



# KAYSER



## HERCULES PRESSURE REGULATORS



 made  
in  
Germany



**KAYSER**



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**HERCULES PRESSURE REGULATOR UP TO 200 BAR**

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- Pressure regulator
- Pressure regulator with Flowmeter
- Double stage Pressure regulator
- Double stage Pressure regulator with Flowmeter
- Pressure regulator with Doppelflowmeter
- High-pressure regulator
- Pressure regulator with UNITOR Connector
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**HERCULES PRESSURE REGULATOR UP TO 300 BAR**

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- Pressure regulator with Flowmeter
- High-pressure regulator

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# HERCULES PRESSURE REGULATOR UP TO 200 BAR

ACCORDING DIN EN ISO 2503

## PRESSURE REGULATOR UP TO 200 BAR, ONE STAGE

Acetylene pressure regulator with Bracket - Propane pressure regulator without content-manometer



Art.-No.	Gas	Working-area	Outlet
CK1001	Oxygen	0-10 bar	1/4"
CK1003	Oxygen	0-20 bar	1/4"
CK1005	Oxygen	0-30 bar	1/4"
CK1101	Acetylene	0-1,5 bar	3/8" LH
CK1201	Argon/CO <sub>2</sub>	0-30l/28l min.	1/4"
CK12011	Argon/CO <sub>2</sub>	0-16l/ min.	1/4"
CK1450	Argon/CO <sub>2</sub>	0-10 bar	1/4"
CK14506	Argon/CO <sub>2</sub>	0-20 bar	1/4"
CK1236	Argon/CO <sub>2</sub>	0-30 bar	1/4"
CK1458	Helium	0-1,5 bar	1/4"
CK1466	Helium	0-3 bar	1/4"
CK1407	Compressed air	0-5 bar	1/4"
CK1401	Compressed air	0-10 bar	1/4"
CK1402	Compressed air	0-20 bar	1/4"
CK1415	Compressed air	0-25 bar	1/4"
CK1406	Compressed air	0-30 bar	1/4"
CK1450	Carbon dioxide	0-10 bar	1/4"
CK1452	Carbon dioxide	0-20 bar	1/4"
CK1301	Nitrogen	0-10 bar	1/4"
CK1302	Nitrogen	0-20 bar	1/4"
CK1303	Nitrogen	0-1,5 bar	1/4"
CK1359	Nitrogen	0-3,5 bar	1/4"
CK1601	Hydrogen	0-1,5 bar	3/8" LH
CK1602	Hydrogen	0-10 bar	3/8" LH
CK1603	Hydrogen	0-20 bar	3/8" LH
CK1616	Hydrogen	0-30 bar	3/8" LH
CK1701	Forming gas	0-50 l/min	3/8" LH
CK1650	Test gas	0-2,5 bar	3/8" LH
CK1651	Test gas	0-10 bar	3/8" LH
CK1655	Test gas	0-1,5 bar	3/8" LH
CK1502	Propane	0-3,5 bar	3/8" LH
CK1470	Nitrous oxide	0-10 bar	1/4"
CK1403	Air	0-10 bar	1/4"
CK1404	Air	0-20 bar	1/4"
CK1014	Synthetic air	0-10 bar	1/4"

# HERCULES PRESSURE REGULATOR UP TO 200 BAR

ACCORDING DIN EN ISO 2503

## PRESSURE REGULATOR WITH FLOWMETER UP TO 200 BAR, ONE STAGE

Attention: Flowrate is regulated at shut-off valve.



Art.-No.	Gas	Working-area	Outlet
CK1214	Argon/CO <sub>2</sub>	0-1l/min	1/4"
CK1215	Argon/CO <sub>2</sub>	0-5l/min	1/4"
CK1204	Argon/CO <sub>2</sub>	0-16l/min	1/4"
CK1203	Argon/CO <sub>2</sub>	0-30l/min.	1/4"
CK1360	Nitrogen	0-30l/min	1/4"
CK1361	Nitrogen	0-16l/min	1/4"
CK1703	Forming gas	0-30l/min	3/8" LH
CK1702	Forming gas	0-50l/min	3/8" LH

## PRESSURE REGULATOR UP TO 200 BAR, DOUBLE STAGE

The adjusted Outlet pressure is kept constantly, independent from the content of the bottle.



