

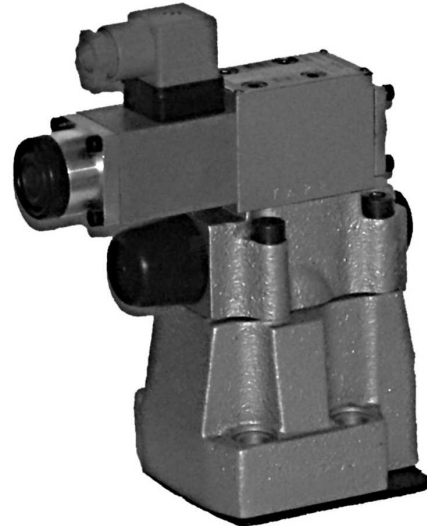
DATA SHEET - SERVICE MANUAL

APPLICATION

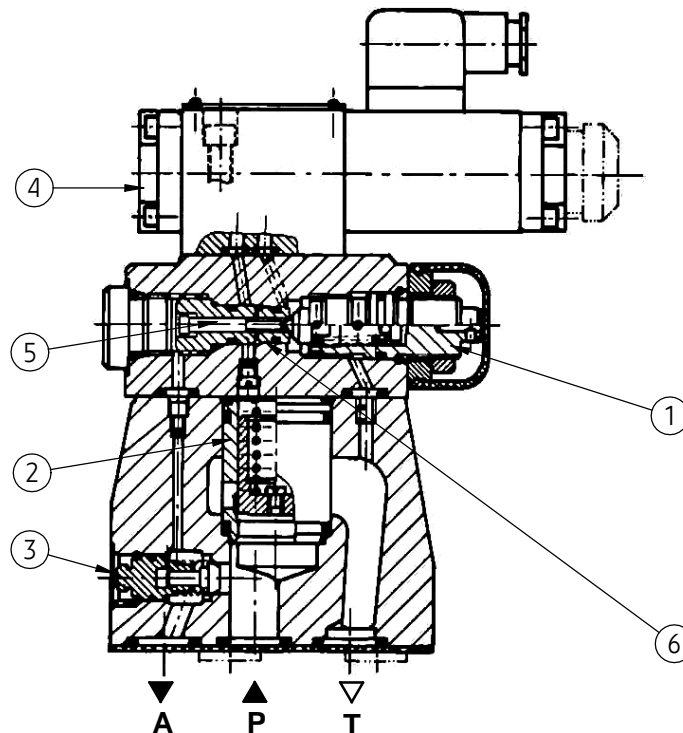
Pressure relief valves type **UZOP 10, 20, 30** pilot operated/unloading valves are used to work with an accumulator or with two pumps. The valve is designed to unload displacement of the pump to the tank when the pressure in accumulator reaches the fixed setting at the pressure relief valve and also when the accumulator is re-supplied when the pressure drops in the accumulator by 10% or 17%.

The valve is complied with the regulations of directive **2006/95/WE** for the following voltages:

- 50 – 250 V for AC
- 75 – 250 V for DC



DESCRIPTION OF OPERATION



Hydraulic fluid (oil) flows from port **P** into accumulator through the check valve (3) and port **A**. When the pressure set at pilot valve (1) is reached, then the poppet of the main valve goes up and the fluid flows from port **P** to the tank through port **T**. When the pressure out of the accumulator in port **A** drops and

reaches the level corresponding to the difference in spool area (5) and the seat area (6), then the accumulator is re-supplied. The valve can also be electrically operated by means of directional control valve (4).

