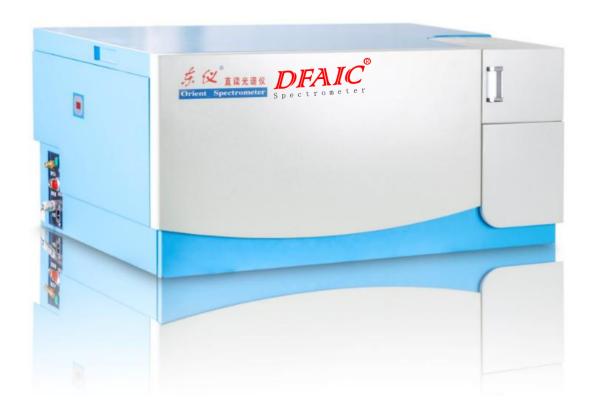


## **DF-410 Full Spectrum OES**



## Introduction

- 1) Czerny-Turner optical system is applied for a better plane CCD collection for all elemental wavelength that falls into 140-750nm.
- 2) Self-developed DF-IV collection device is able to collect all elemental wavelength between 140nm and 750nm.
- 3) Several matrices can be analyzed such as Fe, Cu, Al, Zn, Ni, Sn, Ti, Mg, etc.
- 4) Module design for independent light collection, data processing and data optimization. With the help of high-performance ARM processor and real-time operational system, analytical time is largely shortened and accuracy is further improved.
- 5) A highly-precise thermostatic system improves the energy efficiency to a great extent. The temperature fluctuation range of  $\pm 0.2$ °C makes the DF-410 perform more stable.
- 6) The DF II-E digital-controlled light source broadens the elemental analytical range which covers trace elements, macro elements and elements with super high content.



- 7) Plane grating allows smaller number of CCD, further improving the accuracy and stability. It also occupies smaller space and makes set-up and movement a lot easier.
- 8) A whole new gas way; spark stand with cleaning function; adjustable master-slave gas ways equipped with a sealing device which prevents argon leakage; Quicker argon fulfillment.
- 9) The multipurpose operational software can meet various needs by displaying elemental data in a flexible way and supporting various printing formats.

## **Specifications**

optical system	structure	Czerny-Turner	
	curvature radius	400mm	
	IV holographic original		
	grating with aberration	2400 ruled lines/mm	
	correction function		
	wavelength range	140-750nm	
	pixel resolution	@200nm:7pm	
	vacuum optical chamber	30±0.2°C	
	with auto thermostatic	ostatic vacuum range: 1.2-2.5 Pa	
	system		
light source system	light source	digital controlled	
		spark pulse	
	control technique	PWM	
	discharge current	10-400A	
	excitation frequency	100-800Hz	
	discharge duration	10-10000μs	
spark stand	excitation chamber with minimum argon use		
	easily-changeable foundation(lid)		
	mobile fixing pin		
data collection and control system	CCD detector with high resolution		
	linear CCD: Toshiba		
	high-speed 16-bit A/D conversion		
	resolution: 3648 pixel		
	real-time control on temperature and vacuum state		
	ethernet		
others	matrices	Fe, Cu, Al, Ni, Zn, Sn, Ti,	
		Mg, etc.	
	channel configuration	multiple matrices and	
		channels	
	dimensions(mm)	970*415*640	
	environmental requirement	T 10°C-35°C	



	H 20%-80%
*****	130Kg (net weight),
weig	180Kg (gross weight)
V/F	AC220V±10%/50Hz
	max 800VA
powe	standby 100VA
	purity≥99.994%,
argo	press≥0.3MPa