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Comfort Systems USA (Arkansas), Inc. P.O. Box 16620 Little Rock, AR 72231 Phone 501-834-3320 Fax 501-834-5416

Date: 2/4/2025 Return Request: 2/14/2025 Project: City Of Sherwood Public Works (Maintenance Building) Supplier: Comfort Systems USA (Arkansas), Inc. Manufacturer: Atlas Copco Submittal: Compressed Air Systems Submittal Number: 22 15 00-01 Drawing # and Installation: Plumbing Drawings

ARCHITECT

Cromwell 1300 East 6th Street Little Rock, AR 72202 501-372-2900

GENERAL CONTRACTOR

Baldwin & Shell 1000 W. Capitol Ave. Little Rock, AR 72201 501-374-8677

Notes:

ENGINEER

Cromwell 1300 East 6th Street Little Rock, AR 72202 501-372-2900

MECHANICAL SUBCONTRACTOR

Comfort Systems USA (Arkansas), Inc. 9924 Landers Rd. N. Little Rock, AR 72117 501-834-3320

CSUSA PROJECT NO. 24-6084 sean@comfortar.com

> 9924 Landers Rd. No. Little Rock, AR 72117

Product Company WUX

GA15-Pack-FF / 60Hz / 100psi/ 125psi / 150psi/ 175psi

PRC	DUCT DEFINITION						
	Model		GA15	GA15	GA15	GA15	
	Supply voltage		200/230/380/ 440/460V	200/230/380/ 440/460V	200/230/380 /440/460V	200/230/380 /440/460V	
	Working pressure		100psi / 6.9 bar	125psi / 8.6 bar	150psi / 10.3 bar	175psi / 12 bar	
	Frequency		60Hz	60Hz	60Hz	60Hz	
	Cooling		AC	AC	AC	AC	
REF	ERENCE CONDITIONS						
	Absolute inlet pressure		1	1	1	1	bar(a)
	Relative humidity		0	0	0	0	%
	Air inlet temperature		20	20	20	20	°C
	Cooling medium inlet (water or air) ten	nperature	20	20	20	20	°C
	Effective working pressure		6.9	8.6	10.3	12	bar(g)
	Motor shaft speed		3540	3540	3540	3540	rpm
	Setpoint thermostatic valve		60	60	60	60	°C
LIMI	TATIONS		0	0	0	0	*
	Minimum ambient temperature		0	0	0	0	- <u>C</u>
	Minimum effective working pressure		4	4	4	4	bar(g)
	Waximum effective working pressure		7.4	0.4	40.0	40.5	
			7.4	9.1	10.8	12.5	bar(g)
			7.15	8.85	10.55	12.25	bar(g)
	Maximum allowable inlet temperature		1000	1000	1000	1000	m °C
	Maximum allowable inlet temperature		46	46	46	46	<u> </u>
PER	FORMANCE DATA 1. Free Air Delivery at reference conditions Workplace Back & FE		47.1	42.4	20.2	20.2	1/2
			47.1	42.4	55.2	50.5	1/3
	at effective working pressure stated	4 hor/a)	47 5	40.0	40.7	22.2	
		4 bar(g)	47.5	43.3	40.7	32.3	1/5
		5 Dar(g)	47.2	43.0	40.4	32.0	1/5
		7.15 Dar(g)	47.0				1/5
	- Workplace Dook & EE	7.4 Dar(g)	47.0	40 E	20.0	24.6	1/5
		0 Dal(y)		42.5	39.8	31.0	1/5
		0.05 Dar(y)		42.1			1/5
	- Workplace Pack & EE	$\frac{3.1}{2}$ bar(g)		42.1	20.2	24.0	1/5
	- Workplace	10 bar(g)			<u>১খ.১</u>	31.0	1/5
		10.00 bar(g)			30.9 20 0		1/5
		12.25 bar(g)			30.9	20.4	1/5
	- Workplace	12.20 Dar(g)				3U. I	1/5
		12.5 Dai(y)				30.1	1/3

2. Power data

2.1. Performance based on packaged compressor (electrical) power input

2.1.1. Power input

at reference conditions						
- Workplace Pack		19.0	18.4	18.5	16.1	kW
FF		20.4	19.8	19.8	17.4	kW
at effective working pressure stat	ted					
- Workplace Pack	4 bar(g)	15.7	13.7	12.4	9.7	kW
FF	4 bar(g)	17.1	15.0	13.6	10.9	kW
- Workplace Pack	6 bar(g)	17.9	15.6	14.0	11.0	kW
FF	6 bar(g)	19.3	17.0	15.3	12.2	kW
- Workplace	7.15 bar(g)	20.7				kW
- Workplace	7.4 bar(g)	19.6				kW
- Workplace Pack	8 bar(g)		17.8	15.9	12.5	kW
FF	8 bar(g)		19.1	17.2	13.7	kW
- Workplace	8.85 bar(g)		20.1			kW
- Workplace	9.1 bar(g)		19.0			kW
- Workplace Pack	10 bar(g)			18.1	14.1	kW
FF	10 bar(g)			19.5	15.4	kW
- Workplace	10.55 bar(g)			20.2		kW
- Workplace	10.8 bar(g)			19.1		kW
- Workplace	12.25 bar(g)				17.7	kW
- Workplace	12.5 bar(g)				16.6	kW

