How to Start the 6P-II

QUICK OPERATING GUIDE | BU-6PII-QS-01

Oxygen + acetylene • 220 V AC single phase

Only trained personnel may commission or operate this system. Do not light the gun until gas identity, pressure/flow measurement basis, carrier-gas setting, cooling air, extraction, safety devices and the job recipe have been checked and signed off.

Reference parameters

Parameter	M nozzle reference	K nozzle reference
Oxygen pressure	2.2 bar (31.9 psi)	2.1 bar (30.5 psi)
Acetylene pressure	1.00 bar (14.50 psi)	1.00 bar (14.50 psi)
Oxygen consumption / flow	2.7 m³/h (45 L/min)	2.2 m³/h (36.7 L/min)
Acetylene consumption / flow	1.7 m³/h (28.3 L/min)	1.3 m³/h (21.7 L/min)
Gun cooling air	10-15 psi (0.69-1.03 bar), for the standard gun-cooling cap	Same cap-specific reference; auxiliary jets require a separate setting
Electrical supply	220 V AC, single phase	220 V AC, single phase

Reference values are not a universal coating recipe. M gas values align with the Balaji brochure and reference M rows. K values come from selected reference K ceramic rows, not a Balaji-tested recipe. Approve the actual powder grade, nozzle, siphon plug, air cap, carrier gas and meter calibration before use. Do not set both pressure and flow independently to arbitrary targets.

Never exceed the acetylene limit

Acetylene downstream use pressure must not exceed 15 psig (approximately 1.03 bar gauge). The 1.0 bar reference is already close to that limit: use a suitable calibrated gauge and do not round upward. Follow stricter equipment or local limits.

Carrier-gas pressure/flow, auxiliary cooling-jet settings, feeder RPM, spray distance and workpiece temperature limit must come from the approved powder/nozzle job sheet. They are intentionally not assigned one value for all powders.

Prestart and ignition

MANUAL COMBINED-VALVE GUN ONLY

1. Confirm the approved job sheet: powder grade and size, K or M nozzle, matching siphon plug, air-cap orientation, carrier gas, flows, spray distance and temperature limit. Do not substitute a nozzle while retaining the previous recipe.

2. Inspect the cold, isolated gun. Nozzle and siphon plug must be clean, seals undamaged, the plug seated and the nozzle nut/air-cap body hand-tight. Keep the powder feed OFF.

3. Start extraction and confirm its airflow indication. Secure the workpiece and point the gun into the booth away from people, hoses and combustibles. Put on the site-specified eye/face, hearing, respiratory and flame-resistant protection.

4. Verify gas circuits and protective devices. A trained operator performs the approved leak test and individual line purge into a safe ventilated location. Never test leaks with flame or blow fuel/oxygen hoses out with compressed air.

5. Enable the 220 V single-phase control/feeder supply only after nameplate, protective earth and protection checks. Establish the approved carrier-gas flow through the gun and the required cooling air before ignition.

6. For the manual combined-valve gun only, move the gas valve to its lighting detent. Ignite with the approved spark lighter at the nozzle. On stable ignition, move the valve to the full operating position and verify the approved gas flows. If ignition fails or is abnormal, close the valve and follow the safe purge/restart procedure; do not keep releasing unburned gas.

7. With a stable flame and correct flows, start powder feed and make a test coupon. Check spray pattern, actual powder feed rate, workpiece temperature and coating acceptance before coating the production component.

Stop instead of improvising

If the fitted valve has no lighting detent, the controls differ from the supplied manual, or any required setting is unknown, obtain the correct commissioning procedure from Balaji Udhyog. An automatic controller needs its own interlock and sequence instructions.

Stop safely and record the job

NORMAL STOP | EMERGENCY RESPONSE

1. Switch powder feed OFF. Follow the feeder's approved line-clearance sequence while maintaining carrier gas and cooling air; do not interrupt carrier gas while the flame is lit.

2. Close the gun's combined gas valve to extinguish the flame. Verify flame-out. Maintain cooling/carrier flow for the equipment's specified cooling period; no universal delay is assigned here.

3. For an extended stop, close gas supplies and isolate electrical power. A trained operator releases trapped pressure by the approved separate-circuit procedure with extraction running, then leaves controls closed and regulators unloaded as specified by their manufacturer.

4. Allow parts to cool. Isolate, lock out and verify zero pressure before removing a nozzle, hose, feeder lid, seal or valve. Clean and record any defect before the next shift.

Abnormal condition

For a pop/backfire, sustained hiss, internal burning, gas leak, loss of carrier/cooling air, or failed extraction: stop powder and close the torch gas valve immediately if safe. Isolate supplies from a safe location. If a fire or leaking cylinder cannot be safely isolated, evacuate and call the site's emergency team. Do not relight until the cause has been corrected and the equipment checked by a competent technician.

