

# FLO-MOTION™



PNEUMATIC • BALL • TRANSFERS

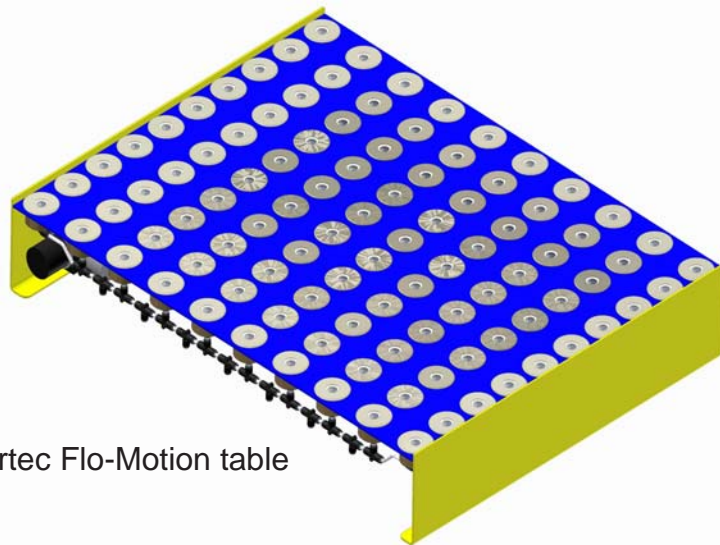


Top-Mount Flo-Motion Unit

High Speed Operation in excess of 10 m/sec

- Cargo Handling
- Straight & Curved Conveyors
- High Speed Sortation
- Incline/Decline
- Specialized machinery

**FLO-MOTION** performs within a minimal consumption closed loop compressed air system. The load range and product velocity will determine the air pressure setting. **FLO-MOTION** consists of a ball that floats on a film of air. Its load capacity is not reduced at higher speeds. **FLO-MOTION** is not a direct replacement for traditional ball transfers, but an advanced technological device that exceeds the limits of present day technology. However, it can perform as well at slow or static speeds, such as the manual movement of packages or containers.



Portec Flo-Motion table

## Flo-Motion Selection Process

Choose available air supply pressure to be used (up to 425 kPa):.....(kPa)  
 Determine total weight (load) of object to be moved (kgs).....(kgs)  
 Determine minimum quantity of FLO-MOTION units under load:..  
 Qty FLO-MOTION = (Load / Air Pressure) / 0.0264

**Example:**

Load = 50 kgs

Available Air Supply Pressure = 425 kPa

Qty of FLO-MOTION = (50 kg / 425 kPa) / 0.264 = 5  
 FLO-MOTION units under load at 425 kPa

This will determine the minimum number of FLO-MOTION units required to support the load. We recommend that this number be at least 9 to allow for the movement on a pattern. If the calculated quantity is less than 9, more FLO-MOTION units using less air pressure will be required.

**Example:**

In the example on the left, only 5 FLO-MOTION's are required. Therefore, more FLO-MOTION units using less air pressure are required. Calculate the required pressure based on 9 FLO-MOTION units.

Air Pressure = (50 kg / 9 ) / 0.0264 = 210 kPa, use 210 kPa.

Qty. of FLO-MOTION = (50 kPa / 210 kPa) / 0.0264 = 9 FLO-MOTION at 210 kPa psi

		Total Allowable load in Kilograms											
Quantity of Flo-Motion Units		9	10	11	12	13	14	15	16	17	18	19	20
Allowable load per Flo-Motion (kgs)	Air Pressure (kPa)												
2.0	75	18	20	22	24	26	28	30	32	34	36	38	40
2.6	100	23	26	29	31	34	36	39	42	44	47	49	52
3.3	125	30	33	36	40	43	46	50	53	56	59	63	66
4.0	150	36	40	44	48	52	56	60	64	68	72	76	80
4.6	175	41	46	51	55	60	64	69	74	78	83	87	92
5.3	200	48	53	58	64	69	74	80	85	90	95	101	106
5.9	225	53	59	65	71	77	83	89	94	100	106	112	118
6.6	250	59	66	73	79	86	92	99	106	112	119	125	132
7.2	275	65	72	79	86	94	101	108	115	122	130	137	144
7.9	300	71	79	87	95	103	111	119	126	134	142	150	158
8.6	325	77	86	95	103	112	120	129	138	146	155	163	172
9.2	350	83	92	101	110	120	129	138	147	156	166	175	184
9.9	375	89	99	109	119	129	139	149	158	168	178	188	198
10.5	400	95	105	116	126	137	147	158	168	179	189	200	210
11.2	425	101	112	123	134	146	157	168	179	190	202	213	224