



Powder Jet 85 Spraying Tables

US SYSTEM – Acetylene and Hydrogen

PPS Powder	Metco EQ #	Vibrator	Nozzle	Meter Valve	Flow Control Valve Setting (Note 1)	Spray Dist. In Inches	Lighting Pressure PSI			2GF Flowmeter Readings			Consumption Per Hour Ft ³ (Note 6)				Speed Ft ² Per Hr .001" Thick (Note 3)	Pwdr Weight Lb. Ft ² .001" Thick (Note 3)	Deposit Efficiency % (Note 7)
							Oxy	Acet	Hyd	Oxy	Acet	Hyd	Oxy	Acet	Hyd	Pwd Lb.			
1	1a	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PWD00002	44	NO	B-G	11	16-18	7-10	25	15	--	34	34	--	60	33	--	16	375	.043	90
PWD00003	51	NO	B-G	11	8-12	5-7	20	15	--	32	32	--	52	30	--	14	425	.033	95
PWD00004	451	NO	B-F	12	10-14	6-8	25	15	--	34	34	--	60	33	--	10	230	.043	90
PWD00005	41C	NO	B-G	11	16-18	7-10	25	15	--	34	34	--	60	33	--	14	360	.039	95
PWD00006	42C	NO	B-G	11	16-18	7-10	25	15	--	34	34	--	60	33	--	14	380	.037	95
PWD00008 (NOTE 2)	14E	NO	B-G	11	16-18	9-10	25	15	--	34	34	--	60	33	--	20	465	.043	95
PWD00012 (NOTE 4-5)	442	YES	B-G	15	6-10	10	25	15	--	34	34	--	60	33	--	5	115	.044	85
PWD00013 (NOTE 4)	443	YES	B-G	12	6-10	6	30	15	--	30	36	--	47	33	--	6	150	.040	90
PWD00014 (NOTE 4)	444	YES	B-F	15	12-14	4-5	30	15	--	30	36	--	47	33	--	7	165	.043	85
PWD00015	445	YES	B-G	15	6-10	4-7	25	15	--	33	33	--	56	32	--	6	146	.041	85
PWD00017 (NOTE 4)	447	YES	B-G	15	6-10	4-7	30	15	--	30	36	--	47	33	--	4.5	95	.042	90
PWD00018 (NOTE 4)	448	YES	B-G	15	6-10	9	25	15	--	34	34	--	60	33	--	5	130	.038	85
PWD00019 (NOTE 4)	449	YES	B-G	15	6-10	8	25	15	--	34	34	--	60	33	--	5	110	.045	85
PWD00011-450 (NOTE 4)	450	YES	B-G	12	8-12	4-8	20	15	--	30	36	--	47	33	--	6	144	.042	90
PWD00033	43C	NO	B-G	11	16-18	7-10	25	15	--	34	34	--	60	33	--	16	390	.041	90
PWD00034F	34F	YES	B-G	11	7-11	4-7	30	--	30	30	--	45	54	--	200	16	265	.060	85
PWD00101 (NOTE 2)	15E	NO	B-G	11	16-18	9-10	25	15	--	34	34	--	60	33	--	20	480	.042	95
PWD00102 (NOTE 2)	16C	NO	B-G	11	16-18	9-10	25	15	--	34	34	--	60	33	--	20	480	.042	95
PWD00103 (NOTE 2)	19E	NO	B-G	11	16-18	9-10	25	15	--	34	34	--	60	33	--	20	465	.043	95
PWD00108 (NOTE 2)	32C	NO	B-G	11	16-18	7-10	25	15	--	34	34	--	60	33	--	18	360	.050	80
PWD0012C	12C	NO	B-G	11	16-18	9-10	25	15	--	34	34	--	60	33	--	20	435	.046	90
PWD153A (NOTE 6)	55	NO	B-G	12	12-16	4-5	30	15	--	30	34	--	60	30	--	16	360	.044	90
PWD01118	452	NO	B-G	11	4-10	6-8	25	15	--	35	40	--	61	47	--				
PWD01118M	453	NO	B-G	11	4-10	6-8	25	15	--	35	40	--	61	47	--				



