

## Object: test facilities description

### Summary

1. Piezoelectric shaker: Wilcoxon Research – 83kN
2. Hydraulic shaker: Team 80T/7.0/10.5 – 83kN
3. Ling LE D390 – 13kN
4. Ling A395 – 26kN
5. GW – 26 kN
6. Ling LE B335 – 80 kN
7. DongLing – 120kN
8. Votsch climatic chamber

# 1. Piezoelectric shaker: Wilcoxon Research – 83kN

<b>Characteristics</b>		<b>Wilcoxon Research - D125L</b>
<b>Freq. Range [kHz]</b>		<b>[2 20]</b>
<b>Max peak force [kN]</b>		<b>83,0</b>
<b>Max RMS force [kN]</b>		<b>12,0</b>
<b>Max shock force [kN]</b>		<b>/</b>
<b>Max acc. [g rms]</b>	shaker	<b>1800,0</b>
	shaker + 1 kg	<b>1200</b>
	shaker + 10 kg	<b>270</b>
<b>Max velocity [m/s]</b>		<b>/</b>
<b>Max displacement [mm] (0 - peak)</b>		<b>/</b>
<b>Moving mass [kg]</b>		<b>/</b>
<b>Driver bar [kg]</b>		<b>/</b>
<b>Slip table [kg]</b>		<b>/</b>
<b>Head expander [kg]</b>		<b>/</b>
<b>Admissible mass [kg]</b>		<b>&gt; 10 kg</b>



Figure 1: Piezoelectric shaker - Wilcoxon research.

## 2. Hydraulic shaker: Team 80T/7.0/10.5 – 83kN

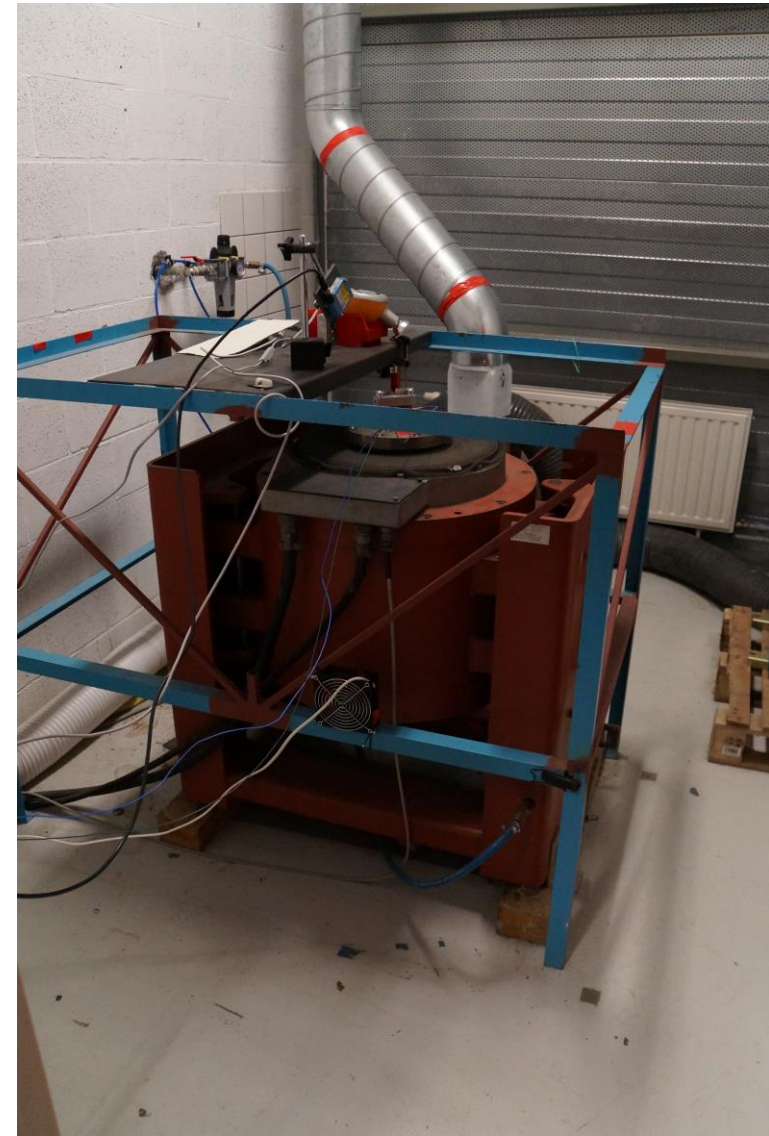
Characteristics	Team 80T/7.0-10.5	
Freq. Range [Hz]	[0,1, 200]	
Max peak force [kN]	83,0	
Max RMS force [kN]	12,0	
Max shock force [kN]	/	
Max acc. [g]	shaker	120,0
	shaker + head expander	/
	shaker + driver bar + slip table	/
Max velocity [m/s]	0,9	
Max displacement [mm] (0 - peak)	125	
Moving mass [kg]	10,9	
Driver bar [kg]	/	
Slip table [kg]	/	
Head expander [kg]	/	
Admissible mass [kg]	2000	



