

FILTER TECHNICAL DATA

SIZING AND SELECTION INSTRUCTIONS

EXAMPLES

This engineering information is applicable to compressed air flows from 60 to 300 PSIG and 60°F to 120°F. Contact factory for conditions outside those ranges or other gases.

Housing and element sizes specified in this engineering manual are from Product Information Sheets:

Nominal SCFM At 100/100	Product Information Sheet No.		
	Housing	Super SU Cartridge	AF/HT Cartridge
35 - 100	109	102	100
200 - 950	111		
1200 - 9600	112		

Please refer to the above Product Information Sheets for further detail on the housings and cartridges.

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Note: If application is at 100°F and 100 PSIG operating pressure, proceed directly to pressure drop curves figures 2, 3 or 4, and read pressure loss, being careful to stay on the solid line.

If application is not at 100/100, use steps 1-4.

- 1) Enter Fig. 1 with operating pressure and SCFM to determine filter assembly size.
- 2) Enter Figures 2, 3 and 4 with SCFM and filter assembly size for uncorrected pressure drop at 100°F/100 PSIG.
- 3) Enter Table 1 with operating pressure and inlet temperature to determine correction factors.
- 4) Determine actual pressure drop with correction factors.

EXAMPLES

	1	2	3
Operating Pressure (PSIG)	100	60	250
Inlet Temperature (°F)	100	100	120
SCFM	900	1500	550
1) Use size	800	2400	200
2) Uncorrected SU saturated (PSID)	2.4	1.6	7.0
Uncorrected SU clean, dry (PSID)	1.4	.7	4.1
Uncorrected AF/HT clean (PSID)	.9	.3	2.6
3) Correction factor – SU saturated	1.0	1.46	.54
Correction factor – SU clean, dry AF/HT	1.0	1.54	.45
4) SU saturated (PSID)	2.4	2.3	3.8
SU clean, dry (PSID)	1.4	1.1	1.8
AF/HT (PSID)	.9	.5	1.2

