HyperCyl®

By Aries Engineering Company, Inc.

HZS Series Pneumatic Schematics

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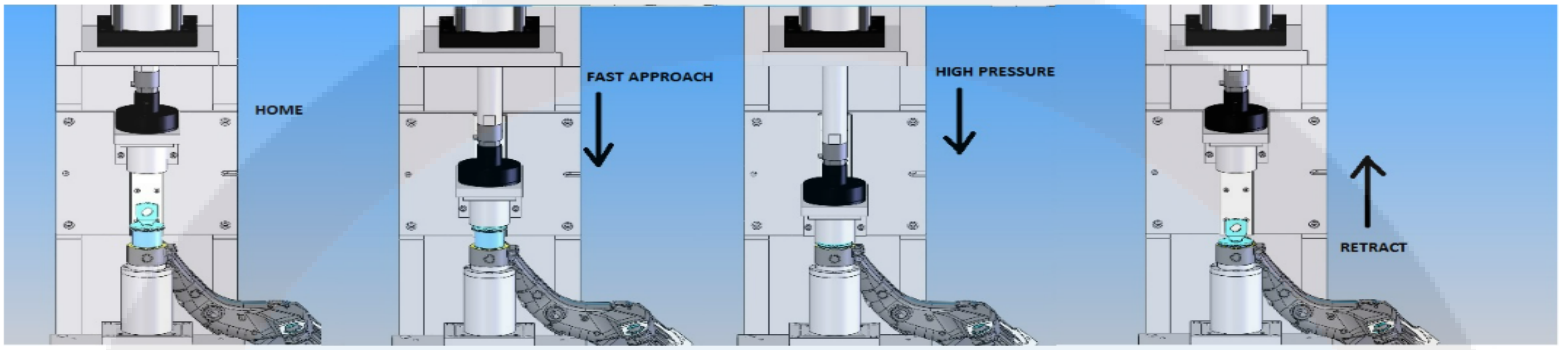
Master Control Sequence

The HPI, HPS and HPT HyperCyl® cylinders require two (2) pneumatic 4-way directional control valves and a plant air supply for proper operation. The HZ series HyperCyl® cylinder requires only one (1) pneumatic 2-way directional control valve.

