



**FLEMING RANGE**  
**OIL-LESS BELT DRIVEN**  
**SCROLL COMPRESSORS**  
**FIXED OR VARIABLE SPEED**



**POWER  
SYSTEM**  
Air Compressors

From 2,2 to 22 kW  
From 8 to 10 bar

# FLEMING RANGE

## Oil-Less Belt Driven Scroll Compressors

### When choose an oil-less scroll compressor?

#### OIL-LESS COMPRESSED AIR

Totally Oil-Less compressed air is a specific requirement in many production processes:

- Pharmaceutical industry
- Medical Laboratories
- Food and Beverages production
- Chemical industry
- Special Food Treating Equipment (milking robot)
- Laser Equipment processes
- Packaging, PET bottles
- Painting

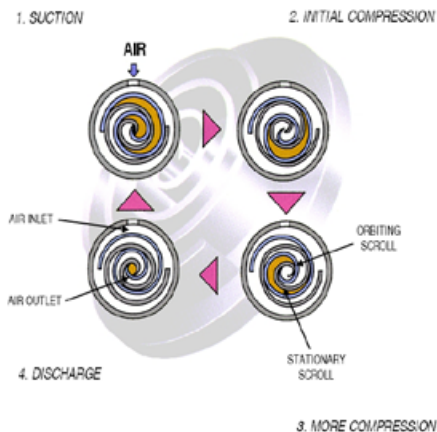
and in all cases where the Class 0 certification is required.

CLASS	max. oil residue mg/m <sup>3</sup> *	Field of application
0	0.00	As specified by the equipment user or supplier and more stringent than class 1
1	0.01	Medical, Chemicals, Biotechnologies, Food and Beverages, Pharmaceuticals, Electronics, Packaging, PET bottles
2	0.1	Paper Industry, Photographic Laboratories, Colour Injectors
3	1	Control Instruments, Sand-blasting
4	5	Low-Performance Sand-blasting

\* incl. oil vapours

The Oil-Less scroll FLEMING range developed by Power System satisfies all these sectors, with a dynamical range of power and model sizes from 2,2 to 22 kW, at 8 or 10 bar, with optional integrated dryer, to suit any specific requirement of high quality totally oil-less compressed air.

#### SPIRAL SCROLL TECHNOLOGY



The highest manufacturing standards are applied to guarantee the maximum performance and reliability.

A proven technology developed to compress air in absolute absence of oil, two spirals turning without any metal-to-metal contact in between intake air through a suction chamber, compresses it in 3 successive phases and deliver it at 8 or 10 bar or pressure.

The simple process allows a smooth contact-free operation of the scrolls and thus provides a very long service life to all the components and therefore the complete unit. The FLEMING range is extremely quiet and can be installed in virtually any environment ensuring the comfort and safety of all operators with minimum impact to the surroundings.

2



# FLEMING RANGE

## Oil-Less Belt Driven Scroll Compressors

### A FLEXIBLE DESIGN TO SUIT ANY SPECIFIC REQUIREMENT AND ASSURANCE OF OPERATION

FLEMING Oil-Less scroll compressors are built using the highest quality components throughout. The attention to detail in the build, finishing and testing of the product results in a high performance, extremely durable, quiet and an energy efficient air compressor that is built to last.

#### FLEMING OPEN VERSION

From 2,2 to 5,5 kW mounted on 200 / 270 lt. air receiver internally Teflon coated to avoid rust formation, saving space and allowing a quick and simple installation.



#### FLEMING SILENCED VERSION

From 2,2 to 11 kW, available in the basic version or air receiver mounted.



#### FLEMING from 7,5 to 11 kW - from 15 to 22 kW

Available in different assemblies:

$2 \times 3,7 = 7,4$  kW at 8 bar

$2,2 + 5,5 = 7,7$  kW at 10 bar

$2 \times 5,5 = 11$  kW at 8 / 10 bar

$3 \times 5,5 = 16,5$  kW at 8 / 10 bar

$2 \times 3,7 + 2 \times 5,5 = 18,4$  kW at 8 bar

$2,2 + 3 \times 5,5 = 18,7$  kW at 10 bar

$4 \times 5,5 = 22$  kW at 8 / 10 bar



### HIGH QUALITY COMPRESSED AIR TREATMENT

The FLEMING range models from 7.5 up to 22 kW are optionally available with integrated refrigerated dryer (Dew point +3°C) ensuring high quality compressed air, allowing operating efficiency and providing improved final product quality, enhancing competitiveness.



