



Our gear units can be supplied with hydraulically released negative multidisc brakes.

Negative brakes are held on by a series of oil springs pressing together alternate fixed and rotating plates. This means they work as a „negative“ brake and are intended for parking or emergency stopping only. Normal stopping of the machine should be done by the hydraulic system.

The performances, with +/- 10 % accuracy margins, are always calculated without back pressure; otherwise the braking torque is reduced as a percentage of the ratio back pressure/minimum opening pressure.

When carrying out the selection, the following two conditions must be taken into account:

- 1) Braking torque $\times i_{\text{eff}} >$ required output torque;
- 2) Braking torque $\times i_{\text{eff}} < 1,1 \times T_{2\text{max}}$

We remind you that high rotation speed, or extended running with vertical axis, can generate considerable temperature increases; in such cases, or when braking of high inertial loads is required, please apply to technical-office staff for advice.

For lubrication we recommend to use mineral oils, heat and aging resistant, having viscosity ISO VG 32 and viscosity index at least 95; hydraulic oils are usually suitable.

Typ	braking torque $T_{\text{max}} - \text{static}$	opening pressure	p_{max}	weight [kg]	oil volume (horizontal)	oil volume (vertical)
FL 620/U	220 Nm	21 - 26 bar	210 bar	8	0,1 l	0,2 l
FL 635/U	380 Nm	12 - 15 bar	315 bar	9	0,1 l	0,2 l
FL 250	181 - 278 Nm	12 - 15 bar	315 bar	15	0,3 l	0,6 l
FL 350	417 - 571 Nm	18 - 22 bar	315 bar	15	0,3 l	0,6 l
FL 450	540 - 737 Nm	22 - 28 bar	315 bar	15	0,3 l	0,6 l
FL 650	642 - 949 Nm	18 - 22 bar	315 bar	15	0,5 l	1,0 l
FL 750	834 - 1.229 Nm	22 - 28 bar	315 bar	15	0,5 l	1,0 l
FL 960	1.528 - 2.293 Nm	19 - 25 bar	315 bar	22	1,2 l	2,4 l

Typ	A Brake releasing plug	A1 Brake releasing plug	B Drain plug	C Oil level plug	D Breather and filling plug	Brake release volume (new discs) cm ³	Brake release volume (worn out discs) cm ³	P [mm]	Y [mm]
FL 620/U	---	M10 x 1	G 1/8	G 1/8	G 1/8	10	20	131	46
FL 635/U	G 1/4	M12 x 1,5	G 1/4	G 1/4	G 1/4	10	20	165	59
FL 250	G 1/4	M12 x 1,5	G 1/4	G 1/4	G 1/4	15	30	195	67
FL 350	G 1/4	M12 x 1,5	G 1/4	G 1/4	G 1/4	15	30	195	67
FL 450	G 1/4	M12 x 1,5	G 1/4	G 1/4	G 1/4	15	30	195	67
FL 650	G 1/4	M12 x 1,5	G 1/4	G 1/4	G 1/4	15	30	195	67
FL 750	G 1/4	M12 x 1,5	G 1/4	G 1/4	G 1/4	15	30	195	67
FL 960	G 1/4	M12 x 1,5	G 1/4	G 1/4	G 1/4	22	45	225	72,5

This document is not subject to the revision service!