order	Country /Region	Photograph	Owner or Operator	Suppliers	Class	**Trainset Formula** M: Motor Car, T: Trailer Car, L: Locomotive, MB: Motor Bogie, TB: Trailer Bogie	**Features** C: Concentrated, A: Articulated, T: Tilting, D: Double Decker	Number of trainsets	Number of presence	Number of cars in a trainset	total number of cars	Year in Service	Power [kW]	Max. Speed [km/h]	Max.Op. Speed [km/h]	Voltage	Weight of the trainset [t]	Power weight ratio [kW/t]	Max.Axle Load [t]	Trainset length [m]	Trainset width [mm]	Seats For 3 classes, 1st and 2nd classes are included in '1st class'			Signaling systems	Observations
1	Austria		ÖBB	Siemens	"Railjet" Siemens Taurus (ÖBB 1216) + Siemens Viaggio	1L6T	C	60	60	7	420	2008-	6400	230	230	3kV(partially) 15kV16.7Hz 25kV50Hz	446		22.5	206	2825	16+76, partially 6+42	316, partially 394	408, partially 442	LZB/PZB,ZUB,ETCS	Locomotive: Class 1116, partially 1216
2	Austria		WestBahn	Stadler	4010	2M4T		7	7	6	42	2011-	4000	200	200	15kV16.7Hz	296	11.9		150	2800	60	441	501	LZB/PZB,ZUB	
3	France		SNCF	Alstom	TGV PSE	2L8T	C, A	109	0	10	0	1981-2021		300	300	1.5kV 3kV 25kV50Hz										
4	France		La Poste	Alstom	TGV Postal	2L8T	C, A	3	0	0	0			270	270											
5	France		SNCF	Alstom	TGV Atlantique	2L10T	C, A	105	28	12	336	1989-	8800	300	300	1.5kV 25kV50Hz	435	18.6	17	237	2904	116	364	480	TVM/KVB	No.301-405 Renovated to Lacroix 455 places(105+350) TVM430 is installed from No 386 to No 405
6	France, Belgium,The Netherlands		Thalys	Alstom	Thalys PBA	2L8T	C, A	10	10	10	100	1996-	8800	320	300	1.5kV 3kV 25kV50Hz	385	21.2	17	200	2904	120	257	377	TVM/KVB, TBL,ATB, ETCS	No. 4531-4540, owned by SNCF Same series as TGV Réseau (tric.). 4531 (now 4551) is used for SNCF
7	France, Belgium,The Netherlands,Germany		Thalys	Alstom	Thalys PBKA	2L8T	C, A	17	17	10	170	1996-	8800	320	300	1.5kV 3kV 15kV16.7Hz 25kV50Hz	385	21.2	17	200	2904	120	257	377	TVM/KVB, TBL/TBL2, ATB,PZB/LZB,ETCS	No.4301-4346 SNCF 6 (No.4341-4346), NS 4 (No.4321-4322,4331-4332) , SNCB 7 (No.4301-4307), No.4321-4322-> DB -> NS
8	France		SNCF	Alstom	TGV Réseau (bicourant)	2L8T	C, A	50	26	10	260	1993-	8800	320	320	1.5kV, 25kV50Hz	383	21.3	17	200	2904	118	257	375	TVM/KVB	No.501-553, 19 (No.515-533) sets are converted to POS and Duplex Réseau, 3sets are added from Réseau tric (No551-553). No 502 was abandoned after the accident at Bierne. Renovating by Lacroix to 355 places(105+252)
9	France		SNCF	Alstom	TGV Réseau (tricourant)	2L8T	C, A	30	27	10	270	1993-	8800	320	320	1.5kV 3kV 25kV50Hz	383	21.3	17	200	2904	118	257	375	TVM/KVB,TBL,SCMT	No.4501-4529, No.4551 3 sets (No.4507-4509) are converted to Réseau bi. No.4530 -> IRIS320, No.4551 <- No.4531 Thalys PBA 4507-30: suited for Belgium(TBL), 4501-06: suited for Italy(SCMT)
10	France		SNCF	Alstom	TGV Duplex	2L8T	C, A, D	108	88	10	880	1996-	8800	320	320	1.5kV 25kV50Hz	390	20.4	17	200	2896	182	330	512	TVM/KVB	No.201-289
11	France		SNCF	Alstom	TGV Réseau Duplex	2L8T	C, A, D	19	19	10	190	2006-	8800	320	320	1.5kV 25kV50Hz (15kV16.7Hz)	380	20.9	17	200	2896	182	330	512	TVM/KVB	No.601-619 613-615: tri-voltage(+15kV16.7Hz) 19 new rakes with TGV Réseau power cars
12	France,Germany Switzerland		SNCF, SBB	Alstom	TGV POS	2L8T	C, A	18	18	10	180	2007-	9280	320	320	1.5kV 15kV16.7Hz 25kV50Hz	423	20.6	17	200	2904	105	252	357	TVM/KVB,PZB/LZB ,SUB,ETCS	No. 4401-4419 4406: SBB Transformation of TGV Duplex: power cars from Duplex and single deck rakes TGV Réseau
13	France		SNCF	Alstom	TGV Dasye	2L8T	C, A, D	49	11	10	110	2009-	9280	320	320	1.5kV 25kV50Hz	390	21.5	17	200	2896	182	330	512	TVM/KVB,ETCS	No.701-720
14	France		SNCF	Alstom	TGV Euroduplex 3UA	2L8T	C, A, D	30	30	10	300	2011-	9280	320	320	1.5kV 15kV16.7Hz 25kV50Hz	390	21.5	17	200	2896	181	328	509	TVM/KVB,PZB/LZB , ETCS	No.4701-4730 Used for Lyria and Alleo
15	France		SNCF	Alstom	TGV Euroduplex 3UF/3UH	2L8T	C, A, D	25	25	10	250	2013-	9280	320	320	1.5kV 25kV50Hz	390	21.5	17	200	2896	181	328	509	TVM/KVB, ETCS, ASFA	No.801-825 for first 25 sets. No. 801-810 are operable in Spain. No.811-825 are operable in Luxembourg.