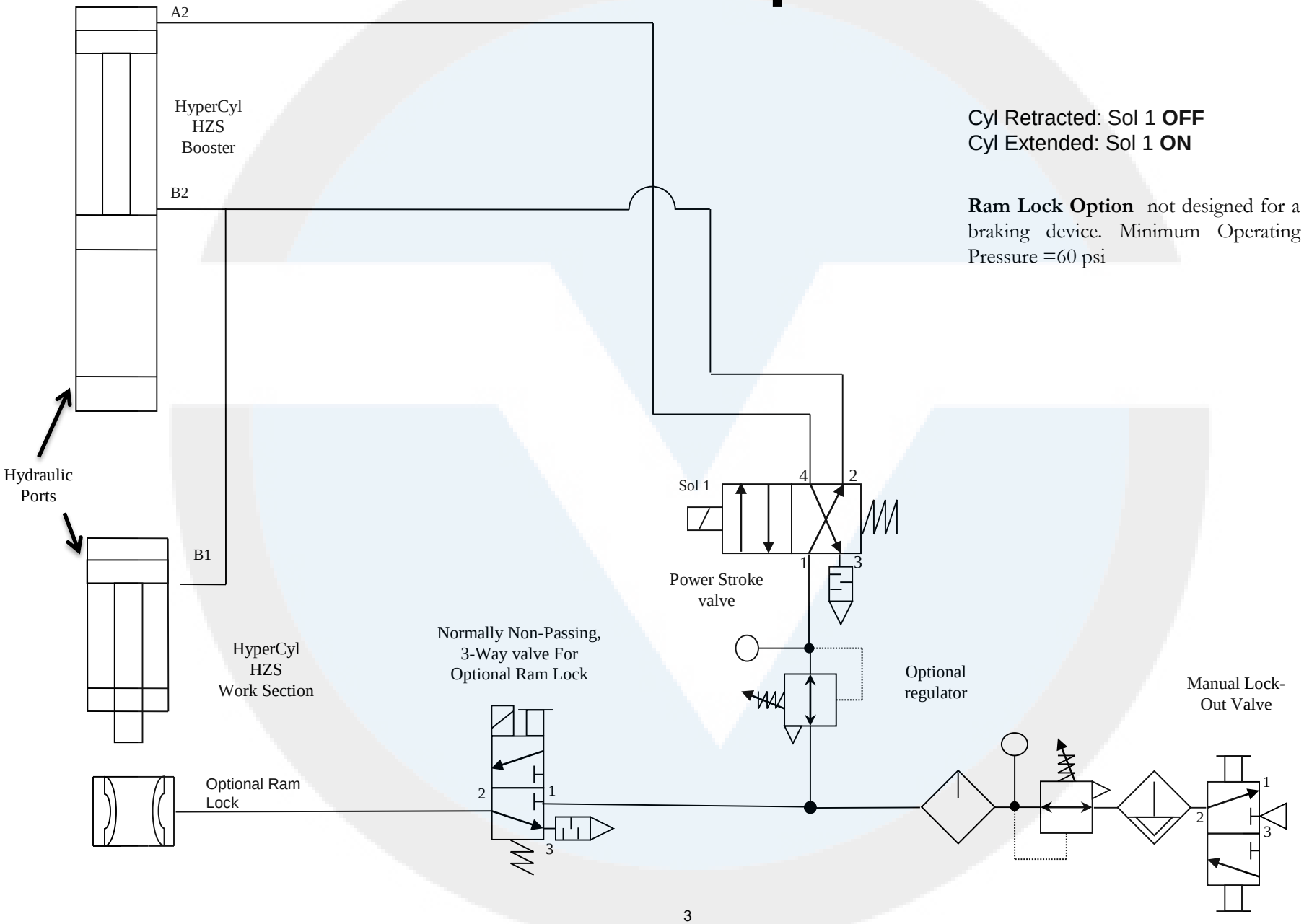


Control sequence to be followed in order 1 through 3:

Step Number	Description of Operation	"A2" Port Condition	"B2" Port Condition
1.	**Home** (retracted)	Exhausted	Pressurized
2.	**High Pressure Extend**	Pressurized	Exhausted
3.	**High Pressure Retract**	Exhausted	Pressurized
	(Cylinder now at step 1)		

In cycle (steps 1 through 3).
The mid position of the valves is used only for an E-Stop condition (cycle interrupted), or shutdown. Normally, the valve is shifted to one side or the other, and not in the mid position.
Not in cycle (step 1)
When not in cycle, and the e-stop is cleared, B2 must return to its pressurized condition prior to the start of the cycle. For example, the operator breaches the light curtain to load, unload, or change a part. The machine is not in cycle. The valves shift to their mid position. When the operator is clear of the light curtain, the valves must be shifted to the position in which B2 is pressurized before the start of the next cycle.

