressure (note pressure stamped on air bottle neck).
- Check tightness of all tubes and connections.

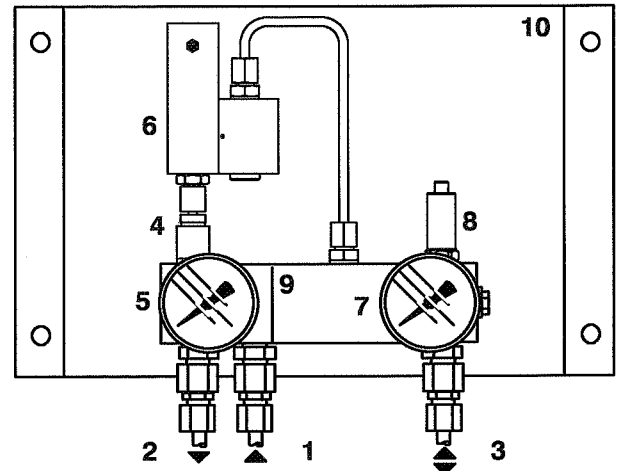


Fig. 1 Automatic selector unit 350 bar

- 1 Connector selector unit – compressor
- 2 Connector selector unit – filling panel
- 3 Connector selector unit – storage reservoirs
- 4 Connector
- 5 Pressure gauge, filling pressure
- 6 Pressure maintaining valve
- 7 Pressure gauge storage pressure
- 8 Pressure sensor
- 9 Manifold
- 10 Panel for wall mounting

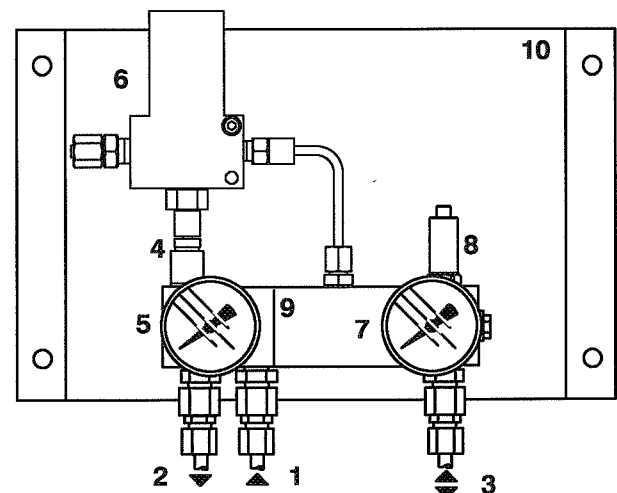


Fig. 2 Automatic selector unit 420 bar

Instruction Manual Automatic Selector Unit

Operation

- Connect the compressed air bottles to the filling valves on the filling panel.
- Set the filling valve handles to filling position.
- Open the bottle valves.
- Switch on compressor - bottles will be filled.
- To remove the air bottles, first close the bottle valves and the filling valves.

When the compressed air bottles connected to the filling panel are filled and the adjusted service pressure is reached, pressure maintaining valve (5) will open and the air flows from the compressor into the storage reservoirs.

When the reservoirs are filled and the maximum operating pressure is obtained, pressure sensor (6) shuts off the compressor.

When having to fill compressed air bottles through the filling panel again, the air will at first flow from the storage reservoirs through non-return valve (2) into the bottles until pressure is balanced and the pressure in the storage reservoirs decreases to the value adjusted on pressure sensor (6). The compressor will start running again and deliver the compressed air to the bottles, in the way described before.