16	France		SNCF	Alstom	TGV Euroduplex 3UFC Océane	2L8T	C, A, D	67	67	10	670	2016-	9280	320	320	1.5kV 25kV50Hz	390	21.4	17	200	2896	158	398	556	TVM/KVB, ETCS	No.836-865 and 867-891
17	France		SNCF	Alstom	TGV Ouigo (ex-Duplex Dasye)	2L8T		38	38	10	380	2009-	9280	320	320	1.5kV 25kV50Hz	390	17.0	21.5	200	2896			634	TVM, KVB,ETCS	transformation of No.701-709 to 721-750 into No. 760-797
18	France, UK		Eurostar	Alstom	TGV-TMST 373 e300	2L18T (+ 2MB)	C, A	38	8	20	160	1994-	12200	300	300	0.75kV 3kV 25kV50Hz	752	15.0	17	394	2814	206	544	750	TVM/KVB,TBL,AWS/TPWS	No.3001-3232 SNCF 16 (No.3201-3232), BR 11 (No.3001-3022), SNCB 3 (No.3103-3108) 7 sets are equipped for DC 1,5kV operation. . No.3101 exists, not operation. No.3102 for scrapping in 2015. No.3103/4 for scrapping in 2016. No.3015/6 were refurbished in 2015.
19	France		SNCF	Alstom	TGV-M	2L9T	C, A, D	100	0	11	0	2024-		350	320	1.5kV 25kV50Hz										
20	France, Switterland, Italy		SNCF	Alstom	TGV-M	2L9T	C, A, D	15	0	11	0	2024-		350	320	1.5kV,3kV 25kV50Hz										
21	France		SNCF	Alstom	IRIS320	2L8T	C, A Inspection	1	1	10	10	1993-	8800	320	320	1.5kV 3kV 25kV50Hz				200	2904	N/A	N/A	N/A	TVM/KVB,TBL,SCMT	TGV Réseau (tric.) 4530
22	Germany		DB AG	Siemens Alstom	401(ICE1)	2L12T	C	60	59	14	826	1991-	9600	280	280	15kV16.7Hz	782	11.5	19.5	358	3020	197	506	703	ETCS LZB/PZB,ZUB	Redesign 2005ff
23	Germany		DB AG	Siemens Alstom	402(ICE2)	1L7T	C	44	44	8	352	1996-	4800	280	280	15kV16.7 Hz	418	10.7	19.5	205	3020	106	275	381	LZB/PZB	Redesign 2011ff
24	Germany		DB AG	Siemens Alstom	403(ICE3)	4M4T		50	50	8	400	2000-	8000	330	300	15kV16.7 Hz	409	18.0	16	200	2950	101	349	450	EYCS LZB/PZB	Redesign 2011ff
25	Germany		DB AG	Siemens Alstom	406(ICE3M) DB	4M4T		16	16	8	128	2000-	8000	330 220(DC)	300	1.5kV 3kV 15kV16.7Hz 25kV50Hz	435	17.1	16	200	2950	93	326	419	ETCS LZB/PZB, ATB,TBL	Redesign 2011ff
26	Netherlands		NS	Siemens Alstom	46(ICE3M) NS	4M4T		5	5	8	40	2000-	8000	330 220(DC)	300	1.5kV 3kV 15kV16.7Hz 25kV50Hz	435	17.1	16	200	2950	93	326	419	ETCS LZB/PZB, ATB,TBL	Redesign 2011ff
27	Germany		DB AG	Siemens Alstom	407(ICE3 Velaro D)	4M4T		17	17	8	136	2013-	8000	320	320	1.5kV 3kV 15kV16.7Hz 25kV50Hz	454	16.3	14.2	201	2950	111	333	444	LZB/PZB, TVM/KVB, ETCS	Redesign 2011ff

