

11 Air pressure, oil pressure and pressing force tables

Firstly select the type of Powerpackage and look for the precise denomination in the headings of the tables.



Special Powerpackages

Special Powerpackages are not listed in these tables.



Tables on the internet

The oil pressure tables can also be called on the internet with a link under www.tox-de.com.

Together with these Operating Instructions you will receive an additional page showing the oil pressure/pressure force table for this special Powerpackage.

11.1 Oil pressure/pressing force table for 10 bar Powerpackages *

Type S; Type S with power stroke adjustment; Type K

S1. 32. 6	S4. 32. 6	S15. 32. 6	S50. 50. 6	S100.300. 8	K2. 50. 4
S1.100. 6	S4.100. 6	S15.100. 6	S50.100. 6	S100.100.10	K2.100. 8
S1.150. 6	S4.150. 6	S15.150. 6	S50.150. 6	S100.200.10	K2.150.12
S1.200. 6	S4.200. 6	S15.200. 6	S50.200. 6	S100.100.18	K2.200.12
S1. 50.12	S4. 50.12	S15. 50.12	S50. 70.12	S100.300.18	K4.100. 6
S1.100.12	S4.100.12	S15.100.12	S50.100.12	S100.200.24	K4.150. 8
S1.150.12	S4.150.12	S15.150.12	S50.150.12	S100.300.30	K4.200.12
S1.200.12	S4.200.12	S15.200.12	S50.200.12	S170.200.10	K8.100. 5
S2. 32. 6	S8. 32. 6	S30. 50. 6	S75.100.12		K8.150. 5
S2.100. 6	S8.100. 6	S30.100. 6	S75.200.12		K8.200.10
S2.150. 6	S8.150. 6	S30.150. 6	S75.300.12	K1. 50. 5	
S2.200. 6	S8.200. 6	S30.200. 6	S75.300.20	K1.100.10	
S2. 50.12	S8. 50.12	S30. 70.12	S75.100.22	K1.150.10	K15.150.5
S2.100.12	S8.100.12	S30.100.12	S75.200.30	K1.200.10	K15.200.5
S2.150.12	S8.150.12	S30.150.12	S75.300.40		
S2.200.12	S8.200.12	S30.200.12			

Air press. [bar]	S1/K1	S2/K2	S4/K4	S8/K8	S15/K15	S30/K30	S50/K50	S75/K75	S100	S170
	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]
2	35 1.3	50 2.9	55 6.2	55 11.9	55 23	46 38	48 61	38 101	40 106	40 172
3	65 2.4	85 4.9	95 10.6	95 20.2	95 39	90 74	87 110	81 212	84 220	86 367
4	95 3.4	130 7.3	130 14.4	135 28.6	130 53	130 106	128 161	118 308	125 326	130 553
5	125 4.5	162 9.1	170 18.8	170 36.0	170 69	170 139	168 212	146 382	167 435	176 747
6	155 5.6	205 11.5	205 22.7	210 44.4	210 86	210 171	209 263	186 486	208 542	225 954
7	185 6.6	245 13.7	245 27.1	245 51.8	245 100	250 204	250 315	218 569	258 671	275 1165
8	210 7.5	285 15.9	285 31.4	285 60.2	285 116	290 236	291 366	254 663	296 770	327 1385
9	240 8.6	325 18.1	325 35.8	325 68.6	325 132	330 269	330 415	286 746	345 897	372 1575
10	275 9.8	365 20.2	360 39.7	365 77.0	365 150	365 297	369 464	320 835	385 1000	410 1736

S1.250.12	S2.250.12	S4.300.12	S8.300.12	S15.300.12	S30.300.12	S50.300.12	K1.100.15		K8.150.15
S1. 0.24	S2. 50.24	S4.400.12	S8.400.12	S15.400.12	S30.400.12	S50.400.12	K1.150.20		K8.200.20
S1.100.24	S2.100.24	S4. 50.24	S8. 50.24	S15. 50.24	S30. 70.20	S50. 70.20	K1.100.20	K4.100.10	K8.300.20
S1.150.24	S2.150.24	S4.100.24	S8.100.24	S15.100.24	S30.100.20	S50.100.20		K4.150.20	K8.400.20
S1.200.24	S2.200.24	S4.150.24	S8.150.24	S15.150.24	S30.150.20	S50.150.20	K2.100.12	K4.200.20	
		S4.200.24	S8.200.24	S15.200.24	S30.200.20	S50.200.20	K2.150.20	K4.300.20	K170.200.10
					S30.300.20	S50.300.20	K2.200.24	K4.400.20	
					S30.400.20	S50.400.20	K2.300.20		
						S50.300.30			
						S50.400.40			

