

# DCN/DCU/DCR

Rotating hydraulic cylinder  
with 2 independent pistons

- modular system for different piston strokes
- up to 70 bar
- central bore for air/coolant/oil
- stroke control via proximity switch or linear positioning system



## Application/customer benefits

- Actuation of retractable jaw chuck with power operated face drivers
- Actuation of power chuck with part-ejector
- Actuation of power chucks with retractable axial stop/finger chucks with power operated centering fixture/chucks typ TPT-C with 2 piston actuation

## Technical features

- Double piston cylinder with 4 way oil manifold for separate actuation of the 2 cylinders
- Pressure range 8–70 bar
- Modular system for different piston strokes: DCN, DCU and DCR
- Horizontal or vertical installation
- Stroke control on each cylinder, safety valves on the big cylinder
- Central bore for coolant, oil or air with thread for rotary union
- Mounting from the rear side with bolts
- A 10 µm filter in pressure line is requested.
- Use oil HM32 ISO 3448

## Standard equipment

Double piston cylinder  
Mounting screws  
Stroke control on each cylinder  
Proximity bracket (without proximity switch)

## Ordering example

Double piston cylinder DCN 125-30  
or  
Double piston cylinder DCN 125-30  
with rotary union (optional)

## Technical data

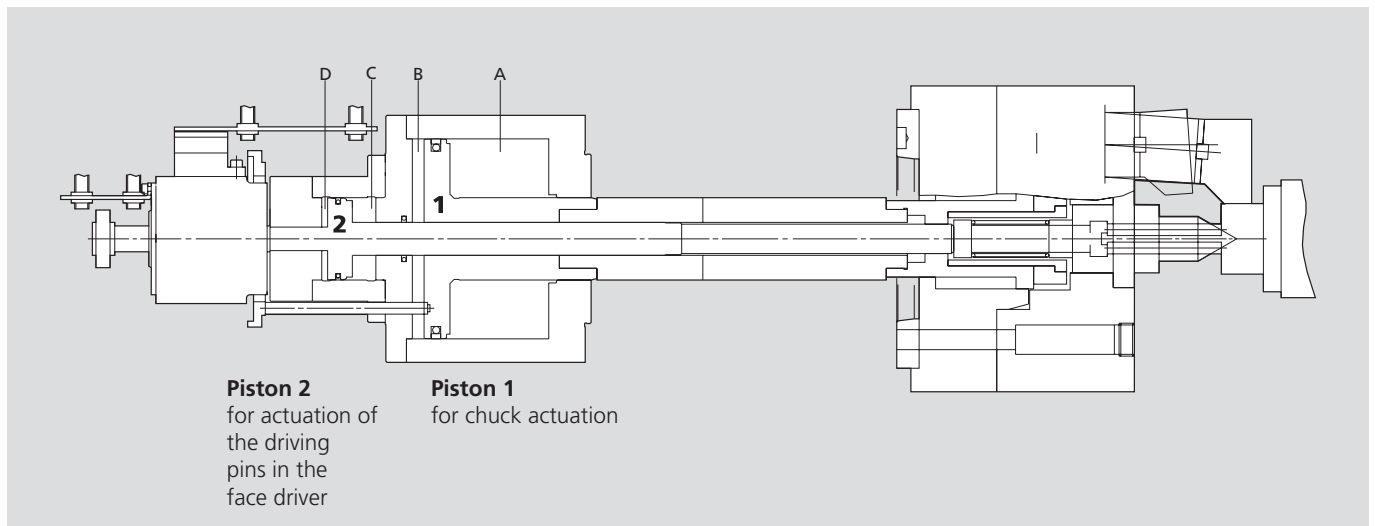
SMW-AUTOBLOK Type	125/30				170/40	170/60	170/40
	DCN 70-25	DCN 87-40	DCU 40-40	DCR 40-80	DCN 95-50	DCU 50-48	DCR 50-95
<b>Id. No.</b>	<b>33705213</b>	<b>33705214</b>	<b>33705313</b>	<b>33705413</b>	<b>33705215</b>	<b>33705315</b>	<b>33705415</b>
<b>Piston stroke</b>	mm 70-25	87-40	40-40	40-80	95-50	50-48	50-95
<b>Piston area A</b>	cm <sup>2</sup> 111	111	111	111	146	146	146
<b>Piston area B</b>	cm <sup>2</sup> 125	125	125	125	168	168	168
<b>Piston area C</b>	cm <sup>2</sup> 27	27	27	27	36	56	36
<b>Piston area D</b>	cm <sup>2</sup> 30	30	30	30	40	60	40
<b>A piston force max</b>	kN 77	77	77	77	102	102	102
<b>B piston force max</b>	kN 87	87	87	87	118	118	118
<b>C piston force max</b>	kN 19	19	19	19	25	39	25
<b>D piston force max</b>	kN 21	21	21	21	28	42	28
<b>Max. speed</b>	r.p.m. 5000	5000	5000	5000	4000	4000	4000
<b>Weight</b>	kg 23.2	24	22.5	23	32	30	31
<b>Moment of inertia J</b>	kg·m <sup>2</sup> 0.088	0.091	0.085	0.087	0.15	0.14	0.14
<b>Operating pressure max.</b>	bar 70	70	70	70	70	70	70
<b>Operating pressure min.</b>	bar 8	8	8	8	8	8	8
<b>Oil leakage (*)</b>	dm <sup>3</sup> /min 3	3	3	3	3	3	3

\* Total at 30 bar / 50 °C

\*\* At max. speed/ oil HM32 ISO 3448

**Important:** On higher pressure the leakage increases proportionally. On higher oil temperature the leakage increases over proportionally (the use of an oil cooler is recommended). When designing/checking the hydraulic unit please ask for our data sheets.  
Option: LPS-NT Linear stroke control. Rotary union for oil/coolant/air.

