

APPLICATION

Hydraulic accumulators are used in hydraulic systems as:

- additional sources of energy that take over peak loads during short, periodical high power demand and used for increasing the speed of idle movements;
- fluid reservoir used when fluid demand increases, that enables completing hydrostatic processes, even when pump fails;
- pressure fluid reservoir - for equalizing pressure, dampening or resilient, receiving sudden pressure surges and dampening periodical vibrations generated by the pump.



DESCRIPTION OF OPERATION

The AS type hydraulic accumulator consists of pressure vessel 1, the interior of which is divided into two chambers by a rubber bladder 2. One of the chambers (hydraulic) is equipped with a straight-run valve 4 and connection port, the other (gas) chamber is equipped with a gas inlet valve 3. The accumulator is filled with nitrogen under pressure appropriate for accumulator operating conditions. The accumulator is filled with gas by means of a PC 250/60 device. During the operation of the accumulator the gas is compressed and the hydraulic fluid is stored. The processes the gas is subjected to, under operating conditions existing in practice, may be treated as adiabatic.

The available accumulator capacity may be expressed by the following formula:

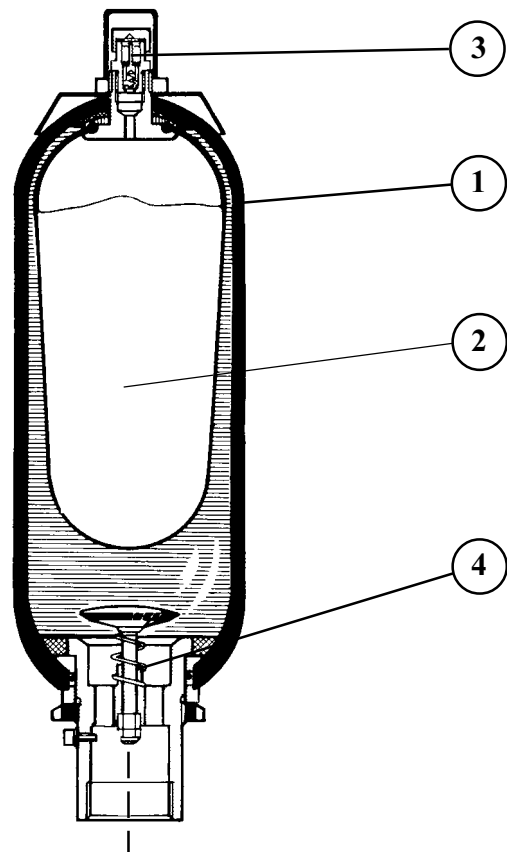
$$V_{dys} = V_1 \left(\sqrt[1,4]{\frac{p_1}{p_3}} - \sqrt[1,4]{\frac{p_1}{p_2}} \right)$$

where:

- V1* - rated accumulator capacity
- p1* - filling pressure
- p2* - max. operating pressure
- p3* - min. operating pressure

We recommend making connection with hydraulic system by means of hydraulic accumulator protection and cut-off unit manufactured by FEH Wadowice:

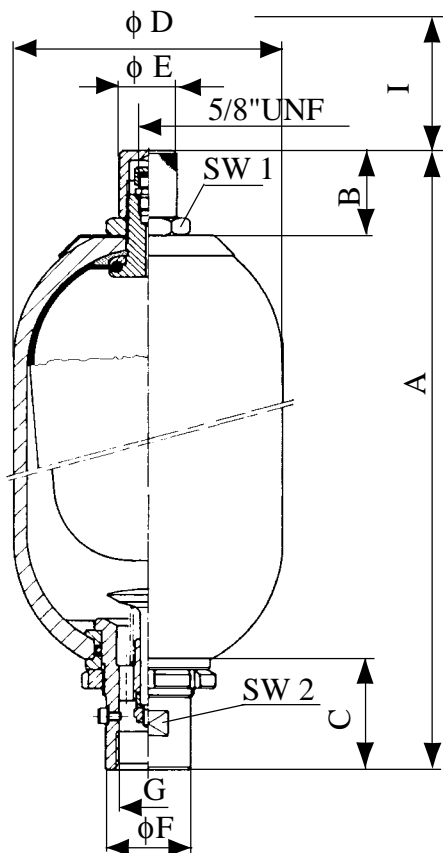
- UZAE10 wg WK 493 120 for AS 0,2 to AS 5
- B 20 wg WK 491 810 for AS 3 to AS 35
- BS 25; BS 32 wg WK 491 820 for AS 10 to AS 35



