

	<b>CYCLES</b>		<b>TIME</b>	<b>RESULTS</b>	<b>ALLOWED (FOR NEW VALVES)</b>
1	1	Hydrostatic shell test at 150 Bar	60 sec	no leakage	no leakage
2	1	Hydrostatic seat test at 102 Bar	60 sec	no leakage	12 drops/min
3	1	Pneumatic air seat test at 6 Bar	60 sec	no leakage	24 bubbels/min

	<b>CYCLES</b>		<b>TOLBOOM VALVE</b>	<b>OTHER BRANDS <sup>1</sup></b>
4	3	Torque measurement at 10 bar diff.pressure	125 Nm	250 Nm up to 450 Nm
5	3	Torque measurement at 20 bar diff.pressure	165 Nm	490 Nm up to 850 Nm
6	3	Torque measurement at 30 bar diff.pressure	220 Nm	
7	3	Torque measurement at 40 bar diff.pressure	290 Nm	
8	3	Torque measurement at 50 bar diff.pressure	310 Nm	910 Nm up to 1695 Nm
9	3	Torque measurement at 60 bar diff.pressure	420 Nm	
10	3	Torque measurement at 70 bar diff.pressure	450 Nm	1715 Nm up to 2410 Nm
11	3	Torque measurement at 80 bar diff.pressure	590 Nm	
12	3	Torque measurement at 90 bar diff.pressure	640 Nm	
13	3	Torque measurement at 102 bar diff.pressure	670 Nm	2520 Nm up to 3370 Nm

<sup>1</sup> clean fluid, ambient temp

CYCLE		RESULTS	ALLOWED (FOR NEW VALVES)
14	43.600	Clean service at ambient temp Pneumatic air test at 0 Bar	No failures N.A
15	34.440	Clean service at ambient temp Pneumatic air test at 6 Bar	no leakage 24 bubbels/min
16	2.000	Clean service at ambient temp Pneumatic air test at 25 Bar	ALLOWED no leakage (NO STANDARD)
17	150	Clean service at ambient temp Pneumatic air test at 75 Bar	ALLOWED no leakage (NO STANDARD)
18	150	Clean service at ambient temp Pneumatic air test at 105 Bar	ALLOWED no leakage (NO STANDARD)
19	400	Clean service at ambient temp Pneumatic air test at 6 Bar	ALLOWED (FOR NEW VALVES) Horizontal Left no leakage 24 bubbels/min
20	400	Clean service at ambient temp Pneumatic air test at 6 Bar	ALLOWED (FOR NEW VALVES) Horizontal Right no leakage 24 bubbels/min

CYCLE	HOT TESTING	RESULTS
21 2000	Clean service <b>350</b> degr C at <b>6 Bar air</b>	No failures <b>ALLOWED</b> (NO STANDARD)
22 400	Clean service <b>350</b> degr C at <b>25 Bar air</b>	No failures <b>ALLOWED</b> (NO STANDARD)
23 1000	Clean service <b>400</b> degr C at <b>6 Bar air</b>	No failures <b>ALLOWED</b> (NO STANDARD)
24 250	Clean service <b>400</b> degr C at <b>25 Bar air</b>	No failures <b>ALLOWED</b> (NO STANDARD)

CYCLE	Torque measurement after cooldown	TOLBOOM VALVE	OTHER BRANDS <sup>2</sup>
25 1	Torque measurement at <b>10</b> bar diff.pressure	130 Nm	Unknown
26 1	Torque measurement at <b>20</b> bar diff.pressure	175 Nm	Unknown
27 1	Torque measurement at <b>30</b> bar diff.pressure	230 Nm	Unknown
28 1	Torque measurement at <b>40</b> bar diff.pressure	290 Nm	Unknown
29 1	Torque measurement at <b>50</b> bar diff.pressure	330 Nm	Unknown
30 1	Torque measurement at <b>60</b> bar diff.pressure	440 Nm	Unknown
31 1	Torque measurement at <b>70</b> bar diff.pressure	490 Nm	Unknown
32 1	Torque measurement at <b>80</b> bar diff.pressure	610 Nm	Unknown
33 1	Torque measurement at <b>90</b> bar diff.pressure	670 Nm	Unknown
34 1	Torque measurement at <b>102</b> bar diff.pressure	700 Nm	Unknown

<sup>2</sup> clean fluid, ambient temp

**SAND TEST with fine and coarse sand, BLOWN INTO THE VALVE. (2 Bar whirl)**

CYCLES		RESULTS
35	11.500 Clean service 350 degr C at 2 Bar air	NO BLOCKATES or JAMING, REMAINS SMOOT FUNCTIONING

**TOTAL TEST CYCLES - 96.333**

One cycle is opening + closing.

192.666 movements