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28	Germany		DB AG	Siemens	408(ICE3neo, Velaro MS)	4M4T		4	4	8	32	2022-	8000	320	320	1.5kV 3kV 15kV16.7Hz 25kV50Hz	454	16.3	14.2	201	2950	111	333	444	LZB/PZB, ATB,TBL, ETCS	
29	Germany		DB AG	Siemens Alstom	411(ICE-T) DB	4M3T	T	28	28	7	196	2000-	4000	230	230	15kV16.7 Hz	350	10.6	15	185	2850	55	304	359	LZB/PZB,ETCS	Redesign 2013ff
30	Germany		DB AG	Siemens Alstom	411(ICE-T2)	4M3T	T	32	32	7	224	2004-	4000	230	230	15kV16.7 Hz	350	10.5	15	185	2850	55	321	376	LZB/PZB,ETCS	Redesign 2013ff
31	Germany		DB AG	Siemens Alstom	415(ICE-T)	3M2T	T	11	11	5	55	1999-	3000	230	230	15kV16.7 Hz	273	10.2	15	133	2850	41	209	250	LZB/PZB,ETCS	Redesign 2013ff
32	Germany		DB AG	Siemens Alstom	412 (ICE4 7-car)	3M4T		37	37	7	259	2020-	4950	250	250	1.5kV 3kV 15kV16.7Hz 25kV50Hz	455	10.1	<18	200	2852	77	379	456	ETCS, LZB/PZB	
33	Germany		DB AG	Siemens Alstom	412 (ICE4 12-car)	6M6T		50	50	12	600	2016-	9900	265	250	15kV16.7Hz	659	13.6	<18	346	2852	205	625	830	ETCS, LZB/PZB	
34	Germany		DB AG	Siemens Alstom	412 (ICE4 13-car)	6M6T		50	50	13	546	2021-	11550	265	250	15kV16.7Hz	659	15.9	<18	374	2852	205	625	830	ETCS, LZB/PZB	
35	Germany		DB AG	Siemens Alstom	605(ICE-TD)	4M	T	20	2	4	8	2001-2017	2240	200	200	Diesel	216	9.7	14.5	106	2850	41	154	195	LZB/PZB, ZUB	6 were transferred from DB to DSB.and are equipped with Danish signaling system and radio for international services. 14 is out of service. Tilting system is not used. All trainsets decommissioned except for 2 Trainsets (now used and named as "advanced train lab" (ATL)
36	Germany		DB AG	Talgo	ICE-L	1M	C	79	0		0															
37	Germany		DB AG	Siemens	ICE-S	2L1T	C Inspection	1	1	3	3	2006-	9600	280	280	15kV16.7 Hz	211			120.3	2856	N/A	N/A	N/A	-	
38	Italy		Trenitalia	Alstom	ETR450	8M1T	T	15	0	9	0	1988-2015	5000	250	250	3kV	435	10.7	12.5 (unloaded)	233.9	2750	170	220	390	SCMT/BACC	15 trainsets were produced.
39	Italy		Trenitalia	Alstom	ETR460	6M3T	T	10	9	9	81	1995-	5880	250	250	3kV	445	12.2	13.5 (unloaded)	237	2800			479	SCMT/BACC	10 trainsets were produced.
