

FLOW DIVIDERS®

Proportional flow repartition in channels

Function

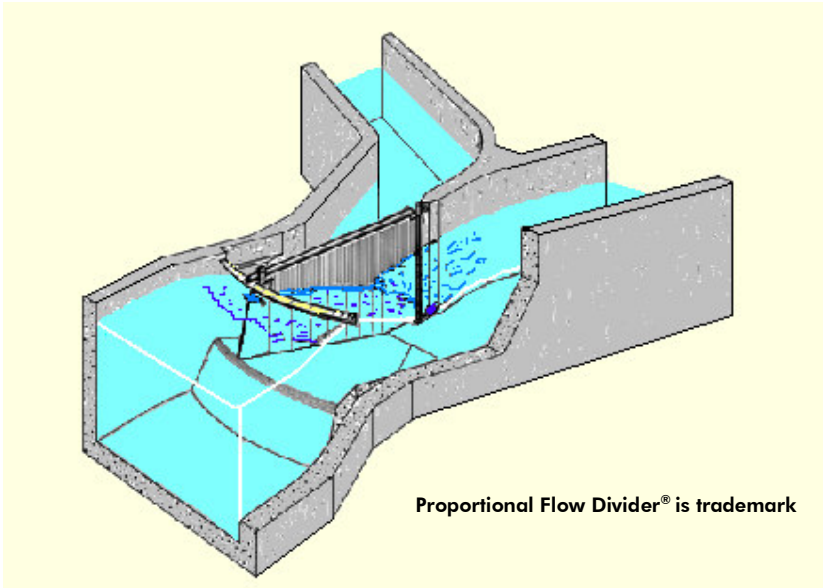
The function of Flow Divider® is to separate into two directions the flow transported by a channel in any proportion required, independently of downstream demand.

Principle

Because of the convergency of outflow, the discharges in each branch are directly proportional to the angles that the moving gate leaf delimits on a circular beam which

supports it.

The independence of discharge with regard to the downstream conditions is ensured by a hydraulic jump. This jump effectively leads to a cut in the water surface while the gate leaf attack edge is not reached. The small difference between upstream and downstream water levels, i.e. the minimum equipment head loss is only a small fraction of the water height above the sill, as shown in the table of normalized sizes.



Normalized sizes – Dimensions in cm

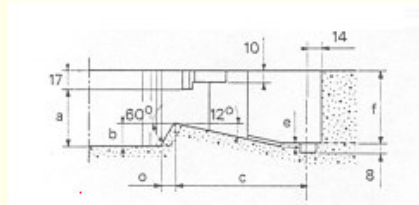
N°	Moving Gate Leaf		Max. Flow l/s	H max overflow	Head loss for Q=max.	Min. Depth from upstream channel bottom to the sill
	Radius (R)	Height (H)				
6	60	35	54	17,5	7	15
8	80	45	110	23	9	20
10	100	54	193	29	11,5	25
12	120	65	305	35	14	30
16	160	84	625	46,5	18	40
20	200	104	1093	58	23	50
25	250	125	1910	72,5	29	63

Upon request, special dividers may be manufactured for greater flows. In function of radius R(m) and water height H(m), the flow

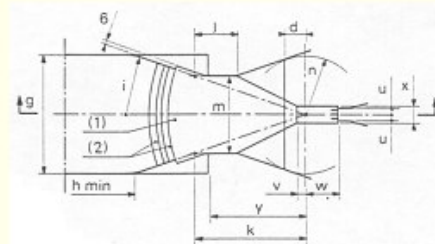
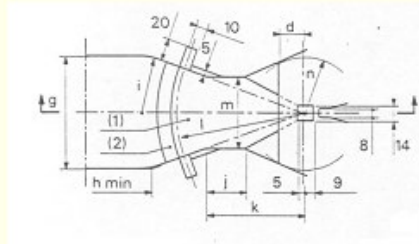
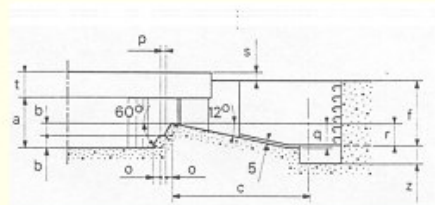
Q (m³/s) is $Q = 1,235 R \cdot H^{1,5}$ and the minimum head loss is equal to 0,4 H.

Engineering structure

From n° 6 to n° 12



From n° 18 to n° 25



- (1) Flat surface
- (2) Conical surface

Dimensions in cm

Divider N°	a	b min.	c	d	e	f	g	h	i	j	k	l	m
6	19,5	10,5	60	10	1,5	35	49,5	30	25	17,5	45	58,5	32,5
8	30	14	80	14	2	45	66	40	33	23	60	77	43
10	40	17,5	100	17,2	2,5	54,5	82,5	50	41	29	75	95,5	54
12	51	21	120	22	3	65	99	60	50	35	90	114	65
16	58,5	13,25	160	28	-	75	132	80	67	47,5	125	-	90
20	74,5	17,5	200	33	-	95	170	100	85	60	160	-	112
25	93	22,5	250	38	-	118	212	125	106	75	200	-	140

Divider N°	n	o	p	q	r	s	t	u	v	w	x	y	z
6	25	6	-	-	-	-	-	-	-	-	-	-	-
8	33	8	-	-	-	-	-	-	-	-	-	-	-
10	41	10	-	-	-	-	-	-	-	-	-	-	-
12	50	12	-	-	-	-	-	-	-	-	-	-	-
16	67	8	7	28	23	10	30	8	10	40	20	100	20
20	85	10	8,1	35,5	30,5	12	37	10	12,5	50	25	135	25
25	106	13	9,2	45	40	14	44	12,5	15	60	30	175	30