



GB Description

CHARACTERISTICS

- Pneumatically applied - spring release
- Water cooled for good heat transfer
- 1, 2, 3 or 4 disc design
- Standard or Low Coefficient (LC) friction pads for various torque requirements
- Multi-range actuators for optimum torque selection optional on some sizes
- For use in dry environment only

UTILISATION

- End-of-shaft or through shaft mounting

TYPICAL USES

- Continuous slipping and tension control applications
- Heavy duty stopping and holding applications
- Fast engagement and cyclic applications

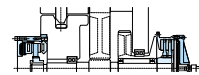
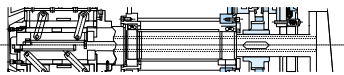
MOUNTING PRECAUTIONS

- Outer ring of brake must be supported by machine frame
- Inner hub of brake must be supported by machine shaft
- Designed for horizontal shaft axis. Consult Wichita if vertical mounting is required
- Maximum water inlet pressure is 4.5 bar

SAFETY

- The brake should be suitably guarded when in use

Mounting example



Model Modell	Flow configuration Fließ bild		Inlet/outlet pipe threads Eintritt/Austritt Rohrgewinde		Min. pipe bore Min. Rohrbohrung 1)		System backpressure Systemgegendruck 2) 3)	
	WCM	CSM	WCM	CSM	WCM (mm)	CSM (mm)	WCM (bar)	CSM (bar)
106	Series / Seriell	Series / Seriell	1/4" BSPT female-male / Auß en-Innen	1/4" BSPT female-male / Auß en-Innen	9	12		0,3
206	Series / Seriell	Series / Seriell	1/4" BSPT female-male / Auß en-Innen	1/4" BSPT female-male / Auß en-Innen	9	12		0,9
108	Series / Seriell	Series / Seriell	1/2" BSPT female-male / Auß en-Innen	3/8" BSPT female-male / Auß en-Innen	16	16	0,1	0,3
208	Series / Seriell	Series / Seriell	1/2" BSPT female-male / Auß en-Innen	3/8" BSPT female-mal / Auß en-Innen	16	16	0,25	0,9
111	Series / Seriell	Series / Seriell	1/2" BSPT female-male / Auß en-Innen	3/8" BSPT female-male / Auß en-Innen	16	16	0,3	0,6
211	Series / Seriell	Series / Seriell	1/2" BSPT female-male / Auß en-Innen	3/8" BSPT female-male / Auß en-Innen	19	19	0,8	1,5
114	Series / Seriell	Series / Seriell	1/2" BSPT female-male / Auß en-Innen	1/2" BSPT female-male / Auß en-Innen	19	19	0,35	0,5
214	Series / Seriell	Series / Seriell	1/2" BSPT female-male / Auß en-Innen	1/2" BSPT female-male / Auß en-Innen	19	19	0,9	2
116	Series / Seriell	Series / Seriell	1/2" BSPT female-male / Auß en-Innen	1/2" BSPT female-male / Auß en-Innen	19	19	0,5	0,8
216	Series / Seriell	Series / Parallel	1/2" BSPT female-male / Auß en-Innen	3/4" BSPT female-female / Innen-Innen	19	19	1,2	0,8
118	Series / Seriell	Series / Seriell	1/2" BSPT female-male / Auß en-Innen	1/2" BSPT female-male / Auß en-Innen	19	19	0,75	1,7
218	Parallel	Parallel	3/4" BSPT female-female / Innen-Innen	3/4" BSPT female-female / Innen-Innen	25	25	0,3	1,2
121	Parallel	Parallel	3/4" BSPT female-female / Innen-Innen	1" BSPT female-female / Innen-Innen	25	25	0,3	0,45
221	Parallel	Parallel	3/4" BSPT female-female / Innen-Innen	1 1/4" BSPT female-female / Innen-Innen	25	32	0,55	1,3
124	Parallel	Parallel	3/4" BSPT female-female / Innen-Innen	1" BSPT female-female / Innen-Innen	25	25	0,7	1,1
224	Parallel	Parallel	3/4" BSPT female-female / Innen-Innen	1 1/4" BSPT female-female / Innen-Innen	25	25	1,4	2
324	Parallel	Parallel	Twin 1" BSPT female-female / Innen-Innen	Twin 1" BSPT female-female / Innen-Innen	25	32	2	
127	Parallel	Parallel	3/4" BSPT female-female / Innen-Innen	1" BSPT female-female / Innen-Innen	25	25	1,1	
227	Parallel	Parallel	3/4" BSPT female-female / Innen-Innen	1 1/4" BSPT female-female / Innen-Innen	25	32	2	
130	Parallel	Parallel	3/4" BSPT female-female / Innen-Innen	Pipe direct to inlets/outlets on each water jacket	25	25	1,2	
230	Parallel	Parallel	1/4" BSPT female-female / Innen-Innen	Direkt zu Eintritt/austritt an jedem Wassermantel	32	32	2,2	
136		Parallel		2 inlets on 1 plate unit / 2 Einlässe bei 1 Platteneinheit		32		
236		Parallel		4 inlets on 2 plate unit / 4 Einlässe bei 2 Platteneinheit		39		
336		Parallel		6 inlets on 3 plate unit / 6 Einlässe bei 3 Platteneinheit		50		



