

# Log-logistic Distribution

## ARL Table for shape parameter increase from the in-control value in LL(1.71.0)

Table 1: ARL of  $\alpha$  increase from in-control value in  $LL(1.7, 1)$

$\alpha$	$\mu_X$	$n = 5$				$n = 10$				$n = 20$			
		$\bar{X}$ chart		$\tilde{X}$ chart		$\bar{X}$ chart		$\tilde{X}$ chart		$\bar{X}$ chart		$\tilde{X}$ chart	
		$ARL$	$ARL^+$	$ARL$	$ARL^+$	$ARL$	$ARL^+$	$ARL$	$ARL^+$	$ARL$	$ARL^+$	$ARL$	$ARL^+$
1.70	1.92	96.56	196.42	99.37	199.20	98.53	196.31	98.05	201.43	97.90	196.75	100.20	202.09
1.75	1.84	114.57	243.18	119.82	224.35	113.89	252.40	122.85	216.71	108.59	252.02	124.44	197.95
1.80	1.77	136.26	301.64	146.97	243.83	132.23	318.84	148.62	229.22	120.40	331.98	143.34	189.90
1.85	1.71	157.99	371.22	174.43	283.78	151.69	402.03	174.28	241.52	131.95	430.46	155.75	186.89