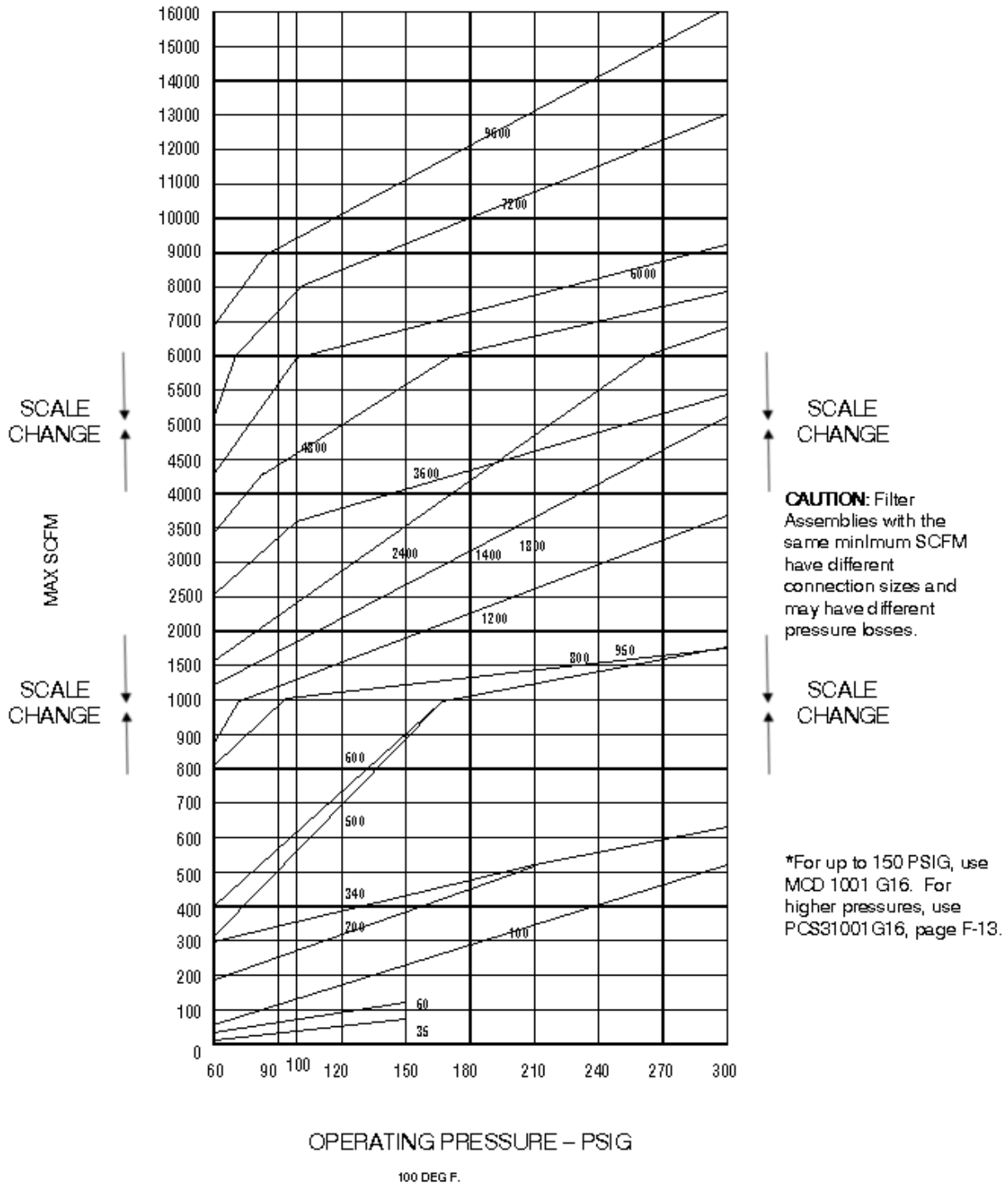


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SIZING GRAPH, FIG. 1

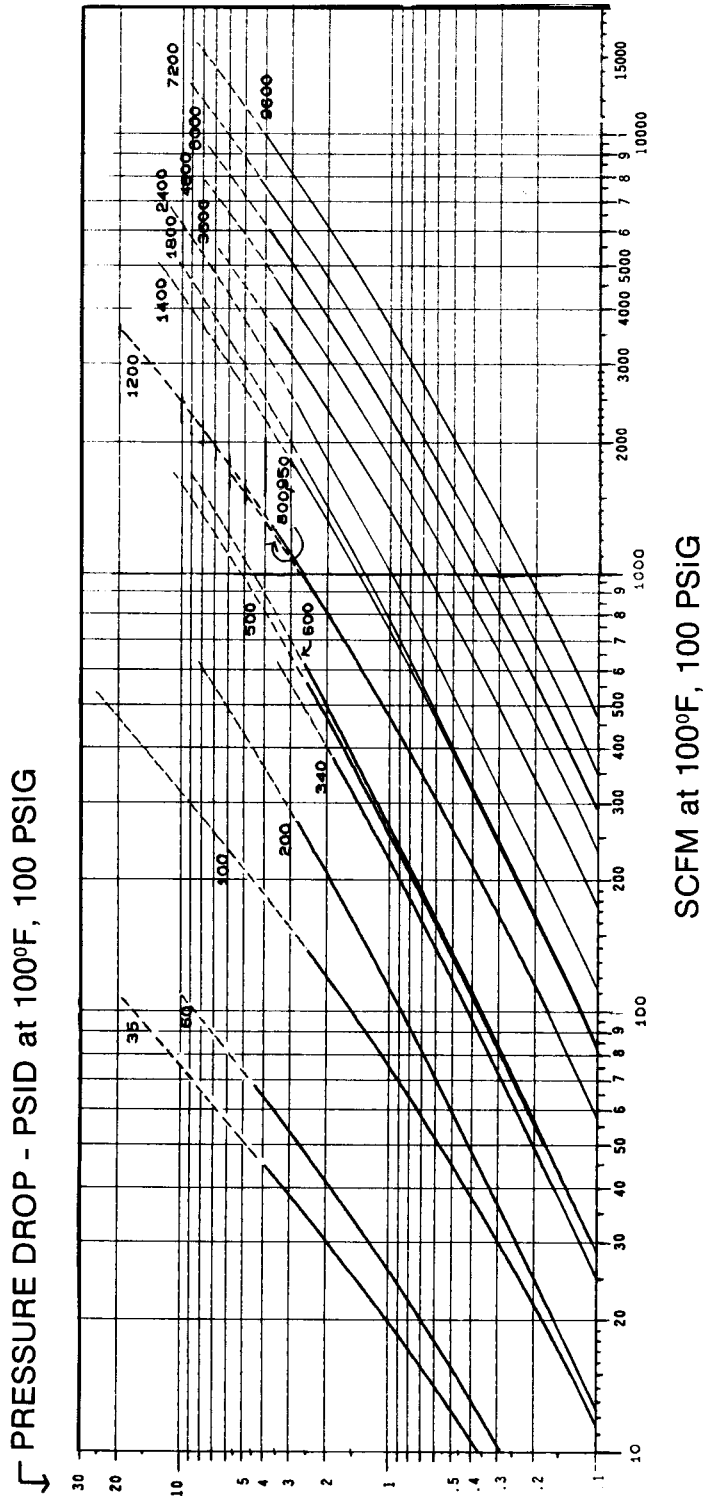


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PRESSURE DROP GRAPH SU ASSEMBLY SATURATED, FIG. 2



Notes: Transition from solid to dashed, represents MAXIMUM assembly capacity at 100 PSIG.