2.1.2. Specific Energy Requirement (2)

at reference conditions						
- Workplace Pack		404	435	471	530	J/I
FF		433	468	506	574	J/I
at effective working pressure stated						
- Workplace Pack	4 bar(g)	331	317	304	301	J/I
FF	4 bar(g)	359	347	335	338	J/I
- Workplace Pack	6 bar(g)	379	364	347	344	J/I
FF	6 bar(g)	408	394	379	383	J/I
- Workplace	7.15 bar(g)	441				J/I
- Workplace	7.4 bar(g)	418				J/I
- Workplace Pack	8 bar(g)		418	399	395	J/I
FF	8 bar(g)		450	433	435	J/I
- Workplace	8.85 bar(g)		478			J/I
- Workplace	9.1 bar(g)		452			J/I
- Workplace Pack	10 bar(g)			461	456	J/I
FF	10 bar(g)			496	498	J/I
- Workplace	10.55 bar(g)			518		J/I
- Workplace	10.8 bar(g)			490		J/I
- Workplace	12.25 bar(g)				587	J/I
- Workplace	12.5 bar(g)				551	J/I

2.1.3. Power input at no load ⁽²⁾

- Workplace Pack	5.5	5.3	5.1	4.6	kW
FF	6.4	6.2	6.0	5.5	kW

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2.2. Performance data based on shaft input

2.2.1. Shaft power input

at reference conditions

- Workplace Pack	16.3	15.8	15.8	13.6	kW	
FF	16.7	16.2	16.2	14.0	kW	

4 bar(g)	13.3	11.5	10.3	7.8	kW
4 bar(g)	13.7	11.8	10.6	8.1	kW
6 bar(g)	15.3	13.2	11.7	9.0	kW
6 bar(g)	15.7	13.6	12.1	9.3	kW
7.15 bar(g)	17.0				kW
7.4 bar(g)	16.9				kW
8 bar(g)		15.2	13.5	10.4	kW
8 bar(g)		15.6	13.8	10.7	kW
8.85 bar(g)		16.5			kW
9.1 bar(g)		16.3			kW
10 bar(g)			15.5	11.9	kW
10 bar(g)			15.9	12.2	kW
10.55 bar(g)			16.5		kW
10.8 bar(g)			16.3		kW
12.25 bar(g)				14.3	kW
12.5 bar(g)				14.1	kW
	4 bar(g) 4 bar(g) 6 bar(g) 6 bar(g) 7.15 bar(g) 7.4 bar(g) 8 bar(g) 8 bar(g) 8 bar(g) 9.1 bar(g) 10 bar(g) 10 bar(g) 10.55 bar(g) 10.8 bar(g) 12.25 bar(g)	4 bar(g) 13.3 4 bar(g) 13.7 6 bar(g) 15.3 6 bar(g) 15.7 7.15 bar(g) 17.0 7.4 bar(g) 16.9 8 bar(g) 8 8 bar(g) 9.1 9.1 bar(g) 10 10 bar(g) 10.55 bar(g) 10.8 bar(g) 12.25 bar(g) 12.5 bar(g) 12.5 bar(g)	4 bar(g) 13.3 11.5 4 bar(g) 13.7 11.8 6 bar(g) 15.3 13.2 6 bar(g) 15.7 13.6 7.15 bar(g) 17.0 15.2 8 bar(g) 16.9 15.6 8 bar(g) 16.5 16.5 9.1 bar(g) 16.3 10 bar(g) 10 bar(g) 10.55 bar(g) 10.8 bar(g) 12.25 bar(g) 12.5 bar(g) 12.5 bar(g)	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