Art.-No.	Gas	Working-area	Outlet
CK1021	Oxygen	0-10 bar	1/4"
CK1022	Oxygen	0-20 bar	1/4"
CK1110	Acetylene	0-1,5 bar	3/8" LH
CK1459	Argon/CO <sub>2</sub>	0-1,5 bar	1/4"
CK1210	Argon/CO <sub>2</sub>	0-30l/28l min.	1/4"
CK1451	Helium	0-10 bar	1/4"
CK1452	Helium	0-3,5 bar	1/4"
CK1464	Helium	0-6 bar	1/4"
CK13091	Nitrogen	0-1 bar	1/4"
CK1309	Nitrogen	0-1,5 bar	1/4"
CK1310	Nitrogen	0-10 bar	1/4"
CK13101	Nitrogen	0-20 bar	1/4"
CK1412	Compressed air	0-10 bar	1/4"
CK14091	Compressed air	0-20 bar	1/4"
CK1652	Test gas	0-1 bar	3/8" LH
CK1610	Fuel gas	0-1,5 bar	3/8" LH
CK1611	Fuel gas	0-10 bar	3/8" LH
CK1612	Fuel gas	0-20 bar	3/8" LH

## HERCULES PRESSURE REGULATOR UP TO 200 BAR

ACCORDING DIN EN ISO 2503

### PRESSURE REGULATOR WITH UNITOR-CONNECTOR UP TO 200 BAR, ONE STAGE



Art.-No.	Gas	Working-area	Inlet	Outlet
CK1001U	Oxygen	0-10 bar	W21,8 x 1/14	3/8"
CK1101U	Acetylene	0-1,5 bar	3/4" RH	3/8" LH
CK1201U	Argon CO <sub>2</sub>	0-30l/ min.	W24,32 x 1/14	3/8"

### HIGH-PRESSURE REGULATOR UP TO 200 BAR, ONE STAGE



Art.-No.	Gas	Working-area	Outlet
CK1007	Oxygen	0-50 bar	1/4"
CK1457	Argon/CO <sub>2</sub>	0-50 bar	1/4"
CK14507	Helium	0-50 bar	1/4"
CK1304	Nitrogen	0-50 bar	1/4"
CK1471	Nitrous oxide	0-50 bar	1/4"
CK1405	Compressed air	0-50 bar	1/4"
CK1606	Fuel gas	0-50 bar	3/8" LH

### TUBE PRESSURE REGULATOR 200 BAR, ONE STAGE



Art.-No.	Gas	Working-area	Inlet/Outlet
CK1955	Inert gas / Fuel gas	0-10 bar	G 1/2" with 15 mm Solder sleeve
CK1958	Inert gas / Fuel gas	0-2 bar	G 1/4" AG
CK1959	Acetylen	0-1,5 bar	G 1/2" AG
CK1961	Acetylen	0-1,5 bar	G 3/8" LH IG
CK1962	Inert gas / Fuel gas	0-2 bar	G 3/4" AG

Further versions and custom made solutions on application

## HERCULES PRESSURE REGULATOR UP TO 200 BAR

ACCORDING DIN EN ISO 2503

### PRESSURE REGULATOR WITH DOPPELFLOWMETER UP TO 200 BAR, ONE STAGE



Art.-No.	Gas	Working-area	Outlet
CK1217	Argon CO <sub>2</sub>	0-30l/min.	1/4"
CK1207	Argon CO <sub>2</sub>	0-16l/ min.	1/4"
CK1707	Forming gas	0-50 l/min	3/8" LH

### PRESSURE REGULATOR WITH FLOWMETER UP TO 200 BAR, DOUBLE STAGE

The adjusted Outlet pressure is kept constantly, independent from the content of the bottle.