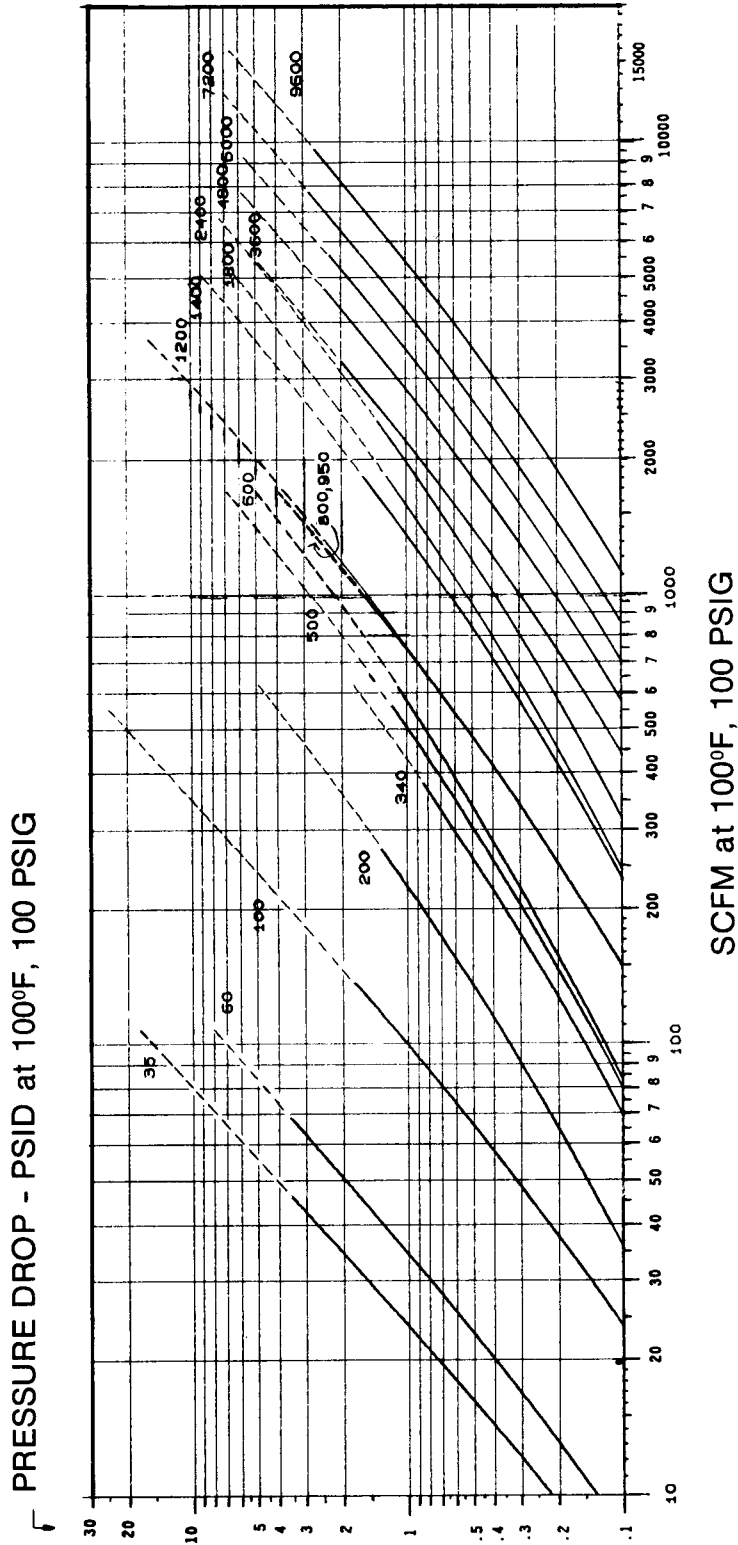


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PRESSURE DROP GRAPH SU ASSEMBLY CLEAN AND DRY, FIG. 3



Notes: Transition from solid to dashed, represents MAXIMUM assembly capacity at 100 PSIG.

