

## Weight-To-Resistance Ratio Explained:

The first speed pulley was made back in the mid 90's. A European vendor wanted a dual handle pulley for bilateral workout using one weight stack as opposed to two which was common at that time. **However, the bilateral handle pulley needed to offer light resistance like the standard pulleys.**

The manufacturer designed a dual handle pulley by adding wheels at the top of the weight stack. Instead of tying the rope off at the weight stack, they threaded the rope through a number of wheels and brought the rope back out in front to attach a second handle. The problem with the design was that for each wheel added the resistance was cut by half. So, they increased the size of the weight stack to compensate for the loss of resistance. By design, they created the issue of "weight-to-resistance ratio), which to many is really confusing.

The weight-to-resistance ratio basically explains how much resistance you get per weight plate. The higher the weight-to-resistance ratio the less resistance you get from each increment. For example, a RehabPro 100 lb. speed pulley weight stack consisting of 20x 5 lb. weight plates offers 1 lb. of resistance using one pulley handle or both pulley handles independently. The "weight-to-resistance is cut by half (3:1) if both ropes are attached to the same handle.

### Example:

#### RehabPro M100S-SW / 6:1 Weight-To-Resistance Ratio Table (20x Weight Increments)

Each 5.0 lb. weight plate **offers 1.0 lbs. of resistance** with the use of 1x pulley handle or both handles separately. You double the resistance if you attach both rope to 1x pulley handle (3:1 Weight-To-Resistance Ratio).

RehabPro M200S-SW doubles the numbers below.

Weight Increment	Total Weight / 6	Actual Resistance 1x handle	Actual Resistance 2x handles
# 1	5.0 lbs. / 6	1.0 lbs.	2.0 lbs.
# 2	10.0 lbs. / 6	2.0 lbs.	4.0 lbs.
# 3	15.0 lbs. / 6	3.0 lbs.	6.0 lbs.
# 4	20.0 lbs. / 6	4.0 lbs.	8.0 lbs.
# 5	25.0 lbs. / 6	5.0 lbs.	10.0 lbs.
# 6	30.0 lbs. / 6	6.0 lbs.	12.0 lbs.
# 7	35.0 lbs. / 6	7.0 lbs.	14.0 lbs.
# 8	40.0 lbs. / 6	8.0 lbs.	16.0 lbs.
# 9	45.0 lbs. / 6	9.0 lbs.	18.0 lbs.
# 10	50.0 lbs. / 6	10.0 lbs.	20.0 lbs.
# 11	55.0 lbs. / 6	11.0 lbs.	22.0 lbs.
# 12	60.0 lbs. / 6	12.0 lbs.	24.0 lbs.
# 13	65.0 lbs. / 6	13.0 lbs.	26.0 lbs.
# 14	70.0 lbs. / 6	14.0 lbs.	28.0 lbs.
# 15	75.0 lbs. / 6	15.0 lbs.	30.0 lbs.
# 16	80.0 lbs. / 6	16.0 lbs.	32.0 lbs.
# 17	85.0 lbs. / 6	17.0 lbs.	34.0 lbs.
# 18	90.0 lbs. / 6	18.0 lbs.	36.0 lbs.
# 19	95.0 lbs. / 6	19.0 lbs.	38.0 lbs.
# 20	100.0 lbs. / 6	20.0 lbs.	40.0 lbs.