

**Brakes - Regulations concerning the manufacture of
brake components**

**Self-adjusting load-proportional braking system and
automatic “empty-loaded” control device**

Appendix C

*Self-adjusting load-proportional braking equipment
accepted in international traffic*

The tables given in this appendix:

- are updated regularly,
- correspond to the above date of update.



Appendix C - Self-adjusting load-proportional braking equipment accepted in international traffic

(Request from RU) Manufacturer	Abridged designation	Distributor	Certified with:		Technically approved since :
			Pneumatic relay	Brake cylinder	
I – Mechanical					
SAB	AC 3 D				Graz, June 1972
II – Pneumatic					
Westinghouse	WDC 14 and WDC 16				Graz, June 1972
Knorr	RLV 12/10			DGB 10"/12"	Graz, June 1972
Oerlikon	ALM-ALT				Copenhagen, June 1973
Oerlikon	ALS-ALT				Copenhagen, June 1973
Westinghouse	VCAC (WDR)	C3AL-GP	Hydropneumatic load-weigh valve	with 16" cylinder	Paris, January 1974
Oerlikon	ALM / ALR 150				Berne, November 1977
Knorr	RLV 11d	KE2d SL-ALB/d	WM 40	with 12" cylinder	Paris, January 1980
Metalski Zavod Tito (MZT)	AKR SS/10	Est 3 f	DP1	with 16" cylinder	Rijeka & Opatija, October 1982
Metalski Zavod Tito (MZT)	AKR S/01	Est 3 f	DP1	with 12" cylinder	Rijeka & Opatija, October 1982
Knorr	RLV 11d 5	KE 1a SL	WM 10	with 16" cylinder	Paris, January 1983
DAKO	DAKO-DSS	CV1D	SL1	with 16" cylinder	Prague, October 1985
DAKO	DAKO-DS	CV1D	SL1	with 16" cylinder	Prague, October 1985
DAKO	DAKO-DSS	CV1D	SL2	with 16" cylinder	Paris, January 1987
DAKO	DAKO-DS	CV1D	SL2	with 16" cylinder	Paris, January 1987
SAB-WABCO ^{a)}	VCAV (SWDR-2)	C3W	F87	with 10"/12" cylinder	Paris, January 1997
SAB-WABCO a)	VCAV (GF4 SS1) (GF4 SS2) (GF6 SS1) (GF6 SS2)	SW4, SW4-C, ou SW4/3	DP1 ou F87	with 16" cylinder	Paris, January 2003

(Request from RU) Manufacturer	Abridged designation	Distributor	Certified with:		Technically approved since :
			Pneumatic relay	Brake cylinder	
Knorr-Bremse	EDU xx1	KE _b) ESH 100 c) EST3F/HBG300	d)	with 8" to 16" cylinder	Paris, June 2007
Bumar-Fablok	PBF-01A (MBF-01A)	ZBF-01 b)	DP1 WM10	1 x 16"	Budapest, June 2008
MZT-Hepos	AKR SS/20	MH 3f HBG 310/300 EST 3f HBG 300	MV 1	1 x 16"	Budapest, June 2008
MZT-Hepos	AKR S/20	MH 3f HBG 310/300 EST 3f HBG 300	MV 2	1 x 16"	Budapest, June 2008
Bumar-Fablok	PBF-01B (MBF-01B))	ZBF-01 b)	DP1 WM10	1 x 16"	Paris, January 2009
Bumar-Fablok	D11 (MBF-02)	ZBF-01 b)	DP1 WM10	1 x 16"	Paris, January 2009
Faiveley Transport	VCAV (FT SS1) (FT SS2)	SW4S, or SW4S/3	DP1 or F87	1 x 16"	Paris, January 2014
Knorr-Bremse	KRf C	KEf	d	with 8" to 16" cylinder	Paris, June 2018
Knorr-Bremse	KRf E	KEf	d	with 8" to 16" cylinder	Paris, January 2019

- a) Faiveley Transport
- b) Distributor certified in conformity with UIC Leaflet 543, Appendices E1 and E2
- c) Certification tests conducted with the EHS 100 distributor without a dump valve; new type ESH 155
- d) Load-weigh valve in accordance with Chapter 3 of this leaflet

Notes concerning the update:

Date of update	Body	Decision
07.04.2004	CTR Steering Committee	Creation of a section for UIC-approved components on the UIC website; removal of the corresponding appendices from the UIC leaflets
01.05.2005	SG 5 for Braking and Running Gear January 2005 session	Agenda item 3.9.4 – Amendments to the appendices of UIC Leaflet 541-04, Appendix C; Publication of Appendix C to UIC Leaflet 541-04 on the UIC website with: <ul style="list-style-type: none">• new layout for the table (simplified presentation, load-weight valves and relay valves listed in separate columns),• DAKO – DS and DAKO – DSS, correction of the assignment of load-weight valves SL1 and SL2
15.03.2007	SG 5 for Braking and Running Gear January 2007 session	Agenda item 2.4 – Amendments to the appendices of UIC Leaflet 541-04, Appendix C; new layout for the table.
01.11.2007	SG 5 for Braking and Running Gear June 2007 session	Certification EDU xx1
11.11.2009	SET 7 „Braking“ session June 2008	Certification PB-01A Bumar Fablok
	SET 7 „Braking“ session January 2009	Certification PB-01B Bumar Fablok Certification D11 Bumar Fablok
18.10.2010	SET 7 „Braking“ session June 2010	Certification AKR SS/20 MZT Hepos Certification AKR S/20 MZT Hepos Certification MKV-20 MZT Hepos
15.02.2014	SET 7 „Braking“ session January 2014	Certification FT SW4S and SW4S/3
17.07.2018	SET 7 „Braking“ session June 2018	Certification Knorr-Bremse KEf with relay valve KRf type C
01.02.2019	SET 7 „Braking“ session January 2019	Certification Knorr-Bremse KEf with relay valve KRf type E