Air press. [bar]	S1/K1	S2/K2	S4/K4	S8/K8	S15/K15	S30/K30	S50/K50	K170		
	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]	P _{oil} [bar] F [kN]		
2	50 1.8	55 3.2	55 6.2	55 11.9	46 19	48 39	40 51	40 173		
3	85 3.0	95 5.4	95 10.6	95 20.2	90 36	87 71	84 106	89 380		
4	130 4.5	130 7.3	135 15.0	130 27.6	130 53	128 104	125 158	133 566		
5	165 5.8	170 9.5	170 18.8	170 36.0	170 69	168 137	167 210	180 765		
6	205 7.1	205 11.5	210 23.2	210 44.4	210 85	209 170	208 262	224 951		
7	245 8.5	245 13.7	245 27.1	245 51.8	250 101	250 204	258 324	271 1149		
8	285 9.9	285 15.9	285 31.4	285 60.2	290 117	291 237	296 372	319 1352		
9	325 11.2	325 18.1	325 35.8	325 68.6	330 133	330 269	345 434	365 1547		
10	365 12.6	360 20.0	365 40.2	365 77.0	365 148	369 300	385 484	413 1749		

* Tolerance for technical data ± 5%

P_{oil} = oil pressure [bar]

F = pressing force [kN]

S1.100.48	S4.100.44	S8.100.48	S15.100.40	S30.150.28	K1.250.20	K15.100.10	K30.100. 5	K50.100.10	K15.100.40 K15.200.40 K15.300.40 K15.400.40		
S1.150.48	S4.150.44	S8.150.48	S15.150.40	S30.200.28	K1.250.40	K15.200.10	K30.150. 5	K50.200.10			
S1.200.48	S4.200.44	S8.200.48	S15.200.40	S30.300.44	S30.300.44	K15.300.10	K30.200. 5	K50.300.10			
S1.150.60	S4.300.44	S8.300.48	S15.300.40	S30.400.44	K2.300.50	K15.400.10	K30.100.10	K50.100.20			
S1.200.60	S4.400.44	S8.400.48	S15.400.40			K15.100.20	K30.200.10	K50.200.20			
S1.250.60	S4.200.65	S8.200.80	S15.150.60		K4.300.50	K15.200.20	K30.300.10	K50.300.20			
	S4.300.65	S8.300.80	S15.200.80		K4.400.50	K15.300.20	K30.400.10	K50.100.40			
S2.100.44	S4.400.65	S8.400.80	S15.300.80			K15.400.20	K30.200.20	K50.200.40			
S2.150.44			S15.400.80		K8.300.50		K30.300.20	K50.300.40			
S2.200.44					K8.400.50		K30.400.20				
S2.150.65							K30.200.40	K75.200.10			
S2.200.65							K30.300.40				
S2.250.65							K30.400.40	K100.200.10			
Air press.	S 1/K 1	S 2/K 2	S 4/K 4	S 8/K 8	S 15/K 15	S 30/K 30	K 50	K 75	K 100	Air press.	K 15
[bar]	P _{oil} F	P _{oil} F	P _{oil} F	P _{oil} F	P _{oil} F	P _{oil} F	P _{oil} F	P _{oil} F	P _{oil} F	[bar]	P _{oil} F
	[bar] [kN]	[bar] [kN]	[bar] [kN]	[bar] [kN]	[bar] [kN]	[bar] [kN]	[bar] [kN]	[bar] [kN]	[bar] [kN]		[bar] [kN]
2	55 2.0	55 3.2	55 6.2	46 10.1	48 20.0	40 33.6	40 51	35 93	40 106	2	40 16.9
3	95 3.3	95 5.4	95 10.6	90 19.3	87 35.8	84 69.3	85 105	66 174	89 233	3	84 34.6
4	130 4.5	135 7.6	130 14.4	130 27.7	128 52.3	125 102.6	130 165	99 260	133 347	4	125 51.1
5	170 5.9	170 9.5	170 18.8	170 36.0	168 68.4	167 136.7	175 220	132 347	180 469	5	167 68.1
6	205 7.1	210 11.7	210 23.2	210 44.4	209 85.0	208 170.0	225 280	166 435	224 583	6	208 84.6
7	245 8.5	245 13.7	245 27.1	250 52.8	250 101.5	258 210.4	275 345	200 524	271 705	7	258 104.6
8	285 9.9	285 15.9	285 31.4	290 61.2	291 118.0	296 241.3	325 410	232 607	319 829	8	296 120.0
9	325 11.2	325 18.1	325 35.8	330 69.6	330 133.8	345 280.9	370 465	265 694	365 948	9	345 139.6
10	360 12.5	365 20.2	365 40.2	365 77.0	369 149.6	385 313.4	410 515	300 785	413 1072	10	385 155.7

