miniBOOSTER®

Minimum Size
Maximum Power

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The HC7 miniBOOSTER

HC7 versions: 5 different intensification factors

P_{IN}: 20 – 200 bar (inlet pressure)

P_H: 2000 bar maximum (outlet pressure)

P_{RETURN}: As low as possible (Return pressure to tank)

Intensification ratios: $P_H = (P_{IN} - P_{Return})$ i (Intensification)

Mounting: Inline tube

Accessories: Pilot operated dump valve incorporated

A model = no dump valve
B model = with dump valve
G model = direct proportionally controlled

Description of the HC7 miniBOOSTER hydraulic intensifer

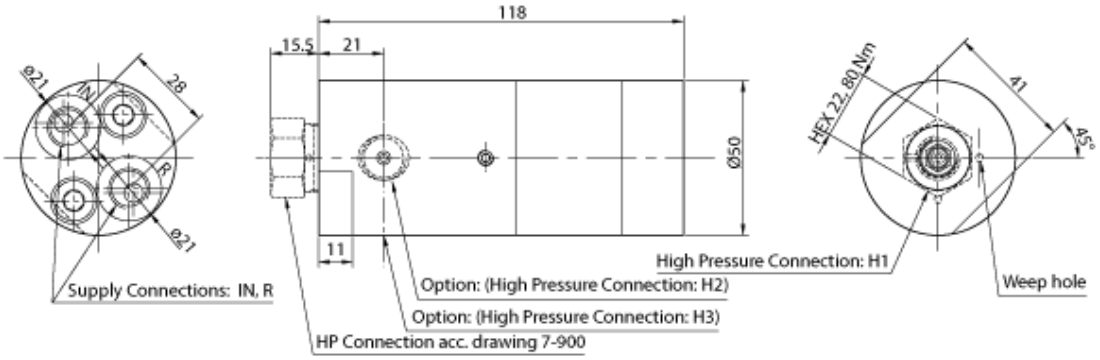
The HC7 is a very compact high pressure unit capable of delivering pressure up to 2,000 bar with an weight of only 1.5 kg. It is ideal for use in portable applications like on power packs.

The HC7 raises supplied pressure to a higher outlet pressure and automatically compensates for consumption of oil to maintain the high pressure. Adjustment of the outlet pressure is carried out by varying the supplied pressure. With the choice of different high pressure adapters a variety of threads can be obtained from the M22x1.5 thread in the HP port. Higher pressure is available on request.

Flow Rates

Intensification factor i	Max. outlet flow l/min	Max. inlet flow l/min
5.0	1.6	14.0
6.6	1.3	13.0
9.0	0.9	13.0
13.0	0.6	12.0
20.0	0.3	12.0

Dimensions



miniBOOSTER HC7 Intensifier:

Ordering code	IN, R	H1	H2	H3
HC7-__._-11	1/4" BSP	M22 x 1.5	-	-
HC7-__._-21	7/16-20 UNF	M22 x 1.5	-	-
HC7-__._-12	1/4" BSP	M22 x 1.5	9/16-18 UNF	
HC7-__._-22	7/16-20 UNF	M22 x 1.5	9/16-18 UNF	
HC7-__._-13	1/4" BSP	M22 x 1.5	9/16-18 UNF	9/16-18 UNF
HC7-__._-23	7/16-20 UNF	M22 x 1.5	9/16-18 UNF	9/16-18 UNF

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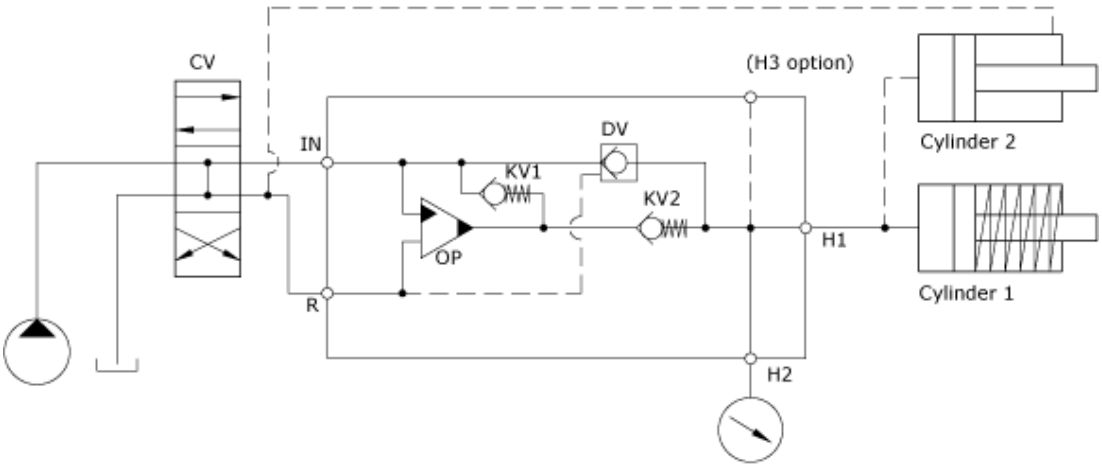
Functions

The basic operation is illustrated in the function diagram. Oil is fed through the directional valve CV to the IN port, flowing freely through the check valves KV1, KV2 and DV to the high pressure side H. In this condition maximum flow through the booster is achieved giving a fast forward function.

