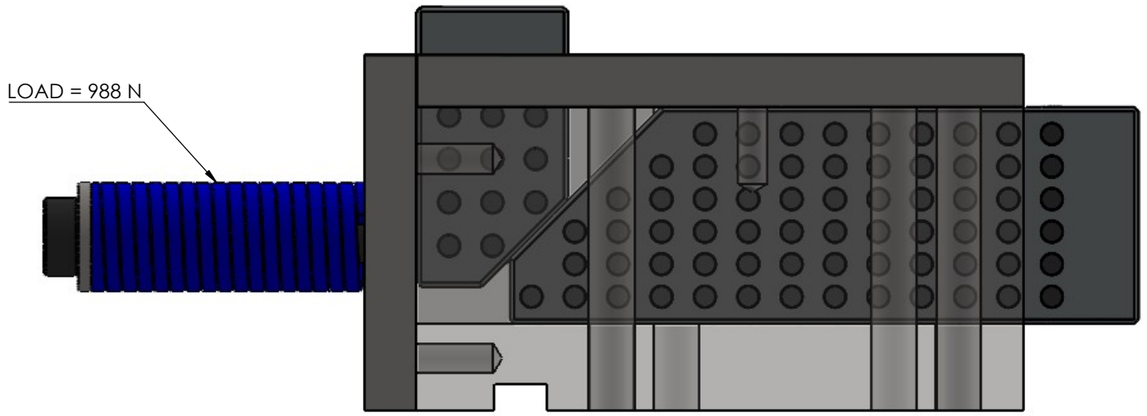
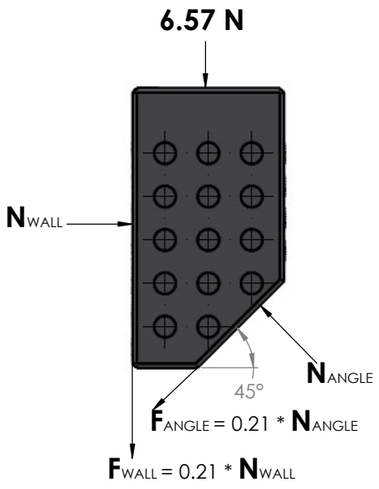
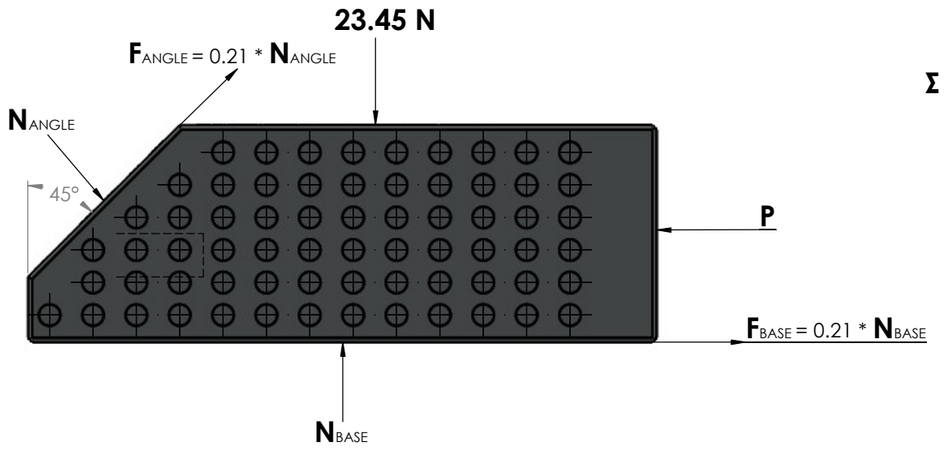
MINIMUM FORCE "P" REQUIRED TO START LIFTING THE DRIVER EXCLUDES THE SPRING IN THE CALCULATION





DRIVER



SLIDER

DRIVER

$\Sigma F_{NET\ X} = 0$

$= N_{WALL} - N_{ANGLE} * COS(45°) - 0.21 * N_{ANGLE} * COS(45°)$

$= N_{WALL} - 0.707 * N_{ANGLE} - 0.149 * N_{ANGLE}$

$= N_{WALL} - 0.856 * N_{ANGLE}$

$\Rightarrow N_{WALL} = 0.856 * N_{ANGLE}$

$\Sigma F_{NET\ Y} = 0$

$= -0.21 * N_{WALL} - 6.57 + N_{ANGLE} * SIN(45°) - 0.21 * N_{ANGLE} * SIN(45°)$

$= -0.21 * N_{WALL} - 6.57 + 0.707 * N_{ANGLE} - 0.149 * N_{ANGLE}$

$= -0.21 * N_{WALL} - 6.57 + 0.559 * N_{ANGLE}$

$\Rightarrow N_{ANGLE} = (0.21 * N_{WALL} + 6.57) / 0.559$

$= 0.376 * N_{WALL} + 11.753$

BY Ax = b:

$N_{WALL} = 14.8294$ N

$N_{ANGLE} = 17.3241$ N

SLIDER

$\Sigma F_{NET\ X} = 0$

$= N_{ANGLE} * COS(45°) + 0.21 * N_{ANGLE} * COS(45°) + 0.21 * N_{BASE} - P$

$= 21.780 - P$

$\Rightarrow P = -21.780$ N

$\Sigma F_{NET\ Y} = 0$

$= -N_{ANGLE} * SIN(45°) - 23.45 + 0.21 * N_{ANGLE} * SIN(45°) + N_{BASE}$

$= -33.128 + N_{BASE}$

$\Rightarrow N_{BASE} = 33.128$ N

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:		FINISH:		DEBURR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION	
	NAME	SIGNATURE	DATE		TITLE:		
DRAWN							
CHK'D							
APPV'D							
MFG							
Q.A				MATERIAL:	DWG NO. Box Side Cam		A2
				WEIGHT:	SCALE:1:1	SHEET 3 OF 3	