GB **Water supply**

(1) Description

Brakes are supplied complete with hoses and fittings ready to be connected to inlet and outlet pipes.

Where the outlet pipe connects directly into the "floating plate" water jacket at the airtube end of the brake, a flexible hose must be used. Ensure that the inlet hose is positioned at the bottom of the brake.

(2) Flow configuration

Smaller brakes are piped up for series flow. On larger models parallel flow is used to avoid excessive backpressure.

Air Sets

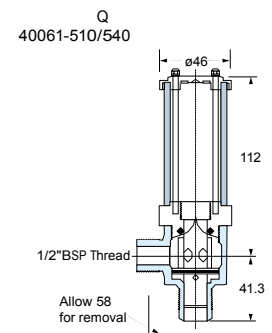
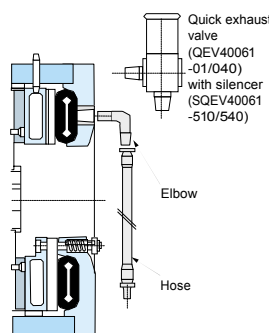
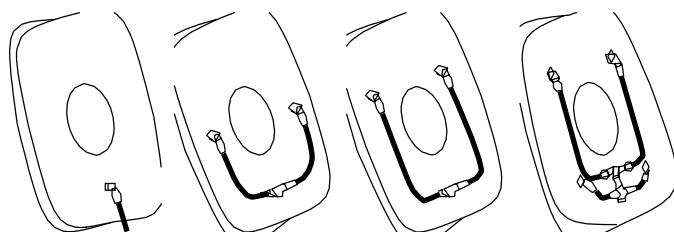
Air sets are optional and consist of elbows or quick exhaust valves, hoses and pipe fittings. For tension control duties customers generally pipe direct to the airtube connections without using an air set. Where there are two inlets, one can be plugged. The thread is 1/2" NPT/BSPT. For fast response or cycling duties an air set comprising elbows, hoses and fittings can be supplied.

Silenced quick exhaust valves (SQEV's) can be used in place of elbows on sizes 108 and 111 to give a further, although small, improvement in response times. Where noise is not a problem, quick exhaust valves without silencers (QEV's) can be used.

Model Modell	# Hoses # Schläuche	Air Inlet connection "A" Luft Eintrittsanschluss "A"
104H	1	1/4" NPT/BSPT male / Außengewinde
104H-208	1	1/2" NPT/BSPT male / Außengewinde
111-316	2	1/2" BSPT female / Innengewinde
118-121	3	3/4" BSPT female / Innengewinde
124H-327	3	1 1/4" BSPT female / Innengewinde
130H-230H	4	1 1/4" BSPT female / Innengewinde

Air set coding example Beispiel für Luftsatzbezeichnung		Air set No. Luftsatz Nr. 332 - 18 - SQX	
Qty of air connections Anzahl der Luftanschlüsse	Qty of fittings Anzahl der Armaturen	Qty of hoses Anzahl der Schläuche	Approx hose length ("") ca. Schlauchlänge ("")
3	3	2	- 18 -