40	Italy, (Switzerland)		Trenitalia (SBB)	Alstom	ETR470	6M3T	T	9	0	9	0	1996-	5880	200	200	3kV 15KV16.7Hz	460	11.8	15.1	236.6	2800	151	324	475	SCMT/BACC,ZUB	Trenitalia: 5 sets, SBB: 0 sets - transferred to Greece (Hellenic)
41	Italy		Trenitalia	Alstom	(ETR480) ETR485	6M3T	T	15	14	9	126	1997-	5880	280	250	3kV 25kV50Hz	422	12.8	13.5 (unloaded)	237	2800			489	SCMT/BACC	AC electric equipment was installed to ETR480 and renumbered as ETR485
42	Italy		Trenitalia	Hitachi Alstom	ETR500	2L11T	C	63	62	13	806	1995-	8800	360	300	3kV 25kV50Hz	640(loaded)	13.8	17	354	2860			574	SCMT/BACC ETCS	Figures are for 3-class. 4-class are introduced from 2012
43	Italy		Trenitalia	Alstom	ETR600	4M3T	T	12	12	7	84	2008-	5600	280	250	3kV 25kV50Hz	443(loaded)	12.6	17	187.4	2830	126	306	432	SCMT/BACCETCS	
44	Italy, Switzerland		Trenitalia SBB	Alstom	ETR610	4M3T	T	26	26	7	182	2009-	5500	250	250	3kV 15KV16.7Hz 25kV50Hz	466	12.2	17	187.4	2830	108+18	304(Trenitalia) 296(SBB)	430(Trenitalia) 422(SBB)	SCMT/BACC,LZB/PZB,ZUB,ETCS	Trenitalia: 7sets, SBB: 19sets
45	Italy		Trenitalia	Hitachi	ETR700 (Frecciargento)	4M4T		19	17	8	136	2019-	5500	300	250	3kV 25kV50Hz	432					127	419	546	ERTMS/ETCS	Refuburished Fyra
46	Italy		Trenitalia	Hitachi Alstom	ETR1000	4M4T		64	63	8	504	2015-	9800	400	300	1.5kV 3kV 15kV16.7Hz 25kV50Hz	500(loaded)	19.6	17	202	2924	10+71+76	300	457	ETCS	Operation from 2015 in 300km/h
47	Italy		NTV	Alstom	AGV575	EMU-11 (5MB7TB)	A	25	25	11	275	2012-	7500	300	300	3kV 25kV50Hz	398	15.0	17	201	3000	19+143	288	450	SCMT/BACC ETCS	3-class
48	Italy		NTV	Alstom	ETR675 "Evo Pendolino"	4M3T		26	26	7	182	2017-		250	250					187				472		Pendolino design
49	Italy		RFI	Hitachi Alstom	"Epsilon"	2L8T	C Inspection	2	2	10	20	2008-	8800	300	300	3kV 25kV50Hz			17	249	2860	N/A	N/A	N/A	SCMT/BACC ETCS	Based on ETR500
50	Poland		PKP Intercity	Alstom	ED250	4M3T		20	20	7	140	2014-	5500	250	250	3kV 15KV16.7Hz 25kV50Hz	395.5	14.2	17	187.4	2830	57	345	402	ETCSL1/L2,SHP,Mirel,LZB/PZB	
51	Spain		Renfe Operadora	Alstom	S100 (bic.)	2L8T	C,A	14	14	10	140	1992-	8800	300	300	3kV 25kV50Hz	392	21.0	17.2	200.15	2904	38+78	211(+2hp)	330(+2hp)	ASFA/LZB,ERTMS	"AVE" 3 classes
52	Spain		Renfe Operadora	Alstom	S100 (tric.)	2L8T	C,A	10	10	10	100	1992-	8800	300	300	1,5kV 3kV 25kV50Hz	392	21.0	17.2	200.15	2904	N/A	N/A	347	ASFA/LZB,TVM/KVB,ERTMS	"AVE" 3 classes 10 sets are tri-current and operable in France from 2013.
53	Spain		Renfe Operadora	Alstom	S101	2L8T	C,A	0	0	10	0	1996-2010	5400	200	200	3kV	392	12.9	17.2	200.15	2904	112	200(+2hp)	314(+2hp)	ASFA/EBICAB900	"Euromed" Gauge 1668 All sets converted to S100.
54	Spain		Renfe Operadora	Talgo Alstom	S102	2L12T	C, A, T	16	16	14	224	2005-	8000	330	300	25kV50Hz	324	22.9	17	200.244	2960	45+76	193(+2hp)	314(+2hp)	ASFA/LZB/ETCS	"AVE" 3 classes
55	Spain		Renfe Operadora	Siemens	S103	4M4T		26	26	8	208	2007-	8800	350	300	25kV50Hz	439	18.7	<17	200	2950	38+103	262(+2hp)	403(+2hp)	ASFA/LZB/ETCS	"AVE" 3 classes
56	Spain		Renfe Operadora	CAF Alstom	S104	4M		20	20	4	80	2004-	4000	250	250	25kV50Hz	222	16.6	17	107.1	2920	30	206(+1hp)	236(+1hp)	ASFA/LZB/ETCS	"Avant"

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57	Spain		Renfe Operadora	Talgo Alstom	S106/112	2L12T	C,A,T	30	30	14	420	2010-	8000	330	300	25kV50Hz	322	23.5	17	200.244	2960	71	292(+2hp)	363(+2hp)	ASFA/LZB/ETCS	Similar to S102 but capacity is increased.