- 1 Manifold
- 2 Non-return valve
- 3 Pressure gauge filling pressure
- 4 Pressure gauge storage pressure
- 5 Pressure maintaining valve
- 6 Pressure switch

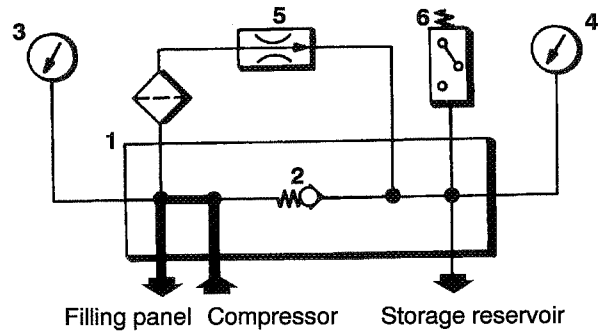


Fig. 3 Direct delivery to filling panel

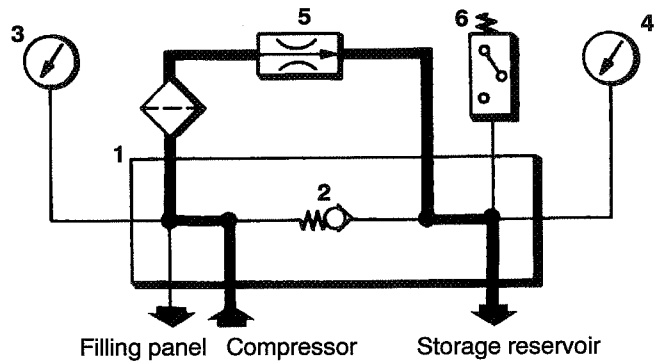


Fig. 4 Delivery to storage reservoirs

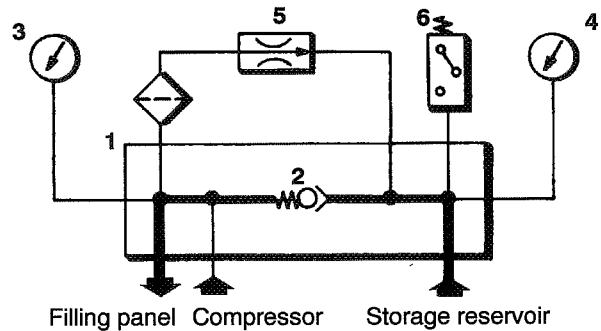


Fig. 5 Filling procedure with overflow from storage reservoirs

Instruction Manual Automatic Selector Unit

2. OPERATION, ADJUSTMENTS

Pressure sensor

The pressure sensor setting is controlled by the B-Control Compressor control system. For instructions refer to the compressor unit instruction manual, chapter "Electrical system".

Pressure maintaining valve

To adjust the opening pressure of the pressure maintaining valve for delivery of the compressed air into the storage reservoirs, switch on compressor and adjust the pressure maintaining valve until the needle indicates the filling pressure on the scale of pressure gauge (5, Fig. 1).

To adjust the valve, loosen jam nut (2, Fig. 6) and set screw (3). Adjust screw (1) to the required pressure using a suitable screwdriver.

Clockwise = increases pressure

Counter-clockwise = decreases pressure

Compressors up to 420 bar

For adjustment of this valve see Fig. 7.

Non-return valve

The non-return valve permits the overflow of compressed air from the storage reservoirs into the air bottles connected to the filling panel.

It also assures that the air flows through the selector unit only in the pre-determined direction.

Pressure gauges

Pressure gauge (5, Fig. 1) shows the filling pressure and is also used for adjusting the pressure maintaining valve.

Pressure gauge (7) shows the storage pressure.

