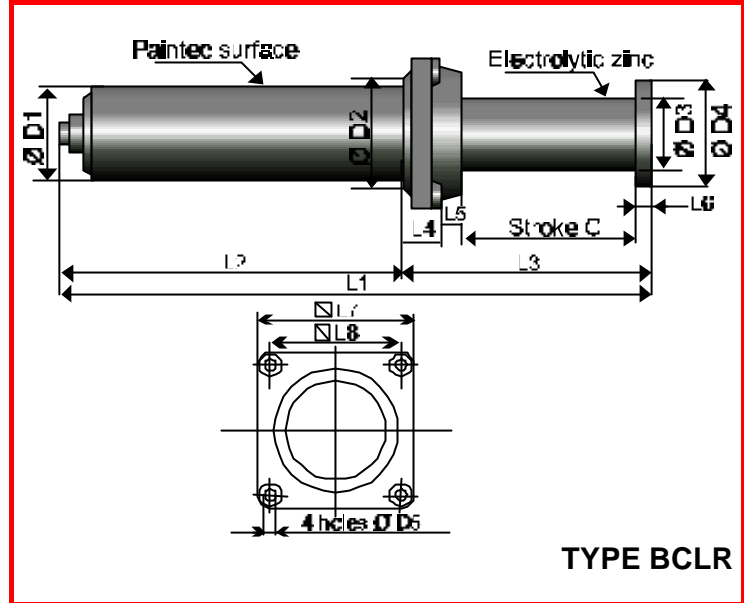
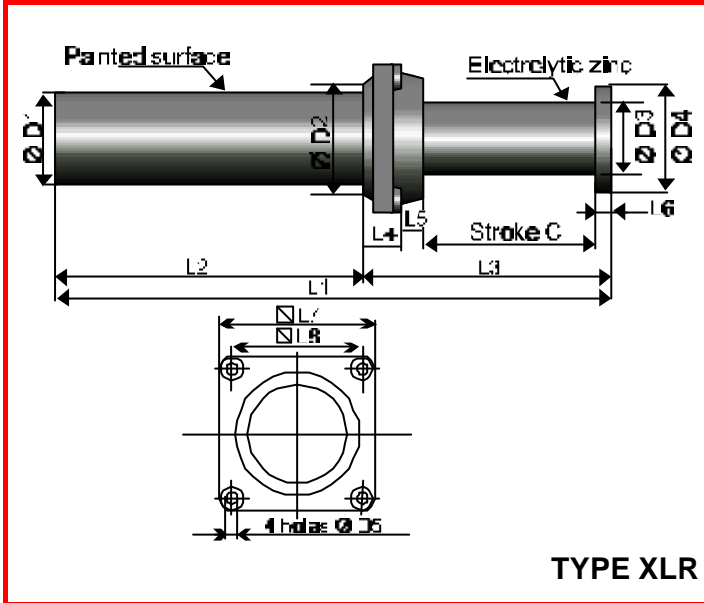


JARRET

LR SERIES

DIMENSIONS



Type XLR	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	L6 mm	L7 mm	L8 mm	D1 mm	D2 mm	D3 mm	D4 mm	D5 mm	m Mass kg
XLR6-150	410	231	179	19	0	10	Ø 90	Ø 70	50	Ø 90	38	50	9	4,2
XLR12-150	480	285	195	18	15	12	110	85	75	90	57	80	11	11
XLR12-200	530	285	245	18	15	12	110	85	75	90	57	80	11	11
XLR25-200	620	370	250	20	18	12	135	105	90	110	72	100	14	20
XLR25-270	690	370	320	20	18	12	135	105	90	110	72	100	14	25
XLR50-275	855	520	335	25	20	15	175	140	110	150	87	120	18	40
XLR50-400	980	520	460	25	20	15	175	140	110	150	87	120	18	40
XLR100-400	1370	910	460	25	20	15	175	140	110	150	87	120	18	65
XLR100-600	1570	910	660	25	20	15	175	140	110	150	87	120	18	65
XLR150-800	2640	1780	860	25	20	15	175	140	110	150	87	120	18	115

