Calculation of grease separator systems according to DIN EN 1825-2

By kitchen appliances and outlet valves

m	Appliances	Num-ber n	qi (l/s)	Sum (n x qi)	Simultaneity factor Zi (n)					Qs /l/s) (n x qi) x Zi (m)
					1 pc	2 pcs	3 pcs	4 pcs	> 5 pcs	
1	Cooking pot outlet 25 mm		x 1.0		0.45	0.31	0.25	0.21	0.20	l/s
2	Cooking pot outlet 50 mm		x 2.0		0.45	0.31	0.25	0.21	0.20	l/s
3	Tilting cooking pot outlet 70 mm		x 1.0		0.45	0.31	0.25	0.21	0.20	l/s
4	Tilting cooking pot outlet 100 mm		x 3.0		0.45	0.31	0.25	0.21	0.20	l/s
5	Kitchen sink with odour closure 40 mm		x 0.8		0.45	0.31	0.25	0.21	0.20	l/s
6	Kitchen sink with odour closure 50 mm		x 1.5		0.45	0.31	0.25	0.21	0.20	l/s
7	Kitchen sink without odour closure 40 mm		x 2.5		0.45	0.31	0.25	0.21	0.20	l/s
8	Kitchen sink without odour closure 50 mm		x 4.0		0.45	0.31	0.25	0.21	0.20	l/s
9	Dishwasher		x 2.0		0.60	0.50	0.40	0.34	0.30	l/s
10	Tilting frying pan		x 1.0		0.45	0.31	0.25	0.21	0.20	l/s
11	Frying pan		x 0.1		0.45	0.31	0.25	0.21	0.20	l/s
12	High pressure / steam jet cleaning system		x 2.0		0.45	0.31	0.25	0.21	0.20	l/s
13	Peeling tool		x 1.5		0.45	0.31	0.25	0.21	0.20	l/s
14	Vegetable washing equipment Outlet valves Nominal diameter according to ISO 228-1		x 2.0		0.45	0.31	0.25	0.21	0.20	l/s
15	DN 15 R ½		x 0.5		0.45	0.31	0.25	0.21	0.20	l/s
16	DN 20 R ¾		x 1.0		0.45	0.31	0.25	0.21	0.20	l/s
17	DN 25 R 1		x 1.7		0.45	0.31	0.25	0.21	0.20	l/s

Sum Qs _____l/s

Difficulty factors

Density (fd)	up to 0.94 - fd = 1 / over 0.94 - fd = 1.5
Inlet temperature (ft)	up to 60° - ft = 1 / over 60° - ft = 1.3
Cleaning agent (fr)	no - fr = 1 / yes - fr = 1.3 / hospitals fr = 1.5

Nominal size (NS) = Qs x fd x ft x fr = _____ x _____ x _____ x _____ = _____ l/s

Commercial kitchens, sizing provisions by food portions

Commercial Kitchen operations	M = Meals (quantity) monthly average of daily produced, warm food portions	VM = operational quantity of water per warm food portion	F = Peak load factor depending on operating conditions	t = daily operating hours in which the separator is applied with waste water	QS = max. waste water inflow
Hotel kitchen	_____ Meals / day	x 100 l =	x 5 (peak factor)	= _____ Litre / _____ OH x 3,600 s	= _____ l/s
Speciality restaurant	_____ Meals / day	x 50 l =	x 8.5 (peak factor)	= _____ Litre / _____ OH x 3,600 s	= _____ l/s
Works canteen / canteen	_____ Meals / day	x 5 l =	x 20 (peak factor)	= _____ Litre / _____ OH x 3,600 s	= _____ l/s
Hospital	_____ Meals / day	x 20 l =	x 13 (peak factor)	= _____ Litre / _____ OH x 3,600 s	= _____ l/s
Full time canteen kitchen	_____ Meals / day	x 10 l =	x 22 (peak factor)	= _____ Litre / _____ OH x 3,600 s	= _____ l/s

Difficulty factors

Density (fd)	up to 0.94 - fd = 1 / over 0.94 - fd = 1.5
Inlet temperature (ft)	up to 60° - ft = 1 / over 60° - ft = 1.3
Cleaning agent (fr)	no - fr = 1 / yes - fr = 1.3 / hospitals fr = 1.5

Nominal size (NS) = Qs x fd x ft x fr = _____ x _____ x _____ x _____ = _____ l/s