Figure 2: M&S - Team 810/7.

### 3. Ling LE D390 – 13kN

<b>Characteristics</b>	<b>LE D390 (13 kN)</b>	
<b>Freq. Range [Hz]</b>	<b>[5, 3000]</b>	
<b>Max peak force [kN]</b>	<b>13,3</b>	
<b>Max RMS force [kN]</b>	<b>12,0</b>	
<b>Max shock force [kN]</b>	<b>/</b>	
<b>Max acc. [g]</b>	shaker	<b>120,0</b>
	shaker + head expander	<b>/</b>
	shaker + driver bar + slip table	<b>/</b>
<b>Max velocity [m/s]</b>	<b>1,78</b>	
<b>Max displacement [mm] (0 - peak)</b>	<b>12,7</b>	
<b>Moving mass [kg]</b>	<b>10,9</b>	
<b>Driver bar [kg]</b>	<b>/</b>	
<b>Slip table [kg]</b>	<b>/</b>	
<b>Head expander [kg]</b>	<b>/</b>	
<b>Admissible mass [kg]</b>	<b>100</b>	



**Figure 3: LE D390 (13 kN).**

## 4. Ling A395 – 26kN

<b>Characteristics</b>		<b>Ling A395 (26 kN)</b>
<b>Freq. Range [Hz]</b>		<b>[5, 3000]</b>
<b>Max peak force [kN]</b>		<b>26,6</b>
<b>Max RMS force [kN]</b>		<b>25,6</b>
<b>Max shock force [kN]</b>		<b>/</b>
<b>Max acc. [g]</b>	shaker	<b>120,0</b>
	shaker + head expander	<b>/</b>
	shaker + driver bar + slip table	<b>/</b>
<b>Max velocity [m/s]</b>		<b>1,8</b>
<b>Max displacement [mm] (0 - peak)</b>		<b>12,7</b>
<b>Moving mass [kg]</b>		<b>19,5</b>
<b>Driver bar [kg]</b>		<b>/</b>
<b>Slip table [kg]</b>		<b>/</b>
<b>Head expander [kg]</b>		<b>/</b>
<b>Admissible mass [kg]</b>		<b>200</b>

