

BS7... Spring Brakes (Disc), diaphragm/diaphragm NG4 EVO

Function

This range of innovative vented **Double Diaphragm Spring Brake** cylinder is used on axles fitted with air disc brakes and provides the service and parking brake functions.

The internal wind off mechanism allows the parking brake force to be removed if air pressure is no longer present.

The Spring Brakes have a mounting seal integrated in the non-pressure housing which prevents the entry of dirt or water into the disc brake caliper.

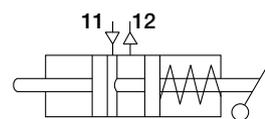
See PD-413-000, Document No. Y115384 for the full range of Spring Brake Actuators for Trailers.



Technical Features

Maximum operating pressure:	Port 11: 10.5 bar Port 12: 8.5 bar
Release pressure:	See chart
Operating temperature range:	- 40 °C to +80 °C +110 °C / 1 hr max for i.e. painting
Sealing of the non-pressure housing:	Rubber Boot
Push rod stroke:	See chart
Port threads:	M16x1.5
Release device:	Mechanical external system
Weight:	See chart

Standard Symbol as DIN ISO 1219



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Range Overview

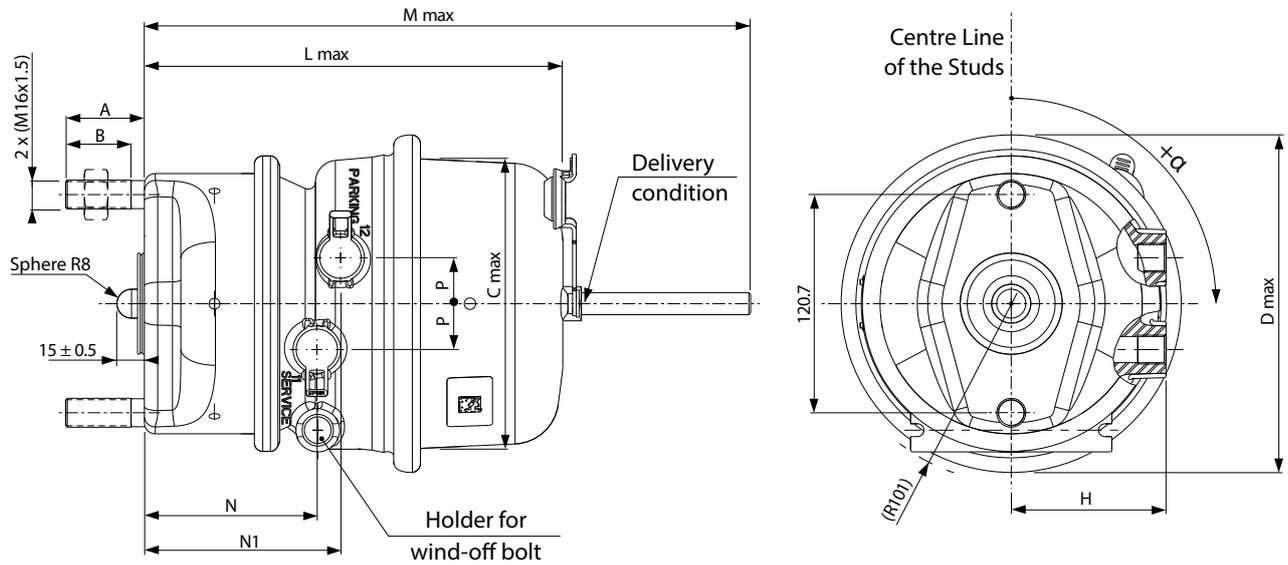
Product Identification		Size			Pneumatic Reservoir Air Consumption	Legislation	Weight approx. [kg]	Related PN´s to be replaced				
Part No. ¹⁾	Type No.	Service Brake Type [inch ²]	Parking Brake Type [inch ²]	Stroke [mm]	Required release pressure @ stroke 10 mm	TÜV Inspection Report		Type number	Current NG4+			
K192161N00	BS7309	16	24	57/57	5,3	"Service Brake 361-0136-05-FBKV Parking Brake 361-0137-05-FBKV"	6,6	BS7303	K159937N00			
								BS7304	K159938N00			
								BS7309	K159939N00			
K192165N00	BS7312							BS7325	K159128N50			
								BS7312	K159940N00			
K192166N00	BS7313							BS7324	K159127N50			
K192167N00	BS7318	BS7313		K159941N00								
K192168N00	BS7319	BS7318		K159942N00								
		BS7319		K159943N00								
K192172N00	BS7751	18		24			64/64	5,3	"Service Brake 361-0136-05-FBKV Parking Brake 361-0137-05-FBKV"	6,8	BS7750	K159948N00
K192174N00	BS7755										BS7751	K159949N00
K192175N00	BS7756										BS7755	K159950N00
K192177N00	BS7402		BS7756		K159951N00							
K192178N00	BS7403	20	24		64/64	5,3	"Service Brake 361-0136-05-FBKV Parking Brake 361-0137-05-FBKV"			6,8	BS7402	K159954N00
K192179N00	BS7404										BS7403	K159955N00
K192180N00	BS7405										BS7404	K159956N00
K192181N00	BS7406										BS7405	K159129N50
					BS7406					K159130N50		

¹⁾ The part number will carry a suffix, "N##" which defines the packaging requirements of different market sectors, e.g. N00, N50. Example: K192161N00 - is supplied without packaging.