58	Spain		Renfe Operadora	Alstom	S114	4M		13	13	4	52	2011-	4000	250	250	25kV50Hz	248	15.0	16	107.9	2830	N/A	237(+1hp)	237(+1hp)	ASFA/LZB/ETCS	"Avant"
59	Spain		Renfe Operadora	CAF Alstom	S120	4M		12	12	4	48	2006-	4000 (DC:2700)	250 220(DC)	250 220(DC)	3kV 25kV50Hz	256	14.5	16.2	107.3	2920	81(+1hp)	156	237(+1hp)	ASFA/LZB/ETCS	"Alvia" Dual gauge (1668,1435)
60	Spain		Renfe Operadora	CAF Alstom	S120.5	4M		16	16	4	64	2006-	4000 (DC:2700)	250 220(DC)	250 220(DC)	3kV 25kV50Hz	256	14.5	16.2	107.3	2920	74(+1hp)	148	222(+1hp)	ASFA/LZB/ETCS	"Alvia" Dual gauge (1668,1435)
61	Spain		Renfe Operadora	CAF Alstom	S121	4M		29	29	4	116	2008-	4800	250 220(DC)	250 220(DC)	3kV 25kV50Hz	252	17.5		107.4	2920	N/A	N/A	282	ASFA/LZB/ETCS	"Avant" Dual gauge (1668,1435)
62	Spain		Renfe Operadora	Talgo Alstom	S130	2L11T	C,A,T	30	29	13	377	2007-	4800 (DC:4000)	250 220(DC)	250 220(DC)	3kV 25kV50Hz	312	15.4	18	185.2	2960	62(+1hp)	236	298(+1hp)	ASFA/LZB/EBICAB 900/ETCS	"Alvia" Dual gauge (1668,1435) 15 sets will be converted to S130H.
63	Spain		Renfe Operadora	Talgo Alstom	S730	2L11T (2T are dedicated for diesel engine)	C,A,T	15	15	13	195	2012-	4800 (DC:4000) (Diesel:3600)	250 220(DC) 180(diesel)	250 220(DC) 180(diesel)	3kV 25kV50Hz Diesel	385	12.5	18	186	2960	44(+2hp)	216	260(+2hp)	ASFA/LZB/EBICAB 900/ETCS	Diesel hybrid version of S130. Diesel engines are installed on 2 end cars next to the locomotive. 15 sets are converted from S130. Dual gauge (1668,1435).No12 was abandoned after the accident at Santiago de Compostela.
64	Spain		ADIF	Talgo Alstom	A330	2L3T	C,A,T Inspection	1	1	5	5	2007-		330	300	25kV50Hz	190			82	2960	N/A	N/A	N/A	ASFA ETCS	
65	Spain		Iryo	Alstom Hitachi	ETR1000	4M4T		23				2022	9800	400	300	1.5kV 3kV 15kV16.7Hz 25kV50Hz	500(loaded)	19.6	17	202	2924	19+2	400	421	ETCS,ERTMS	
66	Portugal		CP	Alstom	CPA4000	4M2T	T	10	9	6	54	1999-	3920	220	220	25kV50Hz	299	12.1	14.4	158.9	2920	96	205	299 +2hp	EBICAB700	Broad gauge (1668) Loading gauge meets CP requirement
67	Switzerland		SBB	Alstom	RABDe500(ICN)	4M3T	T	44	44	7	308	2000-	5200	220	200	15kV16.7Hz	355	13.3		188	2830	125	326	451	ZUB	
68	Switzerland		SBB	Stadler	Giruno (EC250)	4M7T	A	36	29	11	319	2019-	6000	250	250	15kV16.7Hz 25kV50Hz 3kV				202	2900	117	288	405	SCMT/BACC/LZB/P ZB/ZUB/ETCS	
69	UK		CC, EC, EM, FGW, GC,V	BREL	IC125	2L7T 2L8T	C	80	80	9 10	800	1976-	3360	200	200	Diesel	383(2L7T)			197 220	2740			472 etc	AWS/TPWS	CC: Cross Country,EC: East Coast, EM: East Midlands, FGW:First Great Western, GC: Grand Central, V:Virgin
70	UK		East Coast	BREL	IC225	1L9T	C	30 0?	30	10	300	1989-	4350	225	200	25kV50Hz				226	2740	112	368	480	AWS/TPWS	
71	UK		Cross Country	Alstom	220	4M		34	34	4	136	2001-	2200	200	200	Diesel	185.6	11.0		93.34	2730	26	162	188	AWS/TPWS	"Voyger"
72	UK		Cross Country, Virgin	Alstom	221	4M 5M	T	4 40	44	4 5	216	2002-	2800(5M)	200	200	Diesel	227(4M) 282.8(5M)	9.2		93.3(4M) 116.2(5M)	2730	26	162(4M) 224(5M)	188(4M) 250(5M)	AWS/TPWS	"Super Voyger"
73	UK		East Midlands	Alstom	222	4M 5M 7M		4 7 16	27	4 5 7	143	2004-	3920(7M)	200	200	Diesel				161.8(7M)	2730	106	236	342	AWS/TPWS	"Meridian"
74	UK		Virgin	Alstom	390	6M3T	T	57	56	9	504	2002-	5500	225	200	25KV50Hz	458 (loaded)	12.0	16.1	217	2730	145	294	439	AWS/TPWS	Decided to increasing train length to 11 car for 31 train sets and creation of 4 new 11 car trainsets.