Powder Jet 85 Spraying Tables

HIGH SPRAY RATE TABLE – US SYSTEM

PPS Powder (Note 4)	Metco EQ #	Vibrator	Nozzle	Meter Valve	Flow Control Valve Setting	Spray Dist. In Inches	Lighting Pressure PSI		2GF Flowmeter Readings		Consumption Per Hour Ft ³			Speed Ft. ² Per Hr .001” Thick	Pwdr Weight Lb. Ft ² .001” Thick	Deposit Efficiency %
							Oxy	Acet	Oxy	Acet	Oxy	Acet	Pwd Lb.			
1	1a	2	3	4	5	6	7	8	10	11	13	14	16	17	18	19
PWD00012	442	YES	B-K	11	7-12	8-9	28	15	46	54	94	56	10	250	.040	85
PWD00013	443	YES	B-K	11	10-15	5-6	28	15	46	54	94	56	15	320	.041	90
PWD00014	444	YES	B-K	11	12-17	6-7	28	15	46	54	94	56	15	355	.043	85
PWD00015	445	YES	B-K	11	7-12	4-5	28	15	46	54	94	56	10	240	.041	85
PWD00017	447	YES	B-M	11	10-15	6-7	28	15	46	54	94	56	10	240	.042	90
PWD00018	448	YES	B-K	11	5-10	9.5-10.5	28	15	46	54	94	56	10	265	.038	85
PWD00019	449	YES	B-K	11	9-14	9.5-10.5	28	15	46	54	94	56	10	220	.045	85
PWD00011-450	450	YES	B-K	11	10-15	5-6	28	15	46	54	94	56	15	360	.042	90

* NS powders use the same settings as the powder of the same number without the NS suffix.

Notes:

- The ranges of Flow Control Valve settings are nominal. Individual guns may require settings which fall outside the range listed. Adjust as needed to obtain spray rates shown.
- When spraying small diameters, spray distance may be decreased to 6-7” if some porosity is not an issue.
- The figures shown in columns 17 and 18 for PWD0012C, PWD00008, PWD00101, PWD00102, PWD00103 and PWD00034F are based on fused coatings.
- With exothermic powders, proper spray distance is especially important, or bond strength and reliability fall off rapidly.
- Substrate preheat is critical. Preheat to 250-300 degrees.
- Consumptions shown are optimal values obtained by skilled operators with equipment in 1st class condition.
- Deposit efficiency figures are approximate and rounded for easy calculation. Where accurate figures are important, special on the job test runs are advised.

Concentrating Nozzle Setup Chart – US System

Fuel Gas	Powder Grade	Vibrator	Meter Valve	Flow Control Valve Setting	Lighting Pressure PSI		2GF Flowmeter Reading	
					Oxy.	Fuel	Oxy.	Fuel
Acetylene	COARSE	NO	12	16-18	20	15	30	36
Hydrogen	FINE	YES	12	16-18	19	18	20	40



Powder Jet 85 Spraying Tables

METRIC SYSTEM - Acetylene and Hydrogen

PPS Powder	Metco EQ #	Vibrator	Nozzle	Meter Valve	Flow Control Valve Setting (Note 1)	Spray Dist. In mm	Lighting Pressure bar			2GF Flowmeter Readings			Consumption Per Hour m ³ (Note 6)				Speed Ft. ² Per Hr 0.1mm Thick (Note 3)	Pwdr Weight Kg. m ² 0.1mm Thick (Note 3)	Deposit Efficiency % (Note 7)
							Oxy	Acet	Hyd	Oxy	Acet	Hyd	Oxy	Acet	Hyd	Pwd Kg.			
1	1a	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
PWD00002	44	NO	B-G	11	16-18	180-250	13.7	1.03	--	34	34	--	1.7	.93	--	7.3	8.9	.83	90
PWD00003	51	NO	B-G	11	8-12	130-180	1.4	1.0	--	32	32	--	1.5	.85	--	6.4	10.0	.63	95
PWD00004	451	NO	B-F	12	10-14	150-205	1.7	1.0	--	34	34	--	1.7	.93	--	4.5	5.4	.83	90
PWD00005	41C	NO	B-G	11	16-18	180-250	1.7	1.0	--	34	34	--	1.7	.93	--	6.4	8.5	.75	95
PWD00006	42C	NO	B-G	11	16-18	180-250	1.7	1.0	--	34	34	--	1.7	.93	--	6.4	9.0	.71	95
PWD00008 (NOTE 2)	14E	NO	B-G	11	16-18	230-250	1.7	1.0	--	34	34	--	1.7	.93	--	9.1	11.0	.83	95
PWD00012 (NOTE 4-5)	442	YES	B-G	15	6-10	250	1.7	1.0	--	34	34	--	1.7	.93	--	2.3	2.7	.85	85
PWD00013 (NOTE 4)	443	YES	B-G	12	6-10	150	2.1	1.0	--	30	36	--	1.3	.93	--	2.7	3.5	.77	90
PWD00014 (NOTE 4)	444	YES	B-F	15	12-14	100-130	2.1	1.0	--	30	36	--	1.3	.93	--	3.2	3.9	.83	85
PWD00015	445	YES	B-G	15	6-10	100-175	1.7	1.0	--	33	33	--	1.6	.91	--	2.7	3.4	.79	85
PWD00017 (NOTE 4)	447	YES	B-G	15	6-10	100-180	2.1	1.0	--	30	36	--	1.3	.93	--	2.0	2.2	.81	90
PWD00018 (NOTE 4)	448	YES	B-G	15	6-10	230	1.7	1.0	--	34	34	--	1.7	.93	--	2.3	3.1	.73	85
PWD00019 (NOTE 4)	449	YES	B-G	15	6-10	205	1.7	1.0	--	34	34	--	1.7	.93	--	2.3	2.6	.86	85
PWD00011-450 (NOTE 4)	450	YES	B-G	12	8-12	100-205	1.4	1.0	--	30	36	--	1.3	.93	--	2.7	3.4	.81	90
PWD00033	43C	NO	B-G	11	16-18	180-250	1.7	1.0	--	34	34	--	1.7	.93	--	7.3	9.2	.79	90
PWD00034F	34F	YES	B-G	11	7-11	100-180	2.1	--	2.1	30	--	45	1.5	--	5.7	7.3	6.3	1.15	85
PWD00101 (NOTE 2)	15E	NO	B-G	11	16-18	230-250	1.7	1.0	--	34	34	--	1.7	.93	--	9.1	11.3	.81	95
PWD00102 (NOTE 2)	16C	NO	B-G	11	16-18	230-250	1.7	1.0	--	34	34	--	1.7	.93	--	9.1	11.3	.81	95
PWD00103 (NOTE 2)	19E	NO	B-G	11	16-18	230-250	1.7	1.0	--	34	34	--	1.7	.93	--	9.1	11.0	.83	95
PWD00108 (NOTE 2)	32C	NO	B-G	11	16-18	180-250	1.7	1.0	--	34	34	--	1.7	.93	--	8.2	8.5	.96	80
PWD0012C	12C	NO	B-G	11	16-18	230-250	1.7	1.0	--	34	34	--	1.7	.93	--	9.1	10.3	.88	90