Type K with total stroke adjustment

K1.51. 50. 5	K2.51. 50. 4	K4.51.100. 6	K8.51.100. 5	K15.51.150.5					
K1.51.100.10	K2.51.100. 8	K4.51.150. 6	K8.51.150. 5	K15.51.200.5					
K1.51.150.10	K2.51.150.12	K4.51.200.12	K8.51.200.10						
K1.51.200.10	K2.51.200.12								
Air press.	K 1.51	K 2.51	K 4.51	K 8.51	K 15.51				
[bar]	P _{oil} F	P _{oil} F	P _{oil} F	P _{oil} F	P _{oil} F				
	[bar] [kN]	[bar] [kN]	[bar] [kN]	[bar] [kN]	[bar] [kN]				
2	35 1.2	50 2.8	55 6.4	55 11.8	55 23.4				
3	65 2.1	85 4.7	95 11.0	95 20.3	95 40.2				
4	95 3.1	130 7.0	130 15.1	135 28.7	130 54.9				
5	125 4.0	165 8.9	170 19.7	170 36.2	170 71.7				
6	155 4.9	205 11.0	205 23.7	210 44.6	210 88.5				
7	185 5.9	245 13.1	245 28.3	245 52.0	245 103.3				
8	210 6.7	285 15.3	285 32.9	285 60.5	285 120.1				
9	240 7.6	325 17.4	325 37.5	325 68.9	325 136.9				
10	275 8.7	365 19.5	360 41.5	365 77.4	365 153.7				

K1.51.100.15	K2.51.100.12	K4.51.100.10	K8.51.150.15						
K1.51.150.20	K2.51.150.20	K4.51.150.20	K8.51.200.20						
K1.51.200.20	K2.51.200.24	K4.51.200.20	K8.51.300.20						
		K4.51.300.20	K8.51.400.20						
		K4.51.400.20							
Air press.	K 1.51	K 2.51	K 4.51	K 8.51					
[bar]	P _{oil} F	P _{oil} F	P _{oil} F	P _{oil} F					
	[bar] [kN]	[bar] [kN]	[bar] [kN]	[bar] [kN]					
2	50 1.6	55 3.0	55 6.4	55 11.8					
3	85 2.7	95 5.1	95 11.0	95 20.3					
4	130 4.1	130 7.0	135 15.6	130 27.7					
5	165 5.2	170 9.1	170 19.7	170 36.2					
6	205 6.4	205 11.0	210 24.3	210 44.6					
7	245 7.6	245 13.1	245 28.3	245 52.0					
8	285 8.9	285 15.3	285 32.9	285 60.5					
9	325 10.1	325 17.4	325 37.5	325 68.9					
10	365 11.3	360 19.3	365 42.5	365 77.4					

* Tolerance for technical data ± 5%

P_{oil} = oil pressure [bar]

F = pressing force [kN]

K1.51.250.20 K1.51.250.40	K4.51.300.50 K4.51.400.50	K15.51.100.10 K15.51.400.10 K15.51.300.10	K30.51.100.5 K30.51.150.5 K30.51.200.5	K30.51.200.20 K30.51.300.20 K30.51.400.20	K50.51.100.10 K50.51.200.10 K50.51.300.10	K50.51.100.40 K50.51.200.40 K50.51.300.40					K15.51.100.40 K15.51.200.40 K15.51.300.40 K15.51.400.40						
K2.51.300.20 K2.51.300.50	K8.51.300.50 K8.51.400.50	K15.51.400.10 K15.51.100.20 K15.51.200.20 K15.51.300.20 K15.51.400.20	K30.51.100.10 K30.51.200.10 K30.51.300.10 K30.51.400.10														
Air press. [bar]	K 1.51		K 2.51		K 4.51		K 8.51		K 15.51		K 30.51		K 50.51		Air press. [bar]	K 15.51	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]		P _{oil} [bar]	F [kN]
2	55	1.7	55	3.0	55	6.4	46	10.2	48	20.8	40	32.1	40	50.1	2	40	17.5
3	95	3.0	95	5.1	95	11.0	90	19.6	87	37.3	84	66.2	86	106.6	3	84	36.1
4	130	4.1	135	7.3	130	15.1	130	28.1	128	54.7	125	98.1	130	160.6	4	125	53.4
5	170	5.3	170	9.1	170	19.7	170	36.7	168	71.6	167	130.7	176	217.0	5	167	71.2
6	205	6.4	210	11.3	210	24.3	210	45.2	209	88.9	208	162.6	225	277.1	6	208	88.5
7	245	7.6	245	13.1	245	28.3	250	53.7	250	106.3	258	201.2	275	338.4	7	258	109.5
8	285	8.9	285	15.3	285	32.9	290	62.3	291	123.6	296	230.8	327	402.1	8	296	125.6
9	325	10.1	325	17.4	325	37.5	330	70.8	330	140.1	345	268.7	372	457.3	9	345	146.2
10	360	11.2	365	19.5	365	42.1	365	78.4	369	156.6	385	299.8	410	504.1	10	385	163.2