# FLEMING RANGE

## Oil-Less Belt Driven Scroll Compressors



Power System is your ideal partner uniquely qualified to offer the correct energy saving solutions, whatever your application.

### **O**BJECTIVES

- To supply problem free OIL-LESS COMPRESSED AIR**
- To reduce installation and maintenance costs (no expensive and complicated compressed air filters networks)**
- To increase efficiency in all areas of the compressors operation**
- To save energy and environmental costs**
- To provide the most modern, compact, robust, reliable and durable oil-less rotary compressors.**
- To promote industrial processes safeguarding ambient sustainability.**



# Building Sustainable Systems for a more intelligent planet



## EFFICIENCY + RELIABILITY = PRODUCTIVITY

### FEATURES OF OIL-LESS SCROLL

- Labyrinth Lap for high compressor reliability
- Alumite treatment
- Aluminium die casting
- Oil-less compression chamber for high quality air
- Over sized roller bearing
- Effective aluminium heat radiation fin for higher efficiency and durability



### MULTIPLE SCROLL PUMPS

Extremely flexible design, from 2 to 4 pumps different possible assemblies

### MAIN ELECTRIC MOTOR

The asynchronous IE2 High Efficiency electric motor is fully protected with insulation class F and protection to IP 55.



### ADVANCED COOLING SYSTEM

Our over sized premium quality air-air heat exchangers provide our machines with low operating temperatures even in severe working conditions.

The large coolers coupled with separate thermostatically controlled electro-fans ensures lower compressed air outlet temperatures.



# FLEMING RANGE

## Oil-Less Belt Driven Scroll Compressors

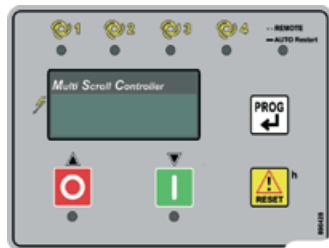
### INTELLIGENT CONTROLLERS

The advanced controllers fitted to the FLEMING range have been specifically developed to guarantee optimum monitoring and regulation of the compressors operation, allowing flexibility and full programming of the complete compressed air station for maximum efficiency and safety.

#### SSC CONTROLLER (FLEMING from 3,7 to 5,5 kW)

The intelligent controller with clear LCD display monitors the working condition and operate the single scroll compressor according to the air demand.

The controllers also allow remote control and auto-restart functions and includes a 'Fault Display' and routine maintenance information.



#### MSC CONTROLLER (FLEMING Multi-Scroll from 7.5 to 22kW)

With clear alphanumeric LCD display features full menu in 12 languages and convenient RS 485 interfacing, controls the operation of Multi Scroll Compressors in order to satisfy the air demand automatically starting and stopping the number of compressors needed. Furthermore the MSC controller varies continuously the starting order of the units in order to balance the operating time of each pump.

Allows remote control and auto-restart functions and powerful MOD-BUS interface allowing energy consumption monitoring and automatic reduction of operating

pressure according to varying demands through the working profile. The controller includes a 'Fault Log' and routine maintenance information.

#### MSC with VARIOSCROLL CONTROLLER (FLEMING from 7.5 to 22 kW)

In addition to the features of the MSC controller the multi-scroll compressors could be optionally fitted with the VarioScroll controller that introduces completely new features:

