

PORTABLE SPARK DIRECT READING SPECTROMETER CODE OES-P200



- Widely used in metallurgy, foundry, machining, automobile manufacturing, metal processing, furnace testing, etc.
- Ability to accurately analyze the elemental content of metallic materials such as C, P, S, B, etc.
- Automatically eliminates spectral drift due to temperature and pressure changes for accurate measurements
- Ability to add desired measurement curves without adding hardware
- Unique jet electrode technology, can save the use of argon gas, reduce the use of costs
- Replaceable lithium batteries, long battery life, hundreds of consecutive excitation times, to ensure the integrity of the field work
- The instrument is easy to carry, analysis is not limited, more convenient to complete outdoor work

STANDARD DELIVERY

Main unit	1 pc
Computer	1 pc
Analysis software	1 pc
Battery	2 pcs
Electrode brush (OES-T350-BR)	2 pcs
Pressure valve	1 pc
Mobile cart	1 pc
Charger	1 pc
Consumable and spare parts	1 set*

*Including lens, mirror paper, wrench, air connection line and other common consumables



spectral sample grinder (optional)

OPTIONAL ACCESSORY

Spectral standard sample	MSS series	select standard sample based on the test material
Spectral sample grinder	OES-MY100	Ø350mm, 380V

SPECIFICATION

Curves	Standard curve	low and medium alloy steel (A1), chrome/nickel stainless steel (A2)
	Customized curve	curves can be added or customized for special base materials (Ni, Mg, Zn, etc.)
Optical system	Detector	high performance CMOS
	Optical system construction	paschen-runge double optical chamber structure
	Visible room temperature	34°C±0.5°C
	UV room temperature	34°C±0.5°C
	Raster scribing	3600 lines/mm
	Spectral range	165~580nm
	Average resolution	≤10pm/pixel
	Visible focal length	300mm
	Ultraviolet focal length	298mm
	Excitation source	Light source
Frequency		100~1000Hz
Excitation voltage		300V
Excitation current		400A
Excitation stand	Gas supply	argon (purity≥99.9995%, pressure: ≥0.3MPa)
	Flow rate	excitation: 3L/min, standby: 0.3L/min
	Electrode	tungsten electrode
	Purge	automatic cleaning
	Design	self-compensating thermal deformation design
	Analysis interval	2.8mm
Analysis software	<ul style="list-style-type: none"> •automatic calibration control according to the given deviation and number of excitations •the analyzed results show the percentage, light intensity values, intensity ratios •electrode cleaning according to set data, display and corresponding deviation •ability to store and print test element results 	
Transmission	DM9000A-based ethernet data transmission	
Work hours	standby: 10h, continuous excitation: 160~180 times	
Work environment	5~35°C	
Power supply	replaceable lithium battery, 24V	
Dimension (LxWxH)	840×700×1050mm	
Weight	50kg	

IRON BASE CURVES

Curve number	A1	A2	A3	A4	A5	A6	A7
Elemental content (%)	Low alloy steel	Cr/Ni stainless steel	High speed tool steel	High Mn steel	High Cr cast iron*	High Ni cast iron*	Cast iron*
C	0.006-1.3	0.008-2.5	0.08-2.2	0.5-2.4	0.9-3.4	1.2-3.8	1.8-4.5
Si	0.01-2.9	0.09-4.0	0.04-1.5	0.3-1.7	0.2-2.5	0.04-3.5	0.2-4.2
Mn	0.03-14	0.12-16	0.04-1.7	5.3-23	0.1-2.4	0.001-6.8	0.06-4.7
P	0.002-0.12	0.003-0.3	0.004-0.007	0.01-0.2	0.01-0.3	0.0015-0.56	0.02-0.8
S	0.002-0.46	0.001-0.4	0.001-0.06	0.006-0.11	0.01-0.15	0.0015-0.24	0.003-0.2
Cr	0.01-12.5	7.4-32	1.8-8.1	0.08-3.8	0.4-34	0.0015-9.1	0.03-2.8
Ni	0.004-4.4	0.8-40	0.07-0.55	0.04-3.5	0.05-2.75	0.9-36.6	0.05-5.1
Mo	0.004-1.76	0.08-4.2	0.02-9.4	0.1-2.0	0.1-4	0.0015-1.5	0.01-2.1
Al	0.003-0.5	0.005-1.7	0.005-1.6	0.008-0.12	-	-	0.002-0.25
Cu	0.002-0.7	0.05-4.5	0.04-0.5	0.02-0.6	0.06-1.5	0.005-0.3	0.06-2.0
Co	0.001-0.5	0.008-0.62	0.008-16	0.007-0.1	-	-	0.008-0.03
Ti	0.002-0.5	0.005-1.1	-	0.004-0.4	0.01-0.14	-	0.007-0.7
Nb	0.002-0.53	0.02-2.0	-	0.08-0.42	0.1-0.7	0.003-0.38	0.002-0.7
V	0.003-0.9	0.02-0.58	0.03-2.5	0.01-0.84	0.02-1.2	-	0.01-0.7
Ca	-	-	-	-	-	-	-
B	0.006-0.02	0.007-0.02	-	-	-	-	0.002-0.3
Sn	0.001-0.09	0.003-0.05	-	-	-	-	0.003-0.3
As	0.001-0.1	0.004-0.04	-	-	-	-	0.008-0.09
Sb	0.002-0.02	-	-	-	-	-	0.004-0.2
Fe	REF	REF	REF	REF	REF	REF	REF