Type T

Air press. [bar]	T 1.12		T 2.06		T 2.12		T 4.6		T 4.12		T 8.6		T 8.12		T 15.6	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
3	14	1.9	40	6.0	16	4.3	30	8.7	20	7.7	46	19.2	23	14.6	43	28.8
4	18	2.5	55	8.3	22	5.9	46	13.4	32	12.7	68	28.6	34	21.9	63	42.4
5	36	5.2	72	11.0	30	8.2	62	18.2	44	17.7	90	38.0	45	29.1	84	56.7
6	45	6.6	89	13.6	38	10.5	79	23.3	57	23.1	112	47.4	56	36.3	105	71.1
7	54	7.9	103	15.7	44	12.2	94	27.7	69	28.0	134	56.7	66	42.9	125	84.7
8	64	9.4	120	18.3	53	14.7	109	32.2	81	33.0	156	66.1	78	50.8	145	98.3
9	75	11.1	137	20.9	62	17.6	125	37.0	94	38.4	178	75.5	89	58.1	165	112.0
10	85	12.5	154	23.6	70	19.6	141	41.7	107	43.8	200	84.9	99	64.6	186	126.3

Type RP

Air press. [bar]	RP 8.32.3		RP 15.32.3	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	35	11.0	55	25.0
3	59	18.0	95	42.0
4	90	28.0	130	58.0
5	114	36.0	170	75.0
6	142	44.0	205	91.0
7	170	53.0	245	109.0
8	198	62.0	285	126.0
9	225	70.0	325	144.0
10	253	79.0	360	159.0

Type O

Air press. [bar]	O 4.6		O 4.12		O 8.6		O 8.12		O 15.6	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	20	5.8	16	6.4	30	12.0	15	9.0	29	19.0
3	33	9.7	28	11.0	53	22.0	27	17.0	50	33.0
4	50	14.8	38	15.0	73	31.0	38	24.0	71	48.0
5	64	18.9	50	20.0	95	40.0	48	31.0	90	61.0
6	80	23.7	61	25.0	115	48.0	60	39.0	111	75.0
7	95	28.0	73	30.5	138	58.0	69	45.0	130	88.0
8	111	33.0	85	35.0	160	68.0	81	53.0	150	102.0
9	127	38.0	96	39.0	183	78.0	92	60.0	172	117.0
10	142	42.0	107	44.0	202	86.0	103	68.0	193	131.0

* Tolerance for technical data ± 5%

P_{oil} = oil pressure [bar] F = pressing force [kN]

11.2 Oil pressure/pressing force table for 6 bar Powerpackages *

Type S, Type K

S 2.30. 50.6 S 2.30.100.6		S 4.30. 50.6 S 4.30.100.6		S 8.30. 50.6 S 8.30.100.6		S 15.30. 50.6 S 15.30.100.6 S 15.30.200.6		S 30.30.70.6 S 50.30.70.6		S 75.30.200.13 S 100.30.200.10		S 170.30.200.10						
Air press. [bar]	S2/K2		S4/K4		S8/K8		S15/K15		S30/K30		S50/K50		S75		S100		S170	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	90	4.9	75	8.2	100	20.7	95	38.1	77	62.7	56	71.1	72	187	48	126	101	426
3	145	7.8	135	14.6	165	34.0	155	61.9	141	114.0	130	163.1	134	347	172	444	190	799
4	200	10.7	190	20.5	235	48.3	215	85.8	201	162.3	195	244.0	190	492	246	634	277	1164
5	260	13.9	240	25.9	300	61.5	275	109.6	264	212.9	255	318.8	251	649	325	837	372	1562
6	320	17.1	290	31.3	360	73.8	335	133.5	328	264.2	325	405.9	312	806	400	1030	440	1840