Art.-No.	Gas	Working-area	Outlet
CK1211	Argon CO <sub>2</sub>	0-30l/min.	1/4"
CK1212	Argon CO <sub>2</sub>	0-16l/min	1/4"

### KINK VALVES FOR BALLON GAS UP TO 200 BAR



Art.-No.	
CK1320	with Cone spout
CK1325	with Flat spout (Delievery with Needle)
CK1330	with abgeschrägter Spout

### KAYSER INFORMS: BOTTLECONNECTORTHREAD 200 BAR

For 200 bar bottles according DIN 477 - Part 1

Gas type	Bottle connection	Connection type	DIN 477
Oxygen	G 3/4"	Union nut	9
Acetylene	-	Bracket connector	3
Argon/CO <sub>2</sub>	W 21,80 × 1/14"	Union nut	6
Compressed air	G 5/8"	external thread	13
Nitrogen	W 24,32 × 1/14"	Union nut	10
Hydrogen	W 21,80 × 1/14" LH	Union nut	1
Forming gas	W 21,80 × 1/14" LH	Union nut	1
Helium	W 21,80 × 1/14"	Union nut	6
Propane	W 21,80 × 1/14" LH	Union nut	1
Test gas	M 19 × 1,5 LH	Union nut	14



## HERCULES PRESSURE REGULATOR UP TO 300 BAR

ACCORDING DIN EN ISO 2503

### PRESSURE REGULATOR UP TO 300 BAR, ONE STAGE



Bottleconnector CEN (W 30 x 2 IG) - not fitting 200 bar bottle

Art.-No.	Gas	Working-area	Outlet
CK1004	Oxygen	0-10 bar	1/4"
CK1008	Oxygen	0-20 bar	1/4"
CK1208	Argon/CO <sub>2</sub>	0-30l/28l min.	1/4"
CK1460	Helium	0-10 bar	1/4"
CK1308	Nitrogen	0-10 bar	1/4"
CK1311	Nitrogen	0-20 bar	1/4"
CK1408	Compressed air	0-10 bar	1/4"
CK1411	Compressed air	0-20 bar	1/4"
CK1607	Fuel gas	0-1,5 bar	3/8" LH
CK1608	Fuel gas	0-10 bar	3/8" LH

### PRESSURE REGULATOR WITH FLOWMETER UP TO 300 BAR, ONE STAGE



Art.-No.	Gas	Working-area	Outlet
CK1231	Argon/CO <sub>2</sub>	0-16l/min	1/4"
CK1230	Argon/CO <sub>2</sub>	0-30l/min.	1/4"
CK1530	Nitrogen	0-30l/min	1/4"
CK1531	Nitrogen	0-16l/min	1/4"
CK1703	Forming gas	0-30l/min	3/8" LH
CK1709	Forming gas	0-50l/min	3/8" LH

### HIGH-PRESSURE REGULATOR UP TO 300 BAR, ONE STAGE

Art.-No.	Gas	Working-area	Outlet
CK1414	Compressed air	0-50 bar	1/4"
CK1350	Nitrogen	0-50 bar	1/4"

### KAYSER INFORMS: BOTTLECONNECTORTHREAD 300 BAR

For 300 bar Bottle according DIN 477 - Part 5

Gas type	Bottle connection	Connection No.
Oxygen	W 30 x 2	59
Argon/CO <sub>2</sub>	W 30 x 2	54
Compressed air	W 30 x 2	56
Nitrogen	W 30 x 2	54
Hydrogen	W 30 x 2 LH	57
Forming gas	W 30 x 2 LH	57