*Cast iron samples need to be whitened samples

ALUMINUM BASE CURVES

Curve number	B1	B2	B3	B4	B5
Elemental content (%)	Al low alloy	Al-Si alloy	Al-Zn alloy	Al-Cu alloy	Al-Mg-Si alloy
Si	0.01-1.63	0.02-24	0.02-9.4	0.02-7	0.02-2.3
Fe	0.01-1.65	0.02-4	0.03-1	0.05-1.9	0.07-0.80
Cu	0.002-1	0.005-6	0.01-4.3	0.01-13	0.07-1
Mn	0.001-1	0.005-1	0.02-1	0.05-1	0.03-2.4
Mg	0.002-1	0.01-1.5	0.01-4	0.01-2.7	0.006-10.2
Cr	0.001-0.15	0.005-0.5	0.01-0.4	0.01-0.14	0.01-0.4
Ni	0.001-0.16	0.02-2.5	0.01-0.2	0.01-2.3	0.005-0.25
Zn	0.002-0.5	0.005-3.5	0.01-12	0.05-3.5	0.01-1
Ti	0.001-0.15	0.005-0.4	0.005-0.3	0.001-0.2	0.007-0.3
Ca	-	0.002-0.03	-	-	-
Cd	0.01-0.3	0.001-0.3	0.002-0.3	0.01-0.3	0.01-0.3
Ga	0.002-0.06	0.005-0.2	-	-	0.009-0.02
Pb	0.02-0.5	0.005-0.5	0.005-0.5	0.01-0.5	0.001-0.5
Sb	-	0.005-0.4	-	-	-
Sn	0.01-0.2	0.003-0.5	0.005-0.2	0.02-0.3	0.007-0.2
V	0.004-0.05	0.005-0.2	0.005-0.03	0.01-0.03	0.002-0.03
Zr	0.001-0.12	0.005-0.2	0.01-0.3	0.001-0.2	0.003-0.12
P	-	0.002-0.005	-	-	-
Al	REF	REF	REF	REF	REF

COBALT BASE CURVES

Curve number	C1	C2	C3	C4	C5	C6	C7
Elemental content (%)	Brass	Copper	Al-Cu alloy	Beryllium bronze	Sn-Pb-Cu alloy	Pure copper	Si-Bronze
Zn	0.5-43.0	0.01-23.0	0.04-2.2	0.005-0.23	0.003-0.7	0.001-0.3	0.2-6.0
Pb	0.01-6.0	0.002-0.13	0.002-0.068	0.005-0.3	0.001-21	0.001-1.5	0.01-0.8
Sn	0.009-4.8	0.009-0.13	0.003-0.35	0.005-0.18	0.005-11.2	0.001-0.3	0.05-0.7
P	0.002-0.14	0.003-0.07	-	-	0.001-0.42	0.001-0.078	0.005-0.08
Mn	0.001-5.3	0.009-1.1	0.001-3.1	-	0.001-0.4	0.001-0.1	0.2-1.8
Fe	0.02-3.0	0.03-1.03	0.005-6.0	0.02-0.28	0.003-0.028	0.001-0.2	0.1-1.7
Ni	0.009-1.8	5.5-32.5	0.005-6.0	0.005-0.35	0.001-1.0	0.001-0.5	0.05-1.0
Si	0.001-4.6	0.009-0.46	0.004-0.3	0.02-0.3	0.002-0.009	0.001-0.055	1.5-5.0
Mg	0.001-0.01	0.003-0.14	-	0.003-0.7	-	0.001-0.01	-
Cr	0.001-0.2	-	-	-	-	0.001-0.081	-
As	0.001-0.2	0.003-0.05	-	-	0.004-0.2	0.005-0.3	-
Sb	0.001-0.4	0.001-0.012	-	-	0.001-0.6	0.005-0.35	0.005-0.07
Ag	-	-	-	-	0.001-0.14	0.006-0.13	-
Co	0.004-0.1	-	-	-	0.001-0.1	-	-
Al	0.001-6.7	-	3.0-12.9	0.02-0.2	0.01-0.1	-	-
S	0.001-0.15	0.004-0.06	-	-	0.001-0.14	0.001-0.05	-
Cu	REF	REF	REF	REF	REF	REF	REF