75	UK		Southeastern	Hitachi	395	4M2T		29	29	6	174	2009-	3360	225	225	0.75KV 25kV50Hz			11 (unloaded, Avg.)	121.8	2810	0	348	348	TVM/KVB AWS/TPWS	
76	UK		LNER(London North Eastern Railway)	Hitachi	800	3M2T 5M4T		10 13	23	5	50 65	2017-		225	200	25kV50Hz + Diesel (Bi-mode)	230 249 (bi-mode)		18.4	130	2740				AWS/TPWS/ETCS/ ATP	Agility Trains, Bi-mode Bi-mode is possible to be propelled by both electricity and diesel engine who provide electricity to motors. 46 sets: 5-cars; 36 sets for Great Western Main Line, 10 sets for East Coast main line
77	UK		GWR(Great Western Railway)	Hitachi	800	3M2T		36	36	9	324	2017-		225	200	25kV50Hz + Diesel (Bi-mode)	230 249 (bi-mode)		18.4	130	2740				AWS/TPWS/ETCS/ ATP	Agility Trains, Bi-mode Bi-mode is possible to be propelled by both electricity and diesel engine who provide electricity to motors. 34 sets: 9-cars 21 sets for Great Western Main Line, 13 sets for East Coast main line
78	UK		LNER(London North Eastern Railway)	Hitachi	801	3M2T 5M4T		12 30	42	5	60 150	2019-		225	200	25kV50Hz + Diesel (Bi-mode)			18.4	234	2740				AWS/TPWS/ETCS	Agility Trains
79	UK		GreatWestern	Hitachi	802	3M2T		22	22	5	110	2018-	2712	200	200	25kV50Hz + Diesel (Bi-mode)								326	AWS/TPWS/ETCS/ ATP	Bi-mode, AT300 Bi-mode is possible to be propelled by both electricity and diesel engine who provide electricity to motors.
80	UK		GreatWestern	Hitachi	802	5M4T		14	14	9	126	2018-	4520	200	200	25kV50Hz + Diesel (Bi-mode)								647	AWS/TPWS/ETCS/ ATP	Bi-mode, AT300 Bi-mode is possible to be propelled by both electricity and diesel engine who provide electricity to motors.
81	UK		Eurostar	Siemens	374 e320	8M8T		17	17	16	272	2015-	16000	320	300	1.5kV 3kV 15kV16.7Hz 25kV50Hz			17	400	2950	222	672	894	TVM/KVB,TBL,AW S/TPWS,ETCS	No.4001-4010 Siemens Velaro D series.
82	UK		HS2	Alstom, Hitachi		not open to the public		54	0	8				360	360	25kV50Hz										
83	Czech Republic		CD	Alstom	CD 680 "Pendolino"	4M3T	T	7	6	7	42	2003-	4000	230	230	3kV 15KV16.7Hz 25kV50Hz	385	9.7	14.75	184.4	2800	105	228	333	LS, LZB/PZB	
84	Czech Republic		CD	Siemens	"ČD railjet" Siemens Taurus (OBB 1216) + Siemens Viaggio Comfort	1L7T	C	7	7	8	56	2014-	6000	230	230	3kV 15kV16.7Hz 25kV50Hz	479	11.7	21.5	204.78	2825	6+42	394	442	LZB/PZB,ZUB	Locomotive: Class 1216 type

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85	Czech Republic		CD	Siemens Škoda	Interjet	1L4T		10	10	5	50	2021-		230	200											
86	Czech Republic		CD	Siemens Škoda	ComfortJet Viaggio Comfort	1L6T 1L4T		17	17	7 5	99	2014-		230	230					233.82	2825	6	42	394		
87	Netherlands Belgium		NS Hispeed SNCB	Hitachi	V250	4M4T		0	0	8	0	2012-2013	5500	250	250	1.5kV 3kV 25kV50Hz	423	11.8	17	200.9	2870	127	419	546	ATB,TBL,LZB,ETCS	NS Hispeed:9(7) sets, SNCB 0(3) sets 2013.1- service is suspended.
88	Russia		RZD	RVR	ER200	8M2T		0	0	10	0	1974-2009	7680	200	200	3kV	557.4	12.8		260	3130			544		Broad gauge (1520)
89	Russia		RZD	Siemens	"Sapsan" B1	4M6T		8	8	10	80	2009-	8000	250	250	3kV	662(Loaded)	12.1	17	250	3265	104	500	604		Broad gauge (1520)
90	Russia		RZD	Siemens	"Sapsan" B2	4M6T		8	8	10	80	2009-	8000	250	250	3kV 25kV50Hz	678(Loaded)	11.8	18	250	3265	104	500	604		Broad gauge (1520)
91	Finland		VR	Alstom	SM3 "Pendolino"	4M2T	T	18	17	6	102	1995-	4000	220	220	25kV50Hz	328	11.5	14.3	159	3200	47	238(+2)	285(+2)	EBICAB900	Broad gauge (1524)
92	Finland,Russia		Karelian Railways	Alstom	SM6 "Allegro"	4M3T	T	4	4	7	28	2010-	5500	220	220	3kV 25kV50Hz	409(Loaded)	13.4	17	184.8	3200	42+6	304	352+2hp		Broad gauge (1522 and 1520) Operated by RZD and VR.