Record before production

Required record	Entry
Powder grade / batch / particle size	_____
Nozzle / siphon plug / air cap	_____
Oxygen / acetylene pressure and flow	_____
Carrier gas / pressure / flow	_____
Gun air / auxiliary air	_____
Feed rate / RPM / spray distance	_____
Temperature limit / coupon acceptance	_____
Operator / technical approval / date	_____

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Confirmed K/M operating parameters

EXPANDED TECHNICAL REFERENCE | REVISION 3

System

Balaji Udhyog 6P-II: oxygen + acetylene, K or M nozzle, 220 V single-phase supply.

Nitrogen carrier

55 psi = 3.79 bar. Verify feeder rating, regulator and calibrated gauge before use.

Acetylene

1.00 bar = 14.50 psi. Do not increase above the approved setpoint. Maximum acetylene safety limits still apply.

Spray distance

200-250 mm (7.87-9.84 in) for the confirmed K/M arrangement.

High-rate values

Rows specified at 35 lb/h use 15.88 kg/h. Rows specified at 82 ft3/h oxygen use 2.32 m3/h. These are row-specific values, not a universal rate for every powder.

Production checks

Confirm powder identity, nozzle assembly, carrier flow, feeder calibration and coating results. Instrument scale numbers are not L/min. TBC entries are withheld pending technical confirmation.

Recipe selection and technical checks

EXPANDED TECHNICAL REFERENCE | REVISION 3

Unconfirmed values

TBC means confirmation is required; do not set the machine from a TBC value.

Powder-specific recipes

Powder identifiers, feed wheel, RPM and gas flows must match the installed feeder and selected powder. No automatic equivalence between powder brands is implied.

Other configurations

Hydrogen/MH, D and N arrangements are outside the confirmed oxygen-acetylene K/M setup. Obtain a separate approved procedure.

Release

A complete job sheet and acceptable test coupon are required before production. Contact sales@balajiudyog.in with the powder code and nozzle details.

Table 1 Standard US

PANEL A | ROWS 1-28

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Nozzle	O2 press.	Fuel press.	H2 press.	O2 scale	Fuel scale	H2 scale	N2 press.	N2 scale
1	12C	P7C -M	32	14.50	-	45	55	-	55	37
2	14E	P7C -M	32	14.50	-	45	55	-	55	37
3	15E	P7C -M	32	14.50	-	45	55	-	55	37
4	15E	P7C -MH	30	-	23	40	-	50	55	40
5	16C	P7C -M	32	14.50	-	45	55	-	55	37
6	TBC code	P7C -M	32	14.50	-	45	55	-	55	37
7	19E	P7C -M	32	14.50	-	45	55	-	55	37
8	31C-NS	P7C -M	32	14.50	-	45	55	-	55	37
9	36C	P7C -M	32	14.50	-	45	55	-	55	37
10	41C	P7C -M	32	14.50	-	45	55	-	55	37
11	41F-NS	P7C -MH	25	-	23	35	-	60	55	37
12	42C	P7C -M	32	14.50	-	45	55	-	55	37
13	43C	P7C -M	32	14.50	-	45	55	-	55	37
14	43F-NS	P7C -MH	28	-	28	35	-	70	55	37
15	44	P7C -M	32	14.50	-	45	55	-	55	37
16	45C-NS	P7C -M	27	14.50	-	40	60	-	55	37
17	51	P7C -M	32	14.50	-	45	55	-	55	37
18	52C- NS(5)	P7C -MH	40	-	30	43	-	65	55	37
19	54 (4)	P7C -MH	20	-	20	30	-	60	55	40
20	55	P7C -MH	37	-	35	40	-	75	55	40
21	56C-NS	P7C -M	32	14.50	-	45	55	-	55	37
22	75F(4)(13)	P7C -D	30	15	-	35	45	-	55	37
23	91	P7C -M	32	14.50	-	45	55	-	55	37
24	101 (15)(16)	P7C -K	30	14.50	-	42	50	-	55	37
25	101FP (16)(18)	P7C -K	30	14.50	-	42	50	-	55	37
26	101SF (14)(18)	P7C -D	30	15	-	42	50	-	55	37
27	102 (16)(18)	P7C -K	30	14.50	-	42	50	-	55	37
28	105 (16)(18)	P7C -K	30	14.50	-	42	50	-	55	37

US units: pressure psi; distance inches; powder lb/h; gas consumption ft³/h. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Table 1 Standard US