## HERCULES PRESSURE REGULATOR FOREIGN COUNTRIES

### PRESSURE REGULATOR WITH FOREIGN CONNECTORS UP TO 200 BAR



Art.-No.	Gas	Prepressure [bar]	Working-manom.	Outlet
CK1001NL	Oxygen	0-10 bar	1/4"	G 5/8 RH
CK1001GB	Oxygen	0-10 bar	1/4"	G 5/8 RH
CK1001FR	Oxygen	0-10 bar	1/4"	W22,91 x 1/14 RH
CK1101GB	Acetylene	0-1,5 bar	3/8" LH	5/8 BSP LH
CK1101FR	Acetylene	0-1,5 bar	3/8" LH	5/8 BSP LH
CK1201NL	Argon/CO <sub>2</sub>	0-30l/28l min.	1/4"	W24,32x1/14RH
CK1201I	Argon/CO <sub>2</sub>	0-30l/28l min.	1/4"	W24,5x1/14RH
CK1401NL	Compressed air	0-10 bar	1/4"	W 28,8 x 1/14
CK1401GB	Compressed air	0-10 bar	1/4"	5/8 BSP
CK1401I	Compressed air	0-10 bar	1/4"	W 30 x 1/14
CK1301NL	Nitrogen	0-10 bar	1/4"	W24,32x1/14RH
CK1301GB	Nitrogen	0-10 bar	1/4"	
CK1301I	Nitrogen	0-10 bar	1/4"	W21,7x1/14RH
CK1602GB	Hydrogen	0-10 bar	3/8" LH	G 5/8 LH
CK1602I	Hydrogen	0-10 bar	3/8" LH	W20x1/14LH
CK1602FR	Hydrogen	0-10 bar	3/8" LH	W21,7x1/14LH
CK1701GB	Forming Gas	0-50 l/min	3/8" LH	G 5/8 LH
CK1701I	Forming Gas	0-50 l/min	3/8" LH	W20x1/14LH
CK1701FR	Forming Gas	0-50 l/min	3/8" LH	W21,7x1/14LH

Further versions and custom made solutions on application

## HERCULES TAPPING POINT PRESSURE REGULATOR

ACCORDING DIN EN ISO 2503

### TAPPING POINT PRESSURE REGULATOR

All Tapping point pressure regulators have an Inlet thread of 3/8" (non-flammable gases) or 3/8" LH (Flammable gases) - fitting for Kayser consoles



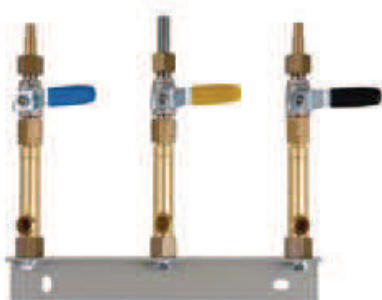
Art.-No.	Gas	Working-area	Outlet
CK1031	Oxygen	0-10 bar	1/4"
CK1115	Acetylene	0-1,5 bar	3/8" LH
CK1220	Argon/CO <sub>2</sub>	30l/min	1/4"
CK1234	Argon/CO <sub>2</sub>	0-2,5 bar	1/4"
CK1410	Helium	0-10 bar	1/4"
CK1225	Nitrogen	0-10 bar	1/4"
CK1511	Fuel gas	0-10 bar	3/8" LH
CK1510	Propane	0-3,5 bar	3/8" LH
CK1710	Forming gas	50 l/min	3/8" LH

### TAPPING POINT PRESSURE REGULATOR WITH FLOWMETER



Art.-No.	Gas	Working-area	Outlet
CK1228	Argon/CO <sub>2</sub>	1l/min	1/4"
CK1227	Argon/CO <sub>2</sub>	5l/min	1/4"
CK1226	Argon/CO <sub>2</sub>	16l/min	1/4"
CK1221	Argon/CO <sub>2</sub>	0-30l/28l min.	1/4"
CK1750	Forming gas	30l/min	3/8" LH
CK1711	Forming gas	5l/min	3/8" LH

### TAPPING POINT PANELS



Art.-No.		
59510	single panel	3/8" LH
59511	single panel	3/8"
59521	double panel	1 x 3/8" 1 x 3/8" LH
59522	double panel	2 x 3/8" LH
59523	double panel	2 x 3/8"
59531	triple panel	2 x 3/8" 1 x 3/8" LH
59532	triple panel	1 x 3/8" 2 x 3/8" LH
59534	triple panel	3 x 3/8"
59535	triple panel	3 x 3/8" LH
59540	quad panel	2 x 3/8" 2 x 3/8" LH

## PRESSURE REGULATOR ACCESSORIES

### PREDECTIVE GRID / PREDECTIVE CAPS



Art.-No.		Colour
18110	Predective grid for Manometer	blue
18120	Predective grid for Manometer	yellow
18130	Predective grid for Manometer	black
18210	Gummischutzkappe for Manometer 63mm	blue
18220	Gummischutzkappe for Manometer 63mm	yellow
18230	Gummischutzkappe for Manometer 63mm	red
18240	Gummischutzkappe for Manometer 63mm	grey