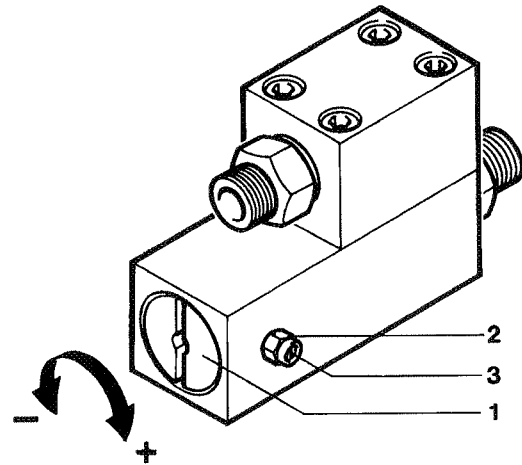


Fig. 6 Pressure maintaining/non-return valve 350 bar

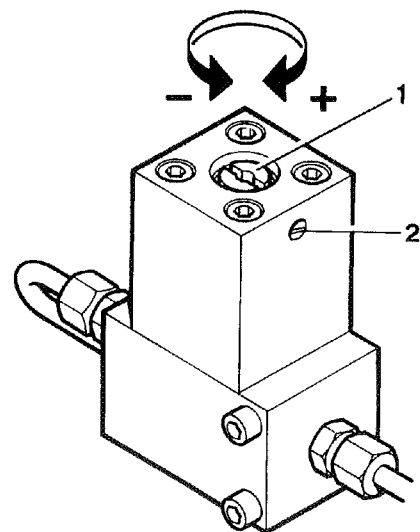


Fig. 7 Pressure maintaining/non-return valve 420 bar

3. SAFETY REGULATIONS

WARNING

Never open filling valves or shut-off valves when under pressure and not connected as highly compressed air emerging can cause serious accidents.

WARNING

Always shut down and decompress the complete system prior to carrying out any work on the compressor.

WARNING

Check the complete system for leakage from time to time by brushing all fittings and couplings with soapy water or spraying with leak test spray. Repair any leakage.

WARNING

Never repair pressure lines by soldering or welding.

4. MAINTENANCE

- Clean the outside of the unit from time to time.
- Check the pressure gauges from time to time. For this purpose we provide a special test pressure gauge with adapter to immediately recognize any deviation in indication. Slight deviations may be ignored. Excessive inaccuracies will require the pressure gauges to be readjusted or sent back for repair.

5. TROUBLE-SHOOTING

Trouble	Cause	Remedy
Compressor does not start	Pressure switch adjustment	Readjust (see chapter 2) or replace if necessary
No filling of storage reservoirs	Pressure maintaining valve adjustment	Readjust (see chapter 2) or replace if necessary
No filling of air bottles connected to the filling panel	Pressure maintaining valve maladjusted or defective	Readjust (see chapter 2) or replace if necessary
Storage reservoirs are filled simultaneously with air bottles	Non-return valve defective	Replace

Instruction Manual Automatic Selector Unit

6. ANNEX

- **Parts list**

Ersatzteilliste
Spare parts catalogue
Liste des pièces**Code G46.1****Zuschaltautomatik**
Automatic selector unit
Dispositif de commutation automatique

Baugruppe	Assembly	Assemblage	Bild/Fig.
Zuschaltautomatik 350 bar	Automatic selector unit 350 bar . . .	Dispositif de démarrage automatique . . .	G46.1- 1
.....	350 bar	
Zuschaltautomatik 420 bar	Automatic selector unit 420 bar . . .	Dispositif de démarrage automatique . . .	G46.1- 2
.....	420 bar	
Druckhalte-/Rückschlagventil	Maintaining/non-return valve	Clapet de maintien/anti-retour	G46.1- 3
350 bar	350 bar	350 bar	
Druckhalte-/Rückschlagventil	Maintaining/non-return valve	Clapet de maintien/anti-retour	G46.1- 4
420 bar	420 bar	420 bar	

Änderungsblatt G46
Change record G46
Table des modifications G46

Änder.-Nr. Change no. No. de changem.	Datum Date	Änderung	Change	Changement
0	01.01.1996	Grundaussage	Basic edition	Edition de base
1	01.01.2004	Drucksensor, Druckhalte- ventil	Pressure sensor, pressure maintaining valve	convertisseur de mesure de pression, soupape de main- tien de pression

Wichtige Hinweise für Teilebestellung:

Bestell-Nr., die mit der Ziffer 0 beginnen, bezeichnen Baugruppen, die komplett geliefert werden. Teile ohne Bestell-Nr. sind nur zur Information für die Montage aufgeführt. Sie sind nicht als Ersatzteil erhältlich. Bei Ersatzteilbestellungen erwarten Sie unsere richtige Lieferung; deshalb benötigen wir von Ihnen folgende Angaben (siehe unten gezeigtes Typenschild):