PANEL B | ROWS 1-28

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Wheel	RPM	Distance	D.E. %	Powder rate	O2 cons.	Fuel cons.	H2 cons.
1	12C	S	30	7.87-9.84	95	20	95	59	-
2	14E	S	35	7.87-9.84	95	20	95	59	
3	15E	S	35	7.87-9.84	95	20	95	59	
4	15E	S	37	7	95	20	76	-	249
5	16C	S	35	7.87-9.84	95	20	95	59	
6	TBC code	S	33	7.87-9.84	95	20	96	59	
7	19E	S	25	7.87-9.84	95	18	95	59	
8	31C-NS	S	32	7.87-9.84	90	16	95	59	
9	36C	S	30	7.87-9.84	85	TBC	TBC	59	
10	41C	S	38	7.87-9.84	95	12	96	-	245
11	41F-NS	S	39	6	90	10	60	59	
12	42C	S	25	7.87-9.84	95	10	95	59	
13	43C	S	22	7.87-9.84	90	10	95		310
14	43F-NS	S	27	7	90	12	62	59	
15	44	S	34	7.87-9.84	85	14	95	85	
16	45C-NS	S	15	7.87-9.84	90	10	75	59	
17	51	S	28	7.87-9.84	95	14	95	-	300
18	52C- NS(5)	S	25	7	85	5	95	-	242
19	54 (4)	S	29	7	80	4	74	-	375
20	55	S	20	4½	95	12	80	59	-
21	56C-NS	S	20	7.87-9.84	90	10	95	47	-
22	75F(4)(13)	S	15	3	80	9-10	61	59	-
23	91	S	30	7.87-9.84	95	10	95	49	-
24	101 (15)(16)	S	15	7.87-9.84	40	2	82	49	-
25	101FP (16)(18)	S	15	7.87-9.84	40	2	82	49	-
26	101SF (14)(18)	H	15	3	50	1.5	82	49	-
27	102 (16)(18)	S	15	7.87-9.84	55	2	82	49	-
28	105 (16)(18)	S	15	7.87-9.84	30	3	82	49	-

US units: pressure psi; distance inches; powder lb/h; gas consumption ft^3/h. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Table 1 Standard US

PANEL A | ROWS 29-56

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Nozzle	O2 press.	Fuel press.	H2 press.	O2 scale	Fuel scale	H2 scale	N2 press.	N2 scale
29	105SFP(14)(18)	P7C -D	25	15	-	42	50	-	55	37
30	106 (16)(18)	P7C -K	30	14.50	-	42	50	-	55	30
31	106F(16)(18)	P7C -K	30	14.50	-	42	50	-	55	30
32	110 (16)(18)	P7C -K	30	14.50	-	42	50	-	55	37
33	111 (16)(18)	P7C -K	30	14.50	-	42	50	-	55	37
34	130 (16)(18)	P7C -K	30	14.50	-	42	50	-	55	37
35	130SF (14)(18)	P7C -K	30	14.50	-	42	50	-	55	37
36	131 VF (14)(18)	P7C -D	25	15	-	42	50	-	55	37
37	136 F (16)(18)	P7C -D	30	15	-	42	50	-	55	37
38	201 (16)(18)	P7C -D	30	15	-	42	50	-	55	37
39	210 (16)	P7C -K	30	14.50	-	42	50	-	55	37
40	211 (16)	P7C -K	30	14.50	-	42	50	-	55	37
41	212 F- NS	P7C -D	25	15	-	42	50	-	55	40
42	350	P7C -M	32	14.50	-	45	55	-	55	37
43	351	P7C -M	32	14.50	-	45	55	-	55	37
44	438 NS-1(2)(3)	P7C -D	25	15	-	40	55	-	55	40
45	439 NS-1(2)(3)	P7C -D	25	15	-	40	55	-	55	40
46	442 (6)(7)	P7C -D	25	15	-	42	50	-	55	37
47	443	P7C -M	32	14.50	-	45	55	-	55	37
48	444 (7)	P7C -D	25	15	-	42	50	-	55	37
49	445 (8)	P7C -M	32	14.50	-	45	55	-	55	37
50	447 (7)	P7C -M	32	14.50	-	45	55	-	55	37
51	448 (7)	P7C -D	25	15	-	42	50	-	55	37
52	449 (7)	P7C -D	25	15	-	42	50	-	55	37
53	450	P7C -M	32	14.50	-	45	55	-	55	37
54	451	P7C -M	32	14.50	-	45	55	-	55	37
55	501(2)	P7C -M	32	14.50	-	45	55	-	55	37
56	625	P7C-D	40	-	25	18	-	73	55	37

US units: pressure psi; distance inches; powder lb/h; gas consumption ft³/h. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Table 1 Standard US