93	Norway		Flytoget	Alstom	BM71	3M		16	16	3	48	1997-	1950	210	210	15KV16.7Hz	158	11.4		82.1	3048	0	168	168	EBICAB700	An intermediate car is being introduced for all sets.
94	Norway		NSB	Alstom	BM73	4M	T	22	22	4	88	1999-	1950	210	210	15KV16.7Hz	212	8.5	16.5	108	3048			203 246	EBICAB700	"Signatur"
95	Slovenia		SZ	Alstom	ETR310	2M1T	T	3	3	3	9	2002-	1980	200	200	3kV			14.8	81.2	2800	30	136	166	SCMT/BACC,PZB	
96	Greece		Hellenic		ETR470	6M4T	T	0	5	10	50	2022-	5880	200	200	25kV 50Hz	460			237		151	322		ETCS(2023)	Converted for use in Greece (originally Cisalpino: SBB, Trenitalia)
97	Sweden		SJ	Alstom	X2(X2000)	1L5T 1L6T	C,T	7 36	43	6 7	294	1990-	3260	200	200	15kV16.7Hz	360(6T)	8.5	18.5	140 165	3080	48 96	213	261(+2hp) 309(+2hp)	EBICAB700	
98	Sweden		AB Transitio	Alstom	X50	2M 2M1T		5 8	13	2 3	34	2001-	1590 2120	200	200	15kV16.7Hz	116 164			53.9 80.5	3450					
99	Sweden		AB Transitio	Alstom	X52	2M 2M1T		24 20	44	2 3	108	2001-	1590 2120	200	200	15kV16.7Hz	116 164			53.9 80.5	3450					
100	Sweden		AB Transitio	Alstom	X54	2M		5	5	2	10	2003-	1590	200	200	15kV16.7Hz	116			53.9	3450					
101	Sweden		SJ	Alstom	X55 (SJ 3000)	EMU-4		20	20	4	80	2012-	3180	250	200	15kV16.7Hz	274	10.8		107	3430	64	181	245	EBICAB700 ETCS	
102	Sweden		Västtrafik	Alstom	X80			45	0	3	0			200	200	15kV16.7Hz										
103	Sweden		SJ	Alstom	Snabbtåg			25	0	6	0	(2026-)		250	250	25kV50Hz 15kV16.7Hz										
104	Sweden		SJ	CAF SA	Civity Nordic	not open to the public		39	0			(2024-)		200	200											
105	China		CR	CSR,Alstom	CRH1A	5M3T		128	128	8	1024	2006-	5500	250	200	25kV50Hz	435	11.3	16.5	213.5	3328	144(128)	524(483)	668(611)	CTCS 2	As for the number of seats, outside the parenthesis is for the fixed seats, inside the parenthesis is for the rotatable seats. No.46 was abandoned after the accident in Wenzhou.
106	China		CR	CSR,Alstom	CRH1A-A	5M3T		87	87	8	696	2016-	5500	250	200	25kV50Hz	435	11.3	16.5	213.5	3328	40	565	605	CTCS 2	
107	China		CR	CSR,Alstom	CRH1B	10M6T		24	24	16	384	2008-	11000	250	200	25kV50Hz	850	11.5	16.5	426.3	3328	208	1091	1299+56	CTCS 2	
108	China		CR	CSR,Alstom	CRH1E	10M6T		20	20	16	320	2009-	11000	250	200	25kV50Hz	890	11.7	16.5	428.9	3328	16+480 (Sleeping Car)	122	618+58	CTCS 2	13 cars are 1st class sleeping cars(1 car is special 1st class sleeping), 2 cars are 2nd class seating cars, 1 car is a dining car.
109	China		CR	CSR,Alstom	CRH1E-250	10M6T		5	5	16	80	2015-	11000	250	200	25kV50Hz	890	11.7	16.5	428.9	3328	16+480 (Sleeping Car)	122	618+58	CTCS 2	13 cars are 1st class sleeping cars(1 car is special 1st class sleeping), 2 cars are 2nd class seating cars, 1 car is a dining car.
110	China		CR	Kawasaki, CSR-Sifang	CRH2A	4M4T		491	491	8	3928	2008-	4800	250	200	25kV50Hz	359.7	11.8	14	201.4	3380	51	559	610	CTCS 2	1 car is 1st seating car,7 cars are 2nd seating cars 1 set is used as the inspection car.