S1.30. 50.12 S1.30.100.12 S1.30.150.12 S1.30.200.12		S2.30. 50.12 S2.30.100.12 S2.30.150.12 S2.30.200.12		S4.30. 50.12 S4.30.100.12 S4.30.150.12 S4.30.200.12		S8.30. 50.12 S8.30.100.12 S8.30.150.12 S8.30.200.12		S15.30. 50.12 S15.30.100.12 S15.30.150.12 S15.30.200.12		S30.30. 70.12 S30.30.150.12 S30.30.200.12 S50.30.150.10		K1.30.100. 6 K1.30.200.10 K2.30.100. 5 K2.30.200.12		K4.30.100. 5 K4.30.200.10 K8.30.200.10		K170.30.200.10	
Air press. [bar]	S1/K1		S2/K2		S4/K4		S8/K8		S15/K15		S30/K30		S50/K50		K170		
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	
2	90	3.0	75	4.1	100	10.8	95	19.7	77	31.1	70	57.2	48	61	98	413	
3	145	4.9	135	7.3	165	17.7	155	32.0	141	56.5	130	105.4	172	215	162	683	
4	200	6.7	190	10.3	235	25.1	215	44.3	201	80.4	195	157.5	246	307	240	1010	
5	260	8.7	240	12.9	300	32.0	275	56.6	264	105.4	255	205.8	325	405	312	1313	
6	320	10.7	290	15.6	360	38.4	335	68.9	328	130.8	325	261.8	400	498	388	1632	

K 15.30.100.10 K 15.30.200.10		K 30.30.200.10		K 50.30.100.10 K 50.30.200.10		K 75.30.200.10		K 100.30.200.10								
Air press. [bar]	S2/K2		S4/K4		S8/K8		S15/K15		S30/K30		S50/K50		K75		K100	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	100	5.4	95	10.3	85	17.7	70	28.5	48	39.9	53	67.4	63	165	98	254
3	165	8.8	155	16.7	145	30.1	130	52.3	172	138.4	123	154.5	119	309	162	419
4	235	12.5	215	23.1	210	43.3	195	78.1	246	197.6	194	242.8	178	462	240	619
5	300	15.9	275	29.5	275	56.6	255	101.9	325	260.8	254	317.6	236	611	312	804
6	360	19.1	335	35.9	340	69.9	325	129.6	400	320.8	316	394.9	301	779	388	1000

11.3 Oil pressure/pressing force table for 6 bar Powerpackages Type EL, EK *

EL 02.30.050.06 EL 02.30.100.06 EL 04.30.050.06 EL 04.30.100.06		EL 08.30.050.06 EL 08.30.100.06		EL 15.30.050.06 EL 15.30.100.06 EL 15.30.200.06		EL 30.30.070.06 EL 30.30.150.06 EL 50.30.070.06		EL 75.30.200.13 EL 75.30.300.20 EL100.30.200.10 EL100.30.300.12								
Air press. [bar]	EL2		EL4		EL8		EL15		EL30		EL50		EL75		EL100	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	80	4.0	30	4	100	20	63	25	77	62	56	71	72	187	48	126
3	124	6.8	115	12	165	34	117	47	141	114	130	163	134	347	172	444
4	167	9.0	175	19	235	48	174	70	201	162	195	244	190	492	246	634
5	246	13.0	203	22	300	61	235	94	264	212	255	318	251	649	325	837
6	316	16.9	275	29	360	73	298	119	328	264	325	406	312	806	400	1030

* Tolerance for technical data ± 5%

P_{oil} = oil pressure [bar]

F = pressing force [kN]

EL 02.30.050.12 EL 02.30.100.12 EL 02.30.150.12 EL 02.30.200.12	EL 08.30.050.12 EL 08.30.100.12 EL 08.30.150.12 EL 08.30.200.12	EL 30.30.070.12 EL 30.30.150.12 EL 30.30.200.12	EK 02.30.100.08 EK 02.30.200.18
EL 04.30.050.12 EL 04.30.100.12 EL 04.30.150.12 EL 04.30.200.12	EL 15.30.050.12 EL 15.30.100.12 EL 15.30.150.12 EL 15.30.200.12	EL 50.30.150.10	EK 04.30.100.08 EK 04.30.200.12 EK 08.30.200.14

Air press. [bar]	EL2/EK2		EL4/EK4		EL8/EK8		EL15/EK15		EL30/EK30		EL50/EK50	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	30	1.9	100	10.8	63	13.0	77	31	56	46	48	61
3	115	6.4	165	17.7	117	24.6	141	56	130	105	172	214
4	175	9.5	235	25.0	174	36.0	201	80	195	157	246	306
5	203	12.2	300	32.0	235	48.0	264	105	255	205	325	404
6	275	14.9	360	38.6	298	61.0	328	130	325	261	400	498

EL 50.30.300.15	EK 30.30.200.10	EK 50.30.100.10 EK 50.30.200.10
-----------------	-----------------	------------------------------------