PANEL B | ROWS 29-56

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Wheel	RPM	Distance	D.E. %	Powder rate	O2 cons.	Fuel cons.	H2 cons.
29	105SFP(14)(18)	H	10	3	70	2½	82	49	-
30	106 (16)(18)	S	15	7.87-9.84	20	2	82	49	-
31	106F(16)(18)	L	45	7.87-9.84	25	2	82	49	-
32	110 (16)(18)	S	15	7.87-9.84	35	2	82	49	-
33	111 (16)(18)	S	15	7.87-9.84	25	2	82	49	-
34	130 (16)(18)	S	15	7.87-9.84	35	2	82	49	-
35	130SF (14)(18)	S	15	7.87-9.84	40	2	82	49	-
36	131 VF (14)(18)	H	15	3	70	2	82	49	-
37	136 F (16)(18)	S	15	2½	45	2	82	49	-
38	201 (16)(18)	L	35	3	20	2	82	49	-
39	210 (16)	S	15	7.87-9.84	65	2	82	49	-
40	211 (16)	S	15	7.87-9.84	90	2	82	49	-
41	212 F- NS	S	24	6	50	4	82	49	-
42	350	S	15	7.87-9.84	90	TBC	95	59	-
43	351	S	16	7.87-9.84	90	TBC	95	59	-
44	438 NS-1(2)(3)	S	23	3½	75	7	74	57	-
45	439 NS-1(2)(3)	S	15	3½	85	6	74	57	-
46	442 (6)(7)	S	12	10	85	5	82	49	-
47	443	S	12	7.87-9.84	80	6	95	59	-
48	444 (7)	S	12	9	85	5	82	49	-
49	445 (8)	S	12	7.87-9.84	90	5	95	59	-
50	447 (7)	S	10	7.87-9.84	90	4½	95	59	-
51	448 (7)	S	11	9	85	5	82	49	-
52	449 (7)	S	12	9	85	5	82	49	-
53	450	S	12	7.87-9.84	90	6	95	59	-
54	451	S	23	7.87-9.84	95	12	95	53	-
55	501(2)	S	12	7.87-9.84	85	4	95	59	-
56	625	S	20	8	40	7	30	-	321

US units: pressure psi; distance inches; powder lb/h; gas consumption ft³/h. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Standard table notes

NOTES 1-10 | TECHNICAL NOTES RETAINED AND QUALIFIED

1. Use the matched four-jet siphon plug and cooling cap, except where the approved job sheet specifies another arrangement. Gun-cooling air reference: 15 psi (1.03 bar).

2. Auxiliary air-jet assembly: intersection and air pressure require job-specific confirmation.

3. Inspect for deposit on the nozzle tip during extended spraying. Shut down, isolate and cool before cleaning.

4. Pinch/cool cap orientation must match the job. Gun-cooling air settings are separate from acetylene settings.

5. Auxiliary air-jet arrangement and intersection distance must be qualified with the selected powder.

6. Preheat temperature: obtain the powder-specific approved limit before operation.

7. Alternative feed wheels require feeder compatibility checks and mass-feed calibration.

8. For cooling-side-out cap operation, confirm the cap's approved air pressure separately.

9. Adjust powder delivery only within the approved process window and verify coating quality.

10. Abradable coatings require a qualified material-specific procedure.

Standard table notes

NOTES 11-19 | TECHNICAL NOTES RETAINED AND QUALIFIED

11. Set gas pressure and meter reading with the installed instrument's calibration; do not apply an assumed pressure correction.

12. Stop and investigate an unstable flame, backfire or abnormal jet behaviour.

13. Auxiliary air-jet pressure and intersection are job-specific; obtain the approved values.

14. Vibrator pressure requires confirmation against the vibrator rating.

15. Confirm cooling-jet pressure and placement before spraying.

16. Where a 20 psi vibrator setting is specified, its equivalent is 1.38 bar; verify the equipment rating.

17. Calibrate actual powder mass feed. RPM alone is not a transferable delivery rate.

18. Auxiliary jet configurations must not be interchanged without process approval.

19. Confirm the full powder grade, suffix and composition; similar codes do not establish equivalence.

Table 2 High rate US

PANEL A | ROWS 1-25

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Nozzle	O2 press.	Fuel press.	O2 scale	Fuel scale	N2 press.	N2 scale
1	12C	P7C-K	30	14.50	42	50	55	37
2	14E	P7C-K	30	14.50	42	50	55	37
3	15E	P7C-K	30	14.50	42	50	55	37
4	16C	P7C-K	30	14.50	42	50	55	37
5	18C	P7C-K	30	14.50	42	50	55	37
6	19E	P7C-K	30	14.50	42	50	55	37
7	31C-NS	P7C-K	30	14.50	42	50	55	37
8	32C	P7C-K	30	14.50	42	50	55	37
9	35C	P7C-K	30	14.50	42	50	55	37
10	36C	P7C-K	30	14.50	42	50	55	37
11	307NS (3)(4)(5)	P7C-K	35	14.50	46	52	55	37
12	308NS (3)(4)(5)	P7C-K	30	14.50	42	50	55	37
13	309 NS(3)(4)(5)	P7C-K	20	14.50	38	56	55	37
14	442	P7C-K	30	14.50	42	50	55	37
15	443	P7C-K	30	14.50	42	50	55	37
16	444	P7C-K	30	14.50	42	50	55	37
17	445(9)	P7C-K	30	14.50	42	50	55	37
18	447	P7C-K	30	14.50	42	50	55	37
19	448	P7C-K	30	14.50	42	50	55	37
20	449	P7C-K	30	14.50	42	50	55	37
21	450	P7C-K	30	14.50	42	50	55	37
22	450-13(3)(4)(5)	P7C-K	30	14.50	42	50	55	37
23	450-14(3)(4)(5)	P7C-K	30	14.50	42	50	55	37
24	450-15(3)(4)(5)]	P7C-K	20	14.50	38	44	55	37
25	450-17(3)(4)(5)(7)	P7C-K	20	14.50	40	46	55	37

