

# MJC8 Q400 TAKEOFF SPEEDS CARD



1. Look up the Vr/V2 from the appropriate **Vr/V2 table** below. Assume V1=Vr
2. In Vr exceeds V2 , assume V2 = Vr
3. If **icing protection** is ON above 500 ft AGL, add 20 kts to V2
4. For **wet runway** reduce V1 by 8kts - 0.1kts for each kt headwind, or 8 kts + 0.3kts for each kt tailwind
5. Check Vr **not below** 108kts for Flaps 5, 104kts for Flaps 10, 100 kts for Flaps 15
6. Check V1 **not below** 97 kts for Flaps 5, 96 kts for Flaps 10 and Flaps 15

Flap Retraction Initiation Speed (VFRI)  
Final Takeoff Speed (V CLMB)

When flying in icing conditions:  
Above 400ft AGL, add 20 kts to VFRI  
Add 20 kts to V CLMB

WEIGHT	V FRI Flap 5°	V FRI Flap 10°	V FRI Flap 15°	V CLMB
18.000 KG	116	110	107	130
20.000 KG	120	112	109	131
22.000 KG	126	118	115	137
24.000 KG	132	123	120	143
26.000 KG	137	128	125	148
28.000 KG	142	134	130	154
29.000 KG	146	137	133	158

## FLAPS 5° Vr/V2

WEIGHT/ ALTITUDE	AT OR BELOW 20° C OAT						ABOVE 20° C OAT					
	0	2000	4000	6000	8000	10000	0	2000	4000	6000	8000	10000
18.000 KG	102/116	102/115	102/114	102/113	102/112	103/111	102/114	102/113	102/112	103/111	103/110	105/109
20.000 KG	105/115	106/114	107/113	107/112	108/112	110/111	107/113	108/112	108/112	110/111	110/111	112/111
22.000 KG	112/117	113/117	113/117	114/117	115/117	116/117	113/117	114/117	115/117	116/117	117/117	118/117
24.000 KG	118/122	119/122	120/122	120/122	121/122	122/122	120/122	120/122	121/122	122/122	123/122	124/122
26.000 KG	124/127	125/127	126/127	126/127	127/127	128/127	126/127	126/127	127/127	128/127	129/127	130/127
28.000 KG	130/132	131/132	131/132	132/132	133/132	134/132	131/132	132/132	133/132	134/132	135/132	136/132
29.000 KG	133/135	134/135	135/135	136/135	137/135	138/135	135/135	136/135	137/135	138/135	138/135	140/135

## FLAPS 10° Vr/V2

WEIGHT/ ALTITUDE	AT OR BELOW 20° C OAT						ABOVE 20° C OAT					
	0	2000	4000	6000	8000	10000	0	2000	4000	6000	8000	10000
18.000 KG	100/111	100/110	100/110	100/109	100/108	100/107	100/109	100/109	100/109	100/107	---/106	---/105
20.000 KG	100/110	100/109	100/109	100/108	100/107	101/106	100/108	100/108	100/107	100/106	---/105	---/105
22.000 KG	103/109	105/109	105/108	105/108	106/108	108/108	104/108	106/108	106/108	106/108	---/108	---/108
24.000 KG	109/113	110/113	111/113	111/113	112/113	113/113	110/113	111/113	112/113	112/113	---/113	---/113
26.000 KG	115/118	116/118	116/118	117/118	118/118	119/118	116/118	117/118	117/118	118/118	---/118	---/118
28.000 KG	120/122	121/122	122/122	122/122	123/122	124/122	121/122	122/122	123/122	123/122	---/122	---/122
29.000 KG	124/125	125/125	125/125	126/125	127/125	128/125	125/125	125/125	126/125	127/125	---/125	---/125

## FLAPS 15° Vr/V2

WEIGHT/ ALTITUDE	AT OR BELOW 20° C OAT						ABOVE 20° C OAT					
	0	2000	4000	6000	8000	10000	0	2000	4000	6000	8000	10000
18.000 KG	98/106	98/106	98/105	98/104	98/103	98/102	98/105	98/104	98/103	98/102	98/102	98/102
20.000 KG	98/105	98/105	98/104	98/103	98/102	98/102	98/103	98/103	98/102	98/102	99/102	99/102
22.000 KG	100/104	101/104	101/104	102/104	103/104	104/104	101/104	102/104	103/104	104/104	104/104	104/104
24.000 KG	106/109	106/109	107/109	108/109	108/109	109/109	107/109	108/109	108/109	109/109	110/109	110/109
26.000 KG	111/113	112/113	112/113	113/113	114/113	114/113	112/113	113/113	114/113	114/113	115/113	115/113
28.000 KG	116/118	117/118	117/118	118/118	118/118	119/118	117/118	118/118	119/118	119/118	120/118	120/118
29.000 KG	119/120	120/120	120/120	121/120	122/120	122/120	120/120	121/120	121/120	122/120	123/120	123/120

# MJC8 Q400 APPROACH AND LANDING SPEEDS CARD



## FLAPS 5°

WEIGHT	V app	V ref	V ga
18.000 KG	115	---	109
20.000 KG	120	---	110
22.000 KG	126	---	115
24.000 KG	131	---	120
26.000 KG	137	---	125
28.000 KG	142	---	130
29.000 KG	146	---	134

## FLAPS 10°

WEIGHT	V app	V ref	V ga
18.000 KG	109	108	108
20.000 KG	112	112	108
22.000 KG	117	117	108
24.000 KG	122	122	112
26.000 KG	127	127	117
28.000 KG	132	132	122
29.000 KG	136	136	125

## FLAPS 15°

WEIGHT	V app	V ref	V ga
18.000 KG	106	105	105
20.000 KG	106	117	105
22.000 KG	112	112	105
24.000 KG	117	117	107
26.000 KG	122	121	111
28.000 KG	126	126	116
29.000 KG	129	129	119

## FLAPS 35°

WEIGHT	V app	V ref	V ga
18.000 KG	---	101	---
20.000 KG	---	102	---
22.000 KG	---	107	---
24.000 KG	---	112	---
26.000 KG	---	116	---
28.000 KG	---	120	---
29.000 KG	---	123	---

\* When flying in icing conditions,  
Add 20 kts to V app, V ref, V ga for flaps 10°, 15° and 35°