

**Industrial Shock Absorbers
Adjustable
Cushioned Mass
5 to 180 000 kg**

- **Highly efficient user adjustable units ideal for a wide variety of applications**
- **Reduced installation vibration gives increased reliability and reduced maintenance**
- **Enable high cycling rates to be used**
- **Minimal service requirements**



Technical Data

Operation:

User adjustable hydraulic units

Operating Temperature:

+90°C max.

Impact Velocity:

0,015 m/s minimum (C/59000/M/1 and .../M/2)

0,61 m/s maximum (C/59000/M/1 and .../M/2)

0,15 m/s minimum (C/59000/1, .../2 and .../3)

4,5 m/s maximum (C/59000/1, .../2 and .../3)

Oil Filling:

Standard hydraulic oil with viscosity 46 cst at 40°C

(C/59000/1, .../2 and .../3)

Automatic transmissions fluid (ATF) 42 cst at 40°C

(C/59000/M/1 and .../M/2)

Formulae and Calculation:

See page N 1.11.003.01

Materials:

Burnished steel body, hardened steel (Martensitic)

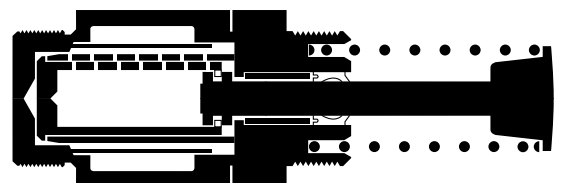
piston rod, synthetic rubber seals

Note: For optimum heat dissipation do not paint or spray shock absorber.

Ordering Information

To order a shock absorber capable of damping a mass of up to 810 kg at up to 100 000 Nm/h quote: C/59838/2

To order mountings and accessories refer to appropriate tables.



**Capacity Chart • Weights for Shock Absorber**







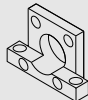
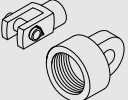
Model	Cushioned mass (kg) me min. max.	Maximum energy input **		Resetting force min. (N) max.	Resetting time (s)	Maximum angle of deflection	Weight (kg)
		W3 per stroke (Nm)	W4 per hour (Nm/h)				
C/59838/1	5 to 450	115	85000	37 to 70	0,03	4°	0,63
C/59838/M/1	300 to 50000	115	85000	37 to 70	0,03	4°	0,63
C/59838/2	10 to 810	230	100000	37 to 106	0,06	3°	0,76
C/59838/M/2	500 to 80000	230	100000	37 to 106	0,06	3°	0,76
C/59857/1	27 to 3600	260	125000	60 to 85	0,04	5°	1,50
C/59857/M/1	3000 to 110000	260	125000	60 to 85	0,04	5°	1,50
C/59857/2	45 to 6300	520	150000	60 to 120	0,09	4°	1,80
C/59857/M/2	5000 to 180000	520	180000	60 to 120	0,09	4°	1,80
C/59857/3	54 to 9500	780	180000	50 to 140	0,12	3°	2,10

** For stop operation, the rating per stroke may be exceeded up to a maximum of 50%.

The ratings per hour may be exceeded by up to a maximum of 40% if the units are switched off periodically or are cooled by exhaust air.

Formulae and Calculations: See page N 1.11.003.01

Weights of Mountings and Accessories (kg)

Model								
C/59838	0,009	0,017	0,121	0,114	-	0,099	0,380	0,150
C/59857	0,023	0,071	0,324	0,325	0,130	0,261	0,590	0,150

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'.

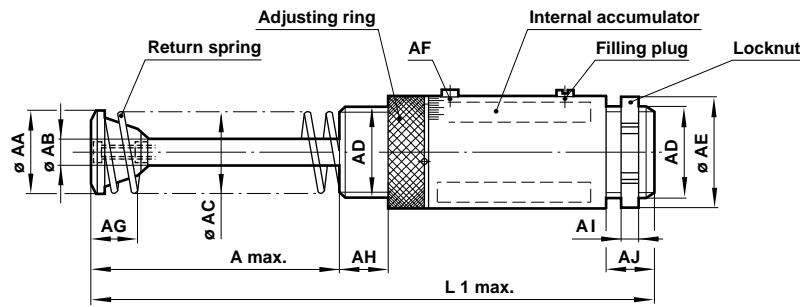
Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.

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.