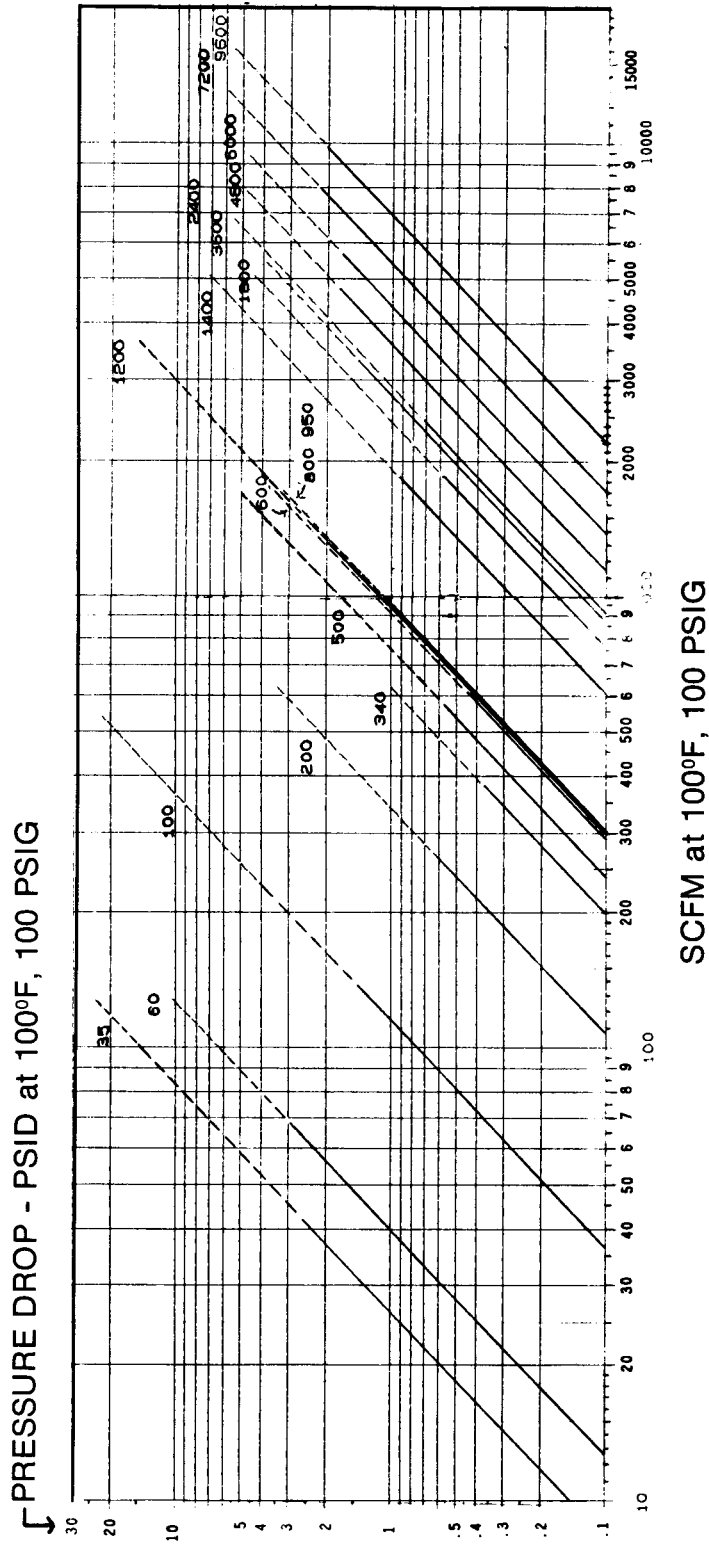


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PRESSURE DROP GRAPH AF/HT ASSEMBLY CLEAN, FIG. 4



Notes: Transition from solid to dashed, represents MAXIMUM assembly capacity at 100 PSIG.



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PRESSURE DROP CORRECTION FACTORS, TABLE 1

This table contains correction factors to be used in conjunction with the pressure drop graphs, Figures 2, 3 and 4. To find the correction factor, locate the inlet pressure on the vertical axis and the inlet temperature on the horizontal axis. The intersection of these two lines is the correction factor to be used in the following formula:

$$\text{Actual PSID} = \text{Graph PSID} \times \text{Correction Factor}$$

The TOP entry at each position is the correction factor for SU dry and clean and AF/HT cartridges. The BOTTOM entry is the correction factor for SU saturated cartridges.