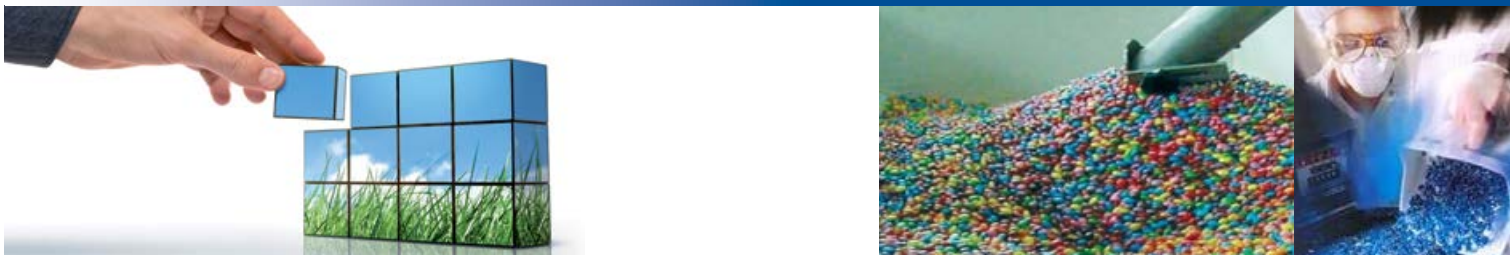
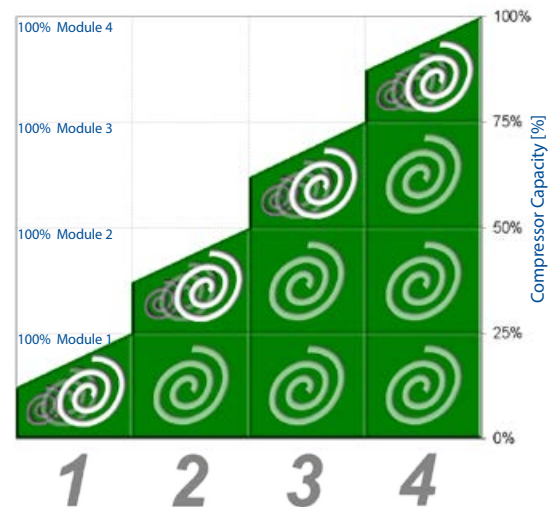
- Elimination of electric absorption peaks in the motor's start-up phase;
- Optimization of the electric consumption of the compressor with a ratio directly proportional to the request for compressed air;
- Constant regulation of the working pressure with a maximum drift of 0.2 bar as to the operating set pressure;
- Reduced wearing of the mechanical parts, screw bearings and motor, with consequent reduction of the maintenance costs.

### VARIABLE SPEED DRIVE

With over 15 years of experience in the manufacture and design of Variable Speed rotary screw compressors, Power System is a technological leader in the field of Inverter employed variable speed technology. Reducing power consumption and protecting our valuable energy resources represents one of the greatest global environment challenges of our times.

The new VarioScroll control system enable the compressor to adapt continuously the air production to the plant demand, avoiding the air delivery steps caused by single module starts/stops.

The variable speed operation is always active only in one of the modules fitted on the compressors. When the air demand increases and the variable speed module reach the maximum capacity, it is switched to fixed speed operation and the variable speed control is transferred to the added module.