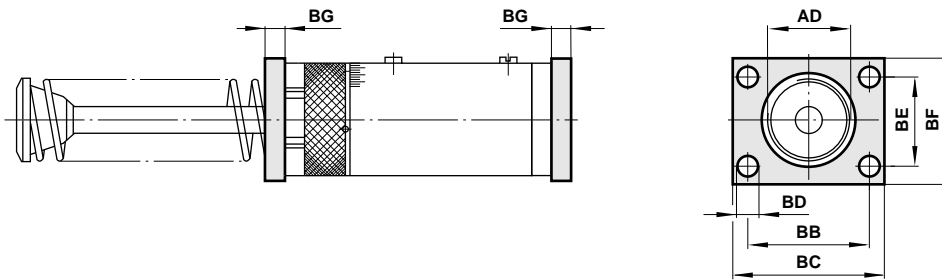
System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.

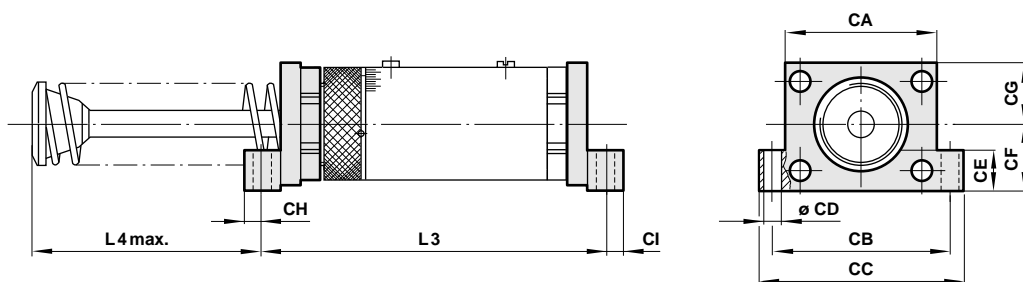


Model	Stroke	A			AC	AD	AE	AF	AG	AH	AI	AJ	L1
C/59838/1 ..M/1	25,4	55,5	25,5	9,5	28	UNF 1 1/4 x 12	38	R 1/8	12	16	6,5	17	138
C/59838/2, ..M/2	50,8	81	25,5	9,5	28	UNF 1 1/4 x 12	38	R 1/8	12	16	6,5	17	189
C/59857/1 ..M/1	25,4	50	38	12,7	38	UNF 1 3/4 x 12	57	R 1/8	17	21	9,5	23	145
C/59857/2, ..M/2	50,8	75,5	38	12,7	38	UNF 1 3/4 x 12	57	R 1/8	17	21	9,5	23	195
C/59857/3	76	101	38	12,7	38	UNF 1 3/4 x 12	57	R 1/8	17	21	9,5	23	246

Note: Install mechanical stop 1 to 1,5 mm before end of stroke.
Shock absorbers are supplied with one locknut as standard.



Model	Shock absorber	AD	BB	BC	BD	BE	BF	BG
C/P29881	59838	UNF 1 1/4-12	42	54	7	28	41	9,5
C/P32368	59857	UNF 1 3/4-12	60	76	9	41,5	57	12,5
C/P70087	59857	UNF 1 3/4-12	41,5	57	9	41,5	57	12,5

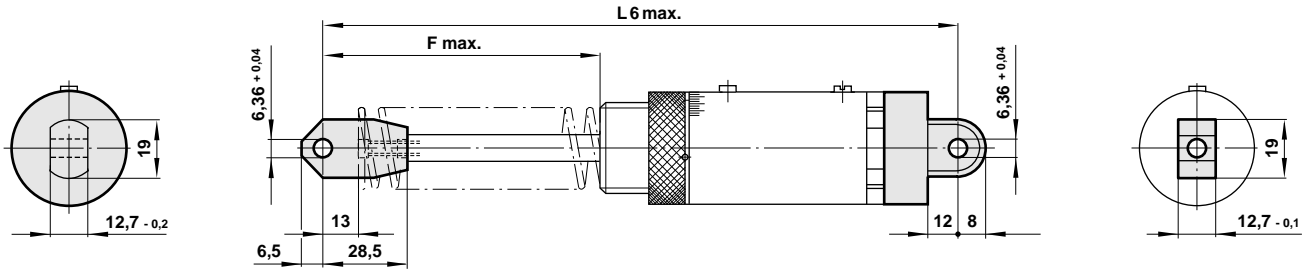


Model	Shock absorber	L3	L4	CA	CB	CC	CD	CE	CF	CG	CH	CI
QC/59838/21	C/59838/1, ..M/1	97	49	41	60	70	7	13	22	20,5	6,5	6,5
	C/59838/2, ..M/2	122	74,5									
QC/59857/21	C/59857/1, ..M/1	89	49	57	76	95	9	14	29,5	28,5	10	13
	C/59857/2, ..M/2	111	78,5									
	C/59857/3	136	104									

