

## Forces for Toggle-Aire Hydro-Pneumatic Cylinders

2009

### Low Pressure Drive Cylinder

1030 Straight Cylinder (A = 6.492 Sq. In. ) (2.875" Bore)  
 1530 Straight Cylinder (A = 11.793 Sq. In. ) (3.875" Bore)  
 1530 Tandem Cylinder (A = 22.801 Sq. In. )

### Cyl. Size

### Line Pressure (psi)

	40	50	60	70	80	90	100
2 Ton	2147.6	2684.5	3221.4	3758.3	4295.2	4832.1	5369.0
4 Ton	3900.8	4876.0	5851.2	6826.4	7801.6	8777.5	9752.8
8 Ton	7086.4	8858.0	10629.6	12401.2	14172.8	15944.4	17716.0
16 Ton	13701.6	17127.0	20552.4	23977.8	27403.2	30828.6	34254.0

**Pounds  
Force**

### Force Multipliers

### Pressure Multipliers

### Approach Force

### Retract Force

2 Ton	53.69 X Line Pressure	8.27 X Line Pressure	5.71 X Line Pressure	4.73 X Line Pressure
4 Ton	97.52 X Line Pressure	8.27 X Line Pressure	11.00 X Line Pressure	10.00 X Line Pressure
8 Ton	177.16 X Line Pressure	15.02 X Line Pressure	11.00 X Line Pressure	10.00 X Line Pressure
16 ton	342.54 X Line Pressure	29.05 X Line Pressure	11.00 X Line Pressure	10.00 X Line Pressure