Powder Jet 85 Spraying Tables

HIGH SPRAY RATE TABLE – METRIC SYSTEM

PPS Powder (Note 4)	Metco EQ #	Vibrator	Nozzle	Meter Valve	Flow Control Valve Setting	Spray Dist. In mm	Lighting Pressure Bar		2GF Flowmeter Readings		Consumption Per Hour m ³			Speed Per Hr 0.1mm Thick	Pwdr Weight Kg. m ² 0.1mm Thick	Deposit Efficiency %
							Oxy	Acet	Oxy	Acet	Oxy	Acet	Pwd Lb.			
1	1a	2	3	4	5	6	7	8	10	11	13	14	16	17	18	19
PWD00012	442	YES	B-K	11	7-12	203-229	1.9	1.0	46	54	2.7	1.6	4.5	5.9	0.77	85
PWD00013	443	YES	B-K	11	10-15	127-152	1.9	1.0	46	54	2.7	1.6	6.8	8.7	0.78	90
PWD00014	444	YES	B-K	11	12-17	152-178	1.9	1.0	46	54	2.7	1.6	6.8	8.4	0.82	85
PWD00015	445	YES	B-K	11	7-12	102-127	1.9	1.0	46	54	2.7	1.6	4.5	5.7	0.79	85
PWD00017	447	YES	B-M	11	10-15	152-178	1.9	1.0	46	54	2.7	1.6	4.5	5.7	0.81	90
PWD00018	448	YES	B-K	11	5-10	241-267	1.9	1.0	46	54	2.7	1.6	4.5	6.2	0.72	85
PWD00019	449	YES	B-K	11	9-14	241-267	1.9	1.0	46	54	2.7	1.6	4.5	5.2	0.85	85
PWD00011-450	450	YES	B-K	11	10-15	127-152	1.9	1.0	46	54	2.7	1.6	6.8	8.5	0.81	90

* NS powders use the same settings as the powder of the same number without the NS suffix.

Notes:

- The ranges of Flow Control Valve settings are nominal. Individual guns may require settings which fall outside the range listed. Adjust as needed to obtain spray rates shown.
- When spraying small diameters, spray distance may be decreased to 152-178 mm if some porosity is not an issue.
- The figures shown in columns 17 and 18 for PWD0012C, PWD00008, PWD00101, PWD00102, PWD00103 and PWD00034F are based on fused coatings.
- With exothermic powders, proper spray distance is especially important, or bond strength and reliability fall off rapidly.
- Substrate preheat is critical. Preheat to 120-150 C.
- Consumptions shown are optimal values obtained by skilled operators with equipment in 1st class condition.
- Deposit efficiency figures are approximate and rounded for easy calculation. Where accurate figures are important, special on the job test runs are advised.

Concentrating Nozzle Setup Chart – Metric System

Fuel Gas	Powder Grade	Vibrator	Meter Valve	Flow Control Valve Setting	Lighting Pressure Bar		2GF Flowmeter Reading	
					Oxy.	Fuel	Oxy.	Fuel
Acetylene	COARSE	NO	12	16-18	20	15	30	36
Hydrogen	FINE	YES	12	16-18	19	18	20	40