TECHNICAL DATA

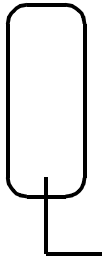
Rated capacity	0,2- 35 dm ³	
Operating medium	Gas chamber	nitrogen – initial factory filling pressure 0.6 ± 1MPa
	Hydraulic chamber	hydraulic fluid appropriate for bladder material
Max. operating pressure	33 MPa	
Max. gas pressure	0,9 min. working pressure	
Min. gas pressure	1/4 max. working pressure	
Operating temperature	-40 do 80° C	
Housing construction material	34 Cr Mo 4-I	
Qualifying acceptance	UDT	

OVERALL DIMENSIONS



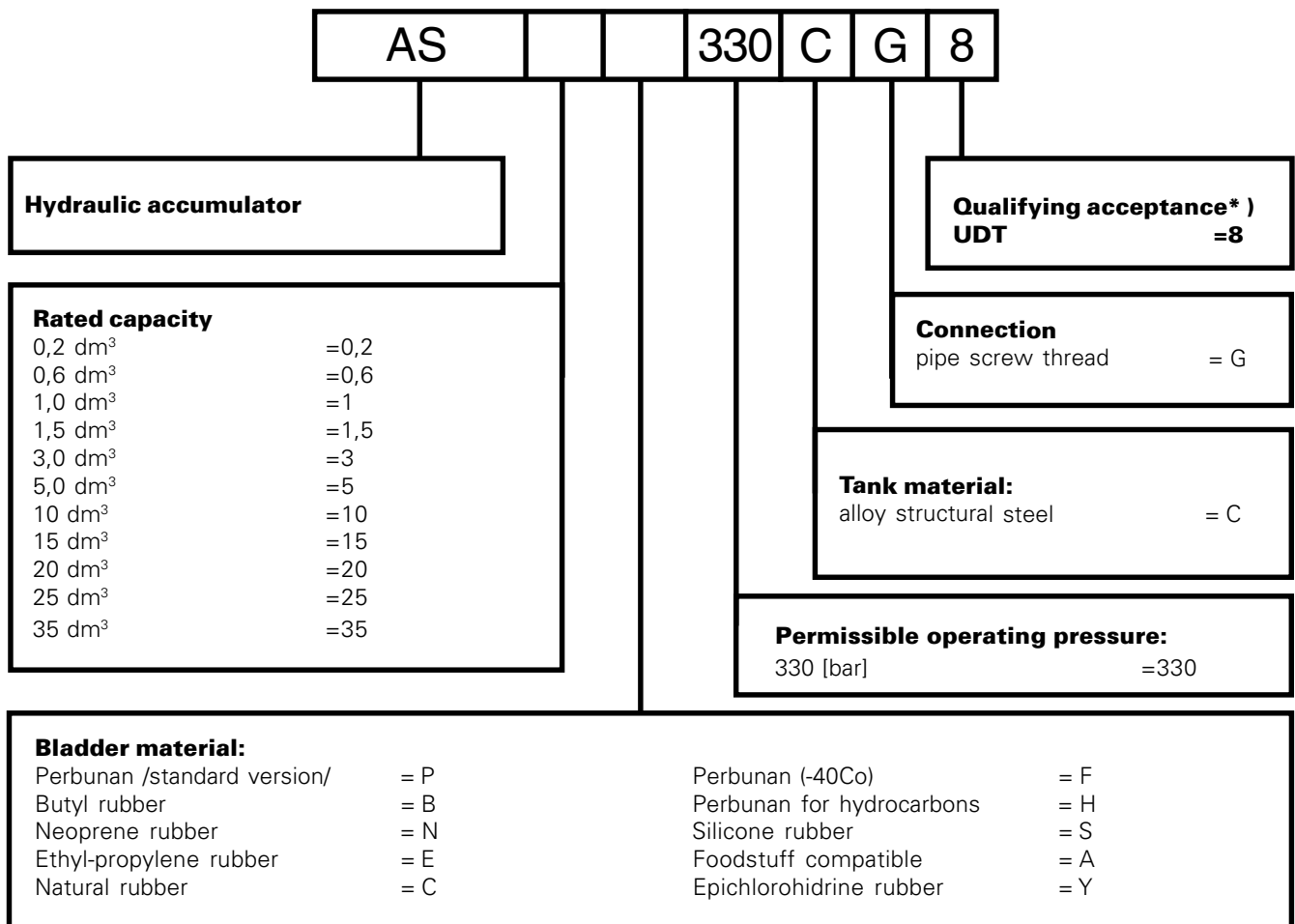
TYP	WEIGHT	G	A	B	C	ØD	ØE	ØF	SW 1	SW 2
AS 0,2	1,4	1/2"	249	22	41	51	20	26	24	23
AS 0,6	3,9	3/4"	280	47	52	90	25	36	32	32
AS 1	4,5		262			115				
AS 1,5	7,1	1 1/4"	322	60	65	140	53	50	70	70
AS 3	11		520							
AS 5	13	2"	571	60	101	220	55	77	70	70
AS 10	38		556							
AS 15	45		711							
AS 20	53		866							
AS 25	63		1026							
AS 35	83	1376								