1. Modellbezeichnung, Fabrik-Nr. sowie Fertigungsstand von Anlage/Block
2. Stückzahlen
3. Benennung und Best.-Nr. des gewünschten Teils

Bestell-Beispiel:

Für Kompressorblock ...
Fabrik-Nr. 524-0528/1/2 drei Dichtungen
8263-090

Important notes for spare parts orders:

Part nos. beginning with digit 0 indicate parts available as complete assemblies. Parts without part no. are indicated for assembly reference, only. These parts are not available as single parts. When placing an order for spare parts, please give the following items so as to ensure our correct delivery (see identification plate shown below):

1. Model, serial no. as well as design standard of unit/block
2. Quantity required
3. Name and part no.

Example for order:

For compressor block ...
serial no. 524-0528/1/2, three gaskets
8263-090

Avis important pour la commande de pièces:

Les nos. de commande commençant par le chiffre 0 indiquent les pièces livrées au complet. Les pièces sans no. de commande sont indiquées uniquement pour information de montage. Elles ne sont pas livrées individuellement. Pour que la livraison de pièces de rechange corresponde à la commande, veuillez bien nous fournir les données suivantes (voir plaque d'identité ci-dessous):

1. Modèle, no. de série et version du bloc compresseur/groupe
2. Quantité désirée
3. Dénomination et no. de commande de la pièce désirée

Exemple de commande:

Pour bloc compresseur ...
no. de série 524-0528/1/2, trois joints no.
de cde. 8263-090

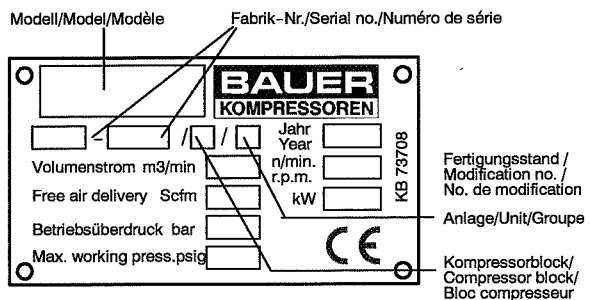


Ersatzteilsätze / Spare parts set / Kits de pièces détachées:

Wartungssatz 300 bar, Maintenance kit 300 bar, Kit d'entretien 300 bar ... Best.-Nr./Part no./No.de. cde.: **N27357**
Wartungssatz 400 bar, Maintenance kit 400 bar, Kit d'entretien 400 bar ... Best.-Nr./Part no./No.de. cde.: **N27358**

*auf Anfrage
upon request
sur demande*

Anmerkungen zur Identifikation:
Remarks for identification:
Remarques pour l'identification:



ACHTUNG

Nur Schrauben und Stiftschrauben der Qualität 8.8 verwenden!