Air press. [bar]	EL30/EK30		EL50/EK50	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	48	39	53	67
3	172	138	123	154
4	246	197	194	242
5	325	260	254	317
6	400	320	316	394

11.4 Oil pressure/pressing force table for 10 bar Powerpackages Type EL, EK *

EL 02.00.050.06 EL 02.00.100.06 EL 02.00.150.06 EL 02.00.200.06 EL 02.00.050.12 EL 02.00.100.12 EL 02.00.150.12 EL 02.00.200.12	EL 08.00.050.06 EL 08.00.100.06 EL 08.00.150.06 EL 08.00.200.06 EL 08.00.050.12 EL 08.00.100.12 EL 08.00.150.12 EL 08.00.200.12	EL 30.00.050.06 EL 30.00.100.06 EL 30.00.150.06 EL 30.00.200.06 EL 30.00.070.12 EL 30.00.100.12 EL 30.00.150.12 EL 30.00.200.12	EL 75.00.100.12 EL 75.00.200.12 EL 75.00.300.12 EL 75.00.300.20 EL 75.00.100.22 EL 75.00.200.30 EL 75.00.300.40	EK 02.00.100.06 EK 02.00.100.12 EK 02.00.150.06 EK 02.00.150.12 EK 02.00.200.06 EK 02.00.200.12	EK 08.00.100.06 EK 08.00.100.12 EK 08.00.150.06 EK 08.00.150.12 EK 08.00.200.06 EK 08.00.200.12
EL 04.00.050.06 EL 04.00.100.06 EL 04.00.150.06 EL 04.00.200.06 EL 04.00.050.12 EL 04.00.100.12 EL 04.00.150.12 EL 04.00.200.12	EL 15.00.050.06 EL 15.00.100.06 EL 15.00.150.06 EL 15.00.200.06 EL 15.00.050.12 EL 15.00.100.12 EL 15.00.150.12 EL 15.00.200.12	EL 50.00.050.06 EL 50.00.100.06 EL 50.00.150.06 EL 50.00.200.06 EL 50.00.070.12 EL 50.00.100.12 EL 50.00.150.12 EL 50.00.200.12	EL100.00.300.08 EL100.00.100.10 EL100.00.200.10 EL100.00.100.18 EL100.00.300.18 EL100.00.200.24 EL100.00.300.30	EK 04.00.100.06 EK 04.00.100.12 EK 04.00.150.06 EK 04.00.150.12 EK 04.00.200.06 EK 04.00.200.12	EK 15.00.100.06 EK 15.00.150.06 EK 15.00.200.06

Air press. [bar]	EL2/EK2		EL4/EK4		EL8/EK8		EL15/EK15		EL30/EK30		EL50/EK50		EL75/EK75		EL100/EK100	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	40	2.4	30	3.7	35	7.9	40	17	46	38	48	61	38	101	40	106
3	80	4.6	72	8.2	56	12.6	75	31	90	74	87	110	81	212	84	220
4	119	6.8	112	12.6	120	25.7	120	49	130	106	128	161	118	308	125	326
5	156	8.8	152	17.0	165	35.1	162	66	170	139	168	212	146	382	167	435
6	194	10.9	188	21.0	204	43.2	198	80	210	171	209	263	186	486	208	542
7	231	13.0	235	26.1	239	50.7	236	96	250	204	250	315	218	569	258	671
8	268	15.0	272	30.1	278	58.8	275	111	290	236	291	366	254	663	296	770
9	305	17.1	311	34.4	316	66.8	315	128	330	269	330	415	286	746	345	897
10	343	19.2	349	38.6	355	75.0	355	144	365	297	369	464	320	835	385	1000

* Tolerance for technical data ± 5%

P_{oil} = oil pressure [bar]

F = pressing force [kN]

EL 02.00.050.24	EL 04.00.050.24	EL 08.00.050.24	EL 15.00.050.24	EL 30.00.300.12	EL 50.00.300.12	EK 02.00.100.24	EK 08.00.100.24
EL 02.00.100.24	EL 04.00.100.24	EL 08.00.100.24	EL 15.00.100.24	EL 30.00.400.12	EL 50.00.400.12	EK 02.00.150.24	EK 08.00.150.24
EL 02.00.150.24	EL 04.00.150.24	EL 08.00.150.24	EL 15.00.150.24	EL 30.00.070.20	EL 50.00.070.20	EK 02.00.200.24	EK 08.00.200.24
EL 02.00.200.24	EL 04.00.200.24	EL 08.00.200.24	EL 15.00.200.24	EL 30.00.100.20	EL 50.00.100.20		
			EL 15.00.300.12	EL 30.00.150.20	EL 50.00.150.20	EK 04.00.100.24	
			EL 15.00.400.12	EL 30.00.200.20	EL 50.00.200.20	EK 04.00.150.24	
				EL 30.00.300.20	EL 50.00.300.20	EK 04.00.200.24	
				EL 30.00.400.20	EL 50.00.400.20		

