OBSOLETE DOCUMENT
Technical Reference Only

Micro Cylinders
Single Acting
Ø2,5 - 6 mm bore

- **Rugged construction for their size**
- **Nose mounting nuts supplied as standard**
- **Two piston rod locknuts supplied as standard on 4 mm, 5 mm and 6 mm bore models**

Technical Data

Medium:
Compressed air, filtered and lubricated

Operation:
Single acting, non-cushioned

Operating Pressure:
2,4 - 7 bar

Operating Temperature:
+5˚C to +60˚C

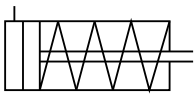
Stock Strokes:
5, 10 mm on 2,5 mm bore
5, 10, 15, 20 mm on 4 and 5 mm bores
15, 25, 30, 45, 50, 60 mm on 6 mm bore

Cylinder Diameters

2,5, 4, 5, 6 mm

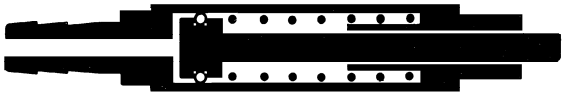
Materials

Brass end caps and barrels, stainless steel piston, nitrile rubber seals.



Ordering Information

To order, quote required model number from tables overleaf.



For your local Norgren Technical Sales Centre phone 0345 662266. For your local Norgren Distributor phone 0345 227777.
IMI Norgren Limited, PO Box 22, Eastern Avenue, Lichfield, Staffordshire WS13 6SB

Forces/Air Consumption

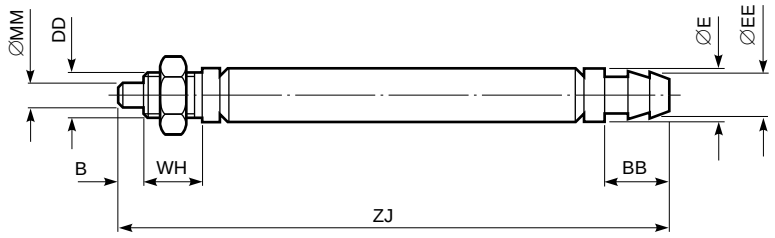
Bar		2,4	3	4	5	6	7
Ø2,5	F1	0,20	0,67	1,17	1,67	2,17	2,71
	Q1	0,000166	0,000196	0,000245	0,000294	0,000343	0,000392
	F2 = 0,73						
Ø4	F1	1,2	1,9	3,2	4,4	5,7	7,0
	Q1	0,000425	0,000502	0,000628	0,000753	0,000880	0,001000
	F2 = 1,8						
Ø5	F1	1,8	2,9	4,9	6,9	8,8	10,8
	Q1	0,000667	0,000785	0,000980	0,001170	0,001370	0,001570
	F2 = 2,9						
Ø6	F1	0,29	1,9	4,8	7,6	10,4	13,3
	Q1	0,000961	0,001130	0,001410	0,001690	0,001980	0,002260
	F2 = 6,5						

F1 - Force (N) outstroke Q1 - Air consumption (l/cm)
F2 - Return force (N) of spring

Weights of Cylinders (grammes)

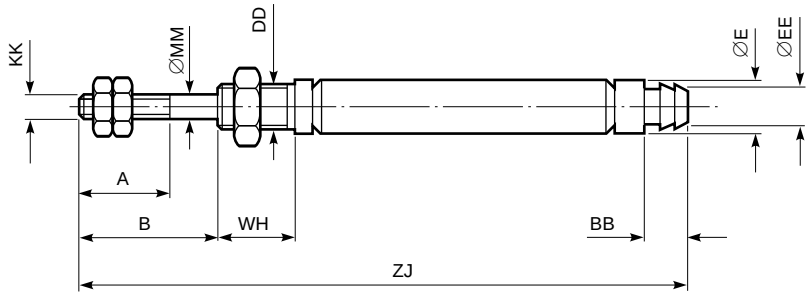
Model	Weight
CS 002 05	1,5
CS 002 10	1,7
CS 004 05	5,5
CS 004 10	6
CS 004 15	7,5
CS 004 20	8
CS 005 05	9
CS 005 10	9,5
CS 005 15	12
CS 005 20	12,5
CS 006 15	21
CS 006 25	26
CS 006 30	29
CS 006 45	36
CS 006 50	41
CS 006 60	44

Basic Cylinder Dimensions
2,5 mm bore



Model	CS 002 05	CS 002 10
B	1,5	1,5
E	3,2	3,2
BB	4	4
DD	M2,5x0,45	M2,5x0,45
EE	2,6	2,6
MM	1	1
WH	3,5	3,5
ZJ	33	38

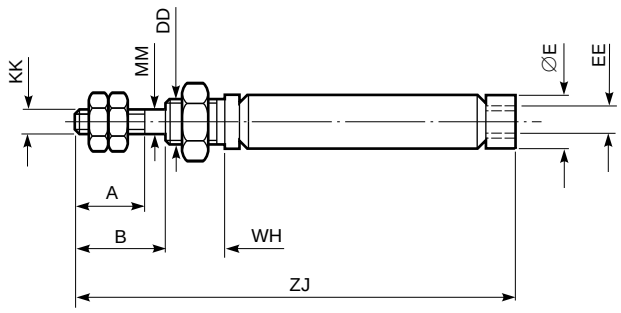
Basic Cylinder Dimensions
4 and 5 mm bore



Model	CS 004 05	CS 004 10	CS 004 15	CS 004 20	CS 005 05	CS 005 10	CS 005 15	CS 005 20
A	10	10	10	10	10	10	10	10
B	15	15	15	15	15	15	15	15
E	5	5	5	5	6	6	6	6
BB	5	5	5	5	5	5	5	5
DD	M4x0,7	M4x0,7	M4x0,7	M4x0,7	M5x0,8	M5x0,8	M5x0,8	M5x0,8
EE	2,6	2,6	2,6	2,6	2,6	2,6	2,6	2,6
KK	M2x0,4	M2x0,4	M2x0,4	M2x0,4	M2,5x0,45	M2,5x0,45	M2,5x0,45	M2,5x0,45
MM	2	2	2	2	2,5	2,5	2,5	2,5
WH	8	8	8	8	8	8	8	8
ZJ	60,5	65,5	81	86	61,5	66,5	82	87

Basic Cylinder Dimensions

6 mm bore



Model	CS 006 15	CS 006 25	CS 006 30	CS 006 45	CS 006 50	CS 006 60
A	15	15	15	15	15	15
B	20	20	20	20	20	20
E	8	8	8	8	8	8
DD	M6x1	M6x1	M6x1	M6x1	M6x1	M6x1
EE	M5x0,8	M5x0,8	M5x0,8	M5x0,8	M5x0,8	M5x0,8
KK	M3x0,5	M3x0,5	M3x0,5	M3x0,5	M3x0,5	M3x0,5
MM	3	3	3	3	3	3
WH	8	8	8	8	8	8
ZJ	78	96	105	132	141	159

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where *pressures* and *temperatures* can exceed those listed under **'Technical Data'**.
Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.
Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes. The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.
System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.
System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.