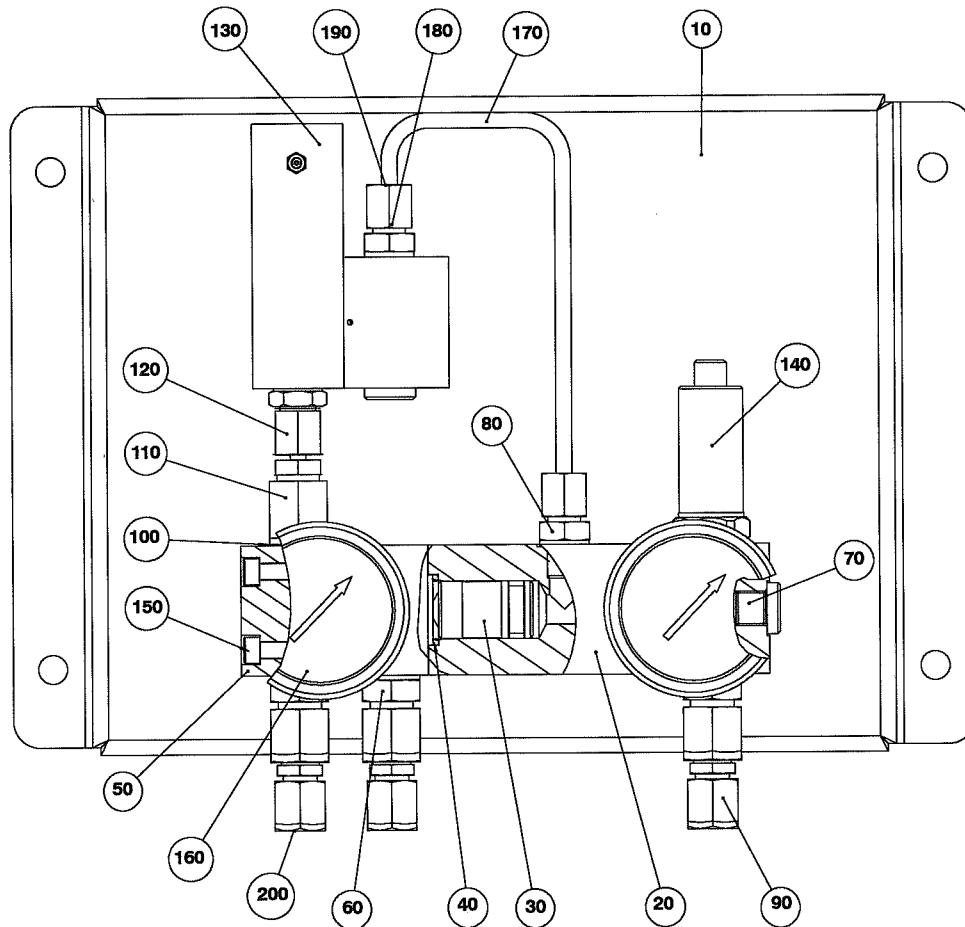
ATTENTION

Use only screws and studs in quality 8.8! This quality is equivalent to SAE J 429 d grade 5.



ATTENTION

N'utiliser que des vis et des goujons filetés de la qualité 8.8!