TECHNICAL DATA

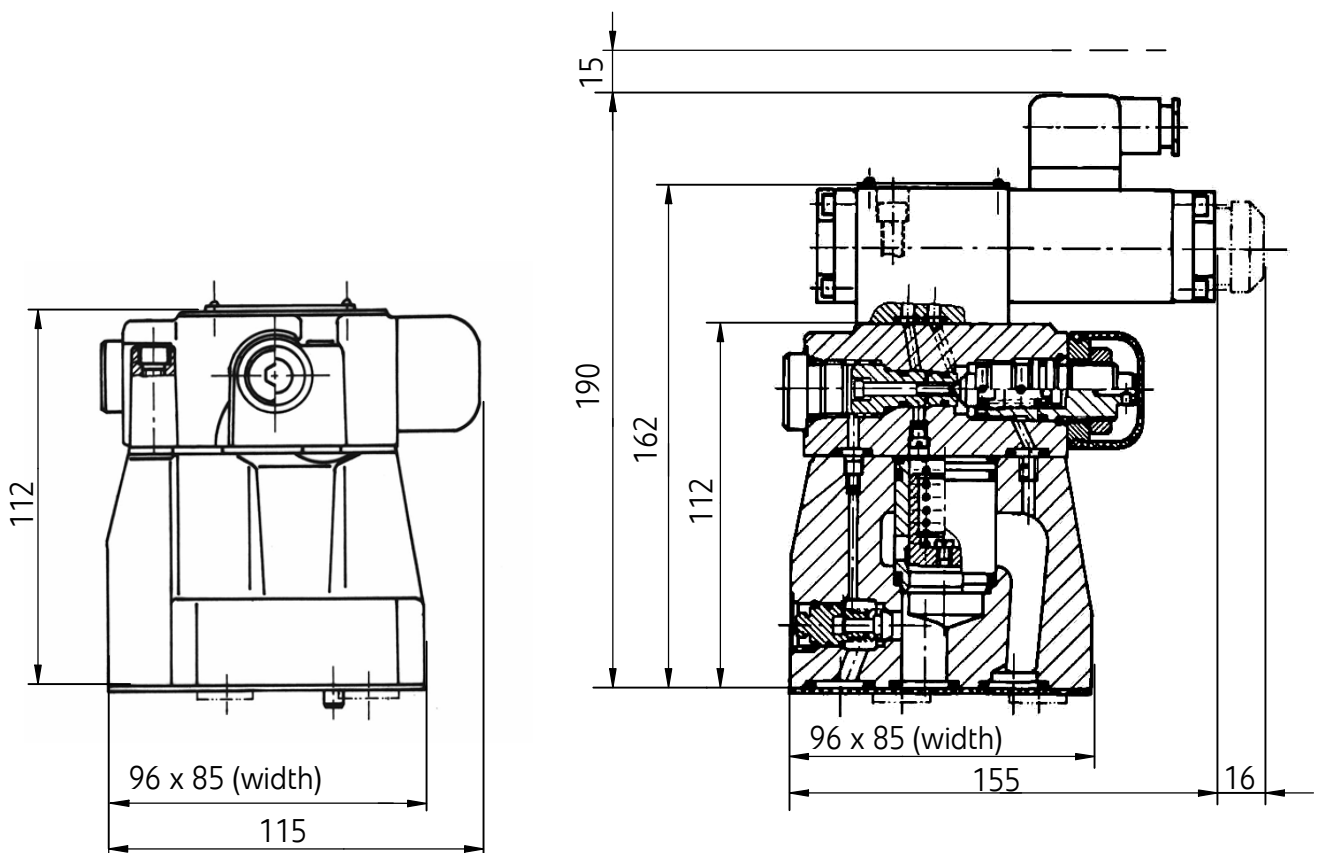
Hydraulic fluid	mineral oil					
Required filtration	up to 16 µm					
Recommended filtration	up to 10 µm					
Nominal fluid viscosity	37 mm ² /s at temperature 55 °C					
Viscosity range	2,8 up to 380 mm ² /s					
Fluid temperature range (in a tank)	recommended	40 °C up to 55 °C				
	max	-20 °C up to +70 °C				
Ambient temperature range	- 20 °C up to +50 °C					
Features	version		version		version	
	UZOP10...10	UZOP10...17	UZOP20...10	UZOP20...17	UZOP30...10	UZOP30...17
Displacement	40 dm ³ /min	60 dm ³ /min	80 dm ³ /min	120 dm ³ /min	120 dm ³ /min	240 dm ³ /min

OVERALL AND CONNECTION DIMENSIONS

versions for subplate mounting:
UZOP10...; UZOPW10...

