GUIDELINES FOR RIGHT APPLICATION OF ELESA PLASTIC HINGES

Choice Instructions

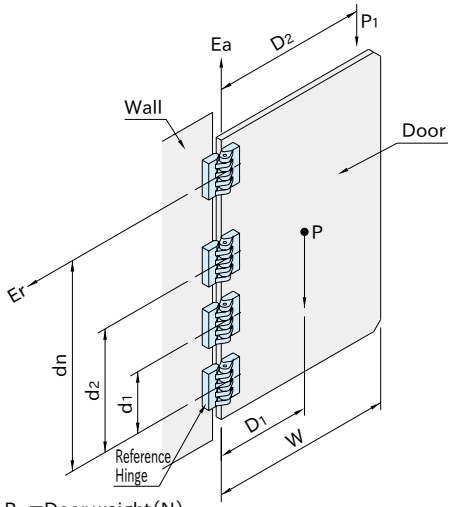
When choosing hinges, consider the allowable radial (Er), axial (Ea) or 90°-angle (E_{90}) loads stated in the table below and on the next page.
If necessary, determine a safety factor based on the breaking loads (Rr, Ra or R_{90}).

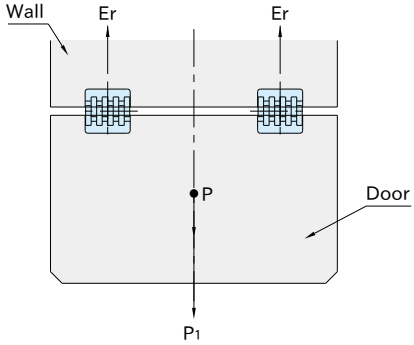
For doors on vertical axis,

Verify the followng 3 conditions:
$[(P \times D_1)+(P_1 \times D_2)] / D_3 \leqq Er$ ···for closed door
$(P+P_1) / N \leqq Ea$
$[(P \times D_1)+(P_1 \times D_2)] / D_3 \leqq E_{90}$ ···for 90°-open door

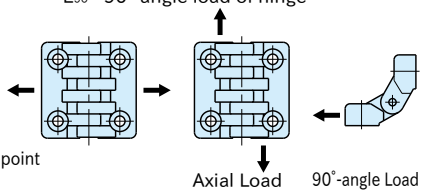
For doors on horizontal axis,

Verify the followng 2 conditions:
$(P+P_1)/N \leqq Er$···for closed door
$(P+P_1)/2N \leqq E_{90}$···for 90°-open door
(when balanced extra load is applied to the door)





Er=Allowable radial load of hinge
Ea=Allowable axial load of hinge
E_{90}=90°-angle load of hinge



P =Door weight (N)
P_1 =Extra load (N) applied (control panel, etc.)
N =Number of hinges
D_1 =Distance (m) between hinge axis and center of gravity of door
Generally D_1=W/2 (W:door width)
D_2 =Distance (m) between hinge axis and extra-load applying point
D_3 =Sum of distances (m) between reference hinge and each of the other hinges ($d_1+d_2+...+d_n$)
(Distance (m) between two hinges if only two hinges are used)

Part Number	Radial Load		Axial Load		90°-angle Load		Max. Screw Torque (N·m)
	Allowable Load Er (N)	Breaking Load Rr (N)	Allowable Load Ea (N)	Breaking Load Ra (N)	Allowable Load E_{90} (N)	Breaking Load R_{90} (N)	
EFH4040HH	290	2030	130	2080	280	1520	1
EFH4040SS	240	2220	200	2050	100	730	5
EFH4530HH	120	980	50	640	20	300	0.5
EFH4530SS	140	1040	50	660	50	310	1
EFH4530TT	110	1040	40	460	60	560	1
EFH5050HH	310	2880	300	2960	320	2490	2
EFH5050SS	440	3070	400	3770	170	1470	5
EFH5050TT	360	1970	370	3070	200	1680	5
EFH6040HH	370	2460	150	1580	80	1210	1
EFH6040SS	230	1920	90	1110	60	590	4
EFH6040TT	300	2440	90	1110	60	590	2
EFH6055HH	890	1770	750	1500	180	270	5

Part Number	Radial Load		Axial Load		90°-angle Load		Max. Screw Torque (N・m)
	Allowable Load Er(N)	Breaking Load Rr(N)	Allowable Load Ea(N)	Breaking Load Ra(N)	Allowable Load E_{90}(N)	Breaking Load R_{90}(N)	
EFH6565HH	720	6270	520	4760	240	4180	3
EFH6565SS	690	5670	640	4570	220	2280	5
EFH6565TT	460	6620	510	5890	220	3190	5
EFH7050AHH **EFH7050BHH**	380	3830	200	2440	190	1950	3
EFH7050HH	410	2850	300	2160	150	1440	2
EFH7050SS	440	2890	160	1260	190	1290	5
EFH7050TT	310	2870	190	1900	160	1190	5
EFH10065HH	690	3450	440	3160	260	2920	5
EFH10065SS	500	2480	530	4160	310	2250	5
EFH10065TT	700	3490	240	2670	270	1830	5
EFH100100HH	1230	10460	1110	6730	510	4100	5
EFH100100SS	2120	17940	970	7660	590	5210	5
EFH100100TT	1730	16190	890	5950	460	3690	5
EFHC4550SHP **EFHC4550CHP** **EFHC4550EHP**	350	1970	300	1220	345	620	1.5
EFHC4550SHN **EFHC4550CHN** **EFHC4550EHN**	350	1970	300	1220	290	720	1.5
EFHL5050HH	310	2880	300	2960	320	2490	2
EFHL6565HH	720	6270	520	4760	240	4180	3
EFHL9797HH	1230	10460	1110	6730	510	4100	5
EFHP7050HH	1490	2970	1740	3470	460	2120	5
EFHP7050SS	2220	4450	730	4170	710	2250	5
EFHP7050TT	2180	4350	1420	4410	510	2220	4
EFTH4040HH **EFTH4040HH-CL**	1900	— *)	1900	— *)	1280	— *)	3
EFTH4040TT	1900	— *)	2000	— *)	1000	— *)	5
EFTH5050HH **EFTH5050HH-CL**	2400	— *)	2630	— *)	1720	— *)	5
EFTH5050TT	2560	— *)	2340	— *)	2100	— *)	5
EFTH6060HH **EFTH6060HH-CL**	2960	— *)	3320	— *)	3070	— *)	5
EFTH6060TT	3940	— *)	3000	— *)	2130	— *)	5
EMH2030SS	150	1190	100	1030	90	600	1
EMH2030TT	160	1020	120	900	80	560	0.5
EMH2540SS	290	1950	180	1780	150	1160	4
EMH2540TT	140	1220	170	1490	120	710	1.5
EMH3030SS	70	490	60	690	60	500	1
EMH3030TT	40	340	70	750	30	390	1
EMH3050SS	480	2890	370	3250	150	1870	5
EMH3050TT	370	2480	220	2200	140	1200	4
EMH4040SS	150	1340	160	1710	100	700	4
EMH4040TT	140	880	110	1230	50	730	1.5
EMH4050SS	260	1700	260	2440	120	1640	5
EMH4050TT	240	1840	290	1770	110	1740	3
EMH4065SS	860	4880	310	4660	340	2770	5
EMH4065TT	590	3520	310	2410	220	1420	4
EMH5565SS	320	2520	450	4130	220	2250	5
EMH5565TT	260	1700	470	3260	240	1580	5

*) Since it can be used as a hinge almost to their breaking point, only allowable load is stated.