US units: pressure psi; distance inches; powder lb/h; gas consumption ft³/h. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Table 2 High rate US

PANEL B | ROWS 1-25

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Wheel	RPM	Distance	D.E. %	Powder rate	O2 cons.	Fuel cons.
1	12C	S	45	7.87-9.84	90	35	82	49
2	14E	S	45	7.87-9.84	90	35	82	49
3	15E	S	50	7.87-9.84	95	35	82	49
4	16C	S	45	7.87-9.84	95	35	82	49
5	18C	S	50	7.87-9.84	95	35	82	49
6	19E	S	50	7.87-9.84	95	35	82	49
7	31C-NS	S	45	7.87-9.84	95	28	82	49
8	32C	S	25	7.87-9.84	80	18	82	49
9	35C	H	25	7.87-9.84	90	28	82	49
10	36C	S	40	7.87-9.84	85	28	82	49
11	307NS (3)(4)(5)	H	50	7.87-9.84	70	16	93	51
12	308NS (3)(4)(5)	H	45	7.87-9.84	80	24	82	49
13	309 NS(3)(4)(5)	H	45	7.87-9.84	80	16	64	40
14	442	S	20	7.87-9.84	85	10	82	49
15	443	S	30	7.87-9.84	80	15	82	49
16	444	S	30	7.87-9.84	85	15	82	49
17	445(9)	S	20	7.87-9.84	90	10	82	49
18	447	S	30	7.87-9.84	90	15	82	49
19	448	S	20	7.87-9.84	85	10	82	49
20	449	S	20	7.87-9.84	90	10	82	49
21	450	S	20	7.87-9.84	90	15	82	49
22	450-13(3)(4)(5)	S	50	7.87-9.84	85	30	82	49
23	450-14(3)(4)(5)	H	40	7.87-9.84	75	40	82	49
24	450-15(3)(4)(5)]	TBC	50	7.87-9.84	75	30	64	35
25	450-17(3)(4)(5)(7)	H	40	7.87-9.84	35	40	71	40

US units: pressure psi; distance inches; powder lb/h; gas consumption ft³/h. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