SQX	
E	= elbows / Kümmern
Q	= QEV / Schnellentlüftungsventil
SQ	= silenced QEV / Schallgedämpftes Schnellentlüftungsventil
X	= pipe cross / Rohrkreuz
T	= pipe tee / T-Stück





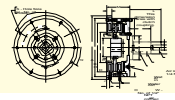
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Performance

Model Modell	Dynamic slip torque Dynamisches Gleitmoment		Heat transfer capacity Wärmeübertragungswert	Max speed Drehzahl ⁽³⁾	Inertia / Trägheit Hub & centre plate Nabe u. Innenscheibe	Weight / Gewicht		Water flow from max heat transfert Wassermenge für r max Wärmeleistung	Airtube displacement Balgvolumen	
	@ 0,2 bar min (Nm) ⁽¹⁾	@ 5,5 bar max (Nm) ⁽¹⁾				Intermit. operation Intermit. Betrieb (kW) ⁽²⁾	Total brake Gesamtbremse		Hub & centre plate Nabe u. Innenscheibe	max heat transfert Wassermenge für r max Wärmeleistung
			(min ⁻¹)	(kgm ²)	(kg)			(kg)		
WCM 104/LC	1	38	6	5250	0,00125	10,6	—	4	15	55
WCM 104	1	57	6	5250	0,00125	10,6	—	4	15	55
WCM 104H	2	115	6	5250	0,00125	10,6	—	4	15	55
WCM 106/MR2/LC	3	83	9	3520	0,02	21	3	6	5	52
WCM 106/MR2	5	124	9	3520	0,02	21	3	6	5	52
WCM 106/A/LC	3	115	9	3520	0,02	21	3	6	20	100
WCM 106/A	3	176	9	3520	0,02	21	3	6	20	100
WCM 106/MR4/LC	6	166	9	3520	0,02	21	3	6	10	104
WCM 106/MR4	10	248	9	3520	0,02	21	3	6	10	104
WCM 106/LC	6	225	9	3520	0,02	21	3	6	30	195
WCM 106	6	340	9	3520	0,02	21	3	6	30	195
WCM 206	12	680	9	3520	0,02	21	3	6	30	195
WCM 108/MR2/LC	4	108	12	3520	0,03	31	6	8	5	52
WCM 108/MR2	6	162	13	2870	0,0225	36	4,5	8	5	52
WCM 108/MR4/LC	8	216	13	2870	0,0225	36	4,5	8	10	104
WCM 108/MR4	12	324	13	2870	0,0225	36	4,5	8	10	104
WCM 108/A/LC	8	330	13	2870	0,0225	36	4,5	8	30	195
WCM 108/A	10	405	13	2870	0,0225	36	4,5	8	30	195
WCM 108/MR6/LC	12	324	13	2870	0,0225	36	4,5	8	15	156
WCM 108/MR6	18	486	13	2870	0,0225	36	4,5	8	15	156
WCM 108/LC	10	405	13	2870	0,0225	36	4,5	8	55	300
WCM 108	10	620	13	2870	0,0225	36	4,5	8	55	300
WCM 208	20	1240	18	2870	0,0375	50	7	12	55	300
WCM 111/MR2/LC	5	145	18	2090	0,113	78	10	12	5	52
WCM 111/MR2	8	218	18	2090	0,113	78	10	12	5	52
WCM 111/MR4/LC	10	290	18	2090	0,113	78	10	12	10	104
WCM 111/MR4	16	436	18	2090	0,113	78	10	12	10	104
WCM 111/A/LC	15	555	18	2090	0,113	78	10	12	55	300
WCM 111/A	22	826	18	2090	0,113	78	10	12	55	300
WCM 111/MR6/LC	15	435	18	2090	0,113	78	10	12	15	156
WCM 111/MR6	24	654	18	2090	0,113	78	10	12	15	156
WCM 111/MR8/LC	20	580	18	2090	0,113	78	10	12	20	208
WCM 111/MR8	32	872	18	2090	0,113	78	10	12	20	208
WCM 111/LC	25	940	18	2090	0,113	78	10	12	90	500
WCM 111	25	1400	18	2090	0,113	78	20	17	90	500
WCM 211	50	2800	27	2090	0,25	90	20	13	90	500
WCM 114/MR2/LC	7	188	21	1640	0,45	125	20	13	5	52
WCM 114/MR2	10	282	21	1640	0,45	125	20	13	5	52
WCM 114/MR4/LC	14	376	21	1640	0,45	125	20	13	10	104
WCM 114/MR4	20	564	21	1640	0,45	125	20	13	10	104
WCM 114/MR6/LC	21	564	21	1640	0,45	125	20	13	15	156
WCM 114/MR6	30	846	21	1640	0,45	125	20	13	15	156
WCM 114/MR8/LC	28	752	21	1640	0,45	125	20	13	20	208
WCM 114/MR8	40	1128	21	1640	0,45	125	20	13	20	208
WCM 114/MR10/LC	35	940	21	1640	0,45	125	20	13	25	260
WCM 114/MR10	50	1410	21	1640	0,45	125	20	13	25	260
WCM 114/LC	100	1620	21	1640	0,45	125	20	13	125	700
WCM 114	100	2435	21	1640	0,45	125	20	13	125	700
WCM 214	200	4870	33	1640	0,325	145	30	21	125	700
WCM 116/LC	110	2530	27	1430	0,495	168	28	18	160	920
WCM 116	110	3360	27	1430	0,495	168	28	18	160	920
WCM 216	220	6780	38	1430	0,72	250	55	25	160	920
WCM 118/LC	200	3815	33	1270	0,75	195	36	21	250	1400
WCM 118	200	5705	33	1270	0,75	195	36	21	250	1400
WCM 218	400	11410	42	1270	0,7	260	50	32	250	1400
WCM 121/LC	230	4915	34	1090	1,6	265	52	30	300	1600
WCM 121	230	7755	34	1090	1,6	265	52	30	300	1600
WCM 221	460	15500	46	1090	1,15	315	80	48	300	1600
WCM 124/A/LC	300	5645	36	950	2,85	360	80	45	300	1600
WCM 124/A	300	8470	36	950	2,85	360	80	45	300	1600
WCM 224/A	600	16940	50	950	2,8	465	130	67	300	1600



