

# Test Verification



## DV Test

NO.	DV Test Requirement	Status	Specification
1	Life time test	In progress	<b>10000+ hours @ 2021.3</b> Road test cycle supplied by one customer. Start 5000 hours test by another customer with system
2	Vibration test	√ PASS	1) GB/T 31467.3-2015, ISO 12405-3:2014-NEQ, random vibration, 63 hours =21hours *(x, y, z direction) @ 0 /30k /60k /95kRPM; 2) GB/T 31467.3-2015, ISO 12405-3:2014-NEQ, random vibration, 63 hours =21hours *(x, y, z direction) @ 0kRPM; 3) ASTM D4169-14, 3hour truck shipping test condition+ 3 hours air shipping test condition;
3	Shock test	√ PASS	GB/T 31467.3-2015, ISO 12405-3:2014-NEQ, 25g-15ms, 18 times = (x, y, z)*(Positive+ negative)* 3 times;
4	Start-up test @ -30°C ambient temperature	√ PASS	-30°C-12hours;
5	Storage test @ -40°C ambient temperature	√ PASS	-40°C-12hours+ 25°C-12hours; repeat three times;
6	Storage test @ 85°C ambient temperature	√ PASS	85°C-12hours+ 25°C-12hours; repeat three times;



NO.	DV Test Requirement	Status	Specification
7	IP test	√ PASS	GB T 4208-2017 , IEC 60529 2013, IP67
8	EMC test	√ PASS	GB/T 18655-2018, CISPR 25:2016-MOD, level 3; ISO 11452-2-2004 level III; ISO 7637; ISO 10605; ISO 16750-2-2010;
9	Corrosion test	√ PASS	GB/T 10125-2012, ISO 9227:2006-IDT; Copper-accelerated acetic acid salt spray test(CASS): Air compressor: 48hours; Controller: 24hours
10	Compressor performance test @ 25°C ambient temperature	√ PASS	Normal ambient condition
11	Compressor performance test @ -30°C ambient temperature	√ PASS	-30°C Climatic chambers
12	Compressor performance test @ 65°C ambient temperature	√ PASS	65°C Climatic chambers
13	Coolant leakage test	√ PASS	



NO.	DV Test Requirement	Status	Specification
14	Insulation resistance test	√ PASS	GB/T 18488-2015, 20MΩ;
15	Withstand voltage test	√ PASS	GB/T 18488 -2015, ISO 16750-2,4.11;
16	NVH test	√ PASS	MAX 72.7dBA @ 1m, 82dBA@ 0.1m;
17	Acceleration time test	√ PASS	< 0.8s, 0 – 30kRPM; < 1s, 30kRPM – 95kRPM;
18	Deceleration time test	√ PASS	< 1.5s, 95kRPM – 30kRPM; < 1s, 30kRPM -0kRPM;
19	Start-stop cycle	√ PASS	> 100,000 times
20	Emergency stop test	√ PASS	Compressor safe @ valve and power turned off suddenly
21	High Altitude Performance test	√ PASS	1000m/2000m/3000m/4000m



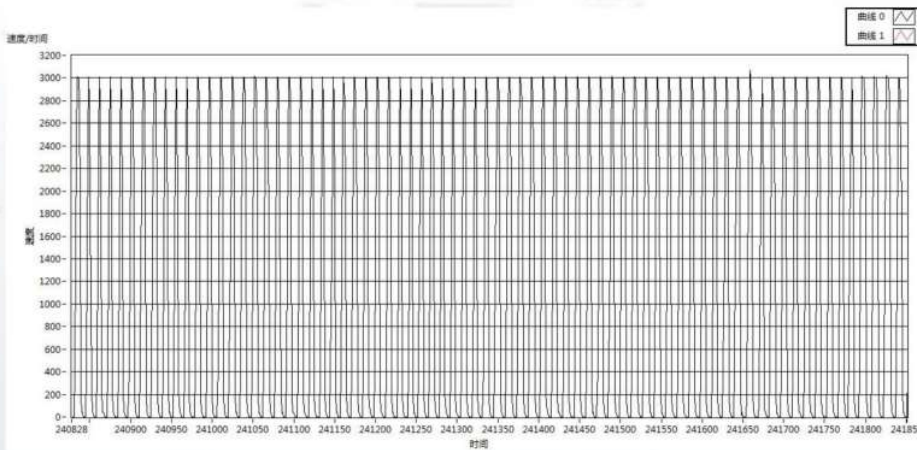
NO.	DV Test Requirement	Status	Specification
22	Coating performance test	√ PASS	Alkali resistance test GB/T 9274-1988 ( only controller ) ; Water resistance test GB/T 5209-1985; Pencil hardness test GB/T 6739-2006; Adhesion test GB/T 9286-1998; Acid resistance test GB/T 9274-1988;
23	Salt spray test	√ PASS	Neutral salt spray test GB/T 10125-2012; Composite salt spray test GB/T 2423.18-2012, IEC 60068-2-52-2017;
24	Damp heat test	√ PASS	GB/T 2423.4-2008