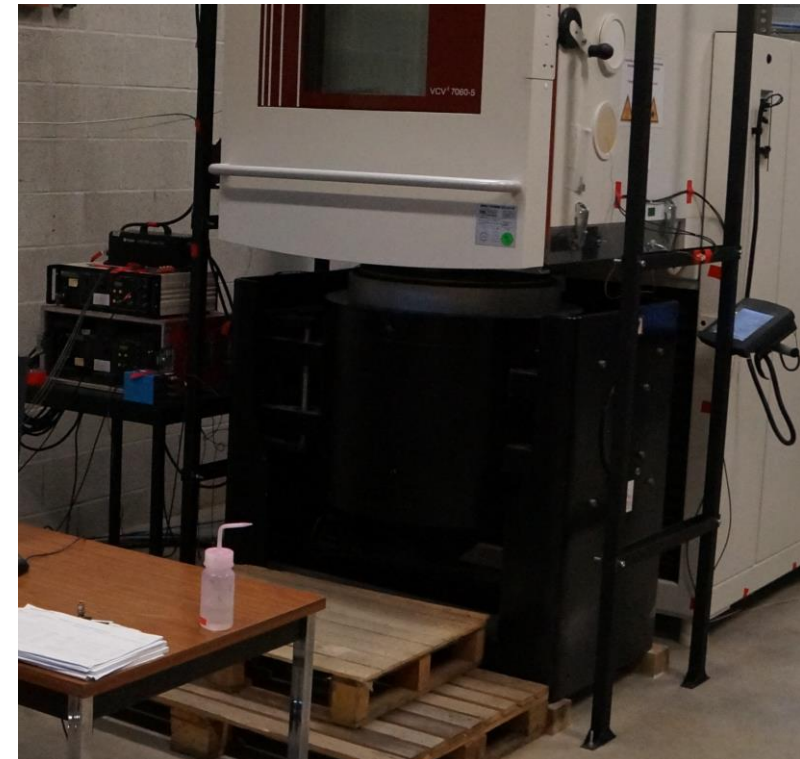


Figure 4: LE A395 (26 kN), here coupled with climatic chamber.

## 5. GW – 26 kN

<b>Characteristics</b>	<b>G&amp;W V2664 (26 kN)</b>	
<b>Freq. Range [Hz]</b>	<b>[5, 2000]</b>	
<b>Max peak force [kN]</b>	<b>26,6</b>	
<b>Max RMS force [kN]</b>	<b>26,6</b>	
<b>Max shock force [kN]</b>	<b>53,4 (6 ms) - 42,4 (11 ms)</b>	
<b>Max acc. [g]</b>	shaker	<b>40,0</b>
	shaker + head expander	<b>/</b>
	shaker + driver bar + slip table	<b>23,3</b>
<b>Max velocity [m/s]</b>	<b>1,52</b>	
<b>Max displacement [mm] (0 - peak)</b>	<b>25,4</b>	
<b>Moving mass [kg]</b>	<b>68,1</b>	
<b>Driver bar [kg]</b>	<b>48,2</b>	
<b>Slip table [kg]</b>	<b>/</b>	
<b>Head expander [kg]</b>	<b>/</b>	
<b>Admissible mass [kg]</b>	<b>500</b>	



**Figure 5: G&W V2664(26 kN).**

## 6. Ling LE B335 – 80 kN

<b>Characteristics</b>		<b>LE B335 (80 kN)</b>
<b>Freq. Range [Hz]</b>		<b>[5, 3000]</b>
<b>Max peak force [kN]</b>		<b>80,0</b>
<b>Max RMS force [kN]</b>		<b>80,0</b>
<b>Max shock force [kN]</b>		<b>/</b>
<b>Max acc. [g]</b>	shaker	<b>144,0</b>
	shaker + head expander	<b>42,0</b>
	shaker + driver bar + slip table	<b>50,0</b>
<b>Max velocity [m/s]</b>		<b>1,78</b>
<b>Max displacement [mm] (0 - peak)</b>		<b>25,4</b>
<b>Moving mass [kg]</b>		<b>56,6</b>
<b>Driver bar [kg]</b>		<b>20,4</b>
<b>Slip table [kg]</b>		<b>86,0</b>
<b>Head expander [kg]</b>		<b>126,0</b>
<b>Admissible mass [kg]</b>		<b>906,0</b>



**Figure 6: LE B335 (80 kN).**

## 7. DongLing – 120 kN

<u>Characteristics</u>	<u>DongLing (120 kN)</u>
Freq. Range [Hz]	[5, 2000]
Max peak force [kN]	120,0
Max RMS force [kN]	120,0
Max shock force [kN]	240
Max acc. [g]	100
Max velocity [m/s]	2
Max displacement [mm] (peak - peak)	76
Moving mass [kg]	72
Small slip table (600 mm x 600 mm) [kg]	72
Large slip table (1200 mm x 1200 mm) [kg]	199
Head expander [kg]	/
Admissible mass [kg]	1000