GB Dimensions



Model	Dynamic slip torque Dynamisches Gleitmoment		Heat transfer capacity Wärmeübertragungswert Intermit. operation Intermit. Betrieb	Max speed Drehzahl ³⁾	Inertia / Trägheit Hub & centre plate Nabe u. Innenscheibe	Weight / Gewicht		Water flow from max heat transfert Wassermenge für max Wärmeleistung	Airtube displacement Balgvolumen	
	@ 0,2 bar min	@ 5,5 bar max				Total brake Gesamtbremse	Hub & centre plate Nabe u. Innenscheibe		new neu	worm abgenutzt
	(Nm) ¹⁾	(Nm) ¹⁾	(kW) ²⁾	(min ⁻¹)	(kgm ²)	(kg)	(kg)	(litre/min) ⁴⁾	(cm ³)	(cm ³)
WCM 124H/LC	500	9240	36	950	2,85	375	80	45	490	2600
WCM 124H	500	13575	36	950	2,85	375	80	45	490	2600
WCM 224H	1000	27150	50	950	2,8	480	130	67	490	2600
WCM 324H	1500	40725	65	950	4,2	600	180	90	490	2600
WCM 127	570	15260	40	850	5	395	89	57	490	2600
WCM 227	1140	30520	52	850	9,2	560	—	90	490	2600
WCM 130H	1100	29630	43	765	9,65	615	—	65	960	5100
WCM 230H	2200	59230	57	765	18	935	—	105	960	5100
WCM 136	1700	44920	(5)	640	—	—	—	90	1800	6800
WCM 236	3400	89840	(5)	640	—	—	—	145	1800	6800
WCM 142	2400	64160	(5)	545	—	—	—	110	2100	8000
WCM 242	4800	128320	(5)	545	—	—	—	180	2100	8000
WCM 248	9500	237600	(5)	475	—	—	—	250	3550	13500

1) Torque Rating. Dynamic torque ratings may be used in selection for applications such as tension control. Service factors vary for more arduous applications, but as a general guide, use 75% brake torque Air Pressure. Note - Torque is directly proportional to the air pressure applied.