### REPLACEMENT MANOMETER

Diameter 63mm, Connector G1/4"



Art.-No.		
18510	Manometer Oxygen	315/200 bar
18520	Manometer Acetylene	40/26 bar
18561	Manometer neutral	400/300 bar
18550	Manometer neutral	315/200 bar
18560	Manometer neutral	40/20 bar
18610	Manometer Sauerstoff	16/10 bar
18620	Manometer Sauerstoff	40/20 bar
18630	Manometer Acetylen	2,5/1,5 bar
18640	Manometer neutral	0-30 l/min
18641	Manometer neutral	0-50 l/min
18650	Manometer Argon/CO <sub>2</sub>	0-30l/28l min.
18670	Manometer neutral	16/10 bar
18680	Manometer neutral	2,5/1,5 bar
18681	Manometer neutral	6/3,5bar
18683	Manometer neutral	100/50 bar
18684	Manometer neutral	60/40 bar
18682	Manometer neutral	160/100 bar

### SEALING



Art.-No.	Dimensions	Usage
1475020	14 x 9 x 2,2 mm	Bottleconnector test gas
651045	15,8 x 9 x 2 mm	Bottleconnector Acetylene
1400020	18,4 x 11,6 x 2,5 mm	Bottleconnector other gases
1400002	10 x 5,3 x 3,7 mm	Manometer Aluminium sealing

### TWIN JUNKTION VALVES



Art.-No.	Gas type	Connector
66100	non-flammable gases	1/4"
66110	non-flammable gases	3/8"
66120	Fuel gas	3/8" LH

## SAFETY DEVICE

ACCORDING ISO 5175

### FLASH BACK ARRESTORS

Applicable for Pressure regulator, single bottle plants and pipings with flame trap, non-return valves and temperature-sensitive cut-off valve.



Art.-No.	Gas	Type	Workingpressure	Inlet	Outlet
64030	Fuel gas	1	max. 5 bar	G3/8" LH IG	G3/8" LH AG
64031	Fuel gas	1	max. 5 bar	G1/2" LH IG	G1/2" LH AG
64032	Fuel gas	1	max. 5 bar	G1/2" LH IG	G3/8" LH AG
64035	Oxygen	1	max. 15 bar	G1/4" IG	G1/4" AG
64036	Oxygen	1	max. 15 bar	G3/8" IG	G3/8" AG
64037	Oxygen	1	max. 15 bar	G1/2" IG	G1/2" AG
64000	Fuel gas	2	max. 5 bar	G3/8" LH IG	G3/8" LH AG
64001	Oxygen	2	max. 15 bar	G1/4" IG	G1/4" AG
64005	Oxygen	2	max. 15 bar	G3/8" IG	G3/8" AG

### SAFETY DEVICES / EXPLOSION PREVENTION

Applicable for handle and hose installation with non-return valve and flame trap



Art.-No.	Gas	Type	Workingspressure	Inlet	Outlet
64050	Fuel gas	3	max. 5 bar	Spout 9 mm	G3/8" LH IG
64051	Oxygen	3	max. 15 bar	Spout 6,3 mm	G1/4" IG
64052	Fuel gas	3	max. 5 bar	Spout 6,3 mm	G3/8" LH IG
64054	Fuel gas	3	max. 5 bar	G1/4" LH AG	Spout 6,3 mm
64055	Fuel gas	3	max. 5 bar	G1/4" LH AG	Spout 8 mm
64060	Fuel gas	3	max. 5 bar	G3/8" LH AG	G3/8" LH IG
64061	Oxygen	3	max. 15 bar	G1/4" AG	G1/4" IG
64067	Oxygen	3	max. 15 bar	G3/8" AG	G3/8" IG
64065	Fuel gas	3	max. 5 bar	Spout 9 mm	Spout 9 mm
64066	Oxygen	3	max. 15 bar	Spout 6,3 mm	Spout 6,3 mm
64075	Fuel gas	3	max. 5 bar	Spout 8 mm	Spout 4 mm
64076	Fuel gas	3	max. 5 bar	Spout 6,3 mm	Spout 4 mm

### KAYSER INFORMS: REVIEW OBLIGATION

The legislator demands 1x per year a review of safety devices according BG R500 Ch. 2.26 Abp. 3.27 through a qualified person (Type 2)

- leakage inspection
- safety of gas backdraft
- flowrate.

