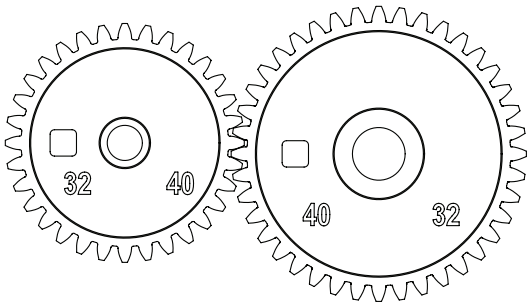
BK-250 Diaphragm Meter

Wheel Set Selection Instructions
Adjustment Wheels Parts List

Wheel Set Selection

1. Determine Accuracy (% Error) target (Acc_{TARG}).
   - Example: 0.0% @ Open & 0.0% @ Check Flowrate = Acc_{TARG}
2. Run meter on proving equipment.
   - Record accuracy in % Error for Open and Check Flowrates.
     - Example: Acc_{MEAS} = -0.4% – Open
       Acc_{MEAS} = -0.4% – Check Flowrate
3. Calculate how much of a change in % Error (Acc_{change}) is required by taking the difference between the Accuracy Target (Acc_{TARG}) and the Measured (Acc_{MEAS}) % Error.
   - Example
     - $Acc_{TARG} – Acc_{MEAS} = Acc_{CHANGE}$
     - 0.0% – -0.4% = 0.4% @ Open = Acc_{CHANGE}
     - 0.0% – -0.4% = 0.4% @ Check = Acc_{CHANGE}
   - These give you the adjustment required from the current Wheel Set. Record this value.
4. Examine the two gears that make up the Wheel Set and find them in Table 1.
   - A wheel set contains a large and small gear of the same color.
   - The gears can be identified by two numbers molded into one face.
     - The larger number represents the number of teeth on the large gear.
     - The smaller number represents the number of teeth on the small gear.
   - Example



   - Look for the 32 in the Small Driving Wheel column and the 40 in the Large Driving Wheel column, to get your $Adj_{CURRENT}$ Value from the Cumulative Adjustment column.
   - The 32 and 40 gears make up Wheel Set No. 03747G010, with a Cumulative Adjustment of 0.00%.
   - $Adj_{CURRENT}$ = 0.00%.
5. Calculate, the new Cumulative Adjustment and determine the new Wheel Set No.
   - Example
     - Measured Accuracy (Acc_{CHANGE}) + ($Adj_{CURRENT}$) = (Adj_{NEW})
     - Calculate the new Wheel Set's Cumulative Adjustment
       - 0.40% + 0.00% = 0.40% @ Open = Adj_{NEW}
       - 0.40% + 0.00% = 0.40% @ Check = Adj_{NEW}
   - Look for these (Adj_{NEW} = 0.40%) values in Table 1, under the Cumulative Adjustment column. The closest of which is 0.40%, for Wheel Set No.: 03747G015 made up of the 49,61 gears.

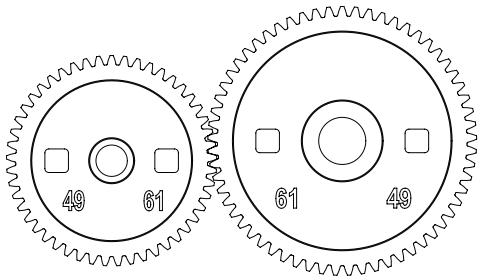


Table 1—Wheel Set Information

Allocation of wheel set / adjustment leap

Wheel Set No.	Small Driving Wheel	Large Driving Wheel	Cumulative Adjustment (% Error)
03747G130	38	44	7.37
03747G120	30	35	6.67
03747G110	28	33	5.71
03747G105	32	38	5.00
03747G100	42	50	4.76
03747G095	36	43	4.44
03747G090	30	36	4.00
03747G085	44	53	3.64
03747G080	24	29	3.33
03747G075	33	40	3.03
03747G070	28	34	2.86
03747G065	37	45	2.70
03747G060	32	39	2.50
03747G055	36	44	2.22
03747G050	31	38	1.94
03747G045	35	43	1.71
03747G040	26	32	1.54
03747G035	30	37	1.33
03747G030	38	47	1.05
03747G025	25	31	0.80
03747G020	37	46	0.54
03747G015	49	61	0.40
03747G010	32	40	0.00
03747G135	47	59	-0.40
03747G140	35	44	-0.57
03747G145	27	34	-0.74
03747G150	38	48	-1.05
03747G155	30	38	-1.33
03747G160	26	33	-1.54
03747G165	33	42	-1.82
03747G170	29	37	-2.07
03747G175	36	46	-2.22
03747G180	32	41	-2.50
03747G185	28	36	-2.86
03747G190	38	49	-3.16
03747G195	24	31	-3.33
03747G200	34	44	-3.53
03747G205	37	48	-3.78
03747G210	33	43	-4.24
03747G215	29	38	-4.83
03747G220	38	50	-5.26
03747G230	24	32	-6.67
03747G240	32	43	-7.50
03747G250	28	38	-8.57

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