High rate table notes

NOTES 1-10 | TECHNICAL NOTES RETAINED AND QUALIFIED

1. Use the matched siphon plug and cooling cap; gun-cooling air reference 15 psi, subject to equipment rating.

2. Acetylene: 1.00 bar (14.50 psi). Use the installed flowmeter calibration; do not apply assumed pressure reductions.

3. Confirm the surface-preparation and bond-coat specification for the selected powder.

4. Powder mass rate and spray distance affect hardness, abradability and erosion resistance. Qualify them together.

5. Maximum substrate temperature requires powder-specific technical confirmation.

6. Temperature-sensitive substrates require a separately approved lower temperature limit.

7. Confirmed K/M spray distance: 200-250 mm, measured along the spray stream. Approve the spray angle for the job.

8. Set and measure the required powder mass rate. For the confirmed 35 lb/h rows, use 15.88 kg/h.

9. For cooling-side-out cap operation at 20 psi, the equivalent is 1.38 bar; verify cap and equipment limits.

10. Confirm full powder identity and suffix before selecting a recipe.

Table 3 Standard metric

PANEL A | ROWS 1-28

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Nozzle	O2 press.	Fuel press.	H2 press.	O2 scale	Fuel scale	H2 scale	N2 press.	N2 scale
1	12C	P7C -M	2.2	1.00	-	45	55	-	3.79	37
2	14E	P7C -M	2.2	1.00	-	45	56	-	3.79	37
3	15E	P7C -M	2.2	1.00	-	45	55	-	3.79	37
4	15E	P7C -MH	2.1	-	1.6	40	-	50	3.79	40
5	16C	P7C -M	2.2	1.00	-	45	55	-	3.79	37
6	TBC code	P7C -M	2.2	1.00	-	45	55	-	3.79	37
7	19E	P7C -M	2.2	1.00	-	45	55	-	3.79	37
8	31C-NS	P7C -M	2.2	1.00	-	45	55	-	3.79	37
9	36C	P7C -M	2.2	1.00	-	45	55	-	3.79	37
10	41C	P7C -M	2.2	1.00	-	45	55	-	3.79	37
11	41F-NS	P7C -MH	1.7		1.6	35	-	60	3.79	37
12	42C	P7C -M	2.2	1.00	-	45	55	-	3.79	37
13	43C	P7C -M	2.2	1.00	-	45	55	-	3.79	37
14	43F-NS	P7C -MH	1.9		1.9	35	-	70	3.79	37
15	44	P7C -M	2.2	1.00	-	45	55	-	3.79	37
16	45C-NS	P7C -M	1.8	1.00	-	40	60	-	3.79	37
17	51	P7C -M	2.2	1.00	-	45	55	-	3.79	37
18	52C- NS(5)	P7C -MH	2.8		2.1	43	-	65	3.79	37
19	54 (4)	P7C -MH	1.4		1.4	30	-	60	3.79	40
20	55	P7C -MH	2.6		2.4	40	-	75	3.79	40
21	56C-NS	P7C -M	2.2	1.00	-	45	55	-	3.79	37
22	75F(4)(13)	P7C -D	2.1	1.0	-	35	45	-	3.79	37
23	91	P7C -M	2.2	1.00	-	45	55	-	3.79	37
24	101 (15)(16)	P7C -K	2.1	1.00	-	42	50	-	3.79	37
25	101FP (16)(18)	P7C -K	2.1	1.00	-	42	50	-	3.79	37
26	101SF (14)(18)	P7C -D	2.1	1.0	-	42	50	-	3.79	37
27	102 (16)(18)	P7C -K	2.1	1.00	-	42	50	-	3.79	37
28	105 (16)(18)	P7C -K	2.1	1.00	-	42	50	-	3.79	37

Metric units: pressure bar; distance mm; powder kg/h; gas consumption m³/h. TBC values must be confirmed before use. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Table 3 Standard metric

PANEL B | ROWS 1-28

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Wheel	RPM	Distance	D.E. %	Powder rate	O2 cons.	Fuel cons.	H2 cons.
1	12C	S	30	200-250	95	9.1	2.7	1.7	-
2	14E	S	35	200-250	95	9.1	2.7	1.7	-
3	15E	S	35	200-250	95	9.1	2.7	1.7	-
4	15E	S	37	180	95	9.1	2.2	-	7.0
5	16C	S	35	200-250	95	9.1	2.7	1.7	-
6	TBC code	S	33	200-250	95	8.2	2.7	1.7	-
7	19E	S	25	200-250	95	7.3	2.7	1.7	-
8	31C-NS	S	32	200-250	90	7.3	2.7	1.7	-
9	36C	S	30	200-250	85	TBC	TBC	1.7	-
10	41C	S	38	200-250	95	4.5	2.7	-	7.0
11	41F-NS	S	39	155	90	4.5	2.7	1.7	-
12	42C	S	25	200-250	95	4.5	1.8	1.7	-
13	43C	S	22	200-250	90	5.4	2.7	-	8.8
14	43F-NS	S	27	180	90	6.5	2.1	1.7	-
15	44	S	34	200-250	85	4.5	2.7	1.8	-
16	45C-NS	S	15	200-250	90	6.4	2.7	1.7	-
17	51	S	28	200-250	95	2.3	1.3	-	8.5
18	52C- NS(5)	S	25	180	85	1.8	2.3	-	6.9
19	54 (4)	S	29	115	80	5.4	2.7	-	10.5
20	55	S	20	205	95	4.5	1.7	1.7	-
21	56C-NS	S	20	200-250	90	4.1-4.5	2.7	1.3	-
22	75F(4)(13)	S	15	205	80	4.5	2.2	1.7	-
23	91	S	30	200-250	95	4.5	2.2	1.3	-
24	101 (15)(16)	S	15	200-250	40	0.9	2.2	1.3	-
25	101FP (16)(18)	S	15	200-250	40	0.9	2.2	1.3	-
26	101SF (14)(18)	H	15	75	50	0.7	2.2	1.3	-
27	102 (16)(18)	S	15	200-250	55	1.3	2.2	1.3	-
28	105 (16)(18)	S	15	200-250	30	1.1	2.2	1.3	-

Metric units: pressure bar; distance mm; powder kg/h; gas consumption m³/h. TBC values must be confirmed before use. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Table 3 Standard metric