		INLET TEMPERATURE (°F)						
		60	70	80	90	100	110	120
OPERATING PRESSURE PSIG	60	<u>1.43</u> 1.45	1.32 1.35	<u>1.48</u> 1.39	<u>1.51</u> 1.42	<u>1.54</u> 1.46	<u>1.56</u> 1.49	<u>1.59</u> 1.53
	70	<u>1.28</u> 1.28	1.18 1.21	<u>1.31</u> 1.24	<u>1.33</u> 1.27	<u>1.35</u> 1.30	<u>1.38</u> 1.34	<u>1.40</u> 1.37
	80	<u>1.12</u> 1.15	1.07 1.10	<u>1.17</u> 1.12	<u>1.19</u> 1.15	<u>1.21</u> 1.18	<u>1.23</u> 1.21	<u>1.25</u> 1.24
	90	<u>1.02</u> .98	<u>1.04</u> 1.00	<u>1.06</u> 1.03	<u>1.08</u> 1.06	<u>1.10</u> 1.08	<u>1.12</u> 1.11	<u>1.13</u> 1.13
	100	<u>.93</u> .91	<u>.95</u> .93	<u>.96</u> .95	<u>.98</u> .98	<u>1.00</u> 1.00	<u>1.02</u> 1.02	<u>1.04</u> 1.05
	110	<u>.85</u> .84	<u>.87</u> .87	<u>.89</u> .89	<u>.90</u> .91	<u>.92</u> .93	<u>.94</u> .95	<u>.95</u> .98
	120	<u>.79</u> .79	<u>.81</u> .81	<u>.82</u> .83	<u>.84</u> .85	<u>.85</u> .87	<u>.87</u> .89	<u>.88</u> .92
	130	<u>.74</u> .75	<u>.75</u> .77	<u>.76</u> .78	<u>.78</u> .80	<u>.79</u> .82	<u>.81</u> .84	<u>.82</u> .86
	140	<u>.69</u> .71	<u>.70</u> .72	<u>.71</u> .74	<u>.73</u> .76	<u>.74</u> .78	<u>.75</u> .80	<u>.77</u> .82
	150	<u>.65</u> .67	<u>.66</u> .69	<u>.67</u> .71	<u>.68</u> .72	<u>.70</u> .74	<u>.71</u> .76	<u>.72</u> .78
	160	<u>.61</u> .64	<u>.62</u> .66	<u>.63</u> .67	<u>.64</u> .69	<u>.66</u> .71	<u>.67</u> .72	<u>.68</u> .74
	170	<u>.58</u> .61	<u>.59</u> .63	<u>.60</u> .65	<u>.61</u> .66	<u>.62</u> .68	<u>.63</u> .69	<u>.64</u> .71
	180	<u>.55</u> .59	<u>.56</u> .60	<u>.57</u> .62	<u>.58</u> .63	<u>.59</u> .65	<u>.60</u> .66	<u>.61</u> .68
	190	<u>.52</u> .57	<u>.53</u> .58	<u>.54</u> .60	<u>.55</u> .61	<u>.56</u> .62	<u>.57</u> .64	<u>.58</u> .65
	200	<u>.50</u> .55	<u>.51</u> .56	<u>.52</u> .57	<u>.52</u> .59	<u>.53</u> .60	<u>.54</u> .62	<u>.55</u> .63
	210	<u>.47</u> .53	<u>.48</u> .54	<u>.49</u> .58	<u>.50</u> .57	<u>.51</u> .58	<u>.52</u> .60	<u>.53</u> .61
	220	<u>.45</u> .51	<u>.46</u> .53	<u>.47</u> .54	<u>.48</u> .55	<u>.49</u> .56	<u>.50</u> .58	<u>.51</u> .59
	230	<u>.44</u> .50	<u>.44</u> .51	<u>.45</u> .52	<u>.46</u> .53	<u>.47</u> .55	<u>.48</u> .56	<u>.49</u> .57
	240	<u>.42</u> .48	<u>.43</u> .49	<u>.43</u> .51	<u>.44</u> .52	<u>.45</u> .53	<u>.46</u> .54	<u>.47</u> .55
	250	<u>.40</u> .47	<u>.41</u> .48	<u>.42</u> .49	<u>.43</u> .50	<u>.43</u> .52	<u>.44</u> .53	<u>.45</u> .54
	260	<u>.39</u> .46	<u>.40</u> .47	<u>.40</u> .48	<u>.41</u> .49	<u>.42</u> .50	<u>.42</u> .51	<u>.43</u> .53
	270	<u>.37</u> .45	<u>.38</u> .46	<u>.39</u> .47	<u>.40</u> .48	<u>.40</u> .49	<u>.41</u> .50	<u>.42</u> .51
	280	<u>.36</u> .44	<u>.37</u> .45	<u>.38</u> .46	<u>.38</u> .47	<u>.39</u> .48	<u>.40</u> .49	<u>.40</u> .50
	290	<u>.35</u> .43	<u>.36</u> .44	<u>.38</u> .45	<u>.37</u> .46	<u>.38</u> .47	<u>.38</u> .48	<u>.39</u> .49
	300	<u>.34</u> .42	<u>.34</u> .43	<u>.35</u> .44	<u>.36</u> .45	<u>.36</u> .46	<u>.37</u> .47	<u>.38</u> .48



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