Cold Gas BOM

Item	Category	Link	Price	Quantity	Notes
12oz CO_2 Paintball Tank	Hardware	CO2 Tank	30	1	Standard CO_2 storage
CO_2 Regulator	Hardware	CO2 Reg	60	1	Adjustable regulator
PTFE Tubing (1/4" OD)	Hardware	1/4" OD PTFE	20	1 roll	Chemical resistant
PTC 1/4" OD to NPT; PTC 1/4" OD Kit	Hardware	PTC2NPT; PTC Kit	5	10pk;60pk	Leak-proof connections
12V DC Solenoid Valve	Hardware	12V DC Solenoid Valve	15	1	Valve for flow control
Raspberry Pi 5	Electronics	Already Have		1	Microcontroller
IRLZ44N MOSFET	Electronics	IRLZ44N MOSFET	10	5-pack	Controls solenoid
12V DC Power Supply	Electronics	12V DC PS - Solenoid	15	1	Powers solenoid
Flyback Diode (1N4007)	Electronics	Fly Back Diode	5	10-pack	Protects circuit
Breadboard	Electronics	Bread Board	7	1	For prototyping
Jumper Wires & Resistors	Electronics	Resistors; Jumper Wires	10	As needed	For connections
Plywood Baseplate	Hardware	Have	10	1	Custom-cut mounting
Mounting Hardware	Hardware	Have	10	As needed	Brackets, clamps, zip ties
Pressure Relief Valve	Safety	Relief Valve - 110 PSI	20	1	Ensures safe pressure
Piping Hardware	Safety		15	1	Monitors system pressure
Safety Glasses & Gloves	Safety	Have	0	1 set	Personal protection
Leak Detection Solution	Safety		5	1	Check for leaks
3D Printer & PETG Filament	Tools	GaTech Makerspace	0	1	For nozzle fabrication
MATLAB	Software	Have	0	-	Simulation toolkit
Python (Optional)	Software	Have	0	-	Visualization and analysis
Raspberry Pi IDE	Software	Have	0	-	For microcontroller code
Digital Scale (Optional)	Testing	Have	0	1	Estimate thrust by recoil
Outdoor Workspace Setup	Testing	Have	0	1	Safe testing area
TOTAL			237		