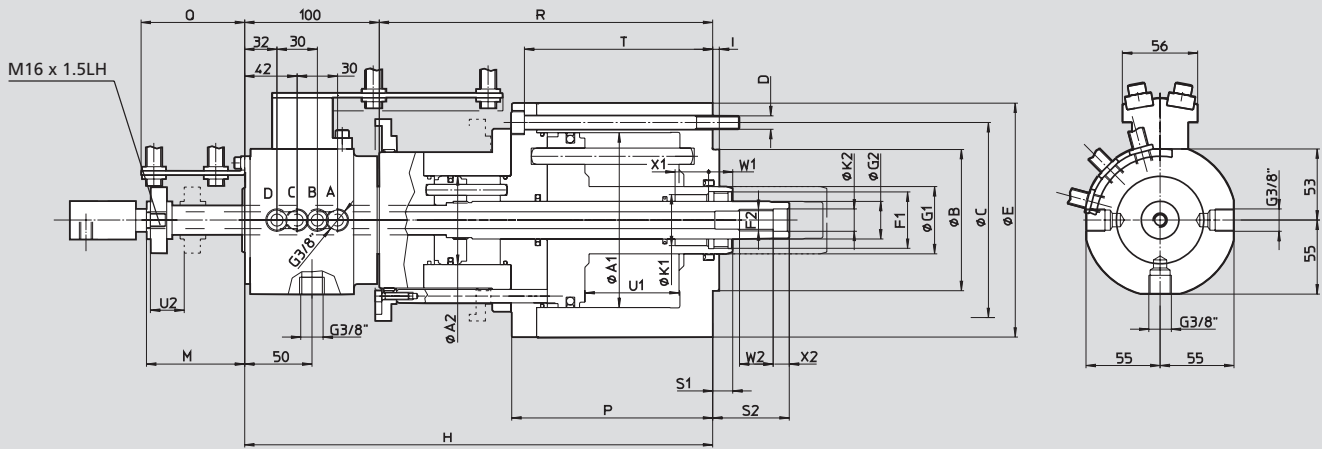
## Cylinder DCN/DCU/DCR for retractable jaw chucks type W or GSA with face drivers with fixed center



# DCN/DCU/DCR

- modular system for different piston strokes
- up to 70 bar
- central bore for air/coolant/oil
- stroke control via proximity switch or linear positioning system

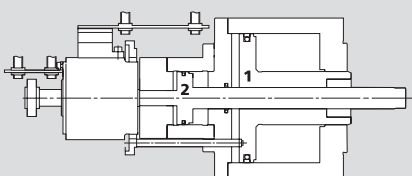
Rotating hydraulic cylinder with 2 independent pistons



Subject to technical changes  
For more detailed information please ask for customer drawing

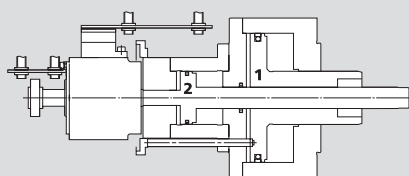
SMW-AUTOBLOK Type		125/30				170/40	170/60	170/40		
		DCN 70-25	DCN 87-40	DCU 40-40	DCR 40-80	DCN 95-50	DCU 50-48	DCR 50-95		
Piston diameter 1	A1	mm	130	130	130	130	150	150	150	
Piston diameter 2	A2	mm	66	66	66	66	75	90	75	
Centering rim	h6	B	mm	105	105	105	105	120	120	120
Fixing bolt circle	C	mm	145	145	145	145	175	175	175	
Fixing bolts	D	mm	6 x M10	6 x M10	6 x M10	6 x M10	6 x M12	6 x M12	6 x M12	
	E	mm	174	174	174	174	204	204	204	
Piston rod thread 1	F1	mm	M42 x 1.5	M42 x 1.5	M42 x 1.5	M42 x 1.5	M45 x 1.5	M45 x 1.5	M45 x 1.5	
Piston rod thread 2	F2	mm	M16	M16	M16	M16	M20	M20	M20	
	G1	mm	50	50	50	50	60	60	60	
	G2	mm	28	28	28	28	30	30	30	
	H	mm	348	380	333	373	411	366	411	
	I	mm	5	5	5	5	5	5	5	
	K1	mm	38	38	38	38	42	42	42	
	K2	mm	16.5	16.5	16.5	16.5	22	22	22	
	max. M	mm	73	73	73	103	73	73	118	
	P	mm	150	167	120	120	184	139	139	
	Q	mm	77	77	77	107	77	77	122	
	R	mm	248	280	233	273	306	266	311	
	min. S1	mm	15	15	45	45	15	60	60	
	min. S2	mm	57	75	72	82	73	118	73	
	T	mm	140	157	110	110	172	127	127	
Piston stroke cyl. 1	U1	mm	70	87	40	40	95	50	50	
Piston stroke cyl. 2	U2	mm	25	40	40	80	50	48	95	
	W1	mm	18	18	18	18	42	42	42	
	W2	mm	25	25	25	25	25	25	25	
	X1	mm	25	25	25	25	10	10	10	
	X2	mm	12	12	12	12	12	12	12	

## DCN



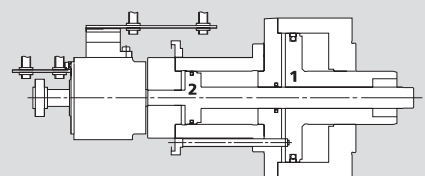
**Piston 1:** long stroke  
**Piston 2:** short stroke

## DCU



**Piston 1:** mid. stroke  
**Piston 2:** mid. stroke

## DCR



**Piston 1:** short stroke  
**Piston 2:** long stroke