Type BCLR	L1 mm	L2 mm	L3 mm	L4 mm	L5 mm	L6 mm	L7 mm	L8 mm	D1 mm	D2 mm	D3 mm	D4 mm	D5 mm	m Mass kg
BCLR-100	1120	660	460	25	20	15	175	140	130	150	110	140	18	63
BCLR-150	1350	775	575	30	25	20	215	170	140	185	120	150	22	90
BCLR-220S	1258	783	475	30	25	20	215	170	140	185	120	150	22	100
BCLR-250	1750	1025	725	30	25	20	215	170	155	185	135	170	22	135
BCLR-400	2185	1250	935	35	25	25	265	210	175	235	150	190	27	218
BCLR-600	2555	1420	1135	35	25	25	265	210	200	235	175	215	27	295
BCLR-800	2935	1630	1305	40	35	30	300	240	220	270	190	235	30	420
BCLR-1000	3225	1820	1405	40	35	30	300	240	230	270	205	248	30	470

Rear flange mounting on request

LR AND XLR SERIES SHOCK ABSORBER SELECTION

1 - STANDARD PERFORMANCE SPECIFICATIONS

Type XLR	En kJ	Stroke mm	Rdy0 kN	Rdy _{max} kN
XLR6-150	6	150	25	50
XLR12-150	12	150	66	100
XLR12-200	12	200	42	78
XLR25-200	25	200	95	150
XLR25-270	25	270	66	112
XLR50-275	50	275	118	230
XLR50-400	50	400	75	150
XLR100-400	100	400	175	320
XLR100-600	100	600	85	230
XLR150-800	150	800	80	250

Type BCLR	En kJ	Stroke mm	Rdy0 kN	Rdy _{max} kN
BCLR-100	100	400	190	310
BCLR-150	150	500	200	380
BCLR-220S	220	400	380	685
BCLR-250	250	650	270	490
BCLR-400	400	850	330	600
BCLR-600	600	1 050	370	740
BCLR-800	800	1 200	430	860
BCLR-1000	1 000	1 300	500	1 000

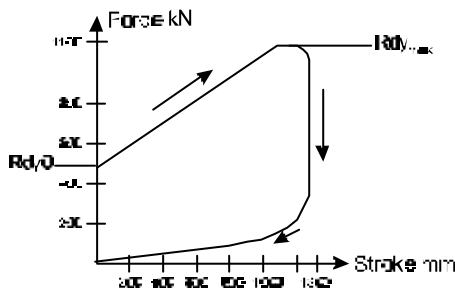
Impact velocity : Types XLR and BCLR shock absorbers are designed for impact velocities up to 2 m/sec, above which, custom modification is required.

STANDARD OPERATING CONDITIONS

- Impact Speed : 2 m/s
- Operating Temperature Range : -20° to + 40° C
- Surface Protection : Electrolytic zinc + painting

PERFORMANCE CURVES

Dynamic curve (v = 2 m/s)



2 - ENERGY CALCULATION

$$E = \frac{1}{2} m_e V_e^2$$

3 - ALLOWABLE IMPACT FREQUENCY

$$F < 8 \times \frac{E_n}{E} \text{ Impacts/hour}$$

4 - REQUIRED STROKE CALCULATION

$$C_e = C \left(\sqrt{\frac{E}{E_n (0,027 V + 0,22)}} + 1,83 - 1,35 \right)$$

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5 - DYNAMIC REACTION CALCULATION

$$Rdy_e = \left[\left(\frac{Rdy_{max} - Rdy_0}{C} \right) \times C_e + Rdy_0 \right] (0,1V + 0,8)$$

6 - APPLICATION EXAMPLE

Data : Effective mass = 75 t,
Effective impact speed = 2,7 m/s
Maximum allowable structural force : 650 kN

- ① : BCLR400 selected
- ② : Performance characteristics are :
En = 400 kJ, Cn = 850 mm,
Rdy_{max} = 600 kN
Rdy₀ = 330 kN
- ③ : Energy dissipated/impact is 274 kJ
- ④ : Maximum allowable impact frequency
8 x 400 / 274 = 12 (10 impacts/hour is acceptable)
- ⑤ : Effective stroke :
$$C_e = 850 \left(\sqrt{\frac{274}{400 (0,027 * 2,7 + 0,22)}} + 1,83 - 1,35 \right)$$

C_e = 587 mm
- ⑥ : Rdy_e = 520 (0,1 x 2,7 + 0,8) = 556 kN
(which is less than maximum allowable reaction force of 650 kN)

**All performance characteristics can be modified.
Please advise us of your specific requirements.**