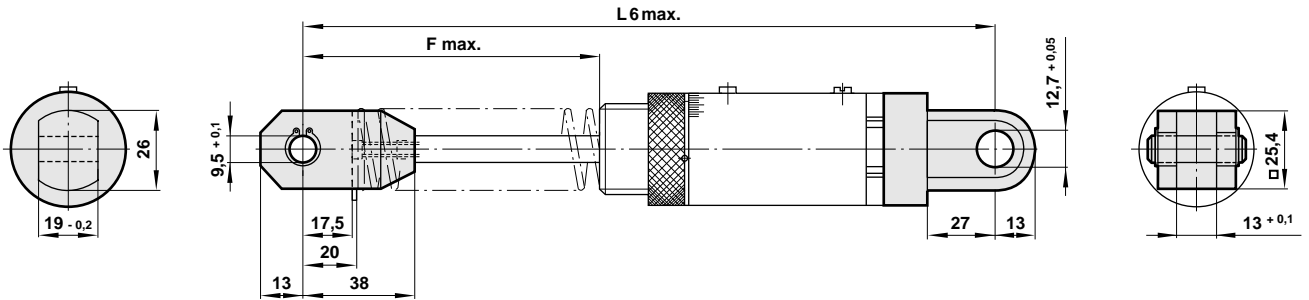


Piston Rod Clevis Mounting Style 'F' and Rear Eye Mounting Style 'R'

Shock absorber 59838



Shock absorber 59857

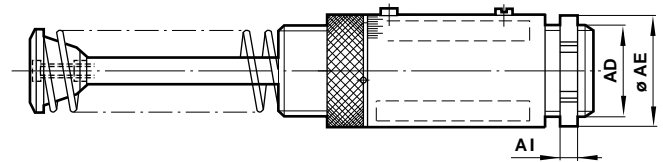
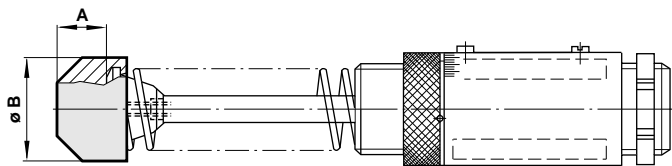


Model	Shock absorber	F	L6
OC/59838/22	C/59838/1, .../M/1	67	167
	C/59838/2, .../M/2	92	218

Model	Shock absorber	F	L6
OC/59857/22	C/59857/1, .../M/1	65	200
	C/59857/2, .../M/2	91	250
	C/59857/3	116	301

Polypad

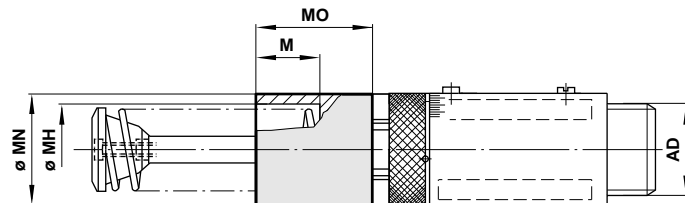
Locknut Style 'N'



Model	Shock absorber	A	Ø B
M/P29879	59838	12	31
C/P32369	59857	17,5	45

Model	Shock absorber	AD	AE	Ø AI
C/P2035/4	59838	UNF 1 1/4 x 12	6,5	38
C/P2035/5	59857	UNF 1 3/4 x 12	9,5	57

Stop Sleeve



Stop sleeve						
Model	Shock absorber	AD	M	Ø MH	Ø MN	MO
M/P70083	59838	UNF 1 1/4 x 12	21	29,5	38	37
M/P70084	59857	UNF 1 3/4 x 12	19	43	57	38
Stop sleeve for shock absorber with polypad						
Model	Shock absorber	AD	M	Ø MH	Ø MN	MO
M/P70085	59838	UNF 1 1/4 x 12	33	33	38	49
M/P70086	59857	UNF 1 3/4 x 12	36,5	50	57	55,5