2.2.2. Specific Energy Requirement

at reference conditions						
- Workplace Pack		346	372	403	449	J/I
FF		355	382	414	462	J/I
at effective working pressure stated						
- Workplace Pack	4 bar(g)	280	266	252	243	J/I
FF	4 bar(g)	288	273	259	251	J/I
- Workplace Pack	6 bar(g)	324	308	291	282	J/I
FF	6 bar(g)	333	316	299	291	J/I
- Workplace	7.15 bar(g)	363				J/I
- Workplace	7.4 bar(g)	359				J/I
- Workplace Pack	8 bar(g)		357	338	328	J/I
FF	8 bar(g)		367	348	337	J/I
- Workplace	8.85 bar(g)		391			J/I
- Workplace	9.1 bar(g)		388			J/I
- Workplace Pack	10 bar(g)			394	383	J/I
FF	10 bar(g)			405	394	J/I
- Workplace	10.55 bar(g)			424		J/I
- Workplace	10.8 bar(g)			420		J/I
- Workplace	12.25 bar(g)				473	J/I
- Workplace	12.5 bar(g)				468	J/I
2.2.3. Shaft input at no load		4.0	3.8	3.6	3.2	kW
3. Compressed air temperature at o	utlet valve					
3.1. Variant - Pack - Workplace	a +	8	8	8	8	°C
3.2. Variant - FF - Workplace	a +	2	2	2	2	°C
4. Typical oil consumption						
at reference conditions		0.038	0.034	0.032	0.025	l/100hrs
5. Typical oil content of compressed	l air	2	2	2	2	mg/m³
6. Mean sound pressure level with u	Incertainty (2)	68 / 3	68 / 3	68 / 3	68 / 3	dB (A)
7. Shaft input cooling fan		0.75	0.75	0.75	0.75	kW

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DESIGN DATA

Number of Compression stage	1	1	1	1	
Max. element male rotor speed	5743	5272	4985	4184	rpm
Oil capacity	7.25	7.25	7.25	7.25	I.
Cooling air flow referred to air inlet grating compressor	1.01	1.01	1.01	1.01	m³/s
Drive motor efficiency at full load	91	91	91	91	%
Drive motor efficiency at no load	84	84	84	84	%
Fan motor efficiency	75	75	75	75	%
Condensate drainpipes manual drain (threaded)	1/8	1/8	1/8	1/8	G
Condensate drainpipes automatic drain OD	8	8	8	8	mm
Condensate drainpipes automatic drain ID	5.5	5.5	5.5	5.5	mm
Electrical cable passage	50	50	50	50	М
Blow off volume	16	16	16	16	
Time to reach 80% blow-off	40	40	40	40	S
Dimension of compressed air outlet valve (threaded)	1	1	1	1	G
nensions Shipping dimensions Shipping length					
- Workplace Pack & FF	1 35	1 35	1 35	1 35	m
Shipping width	1.55	1.55	1.55	1.00	
- Workplace Pack & FF	0.8	0.8	0.8	0.8	m
Shipping beight	0.0	0.0	0.0	0.0	
- Workplace Pack & FF	1.53	1 53	1.53	1.53	m
Shipping volume	1.00	1.00	1.00	1.00	
- Workplace Pack & FF	1 65	1 65	1 65	1 65	m ³
Shipping mass Europe	1100	1100	1100	1100	
- Workplace Pack	481	481	481	481	ka
FF	534	534	532	530	ka
Shipping mass overseas	001	001	002	000	
- Workplace Pack	511	511	511	511	ka
FF	564	564	562	560	ka
Canopy dimensions	001	001	002	000	
Canopy length					
- Workplace Pack & FF	1,255	1,255	1,255	1.255	m
Canopy width		00	00		
- Workplace Pack & FF	0.695	0.695	0.695	0.695	m
Canopy height	0.000	0.000	0.000	0.000	
- Workplace Pack & FF	1.475	1,475	1,475	1,475	m
Net mass					
- Workplace Back	421	421	421	421	ka

INTEGRATED DRYER

Integrated Dryer type	IDe55	IDe55	IDe55	IDe55	
Pressure dew point FF at ambient = 20°C; RH = 100%	5	5	5	5	°C
Pressure drop over dryer	0.225	0.225	0.225	0.225	bar(g)
Total power consumption					_
at full load (ambient = 20°C; RH = 100%; incl fan)	0.92	0.92	0.92	0.92	kW
at no load (ambient = 20°C; RH = 0%; fan stopped)	0.84	0.84	0.84	0.84	kW
Cooling air flow	22.0	22.0	22.0	22.0	m³/min
Heat dissipated by cooling air (ambient = 20°C, RH = 100%)	3.5	3.5	3.5	3.5	kW
Refrigerant type	R134a	R134a	R134a	R134a	
Total amount	0.56	0.56	0.56	0.56	kg

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- (1) Unless otherwise stated, at reference conditions. All values given with a tolerance according to specified. Codes are guaranteed; all other values are to be considered typical.
- (2) Free Air Delivery measured according ISO 1217 ed. 4 2009, annex C
 - FAD < 250 l/s Tolerance 5%
 - FAD > 250 l/s Tolerance 4%
- (3) Specific Energy Requirement measured according ISO 1217 ed. 4 2009, annex C
 - FAD < 250 l/s Tolerance 6% FAD > 250 l/s
 - Tolerance 5%
- (4) Power requirement at zero volume flow rate measured according ISO 1217 ed. 4 2009, annex C
 - Tolerance 10%
- (5) Measured according to ISO 2151: 2004 using ISO 9614/2 (sound intensity method).