The review is to be documented by the user.

Of course we can take over the review for you!

## QUICK CONNECTIONS

ACCORDING ISO 7289

### HOSE SPLICERS

marking: 1 stroke = Oxygen, 2 Strokes = Fuel gas, 3 Strokes = Neutral gasses



Art.-No.	Gas type	Inlet	Usage
64196	Oxygen	G1/4" IG	for handle
64296	Fuel gas	G3/8" LH IG	for Handle
64396	Neutral gases	G1/4" IG	for Gerät
64195	Oxygen	Spout 6 mm	for Hose installation
64194	Oxygen	Spout 4 mm	for Hose installation
64295	Fuel gas	Spout 8 mm	for Hose installation
64294	Fuel gas	Spout 4 mm	for Hose installation
64293	Fuel gas	Spout 6,3 mm	for Hose installation
64330	Neutral gases	Spout 6,3 mm	for Hose installation
64300	Oxygen	G1/4" AG	for integrated Hoses
64310	Fuel gas	G3/8" LH AG	for integrated Hoses
64320	Neutral gases	G1/4" AG	for integrated Hoses

### QUICK CONNECTIONS WITH AUTOMATIC GAS LOCK



Art.-No.	Gas type	Inlet	Usage
64105	Oxygen	Spout 6 mm	for Hose installation
64305	Oxygen	Spout 6,3 mm	for Hose installation
64205	Fuel gas	Spout 9 mm	for Hose installation
64207	Fuel gas	Spout 11 mm	for Hose installation
64208	Fuel gas	Spout 6,3 mm	for Hose installation
64110	Oxygen	G1/4" AG	for integrated Hoses
64210	Fuel gas	G3/8" LH AG	for integrated Hoses
64305	Neutral gases	G1/4" AG	for integrated Hoses
64600	Oxygen	G1/4" AG	for Pressure regulator
64610	Fuel gas	G3/8" LH AG	for Pressure regulator
64620	Neutral gases	G1/4" AG	for Pressure regulator



## TERMS AND CONDITIONS

### I. General and Conclusion of Agreement

1. Unless otherwise agreed in writing, our deliveries shall be subject exclusively to the conditions below. On receipt of the goods at the latest, our General Terms and Conditions shall be taken as accepted. The customer's purchasing terms and conditions are hereby expressly excluded, nor shall they commit us in any way even if they are not expressly excluded at the time of conclusion of the Agreement. In the event of amendments or other subsidiary agreements, the remaining conditions shall retain their full validity.

2. Our offers are always without obligation. In order to be valid, all transactions, orders and other agreements require our confirmation in writing. Our written order confirmation or agreement shall determine the nature and scope of the delivery.

### II. Price and Invoicing, Terms of Payment etc.

1. Our normal terms of payment are as follows: 2 % discount for payment within 10 days of date of invoice, 30 days net cash after date of invoice.

2. Unless otherwise agreed, our prices are to be understood in Euros, ex works, excluding packaging.

3. The customer may only set off payment against counterclaims which are undisputed or legally determined.

4. In the event that payment schedules are not maintained, interest of 3 % above the respective EURIBOR interest rate for 3 months.

5. Where payment by bill of exchange is agreed, said bill will only be accepted for payment purposes; in particular, the existing retention of title shall not be affected. In the event that cheques or bills of exchange have not been encashed, either in whole or in part, by the date on which invoices are due for payment, all our unpaid claims shall be due immediately, even where bills of exchange with later due date have been submitted. We shall only be obliged to make further deliveries if the entire unpaid balance is settled immediately and if cash in advance is provided for the entire amount of the goods to be delivered.