Air press. [bar]	EL 2/EK 2		EL 4/EK 4		EL 8/EK 8		EL 15/EK 15		EL 30/EK 30		EL 50/EK 50	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	30	1.9	35	4.2	40	8.9	46	19	48	39	40	51
3	72	4.2	56	6.6	75	16.3	90	36	87	71	84	106
4	112	6.4	120	13.4	120	25.7	130	53	128	104	125	158
5	152	8.6	165	18.3	162	34.5	170	69	168	137	167	210
6	188	10.6	204	22.6	198	42.1	210	85	209	170	208	262
7	235	13.2	239	26.5	236	50.1	250	101	250	204	258	324
8	272	15.2	278	30.7	275	58.3	290	117	291	237	296	372
9	311	17.4	316	34.9	315	66.6	330	133	330	269	345	434
10	349	19.5	355	39.2	355	75.0	365	148	369	300	385	484

EL 02.00.100.48	EL 15.00.100.40	EL 30.00.150.28	EK 04.00.100.48	EK 30.00.100.05	EK 50.00.100.10
EL 02.00.150.48	EL 15.00.150.40	EL 30.00.200.28	EK 04.00.150.48	EK 30.00.150.05	EK 50.00.200.10
EL 02.00.200.48	EL 15.00.200.40	EL 30.00.300.44	EK 04.00.200.48	EK 30.00.200.05	EK 50.00.300.10
	EL 15.00.300.40	EL 30.00.400.44		EK 30.00.100.10	EK 50.00.100.20
EL 04.00.100.48	EL 15.00.400.40		EK 15.00.100.10	EK 30.00.200.10	EK 50.00.200.20
EL 04.00.150.48	EL 15.00.150.60	EL 50.00.300.30	EK 15.00.200.10	EK 30.00.300.10	EK 50.00.300.20
EL 04.00.200.48	EL 15.00.200.80	EL 50.00.400.40	EK 15.00.300.10	EK 30.00.400.10	EK 50.00.100.40
	EL 15.00.300.80		EK 15.00.400.10	EK 30.00.200.20	EK 50.00.200.40
EL 08.00.100.48	EL 15.00.400.80		EK 15.00.100.20	EK 30.00.300.20	EK 50.00.300.40
EL 08.00.150.48		EK 02.00.100.48	EK 15.00.200.20	EK 30.00.400.20	
EL 08.00.200.48		EK 02.00.150.48	EK 15.00.300.20	EK 30.00.200.40	
EL 08.00.300.48		EK 02.00.200.48	EK 15.00.400.20	EK 30.00.300.40	
EL 08.00.400.48				EK 30.00.400.40	

EL 08.00.200.80	EL 08.00.300.80	EL 08.00.400.80
-----------------	-----------------	-----------------

Air press. [bar]	EL 2/EK 2		EL 4/EK 4		EL 8/EK 8		EL 15/EK 15		EL 30/EK 30		EL 50/EK 50		Air press. [bar]	EL 8/EK 8	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]		P _{oil} [bar]	F [kN]
2	35	2.2	40	4.7	46	10.1	48	20	40	33	40	51	2	40	17.5
3	56	3.5	75	8.6	90	19.3	87	35	84	69	86	109	3	84	36.1
4	120	6.8	120	13.4	130	27.7	128	52	125	102	130	164	4	125	53.4
5	165	9.3	162	18.0	170	36.0	168	68	167	136	176	221	5	167	71.2
6	204	11.4	198	22.0	210	44.4	209	85	208	170	225	283	6	208	88.5
7	239	13.4	236	26.2	250	52.8	250	101	258	210	375	345	7	258	109.5
8	278	15.5	275	30.4	290	61.2	291	118	296	241	327	410	8	296	125.6
9	316	17.6	315	34.8	330	69.6	330	133	345	280	372	467	9	345	146.2
10	355	19.8	355	39.2	365	77.0	369	149	385	313	410	515	10	385	163.2

11.5 Oil pressure/pressing force table for Powerpackages Type BS*

BS 01.00.050.12	BS 02.30.050.06	BS 04.30.050.06	BS 08.30.050.06	BS 15.30.050.06	BS 30.30.070.06
BS 01.00.100.12	BS 02.30.100.06	BS 04.30.100.06	BS 08.30.100.06	BS 15.30.100.06	BS 30.30.150.06
	BS 02.30.050.12	BS 04.30.050.12	BS 08.30.050.12	BS 15.30.050.10	BS 30.30.070.10
	BS 02.30.100.12	BS 04.30.100.12	BS 08.30.100.12	BS 15.30.100.12	BS 30.30.150.12
			BS 08.30.200.12	BS 15.30.200.12	BS 30.30.200.12