SYMBOL



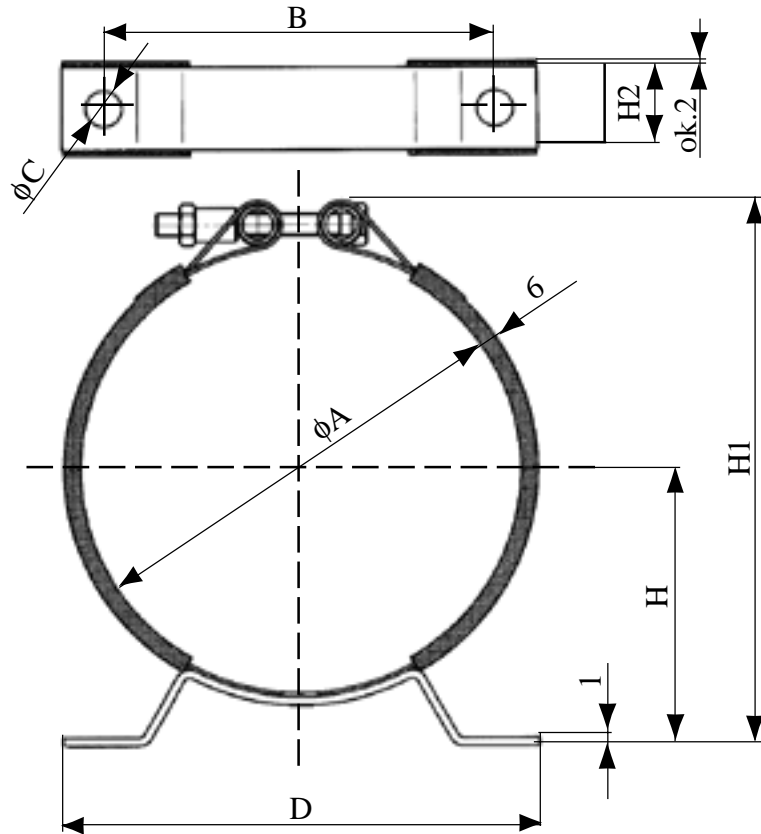
HOW TO ORDER

Orders coded in the way showed below should be forwarded to the manufacturer.



*) Other acceptance inspections are possible, for instance: ISPEL (1), TÜV (2), BS- LLOYD'S (5)

OVERALL DIMENSIONS

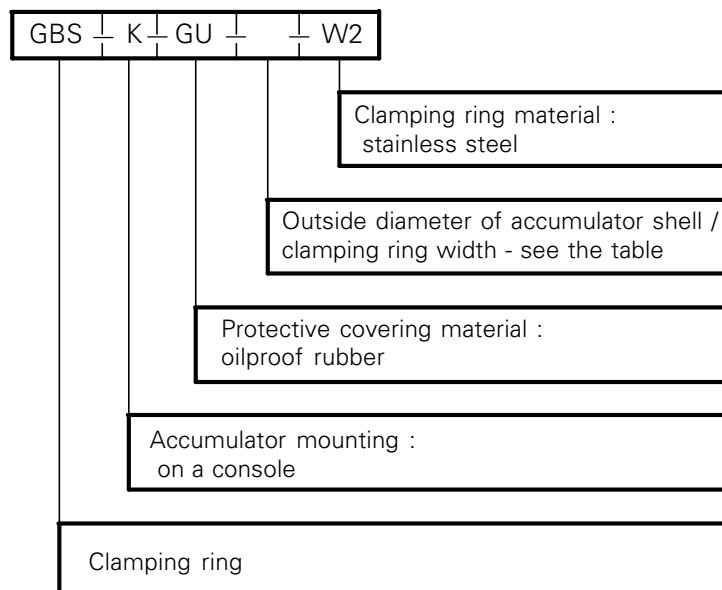


Type of Clamping ring

Type of Clamping ring	ϕA [mm]	ϕB [mm]	ϕC [mm]	D [mm]	H [mm]	H1 [mm]	H2 [mm]	Weight [~kg]
GBS-K-GU-94/25-W2	86 ÷ 91	85	8,5	120	58	123	25	0,20
GBS-K-GU-117/25-W2	107 ÷ 115	95	8,5	135	71	158	25	0,25
GBS-K-GU-144/25-W2	136 ÷ 142	110	8,5	140	87	175	25	0,38
GBS-K-GU-220/30-W2	208 ÷ 220	140	10,5	170	119	250	30	0,51

HOW TO ORDER CLAMPING RING

Orders coded in the way showed below should be forwarded to the manufacturer.



PONAR WADOWICE S.A.
ul. Wojska Polskiego 29
34-100 Wadowice
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