When pump pressure is reached on the high pressure side H, valves KV1, KV2 and DV will close. The end pressure will be achieved by the oscillating pump unit OP. The unit will automatically stall when end pressure on high pressure side H is reached. If there is a pressure drop on the high pressure side due to consumption or leakage, the OP valve will automatically operate to maintain the end pressure.

Function Diagram



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Connection types

Connection	IN / R
1	1/4" BSP
2	7/16-20" UNF

Max. tightening torque BSP

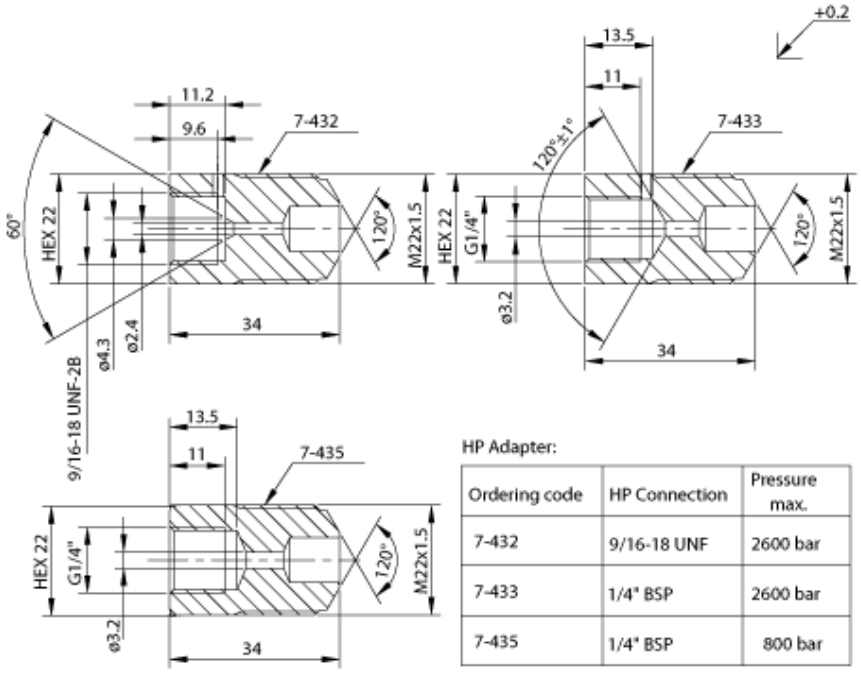
	IN / R
	1/4" BSP
with steel washer	4.0 da/Nm
with aluminium washer	3.0 da/Nm
with cutting edge	4.0 da/Nm

Max. tightening torque UNF

	IN / R
	7/16-20" UNF
with o-ring	2.0 da/Nm

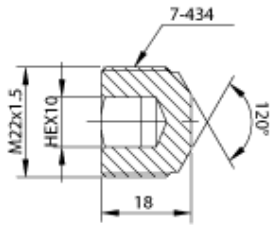
High pressure adapters

Ordering Code	Male connection 1	Female connection 2
7-432	M22 x 1.5	9/16-18 UNF
7-433	M22 x 1.5	1/4" BSP
7-434	M22 x 1.5	Plug



HP Adapter:

Ordering code	HP Connection	Pressure max.
7-432	9/16-18 UNF	2600 bar
7-433	1/4" BSP	2600 bar
7-435	1/4" BSP	800 bar



HP Plug:

Ordering code	Pressure max.
7-434	2600 bar

Fluids and materials

Please see General Specifications.

Ordering a HC7

Ordering example of a HC7 with i = 13.0, H1 M22 x 1.5 and H2 19/16-18 UNF.
DV incorporated and BSP connections: HC7 - 13.0 - B - 12

Please note!
High pressure adapter ordering code – see table

Model		*Intensification, i*		*Dump Valve*		*Connections*
HC7	–	your selection...	–	your selection...	–	see table below
		see flow rate table		A = (no) / A model		
				B = (yes) / B model		
				G = (proportional) / G model		

Ordering Code	IN, R	H1	H2	H3
HC7-___-__-11	1/4" BSP	M22 x 1.5	–	–
HC7-___-__-21	7/16-20 UNF	M22 x 1.5	–	–
HC7-___-__-12	1/4" BSP	M22 x 1.5	9/16-18 UNF	–
HC7-___-__-22	7/16-20 UNF	M22 x 1.5	9/16-18 UNF	–
HC7-___-__-13	1/4" BSP	M22 x 1.5	9/16-18 UNF	9/16-18 UNF
HC7-___-__-23	7/16-20 UNF	M22 x 1.5	9/16-18 UNF	9/16-18 UNF