NO.	Air Compressor Model	Test Items	Testing Time
1	FCC300P	Duty cycle endurance test	2000h
2	FCC400H	Fatigue life test	1 million times
3	FCC400H	Accelerated life test	2000h
4	FCC400H	Accelerated life test	2500h
5	FCC400H	High voltage endurance test	500h
6	FCC400H	High voltage endurance test	705h
7	FCC400H	Duty cycle endurance test	5044h
8	FCC400H	Accelerated life test	1217h
9	FCC300	Duty cycle endurance test	9917h

**More results to come...**

# Start & Stop Life Test



复位	输出AC电压	输出功率	输出电流
复位	0 V	0 W	0 A
	反馈速度	控制器温度	输入DC电压
	0 10RPM	45 °C	560.0 V
停止数据	压气机状态	压气机温度	
停止数据	Initializing	0	

循环计数	循环总次数
25560 次数	196880 次数

最高速-怠速减速时间: 0 s

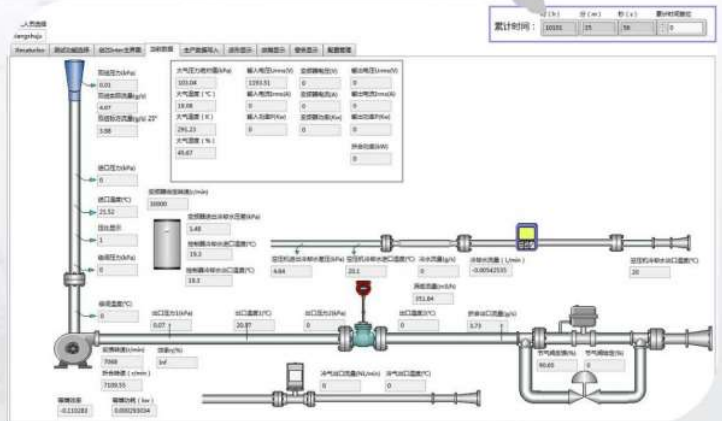
Data accumulation during testing  
Speed VS Time

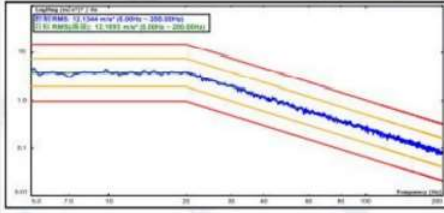
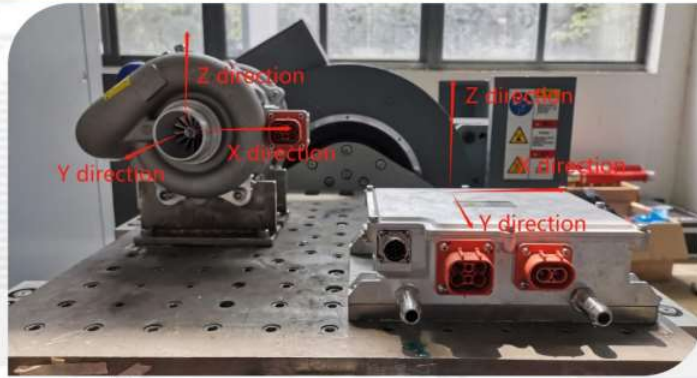
Sufficient life margin comparing  
with 100,000 cycle demanding

# Durability Test

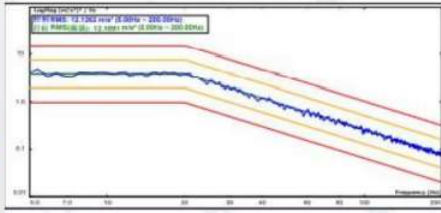


**10000hr+ and  
Continuously  
running**

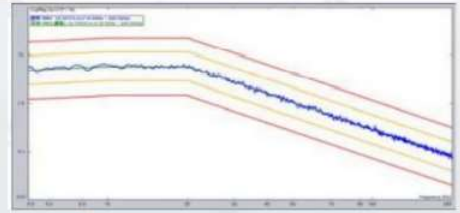




X direction



Y direction



Z direction