# FLEMING RANGE

## Oil-Less Belt Driven Scroll Compressors

MODEL	Pressure		F.A.D.		rpm	Power kW / Hp	Noise dB	Tank L	Weight Kg	Dimensions LxWxH (mm)
	bar max	PSI max	L/min	CFM						
FLEMING OPEN 2,2/200	8	116	240	8,5	3250	2,2 / 3	70	200	109	1400x550x970
	10	145	200	7,1	2870					
FLEMING OPEN 3,7/270	8	116	420	15	2200	3,7 / 5	74	270	157	1640x650x1035
FLEMING OPEN 5,5/270	8	116	630	22,5	3180	5,5 / 7,5	76		157	1640x650x1035
	10	145	520	18,5	2650					
FLEMING OPEN 5,5/470	8	116	630	22,5	3180			470	202	2200x650x1105
	10	145	520	18,5	2650					
FLEMING 2,2	8	116	240	8,5	3250	2,2 / 3	64	25	97	670x530x730
	10	145	200	7,1	2870		63			
FLEMING 2,2/200	8	116	240	8,5	3250		64	200	155	1400x530x1240
	10	145	200	7,1	2870					
FLEMING 3,7	8	116	410	15	2200	3,7 / 5	67	10	150	700x650x890
FLEMING 3,7/270							270	240	1550x650x1550	
FLEMING 5,5	8	116	630	22,5	3180	5,5 / 7,5	69	10	160	700x650x890
	10	145	520	18,5	2650		68			
FLEMING 5,5/270	8	116	630	22,5	3180		69	270	245	1550x650x1550
	10	145	520	18,5	2650					
FLEMING 5,5/470	8	116	630	22,5	3180	69	470	280	1900x650x1620	
	10	145	520	18,5	2650					68
FLEMING 7.5	8	116	410-840	14,3-22,6	2440	2x3,7 / 2x5,5	67	--	265	1160x597x1034
	10	145	200-720	7,1-25,4	2870-2650	2,2+5,5 / 3+7,5	67			
FLEMING 7.5/270	8	116	410-840	14,3-22,6	2440	2x3,7 / 2x5,5	67	270	350	1582x597x1556
	10	145	200-720	7,1-25,4	2870-2650	2,2+5,5 / 3+7,5	67			
FLEMING 7.5/470	8	116	410-840	14,3-22,6	2440	2x3,7 / 2x5,5	67	470	380	1992x600x1670
	10	145	200-720	7,1-25,4	2870-2650	2,2+5,5 / 3+7,5	67			
FLEMING 11	8	116	630-1260	22,5-44,5	3180	2x5,5 / 2x7,5	67	--	275	1160x597x1034
	10	145	520-1040	18,5-36,7	2650	2x5,5 / 2x7,5	67			
FLEMING 11/270	8	116	630-1260	22,5-44,5	3180	2x5,5 / 2x7,5	67	270	360	1582x597x1556
	10	145	520-1040	18,5-36,7	2650	2x5,5 / 2x7,5	67			
FLEMING 11/470	8	116	630-1260	22,1-44,5	3180	2x5,5 / 2x7,5	67	470	390	1992x600x1670
	10	145	520-1040	18,5-36,7	2650	2x5,5 / 2x7,5	67			
FLEMING 15	8	116	630-1890	22,5-66,7	3180	3x5,5 / 3x7,5	67	--	515	1410x800x1500
	10	145	520-1560	18,5-55,1	2650	3x5,5 / 3x7,5	67			
FLEMING 18.5	8	116	410-2100	14,4-74,1	3180	2x3,7 + 2x5,5 / 2x5,5 + 2x7,5	68	--	570	1410x800x1500
	10	145	200-1760	7,1-62,1	2650	2,2 + 3x5,5 / 3 + 3x7,5	68			
FLEMING 22	8	116	630-2520	22,5-88,9	3180	4x5,5 / 4x7,5	69	--	580	1410x800x1500
	10	145	520-2080	18,5-73,4	2650	4x5,5 / 4x7,5	69			

Reference conditions: Intake air temperature 20°C (68°F) - atmospheric pressure 1 bar (14,5 psig).  
The air flow rates are measured at the following working pressures: 7,5 bar for models at 8 bar - 9,5 bar for models at 10 bar.  
The data and performances in accordance with ISO 1217 directives. Sound level measured in accordance with PNEUROF/CAGI standards.

Models from 7,5 to 22 optional dryer is available on request.



## THE COMPANY

Since 1992 Power System Group have been leaders in the design, development, production and distribution world-wide of Rotary Screw Compressors and Professional Reciprocating Compressors in a range of powers going from 0,55 to 250 kW satisfying air demands up to 42,1 m<sup>3</sup>/min. suitable for any technology sector, from the largest industry to the smallest enterprise. Power System Group is, since the very beginning, engaged in a Research mission aimed to create advanced solutions to compress air with the lowest possible energy consumption.



### QUALITY POLICY

Full satisfaction of the Client is the constant and continuous effort of Power System Group.

Quality Certifications:

- UNI EN ISO 9001 Vision 2000 (TUV)
- Russian GOST-R Certification

Products Certifications:

- EC European Directives
- RINA-LLOYDS-REGISTER on request
- MOM for Singapore



**We fear no  
comparisons.  
Choose quality!**



POWER SYSTEM S.r.l.  
via dell'Emigrante, 11/13  
36040 Brendola (VI) - Italia  
Tel. +39 0444 401270  
Fax +39 0444 401165  
E-mail: info@powersystem.it

[www.powersystem.it](http://www.powersystem.it)