6. For orders below 30 Euro net we will charge you 10 Euro.

### III. Retention of Title

1. Title shall be retained on all delivered goods (reserve items) until all claims against the customer, for whatever legal reason, have been met in full. This is also then applicable when separate claims or our claims have been included in a current invoice and the account has been balanced and accepted. Any contingent treatment or processing of the reserve items shall be performed by the purchaser on behalf of the seller, without any obligation being placed on the latter as a result. In the event that the reserve items are joined, blended or processed by the customer with other items which do not belong to us, we shall have title to the new object in the proportion of the value of the reserve item to the other items used for joining or processing at the time of such joining or processing.

2. Claims owing to the customer through further sale are herewith already assigned to us together with all accessory claims. In the event of the sale of reserve items together with other items or the sale of processed reserve items (Section 1, 2nd sentence) the claim is herewith assigned to the extent of our invoice amount for the reserve items.

3. In the event of resale abroad, the entire invoice amount shall be due for payment before the goods leave the country.

4. **Excess Safeguarding Clause.** Provided that the existing collateral security exceeds the debt claims to be secured by more than 15 %, the seller shall undertake to release the appertaining security to the purchaser upon request.

### IV. Delivery Schedule and Unforeseen Circumstances

1. The schedule for deliveries and performance shall begin on the day on which agreement is reached between the customer and the supplier in writing. Maintenance of this schedule is subject to provision in due course of all documents, authorisation and releases, to be supplied by the customer, the acceptance and approval of plans, observance of agreed payment schedules and other obligations. In the event that these conditions are not met punctually, the delivery schedule may be extended accordingly.

2. The delivery schedule is deemed to have been maintained if the goods are ready for delivery or fetched within the agreed delivery and performance schedule. In the event that delivery is delayed at the fault of the customer, the delivery schedule is deemed to have been met if the Supplier notifies readiness for dispatch within the said schedule.

3. In the event of unforeseen hindrances outside of our control which occur either with us or with our own suppliers, such as force majeure, transport disruptions, strikes and lockouts and other operating disruptions which we are unable to prevent, the delivery schedule shall be extended accordingly.

4. In the event that the customer does not collect the ordered goods within 14 days of notification of readiness for dispatch or after shipment, we shall be entitled, after allowing an additional period of 14 days, to withdraw from the Agreement and/or claim for damages on account of non-fulfilment.

5. In the event that dispatch of the ordered goods is delayed at the request of the customer and with our agreement, he shall be charged for the costs of storage in our factory, a minimum of 0.5 % of the invoice value, for every month or part thereof, starting from the month following notification of readiness for dispatch.

6. If the customer suffers damage because we are in arrears with the delivery, he shall be entitled to demand a lump-sum compensation for damage resulting from delay. It shall be 0.5% for each full week of delay, however altogether a maximum of 5% of the value of the portion of the overall delivery that cannot be used in due time or not at all pursuant to the contract as a result of the delay. If the customer grants us an appropriate period for performance because of the delay in delivery taking the legal exceptions into consideration and if we do not comply with the period, the customer shall be entitled to withdraw in the framework of the legal regulations.

7. Further claims arising from a delay in delivery are exclusively determined according to section VII.2 of these conditions.

### V. Transfer of Risk

1. Complaints can only be taken into account if submitted within 8 days of receipt of the goods. Delivered goods will only be accepted in return in their original packing. Illustrations and brochures etc. are not binding. Measurements and utilisation data are only to be regarded as approximate and are also not binding.

2. The risk shall pass to the customer, even in the event of delivery carriage-paid, as soon as the ready delivery is dispatched or collected. Unless the customer has given special dispatch instructions, delivery may be made at our discretion by the most suitable means. On request of the customer the delivery will be insured at his cost against breakage, transport and damage from fire or water.

3. In the event that dispatch or delivery is delayed at the request of the customer or for reasons for which he is responsible, the risk shall pass to the customer for the period of the delay, however at the request of the customer, we shall arrange the insurance cover he requires at his expense.

### VI. Warranty Claims

Warranty claims shall be recognised, if the defect has been reported to us in writing within 12 months of the delivery date. To the exclusion of further claims – subject to section VII – we will provide a warranty as follows:

1. We shall have the option to either replace or to carry out repairs free of charge on all those parts which prove to be defective due to circumstances which occurred prior to the transfer of risk. The discovery of such defects must be reported to us immediately in writing. Replaced parts become our property.