The International ISO 1217 ed. 4 2009 standard refers to following standards :

- ISO 5167 - British BS 1571 Part 2
- ISO 9300 - American ASME PTC9
 - German DIN 1950



Working Principle

Air is drawn in through the air filter, the inlet valve into the compression element. This compressed air is forced through the air/oil separator, past the minimum pressure valve and into the after-cooler through the water separator to the discharge. In the case of a Full Feature unit the air will then circulate through the refrigerated dryer and then to the discharge.



Scope of Supply

Drive Train

The high-quality gear driven design does not use couplings which eliminates a maintenance point. The design of the gears has eliminated transmission losses that are typically 2-3% higher on belt driven units. Our latest state of the art compression element provides even more free air delivery.



Air Oil Separator

The high efficiency air oil separation system provides excellent oil pre-separation with >99% of oil separated in the vessel providing less than 3ppm oil carry over. Due to the innovative design, the chance for overfilling the unit has been eliminated. The compact size of this vessel ensures less oil is required and less compressed air is blown off when the unit unloads resulting in money savings for you.



Cooling System

The reliable and efficient design of the cooler effectively lowers the discharge temperature of the compressed air. This reduces the burden placed on downstream air treatment equipment and provides better protection of air network piping. The low sound and low power consumption from the cooling fan makes these new units even more silent and efficient than ever.



Air Dryer (Full Feature models)

The integrated dryer efficiently removes moisture, aerosols and dirt particles to protect your investment. This quality air expands the life of equipment, increasing efficiency and ensuring quality in your final product. Pressure dew point at 3°C /37°F at maximum FAD. (100% relative humidity at 20°C/68°F) Can be outfitted with optional filters, allowing you to obtain the exact air quality you need for your specific application.



ELEKTRONIKON

Elektronikon® Swipe Controller

The Elektronikon® Swipe is offered as standard for the GA 15-26 for fixed speed compressors with online visualization. Elektronikon® Swipe controls and monitors the key compressor parameters efficiently as stated below.

GA 15-26 compressors are equipped with the power conscious, efficient, automatic full-load / no-load regulation system. The Elektronikon® regulation is equipped with the delayed second stop feature (DSS) for the main motor which significantly cuts the electricity cost



The regulating system includes the Elektronikon® Swipe module to regulate, control and monitor compressor operation. All GA 15-26 series Elektronikon® control modules display and monitor the following:

- 1. Compressor Status Indication
 - Voltage on
 - Compressor loaded
 - Compressor unloaded
 - Compressor maximum allowed unloading pressure
 - Automatic operation
 - General warning/alarm
 - Service required
- 2. Temperature, numerical readouts
 - Delivery air
 - Ambient air temperature
- 3. Pressure, numerical readouts
 - Delivery air

- 4. Compressor Control
 - Start / Stop
 - Emergency stop
 - Reset / Test
- 5. Hour meters
 - Total running hours
 - Total loading hours
- 6. Service requirement indications
 - Air filter
 - Oil filter
 - Oil lifetime
 - Oil separator
- 7. Compressor safety warning indications
 - High dew point temperature
 - Sensor error
- 8. Compressor safety shutdown indications
 - High element outlet temp.
 - Drive motor/fan motor overload
 - Emergency stop
- 9. Digital output relays for remote monitoring (voltage free)
 - Remote start and stop
- 10. Optional upgradable to Elektronikon® Touch without rewiring
- 11. SMARTLINK: Data Monitoring Program
 - Remote monitoring system that helps you optimize your compressed air system and save energy and costs.
 - Provides a complete insight in your compressed air network.
 - Anticipates on potential problems by warning you up-front.

Features & Benefits

Energy Savings

State of the Art compression element

• Low energy consumption and high output of compressed air

Integrated Dryer with Saver cycle technology

• Reduces the energy consumption of the integrated air treatment in light load conditions. Water separation is improved. Pressure Dew Point (PDP) becomes more stable.

Fully Integrated & Compact design

• Controller to ensure optimum efficiency and reliability. Ensures compliance with your air requirements and makes the best use of your valuable floor space.

Quite operation

Sound insulated canopy

• No separate compressor room required. Allows for installation in most working environments.

Highest reliability

Robust Air Filter

• Offers long lifetime and high reliability for long service intervals and low maintenance needs. Air filter is very easy to replace.

IP55 (TEFC) IE3 Motor

• Totally enclosed fan cooled motor insures reliability. Efficiency ratings at or above premium regulations