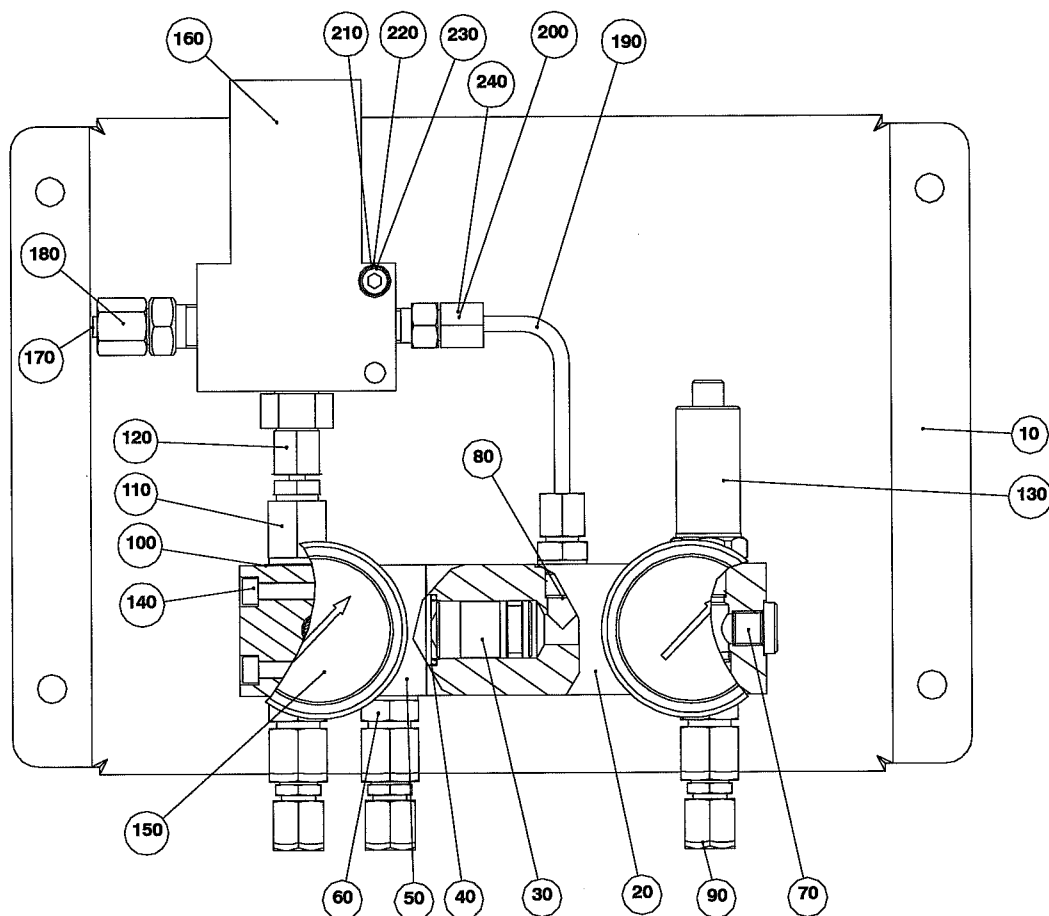

 Ersatzteilsätze
 Spare parts sets
 Kits de pièces dét.

 Baugruppe 82116
 Assembly 82116
 Assemblage 82116

 Zuschaltautomatik 350 bar
 Automatic selector unit 350 bar
 Dispositif de sélection automatique 350 bar

G46.1-1

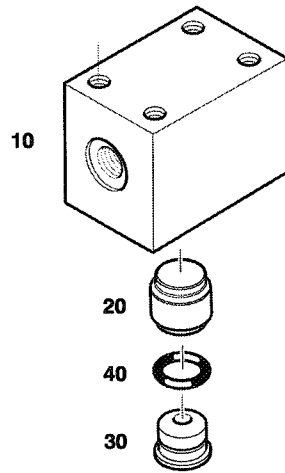
Klasse/ Class/ Classe	Pos	Bestell-Nr. Part No. No. de cde.	Anz Qty. Qté.	Benennung	Designation	Dénomination
	10	82118	1	Grundplatte	frame plate	châssis
	20	62797	1	Anschlußleiste	manifold	bloc de raccordement
	21	N58	2	Scheibe	washer	rondelle
	22	N19546	2	Zylinderschraube	allen screw	vis allen
	30	N15100	1	Rückschlagventil	non-return valve	clapet anti-retour
	40	N4207	1	O-Ring	o-ring	joint torique
	50	62798	1	Verteilerblock	manifold	bloc distributeur
	60	N20228	3	G-Einschraubstutzen	connector	raccord
	70	N16394	2	Verschlußschraube	plug	bouchon
	80	N20211	2	G-Einschraubstutzen	coupling	raccord
	90	N20069	3	Reduzierstutzen	reducer	réducteur
	100	N4499	1	USIT-Ring	usit-ring	bague usit
	110	N9941	1	Gewinde-Reduzierstutzen	reducer	réducteur
	120	N15600	1	G-Einschraubstutzen	coupling	raccord
	130	80751	1	Druckhalte-Rückschlagventil	non-return/pressure maintaining valve	clapet anti-retour/de maintien de pression
	140	N25421	1	Druckmeßumformer	pressure measuring transducer	convertisseur de mesure de pression
	145	N25788	1	Verlängerungskabel	prolongation cable	rallonge
	150	N19543	4	Zylinderschraube	allen screw	vis allen
	160	N22330	2	Manometer	pressure gauge	manomètre
	170	82119-01	1	Rohrleitung	tube	conduite
	180	N3663	2	Schneidring	cutting ring	bague coupante
	190	N3610	2	Überwurfmutter	nut	écrou
	195	N3609	3	Schneidring	cutting ring	bague coupante
	200	N3608	3	Überwurfmutter	nut	écrou
	210	63005	1	Klebeschild	sticker	auto-collant
	220	62558	1	Klebeschild logo	sticker logo	auto-collant logo
	230	13762	1	Klebeschild "Made in Germany"	sticker "Made in Germany"	auto-collant "Made in Germany"


 Ersatzteilsätze
 Spare parts sets
 Kits de pièces dét.