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Dimensions



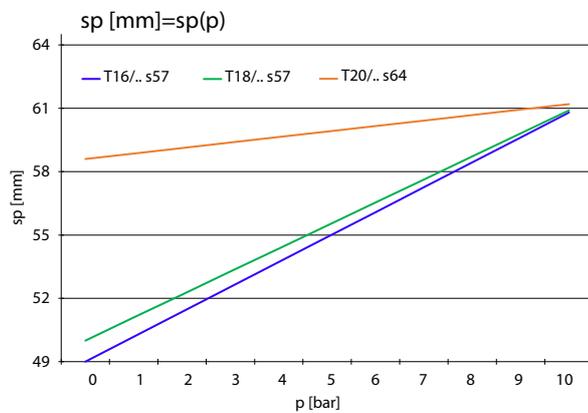
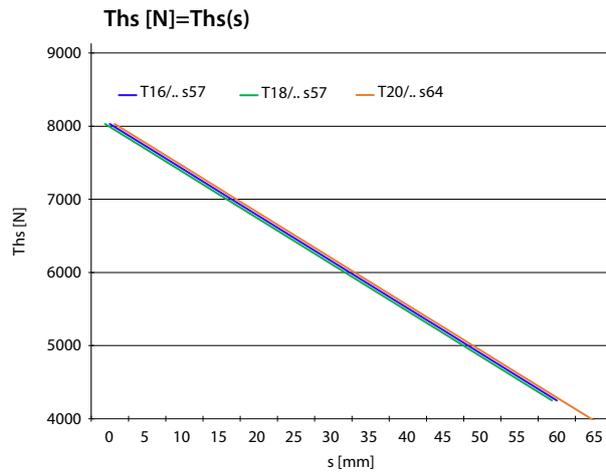
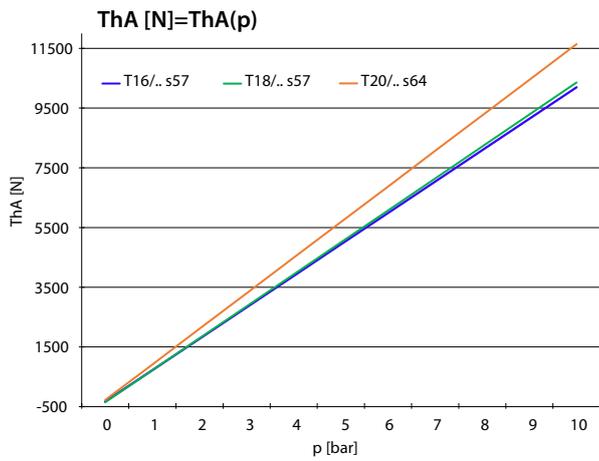
Product Identification		Dimensions										
Part No.	Type No.	A [mm]	B [mm]	C max [mm]	D max [mm]	H [mm]	N [mm]	N1 [mm]	L max [mm]	M max [mm]	P [mm]	α [°]
K192161N00	BS7309	43	36	163	187	85	94	108	240	333	25,4	90
K192165N00	BS7312											315
K192166N00	BS7313											225
K192167N00	BS7318											300
K192168N00	BS7319											60
K192172N00	BS7751											90
K192174N00	BS7755											300
K192175N00	BS7756											60
K192177N00	BS7402											90
K192178N00	BS7403											300
K192179N00	BS7404											60
K192180N00	BS7405											225
K192181N00	BS7406											315

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Performance Charts

Product Identification		Service Brake					Parking Brake		
Part No.	Type No.	Type [inch ²]	ThA [N]	p15 [bar]	sp [mm]	smax @ 6.5 bar [mm]	Type [inch ²]	Ths [N]	p10 [bar]
K192161N00	BS7309	16	1053*p-331	0,27	1.18*p+49	61		8030-63*s	5,3
K192165N00	BS7312								
K192166N00	BS7313								
K192167N00	BS7318								
K192168N00	BS7319								
K192172N00	BS7751	18	1071*p-352	0,26	1.09*p+50		24		
K192174N00	BS7755								
K192175N00	BS7756								
K192177N00	BS7402	20	1192*p-277	0,23	0.26*p+58.6	69			
K192178N00	BS7403								
K192179N00	BS7404								
K192180N00	BS7405								
K192181N00	BS7406								



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Accessories

Spare Parts:	
K040394K50	Release screw kit (release screw, nut, washer)
K050194K50	Plug Spare kit (plug and clip)
K161769	Breathing Plug kit

Mounting kit available comprising 2 off hexagonal lock nuts: Part Number I136860*

* must be ordered separately !

Installation and Mounting instructions

Detail information concerning the Power spring release after installation and dust plug mounting can be found in the NG4 EVO Service manual Y487181 available on truckservices.knorr-bremse.com .

Special Note:

If the actuator is supplied with the drain holes plugged, remove lowest plug (as viewed when the actuator is installed).

Note:

When Spring brakes are replaced, ensure that the units on both sides of the axle have the same stroke capability.

Revision Details

Rev. 006	April 2019	New Layout
Rev. 007	June 2023	Replacement of NG4+ by NG4 EVO



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