## 8. Votsch climatic chamber

<u>Thermic tests characteristics</u>	VCV3 - 7060 - 5
Chamber volume (L)	600,0
Admissible mass [kg]	60,0
T° range (°C)	[-70 ; +180]
Heating (K/min)	5,0
Cooling (K/min)	5,0

<u>Climatic tests characteristics</u>	VCV3 - 7060 - 5
T° range (°C)	[+4 ; +94]
Humidity range (h.r.)	[10% ; 95%]

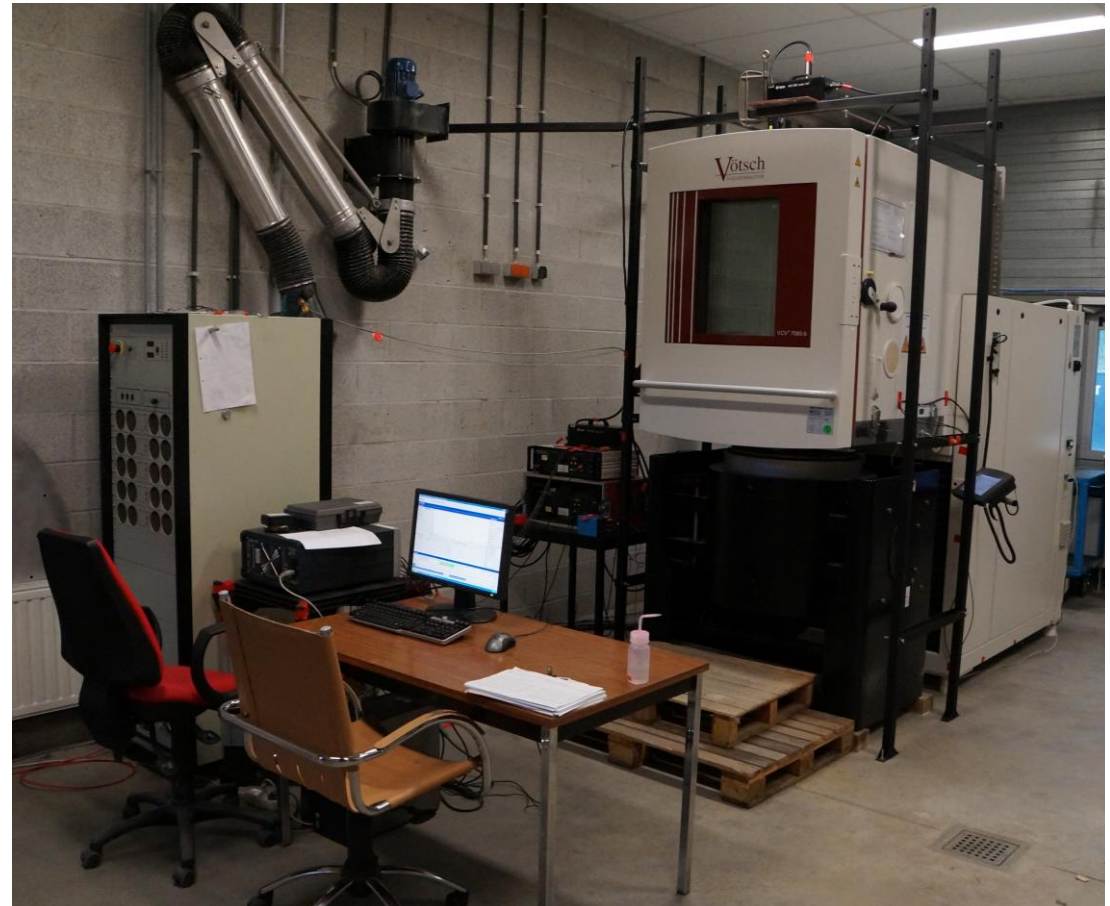


Figure 7: Climatic chamber (here, coupled with shaler 26 kN Ling A395).