PANEL A | ROWS 29-56

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Nozzle	O2 press.	Fuel press.	H2 press.	O2 scale	Fuel scale	H2 scale	N2 press.	N2 scale
29	105SFP(14)(18)	P7C -D	2.1	1.0	-	42	50	-	3.79	37
30	106 (16)(18)	P7C -K	2.1	1.00	-	42	50	-	3.79	30
31	106F(16)(18)	P7C -K	2.1	1.00	-	42	50	-	3.79	30
32	110 (16)(18)	P7C -K	2.1	1.00	-	42	50	-	3.79	37
33	111 (16)(18)	P7C -K	2.1	1.00	-	42	50	-	3.79	37
34	130 (16)(18)	P7C -K	2.1	1.00	-	42	50	-	3.79	37
35	130SF (14)(18)	P7C -K	2.1	1.00	-	42	50	-	3.79	37
36	131 VF(14)(18)	P7C -D	2.1	1.0	-	42	50	-	3.79	37
37	136 F (16)(18)	P7C -D	2.1	1.0	-	42	50	-	3.79	37
38	201 (16)(18)	P7C -D	2.1	1.0	-	42	50	-	3.79	37
39	210 (16)	P7C -K	2.1	1.00	-	42	50	-	3.79	37
40	211 (16)	P7C -K	2.1	1.00	-	42	50	-	3.79	37
41	212 F- NS	P7C -D	2.2	1.0	-	42	50	-	3.79	40
42	350	P7C -M	2.2	1.00	-	45	55	-	3.79	37
43	351	P7C -M	2.2	1.00	-	45	55	-	3.79	37
44	438 NS-1(2)(3)	P7C -D	1.7	1.0	-	40	55	-	3.79	40
45	439 NS-1(2)(3)	P7C -D	1.7	1.0	-	40	55	-	3.79	40
46	442 (6)(7)	P7C -D	1.7	1.0	-	42	50	-	3.79	37
47	443	P7C -M	2.2	1.00	-	45	55	-	3.79	37
48	444 (7)	P7C -D	1.7	1.0	-	42	50	-	3.79	37
49	445 (8)	P7C -M	2.2	1.00	-	45	55	-	3.79	37
50	447 (7)	P7C -M	2.2	1.00	-	45	55	-	3.79	37
51	448 (7)	P7C -D	1.7	1.0	-	42	50	-	3.79	37
52	449 (7)	P7C -D	1.7	1.0	-	42	50	-	3.79	37
53	450	P7C -M	2.2	1.00	-	45	55	-	3.79	37
54	451	P7C -M	2.2	1.00	-	45	55	-	3.79	37
55	501(2)	P7C -M	2.2	1.00	-	45	55	-	3.79	37
56	625	P7C-D	2.5	-	1.7	18	-	73	3.79	37

Metric units: pressure bar; distance mm; powder kg/h; gas consumption m³/h. TBC values must be confirmed before use. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Table 3 Standard metric

PANEL B | ROWS 29-56

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Wheel	RPM	Distance	D.E. %	Powder rate	O2 cons.	Fuel cons.	H2 cons.
29	105SFP(14)(18)	H	10	75	70	0.9	2.2	1.3	-
30	106 (16)(18)	S	15	200-250	20	0.9	2.2	1.3	-
31	106F(16)(18)	L	45	200-250	25	0.9	2.2	1.3	-
32	110 (16)(18)	S	15	200-250	35	0.9	2.2	1.3	-
33	111 (16)(18)	S	15	200-250	25	0.9	2.2	1.3	-
34	130 (16)(18)	S	15	200-250	35	0.9	2.2	1.3	-
35	130SF (14)(18)	S	15	200-250	40	0.9	2.2	1.3	-
36	131 VF(14)(18)	H	15	75	70	0.9	2.2	1.3	-
37	136 F (16)(18)	S	15	65	45	0.9	2.2	1.3	-
38	201 (16)(18)	L	35	75	20	0.9	2.2	1.3	-
39	210 (16)	S	15	200-250	65	0.9	2.2	1.3	-
40	211 (16)	S	15	200-250	90	0.9	2.2	1.3	-
41	212 F- NS	S	24	150	50	5.4	2.3	1.4	-
42	350	S	15	200-250	90	TBC	2.7	1.7	-
43	351	S	16	200-250	90	TBC	2.7	1.7	-
44	438 NS-1(2)(3)	S	23	90	75	3.2	2.1	1.6	-
45	439 NS-1(2)(3)	S	15	90	85	2.7	2.1	1.6	-
46	442 (6)(7)	S	12	255	85	2.3	2.3	1.4	-
47	443	S	12	200-250	80	2.7	2.7	1.7	-
48	444 (7)	S	12	230	85	2.3	2.3	1.4	-
49	445 (8)	S	12	200-250	90	2.3	2.7	1.7	-
50	447 (7)	S	10	200-250	90	2.0	2.7	1.7	-
51	448 (7)	S	11	230	85	2.3	2.3	1.4	-
52	449 (7)	S	12	230	85	2.3	2.3	1.4	-
53	450	S	12	200-250	90	2.7	2.7	1.7	-
54	451	S	23	200-250	95	5.4	2.7	1.7	-
55	501(2)	S	12	200-250	85	1.8	2.7	1.7	-
56	625	S	20	200	40	3.2	1.1	-	911