MR (multi-range) options are also available on WCM 116 and larger.

2) Heat transfer. For constant running reduce table rating by 30%.

3) Water flow. Table ratings are for max heat capacity, water flow requirement may be lower use 0.64 litre per min/kW.

Model Modell	A	B	C ¹⁾	D	E	F	I	K	L	M	P	Q	S	T	U ²⁾		V ³⁾
															min	max	
WCM 104	180	165	140	51	45	22	32	4	102	62	51	90°	180	90°	15	25	4xø9
WCM 104H	180	165	140	51	45	22	32	4	107	62	51	90°	200	90°	15	25	4xø9
WCM 106	220	203	190	80	68	51	19	3	145	32	51	90°	224	90° ⁴⁾	15	45	4xø9
WCM 206	220	203	190	80	68	112	33	3	198	32	51	90°	224	90° ⁴⁾	15	45	4xø9
WCM 108	310	280	220	118	89	51	29	6	171	38	57	60°	283	120°	25	57	4xø14
WCM 208	310	280	220	118	89	101	29	6	225	38	57	60°	283	120°	25	57	4xø14
WCM 111	400	375	295	146	102	70	19	6	188	38	83	60°	375	120°	25	64	4xø18
WCM 211	400	375	295	146	102	122	19	6	241	38	83	60°	375	120°	25	64	4xø18
WCM 114	470	445	370	211	140	95	27	6	213	44	127	45°	445	90°	25	90	6xø18
WCM 214	470	445	370	211	108	143	43	6	293	44	127	45°	445	90°	25	90	6xø18
WCM 116	540	510	410	240	152	102	24	6	219	44	152	30°	508	60°	35	102	10xø18
WCM 216	540	510	410	240	178	143	24	6	285	44	152	30°	508	60°	35	120	10xø18
WCM 118	590	560	470	279	178	102	27	6	226	44	203	30°	559	60°	35	120	10xø18
WCM 218	590	560	470	279	151	165	41	6	285	44	203	30°	559	60°	35	100	10xø18
WCM 121	685	648	540	343	229	102	32	6	244	45	235	30°	632	60°	50	152	10xø18
WCM 221	685	648	540	343	—	165	32	6	302	45	235	30°	632	60°	50	143	10xø18
WCM 124	760	730	620	343	229	102	35	6	254	44	235	30°	737	60°	50	152	10xø18
WCM 224	760	730	620	343	203	203	35	6	314	44	235	30°	737	60°	50	143	10xø18
WCM 124H	760	730	620	343	229	102	35	6	254	44	260	30°	737	60°	50	152	10xø18
WCM 224H	760	730	620	343	203	203	35	6	314	44	260	30°	737	60°	50	143	10xø18
WCM 127	830	800	700	387	229	115	30	6	254	47	337	22,5°	788	45°	65	165	14xø18
WCM 227	830	800	700	387	229	241	30	6	307	47	337	22,5°	788	45°	65	165	14xø18
WCM 130H	940	900	775	464	406	127	35	6	283	51	381	20°	883	40°	65	267	16xø22
WCM 230H	940	900	775	464	—	203	49	6	421	51	381	20°	883	40°	65	267	16xø22
WCM 136	1105	1065	925	572	305	143	29	6	302	57	476	20°	1041	40°	150	230	16xø22
WCM 236	1105	1065	925	572	305	279	29	6	441	57	476	20°	1041	40°	150	230	16xø22
WCM 142	1320	1250	1070	730	406	143	29	6	302	57	616	15°	1250	30°	200	250	22xø26
WCM 242	1320	1250	1070	730	406	286	29	6	442	57	616	15°	1250	30°	200	250	22xø26
WCM 248	1490	1440	1220	749	550	321	13	6	483	60	641	15°	1441	30°	250	370	22xø26

- 1) Bore dimensions "U" refer to the standard design. Larger bores are available on certain units.
- 2) The mounting holes in the backplate are not equally spaced due to the position of water inlet and outlet connections. For actual positions refer to angular dimensions "Q" and "T".
- 3) On the WCM 106 and WCM 206 the first mounting hole is positioned 13° clockwise from the vertical axis. The sketches and dimension table do not include the hose assemblies for water circulation.