Baugruppe 82117
Assembly 82117
Assemblage 82117

Zuschaltautomatik 420 bar
Automatic selector unit 420 bar
Dispositif de sélection automatique 420 bar
G46.1- 2

Klasse/ Class/ Classe	Pos			Bestell-Nr. Part No. No. de cde.	Anz. Qty. Qté.	Benennung	Designation	Dénomination
	0	2	5					
			10	82118	1	Grundplatte	frame plate	châssis
			20	62797	1	Anschlußleiste	manifold	bloc de raccordement
			21	N58	2	Scheibe	washer	rondelle
			22	N19546	2	Zylinderschraube	allen screw	vis allen
			30	N15100	1	Rückschlagventil	non-return valve	clapet anti-retour
			40	N4207	1	O-Ring	o-ring	joint torique
			50	62798	1	Verteilerblock	manifold	bloc distributeur
			60	N20228	3	G-Einschraubstutzen	connector	raccord
			70	N16394	2	Verschlußschraube	plug	bouchon
			80	N20211	2	G-Einschraubstutzen	coupling	raccord
			90	N20069	3	Reduzierstutzen	reducer	réducteur
			100	N4499	1	USIT-Ring	usit-ring	bague usit
			110	N9941	1	Gewinde-Reduzierstutzen	reducer	réducteur
			120	N15600	1	G-Einschraubstutzen	coupling	raccord
			130	N25422	1	Druckmeßumformer	pressure measuring transducer	convertisseur de mesure de pression
			135	N25788	1	Verlängerungskabel	prolongation cable	rallonge
			140	N19543	4	Zylinderschraube	allen screw	vis allen
			150	N17351	2	Manometer	pressure gauge	manomètre
			160	068275	1	Druckhalte-Rückschlagventil	non-return/pressure maintaining valve	clapet anti-retour/de maintien de pression
			170	N16309	1	Verschlußstopfen	plug	bouchon
			180	N3608	4	Überwurfmutter	nut	écrou
			190	82119-02	1	Rohrleitung	tube	conduite
			200	N3610	2	Überwurfmutter	nut	écrou
			210	63005	1	Klebeschild	sticker	auto-collant
			220	62558	1	Klebeschild logo	sticker logo	auto-collant logo
			230	13762	1	Klebeschild "Made in Germany"	sticker "Made in Germany"	auto-collant "Made in Germany"
			240	N3609	2	Schneidring	cutting ring	bague coupante