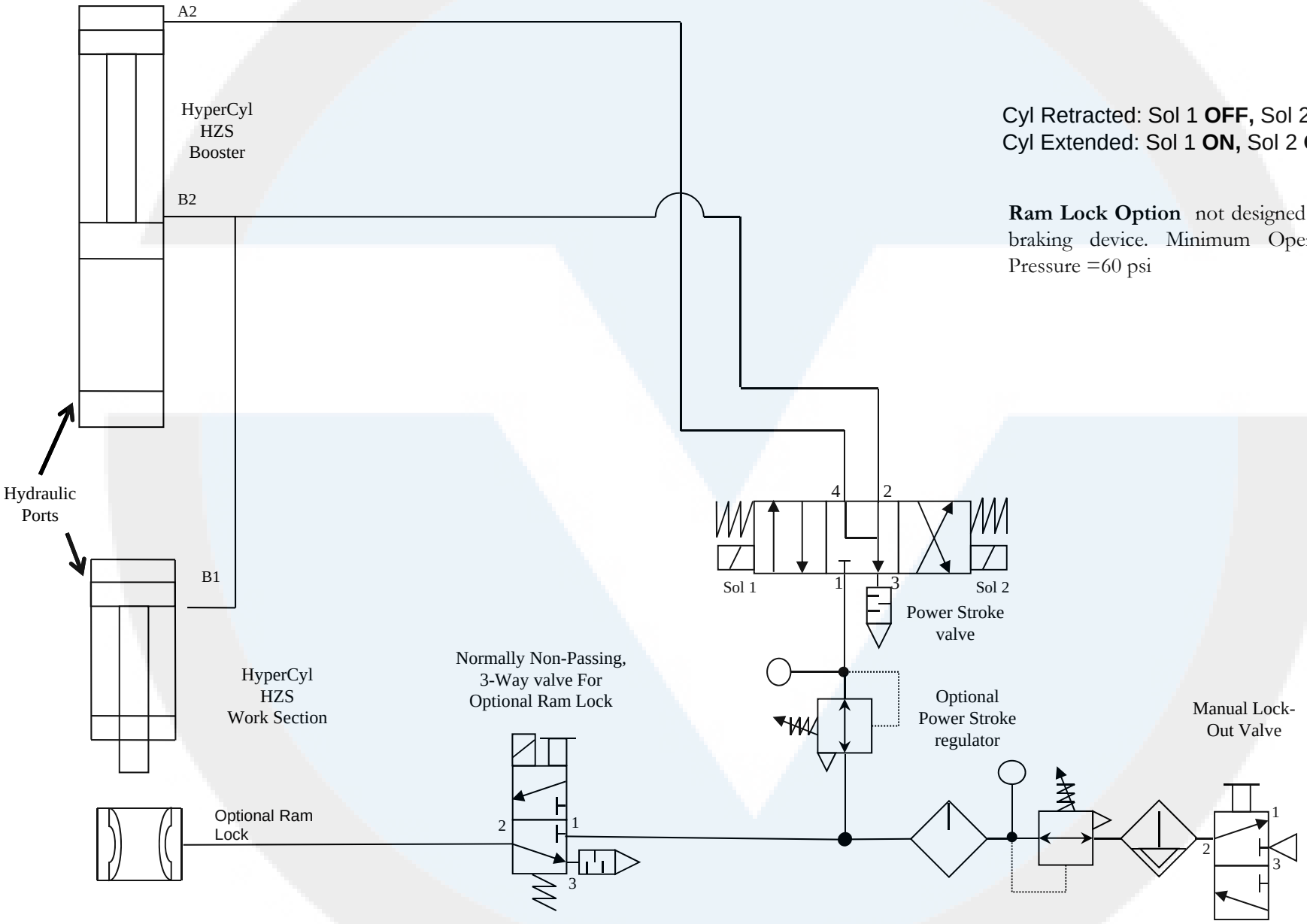
HZS Series Option 1



Cyl Retracted: Sol 1 **OFF**
Cyl Extended: Sol 1 **ON**

Ram Lock Option not designed for a braking device. Minimum Operating Pressure =60 psi

HZS Series Option 2



Cyl Retracted: Sol 1 **OFF,** Sol 2 **ON**
Cyl Extended: Sol 1 **ON,** Sol 2 **OFF**

Ram Lock Option not designed for a braking device. Minimum Operating Pressure =60 psi

Contact Information

Aries Engineering Co., Inc.
130 Aries Drive
Dundee, MI 48131

Phone: (734) 529-8855

Fax: (734) 529-8844

E-Mail: service@hypercyl.com

www.HyperCyl.com

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