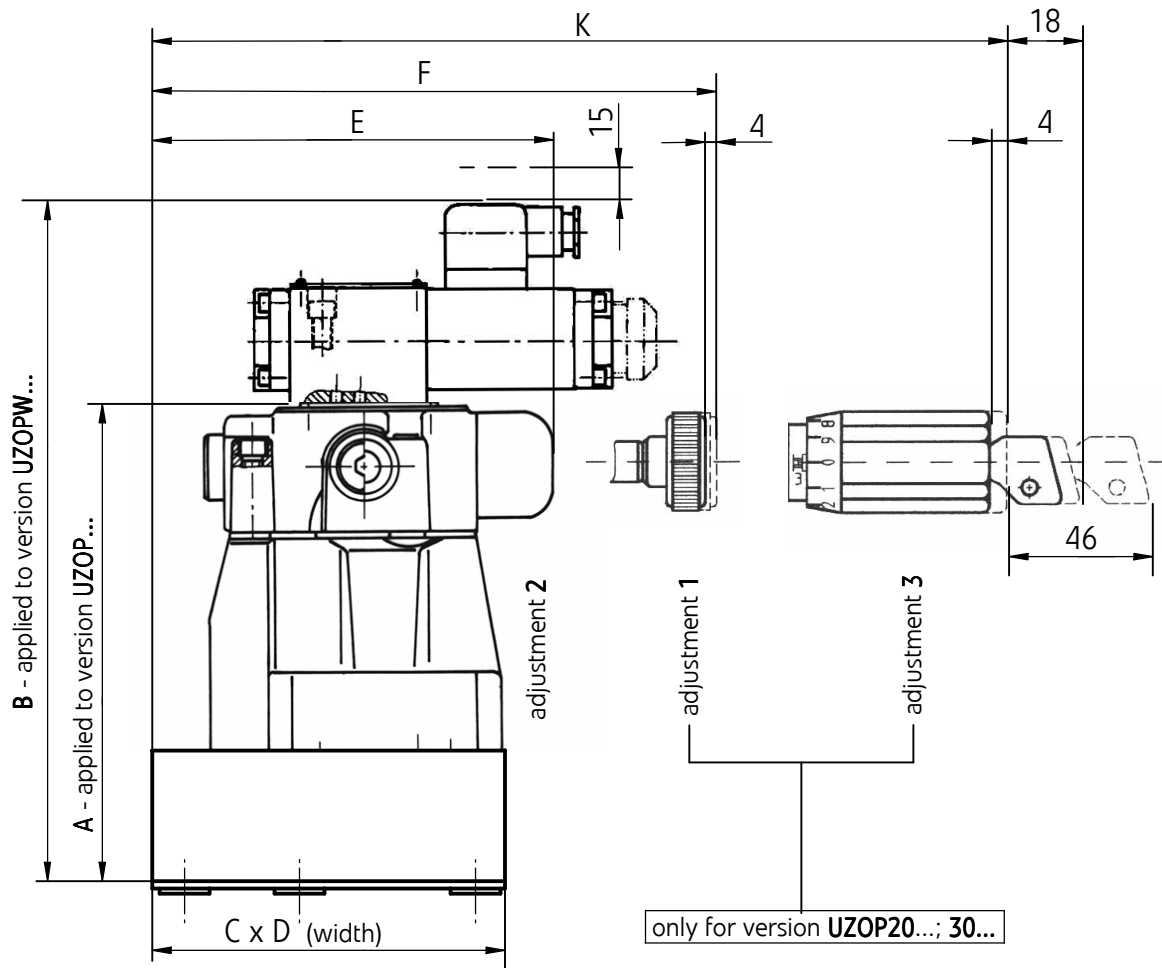
version UZOP10...

version UZOPW10...



OVERALL AND CONNECTION DIMENSIONS

versions for subplate mounting:
UZOP20...;UZOP30...; UZOPW20...; UZOPW30...



	A	B	C	D	E	F	K
UZOP 20	156	-	144	102	210	216	254
UZOPW 20	-	234	144	102	210	216	254
UZOP 30	156	-	205	115	240	256	288
UZOPW 30	-	234	205	115	240	256	288