2. If we have to supply according to drawings, specifications, samples etc. provided by the customer, then the customer carries the risk for the suitability for the intended purpose. Decisive for the condition of the goods conforming to the agreement is the point in time of the transfer of risk according to section V.

3. If a final inspection of the goods has been agreed or an inspection of the first sample, then customer's complaints will not be recognised later concerning defects which the customer should have noticed at the final inspection or inspection of the first sample if it had been carried out with due care and attention.

4. We must be given an opportunity to confirm the defect the complaint is being made about. Rejected goods must be returned to us immediately on demand. We will bear the transport costs if the customer complaint is justified. If the customer does not comply with these obligations or makes changes to the rejected goods without our agreement, then he forfeits any claims under warranty of quality.

5. Only in urgent cases, in which operational security is endangered or to prevent a disproportionate amount of damage being incurred, does the customer have the right to remedy the defect or have it remedied by a third party and to demand compensation from us for expenses thus incurred, whereby we must be informed immediately.

6. Of costs incurred due to the rectification of defects or the replacement delivery, providing the complaint proves to be justified, we will bear the costs for the replacement goods including transport and also reasonable costs for disassembly and assembly.

7. Within the framework of legal provisions, the customer has the right to withdraw from the contract if, taking the legal exceptions into consideration, we do not successfully make use of a reasonable period of time given to us for rectification of defects or a replacement delivery due to a redhibitory defect. If the defect is insignificant, then the customer only has the right to claim a reduction of the contractual price. In all other cases the right to a reduction of the agreed price is excluded.

8. No warranty will be given in the following cases in particular: Unsuitable or inappropriate use, faulty installation or start-up by the customer or a third party, natural wear and tear, incorrect or negligent treatment, maintenance not carried out correctly, unsuitable construction work, unsuitable foundation, chemical, electrochemical or electrical influences providing we are not liable for the same.

9. If the customer or a third party reworks the goods incorrectly, then we are not liable for the consequences arising from this. The same applies to changes made to the delivery item without our prior agreement.

10. We only provide a warranty for accessories added on within the framework of the warranty provided by our supplier.

### VII. Liability

1. If we are responsible for the customer not being able to use the delivery item as stipulated in the contract as a consequence of suggestions made and consultations carried out before or after the contract was concluded which were omitted or carried out incorrectly or through infringing upon other subsidiary obligations - in particular instructions for operating and maintaining the delivery item - then to the exclusion of further claims made by the customer, the stipulations in sections VI and VII.2 apply correspondingly.

2. For damages, which have not been incurred by the delivery item itself, we only accept liability - whatever legal reasons are given - in the case of

- intent
- gross negligence by executive employees
- culpable injury of life, body, health
- malicious silence with regard to a defect or the nonexistence of which had been guaranteed
- defects of the delivery item for which liability must be accepted according to the German Law on Product Liability for damages to persons or property with regards to privately used objects. In the case of culpable infringement of essential contractual obligations, we also accept liability for gross negligence of non-executive employees and in the case of slight negligence, in the latter case limited to reasonable, foreseeable damages

Typeical to a contract. Any further claims shall be excluded.

### VIII. Statutory Limitation

All claims made by the customer - for whatever legal reasons - are subject to a limitation period of 12 months. For willful or fraudulent behaviour and for claims based on the German Product Liability Law, the legal limitations apply. They shall also apply to defects in a building structure or for delivery items that were used in accordance with the normal use for a building structure and caused its defectiveness.

### IX. Place of performance and jurisdiction

1. Place of fulfilment and exclusive place of jurisdiction for all claims arising out of this agreement, including proceedings related to bills of exchange, cheques or documents, shall be Dortmund.

2. German law shall be applicable to matters arising out of this Agreement.

### X. Validity of the Agreement

Should one or more of the provisions of this Agreement be or become invalid for any reason, the provisions should be interpreted to ensure that the commercial aim of the original, invalid provision is upheld. The validity of the remaining provisions shall remain unaffected.



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