Metric units: pressure bar; distance mm; powder kg/h; gas consumption m³/h. TBC values must be confirmed before use. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Table 4 High rate metric

PANEL A | ROWS 1-25

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Nozzle	O2 press.	Fuel press.	O2 scale	Fuel scale	N2 press.	N2 scale
1	12C	P7C-K	2.1	1.00	42	50	3.79	37
2	14E	P7C-K	2.1	1.00	42	50	3.79	37
3	15E	P7C-K	2.1	1.00	42	50	3.79	37
4	16C	P7C-K	2.1	1.00	42	50	3.79	37
5	18C	P7C-K	2.1	1.00	42	50	3.79	37
6	19E	P7C-K	2.1	1.00	42	50	3.79	37
7	31C-NS	P7C-K	2.1	1.00	42	50	3.79	37
8	32C	P7C-K	2.1	1.00	42	50	3.79	37
9	35C	P7C-K	2.1	1.00	42	50	3.79	37
10	36C	P7C-K	2.1	1.00	42	50	3.79	37
11	307NS (3)(4)(5)	P7C-K	2.4	1.00	46	50	3.79	37
12	308NS (3)(4)(5)	P7C-K	2.1	1.00	42	50	3.79	37
13	309 NS(3)(4)(5)	P7C-K	2.1	1.00	38	56	3.79	37
14	442	P7C-K	2.1	1.00	42	50	3.79	37
15	443	P7C-K	2.1	1.00	42	50	3.79	37
16	444	P7C-K	2.1	1.00	42	50	3.79	37
17	445(9)	P7C-K	2.1	1.00	42	50	3.79	37
18	447	P7C-K	2.1	1.00	42	50	3.79	37
19	448	P7C-K	2.1	1.00	42	50	3.79	37
20	449	P7C-K	2.1	1.00	42	50	3.79	37
21	450	P7C-K	2.1	1.00	42	50	3.79	37
22	450-13(3)(4)(5)	P7C-K	2.1	1.00	42	50	3.79	37
23	450-14(3)(4)(5)	P7C-K	2.1	1.00	42	50	3.79	37
24	450-15(3)(4)(5)]	P7C-K	1.4	1.00	38	44	3.79	37
25	450-17(3)(4)(5)(7)	P7C-K	1.4	1.00	40	46	3.79	37

Metric units: pressure bar; distance mm; powder kg/h; gas consumption m³/h. TBC values must be confirmed before use. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.

Table 4 High rate metric

PANEL B | ROWS 1-25

K/M operating values updated. Select the correct powder and nozzle; validate the complete job recipe before production. TBC = technical confirmation required.

No.	Powder / notes	Wheel	RPM	Distance	D.E. %	Powder rate	O2 cons.	Fuel cons.
1	12C	S	45	200-250	90	15.88	2.32	TBC
2	14E	S	45	200-250	90	15.88	2.32	TBC
3	15E	S	50	200-250	95	15.88	2.32	TBC
4	16C	S	45	200-250	95	15.88	2.32	TBC
5	18C	S	50	200-250	95	15.88	2.32	TBC
6	19E	S	50	200-250	95	15.88	2.32	TBC
7	31C-NS	S	45	200-250	95	TBC	2.32	TBC
8	32C	S	25	200-250	80	TBC	2.32	TBC
9	35C	H	25	200-250	90	TBC	2.32	TBC
10	36C	S	40	200-250	85	TBC	2.32	TBC
11	307NS (3)(4)(5)	H	50	200-250	70	TBC	TBC	TBC
12	308NS (3)(4)(5)	H	45	200-250	80	TBC	2.32	TBC
13	309 NS(3)(4)(5)	H	45	200-250	80	TBC	TBC	TBC
14	442	S	20	200-250	85	TBC	2.32	TBC
15	443	S	30	200-250	80	TBC	2.32	TBC
16	444	S	30	200-250	85	TBC	2.32	TBC
17	445(9)	S	20	200-250	90	TBC	2.32	TBC
18	447	S	30	200-250	90	TBC	2.32	TBC
19	448	S	20	200-250	85	TBC	2.32	TBC
20	449	S	20	200-250	90	TBC	2.32	TBC
21	450	S	20	200-250	90	TBC	2.32	TBC
22	450-13(3)(4)(5)	S	50	200-250	85	TBC	2.32	TBC
23	450-14(3)(4)(5)	H	40	200-250	75	TBC	2.32	TBC
24	450-15(3)(4)(5)]	TBC	50	200-250	75	TBC	TBC	TBC
25	450-17(3)(4)(5)(7)	H	40	200-250	35	TBC	TBC	TBC

Metric units: pressure bar; distance mm; powder kg/h; gas consumption m³/h. TBC values must be confirmed before use. Flow columns are instrument scales, not volumetric flow. D.E. = deposition efficiency. Numbers in parentheses refer to the accompanying numbered notes.