Air press. [bar]	BS 1		BS 2		BS 4		BS 8		BS 15		BS 30	
	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]	P _{oil} [bar]	F [kN]
2	35	1.3	90	4.9	75	8.2	100	20.7	95	38	87	70
3	65	2.4	145	7.8	135	14.7	165	34.0	155	61	148	119
4	95	3.4	200	10.8	190	20.6	235	48.0	215	85	212	170
5	125	4.5	260	13.9	240	26.0	300	61.6	275	109	279	224
6	155	5.6	320	17.1	290	31.4	360	73.9	335	133	344	276

* Tolerance for technical data ± 5%

P_{oil} = oil pressure [bar]

F = pressing force [kN]

11.6 Fast approach and retracting force table *

Type S; Type S with power stroke adjustment; Type K

Air press. [bar]	S 1/K 1		S 2/K 2		S 4/K 4		S 8/K 8		S 15/K 15		S 30/K 30		S 50/K 50		S 75/S 100		S 170/K 170	
	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN
2	23	24	47	50	60	66	108	112	152	184	220	310	240	400	420	740	667	655
3	34	36	70	75	90	100	162	168	228	276	330	465	360	600	630	1110	100	1130
4	46	48	94	100	120	132	216	224	304	368	440	620	480	800	840	1480	1330	1600
5	57	60	117	125	150	165	270	280	380	460	550	775	600	1000	1050	1850	1660	2080
6	69	72	140	150	180	195	320	330	450	550	660	930	720	1200	1260	2200	2000	2560
7	80	84	164	175	210	231	378	392	532	644	770	1085	840	1400	1470	2590	2330	3040
8	92	96	188	200	240	264	432	448	608	736	880	1240	960	1600	1680	2960	2670	3510
9	103	108	211	225	270	297	486	504	684	828	990	1355	1080	1800	1890	3330	3000	3990
10	115	120	235	250	300	330	540	560	760	920	1100	1550	1200	2000	2100	3700	3330	4470

Type K with total stroke adjustment

Air press. [bar]	K 1.51		K 2.51		K 4.51		K 8.51		K 15.51		K 30.51		K 50.51	
	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN	E** daN	R** daN
2	21	24	44	50	59	66	95	112	125	184	201	310	191	400
3	31	36	66	75	80	100	143	168	188	276	302	465	286	600
4	41	48	88	100	107	132	191	224	250	368	403	620	382	800
5	52	60	110	125	134	165	238	280	313	460	503	775	477	1000
6	62	72	132	150	161	195	286	330	376	550	604	930	573	1200
7	73	84	154	175	188	231	334	392	438	644	705	1085	686	1400
8	83	96	176	200	214	264	382	448	501	736	805	1240	764	1600
9	94	108	298	225	241	297	430	504	564	828	906	1355	859	1800
10	104	120	220	250	268	330	477	560	626	920	1007	1550	955	2000

Type RP, T, O

Air press. [bar]	Type RP				Type T								Type O				
	8.32.3		15.32.3		1.12	2.06	2.12	4.06	4.12	8.06	8.12	15.06	4.6	4.12	8.6	8.12	15.6
	E** daN	R** daN	E** daN	R** daN	R** daN	R** daN	R** daN	R** daN	R** daN	R** daN	R** daN	R** daN	R** daN	R** daN	R** daN	R** daN	R** daN
2	-	-	-	-	-	-	-	-	-	-	-	-	175	300	300	580	580
3	-	-	-	-	93	93	280	280	510	510	800	800	390	640	640	1130	1130
4	-	-	-	-	182	182	500	500	850	850	1350	1350	600	990	990	1680	1680
5	400	290	500	575	270	270	720	720	1200	1200	1900	1900	820	1330	1330	2330	2330
6	400	510	500	920	358	358	930	930	1540	1540	2450	2450	1030	1680	1680	2780	2780
7	400	720	500	1260	440	440	1150	1150	1890	1890	3000	3000	1250	2020	2020	3330	3330
8	400	940	500	1610	530	530	1360	1360	2230	2230	3550	3550	1460	2370	2370	3880	3880
9	400	1100	500	1950	620	620	1580	1580	2580	2580	4100	4100	1680	2710	2710	4430	4430
10	400	1300	500	2300	710	710	1790	1790	2920	2920	4650	4650	1900	3060	3060	4980	4980

* Tolerance for technical data ± 5%

** E = fast approach stroke R = retracting force