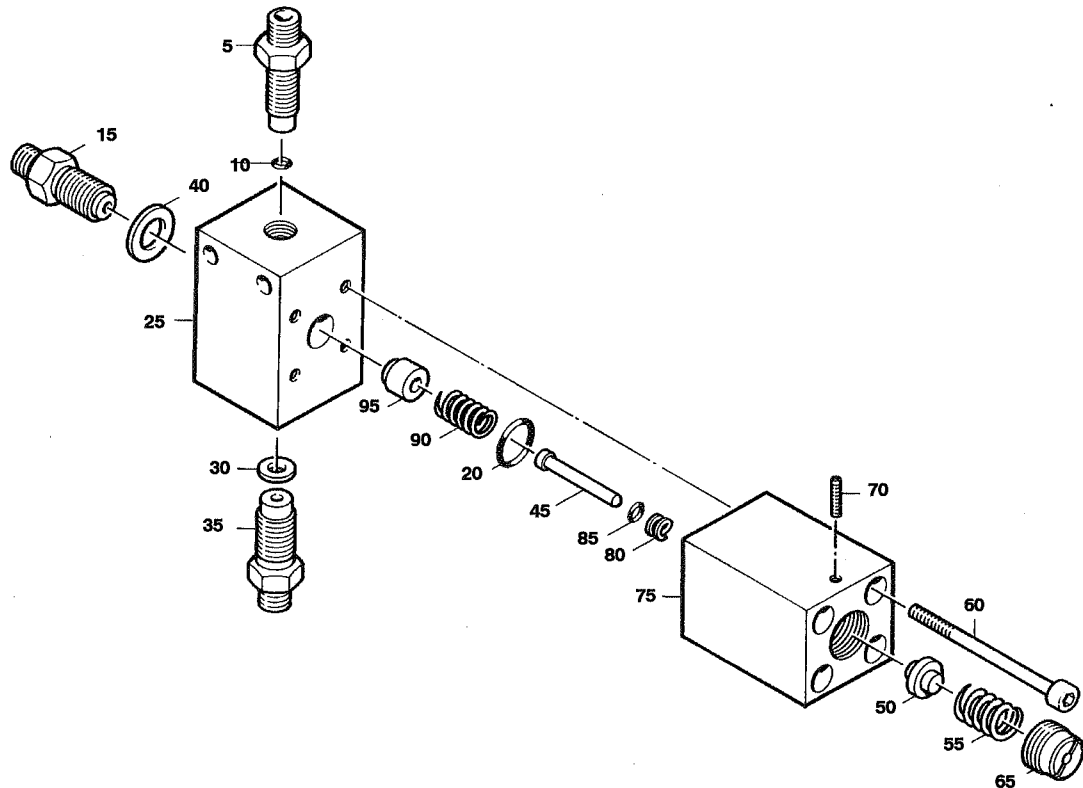

 Wartungssätze
 Maintenance kits
 Kits d'entretien

 Baugruppe 80763
 Assembly 80763
 Assemblage 80763

 Rückschlagventil
 Non-return valve
 Soupape anti-retour

G46.1- 3b

Klasse/ Class/ Classe			Pos.	Bestell-Nr. Part No. No. de cde.	Anz. Qty. Qté.	Benennung	Designation	Dénomination
a	b	c						
			10	80746	1	Ventilkörper	valve housing	corps de clapet
			20	73767	1	Ventilkolben	valve piston	piston
			30	80716	1	Ventilsitz	valve seat	siège
			40	N24927	1	O-Ring	o-ring	o-ring


Wartungssätze
Maintenance kits
Kits d'entretien
Bildtafel
Figure
Planche
068275
068275
068275
Druckhalte-Rückschlagventil
Pressure maintaining/non-return valve
Clapet de maintien de pression/anti-retour
G46.1- 4

Klasse/ Class/ Classe			Pos.	Bestell-Nr. Part No. No. de cde.	Anz. Qty. Qté.	Benennung	Designation	Dénomination
a	b	c						
			5	68270	1	Drosselverschraubung	connector	raccord
X			10	N4600	1	O-Ring	o-ring	joint torique
			15	68272	1	Druckhalteventilsitz	pressure maintaining valve seat	siège de soupape
X			20	N2789	1	O-Ring	o-ring	joint torique
			25	68273	1	Ventilkörper	valve housing	corps de soupape
X			30	4479	1	Dichtring	gasket	joint
			35	68271	1	Rohrverschraubung	connector	raccord
X			40	N4499	1	USIT-Ring	usit-ring	joint usit
			45	77245	1	Zylinderstift	cylindric pin	goupille
			50	56675	1	Federaufnahme	spring seat	siège de ressort
			55	2623	1	Druckfeder	spring	ressort de pression
			60	N1282	4	Zylinderschraube m. IN-6KT	allen screw	vis à six pans creux
			65	57517	1	Einstellschraube	adjusting screw	vis d'ajustage
			70	N18103	1	Gewindestift m. Schlitz u. Spitze	stud	vis sans tête
			75	68274	1	Ventilkörper	valve housing	corps de soupape
X			80	N18104	1	Stützring	retaining ring	bague d'appui
X			85	N16591	1	O-Ring 5x1.5	o-ring	joint torique
			90	68294	1	Druckfeder	spring	ressort de pression
			95	056674	1	Ventilkolben kpl.	valve piston assy.	piston de soupape cpl.