OVERALL AND CONNECTION DIMENSIONS

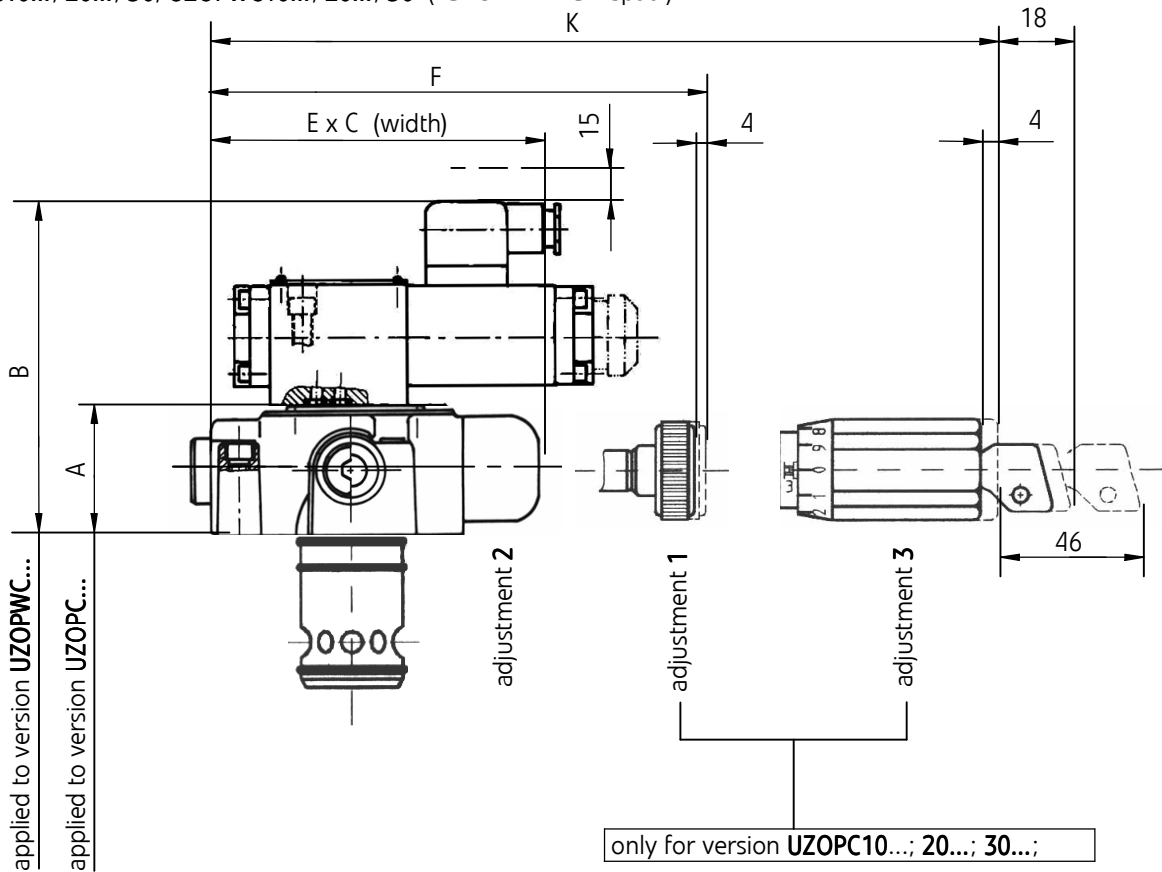
Porting pattern - versions for subplate mounting:
UZOP10...; 20...; 30...; UZOPW10...; 20...; 30...

Porting pattern - configuration of connection holes in subplate	Subplate surface required
<p>versions: UZOP10...; UZOPW10...</p>	
<p>versions: UZOP20...; UZOPW20...</p>	
<p>versions: UZOP30...; UZOPW30...</p>	

OVERALL AND CONNECTION DIMENSIONS

versions for mounting in manifold blocks:

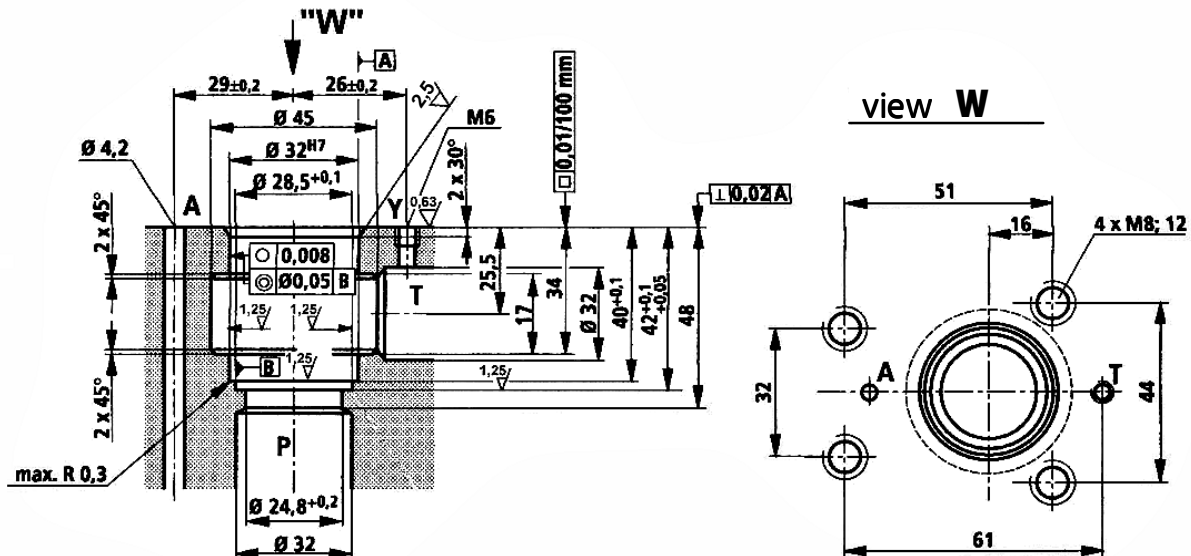
UZOPC10...; 20...; 30; UZOPWC10...; 20...; 30 (valve with main spool)



	A	B	C	E	F	K
UZOPC 10,20,30	40	-	60	115	121	159
UZOPWC 10,20,30	-	118	60	115	121	159

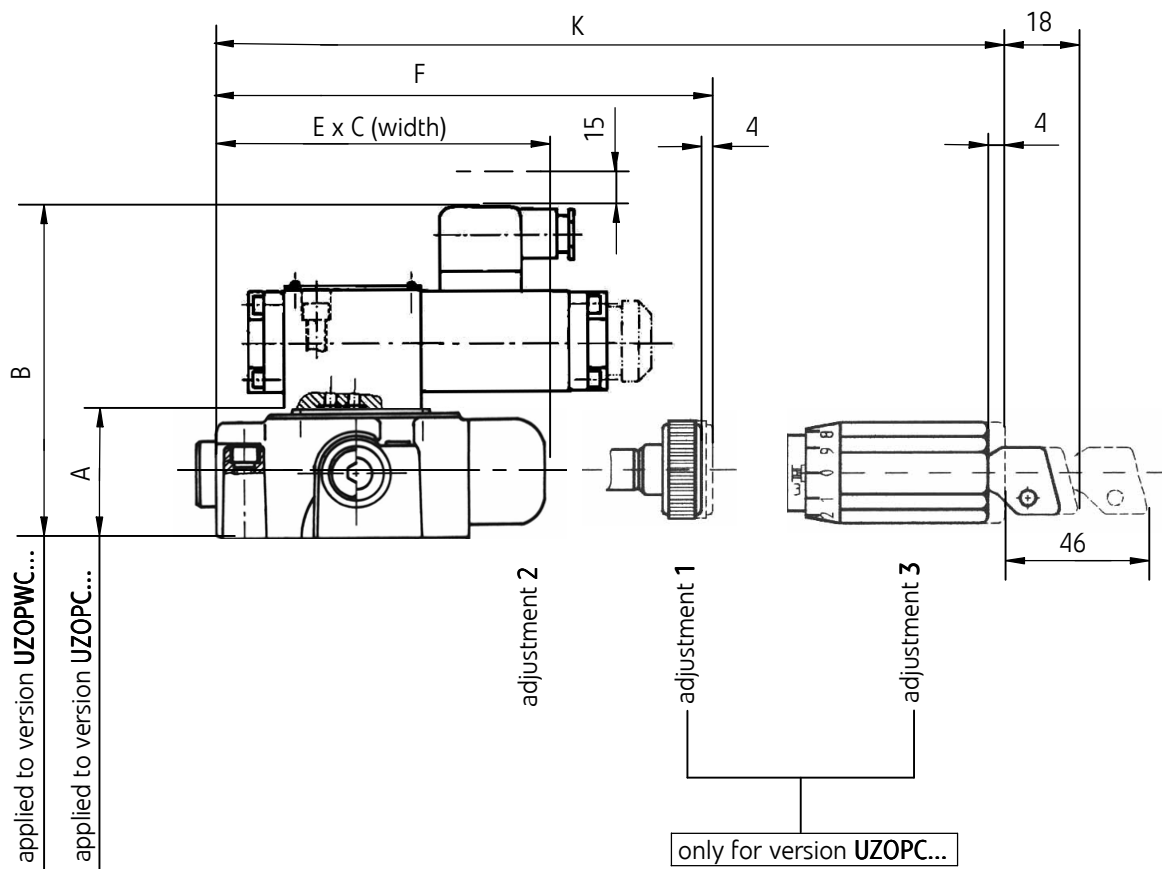
valve seat for manifold mounting:

UZOPC10...; 20...; 30; UZOPWC10...;20...; 30 (valve with main spool)



OVERALL AND CONNECTION DIMENSIONS

versions as remote control valve:
 UZOPC...; UZOPWC... (valve without main spool)

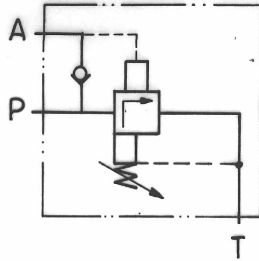


	A	B	C	E	F	K
UZOPC	40	-	60	115	121	159
UZOPWC	-	118	60	115	121	159

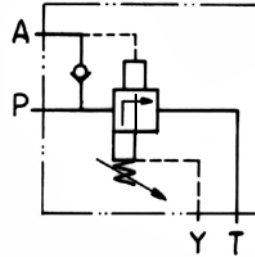
SCHEMES

Hydraulic schemes for the valve type UZOP...

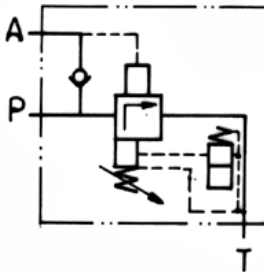
version UZOP...



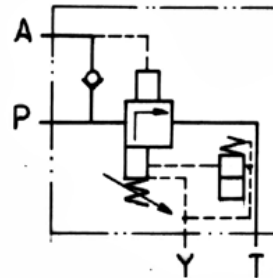
version UZOPY...



version UZOPW...



version UZOPW...Y...



HOW TO ORDER

UZOP					+	/	+	
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Version
without unloading = no designation
 with unloading = W

Type of valve
complete valve = no designation
pilot valve with main spool = C (nominal size: **NS10** or **NS20** or **NS30** required)
pilot valve without main spool = C (nominal size not required)

Nominal size (NS)
NS10 = 10
NS20 = 20
NS30 = 30

Directional control valve (applied to UZOPW only)
in de-energized position closed = A
in de-energized position open = B

Adjustment method
 hand knob = 1
set screw with internal hexagon = 2
 lockable hand knob (for sizes NS6, NS10 only) = 3

Series number
 (11-19) - connection and installation dimensions unchanged = 1X
series 12 = 12

Max pressure setting
 up to **5 MPa** = 50
 up to **10 MPa** = 100
 up to **20 MPa** = 200
 up to **29,5 MPa** = 295

Percentage difference in switching off and switching on pressure
10% (for option 10 % the only version is UZOP.../...- Y...) = 10
17% = 17

Pilot fluid drain
internal pilot fluid drain to port T = no designation
 external pilot fluid drain via port Y = Y

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Further requirements in clear text (to be agreed with the manufacturer)

Sealing

NBR (for fluids on mineral oil base) = **no designation**
 FPM (for fluids on phosphate ester base) = V

Electrical connection

plug-in-connector type ISO 4400 without LED = **Z4**
 plug-in-connector type ISO 4400 with LED = Z4L

Manual operation for directional control valve

(only for version UZOPW...)
 solenoid without manual override = no designation
solenoid with manual override = **N**

Control voltage for solenoid (only for version UZOPW...)

DC voltage 12V DC = G12
DC voltage 24V DC = **G24**
 DC voltage 110V DC = G110
AC voltage 230V AC 50Hz (connector-in-plug with rectifier) = **W230R**

The valve should be ordered according to the above coding.

The symbols in bold are preferred versions in short delivery time.

Coding example: UZOPW20 A 2 – 12/100 – 17 W230R N Z4

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