111	China		CR	CSR-Sifang	CRH2B	8M8T		27	27	16	432	2008-	9600	250	200	25kV50Hz	758.8	11.8	14	401.4	3380	155	1075	1230+32	CTCS 2	3 Cars are 1st seating cars,12 cars are 2nd seating cars,1 car is dining car.
112	China		CR	CSR-Sifang	CRH2C	6M2T		49	49	8	392	2008-	8760	350	300	25kV50Hz	370.8	19.5	14	201.4	3380	51	559	610	CTCS 2, 3	1 car is 1st seating car, 6 cars are 2nd seating cars, 1 car is 2nd seating/dining car 1 set is used as the inspection car.
113	China		CR	CSR-Sifang	CRH2C2	6M2T		11	11	8	88	2008-	8760	350	300	25kV50Hz	370.8	19.5	14	201.4	3380	51	559	610	CTCS 2, 3	1 car is 1st seating car, 6 cars are 2nd seating cars, 1 car is 2nd seating/dining car 1 set is used as the inspection car.

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114	China		CR	CSR-Sifang	CRH2E	8M8T		24	24	16	384	2009-	9600	250	200	25kV50Hz	778.9	11.6	14	401	3380	520 (Sleeping Car)	100	620	CTCS 2	13 cars are 1st class sleeping cars, 2 cars are 2nd class seating cars, 1 car is dining car.
115	China		CR	CSR-Sifang	CRH2G	4M4T		29	29	8	232	2015-	9280	250	250	25kV50Hz			15.45	201.4	3380	48	565	613	CTCS 2	
116	China		CR	CNR-Tanshang, CNR-Changchun	CRH3A	4M4T		61	61	8	488	2017-	5120	250	250	25kV50Hz			15	201	3300	48	565	613	CTCS 2	
117	China		CR	Siemens, CNR-Changchun	CRH3C	4M4T		80	80	8	640	2008-	8800	350	300	25kV50Hz	425	18.7	17	200	3260	66	490	556	CTCS 2, 3	1 car is 1st class seating car, 6 cars are 2nd seating cars, 1 car is 1st seating/dining car(16 sheets).
118	China		CR	Alstom, CNR-Changchun	CRH5A	5M3T		140	140	8	1120	2007-	5500	250	200	25kV50Hz	451.3	11.0	<17	211.5	3200	60(112)	562(474)	622(586)	CTCS 2	As for the seat's number,the figure outside the parenthesis is for the fixed seats.inside the parenthesis is for the rotatable seat.
119	China		CR	Alstom, CNR-Changchun	CRH5G	5M3T		80	80	8	640	2007-	5500	250	200	25kV50Hz	451.3	11.0	<17	211.5	3200	60(112)	562(474)	622(586)	CTCS 2	As for the seat's number,the figure outside the parenthesis is for the fixed seats.inside the parenthesis is for the rotatable seat.
120	China		CR	CNR-Changchun	CRH5E	10M6T		2	2	16	32	2021-	11000	250	250	25kV50Hz			17	418.7	3300	532 (Sleeping Car)	110	642	CTCS2	Cold resistant high speed sleeper trains outfitted with traditional railway sleeping berths (couchette car)
121	China		CR	CRRC-NanjingPuzhen	CRH6A	4M4T		77	77	8	616	2013-	5520	220	200	25kV50Hz			15.5	201.4	3300	0	549	549	CTCS 2, 3	CRH6A will be existed. operating speed is under 200km/h.
122	China		CR	CRRC Chengdu	CRH6A-A	2M2T		21	21	4	84	2020	2680	200	200	25kV50Hz			15.5	101.4	3300	0	240	240	CTCS2	
123	China		CR	CSR-Sifang	CRH380A	6M2T		320	320	8	2560	2010-	9600	350	300	25kV50Hz			<15	203	3380	12+95	373	480	CTCS 2, 3	12 seats: "sightseeing". There are other 14 seats for dining car.
124	China		CR	CSR-Sifang	CRH380AL	14M2T		113	113	16	1808	2011-	21560	350	300	25kV50Hz			<15	403	3380	56+6+76	923	1061	CTCS 2, 3	56 seats: business class, 6 seats: "sightseeing".
125	China		CR	CNR-Changchun	CRH380B	4M4T		353	353	8	2824	2011-	9200	350	300	25kV50Hz			<17	200	3260	72	528	600	CTCS 2, 3	
126	China		CR	CNR-Changchun	CRH380BG	4M4T		157	157	8	1256	2011-	9200	350	300	25kV50Hz			<17	200	3260	72	528	600	CTCS 2, 3	
127	China		CR	CNR-Tanshang, CNR-Changchun	CRH380BL	8M8T		149	149	16	2384	2011-	18400	350	300	25kV50Hz			<17	400	3260	24+190	791	1005	CTCS 2, 3	24 seats: business
128	China		CR	CNR-Changchun	CRH380CL	8M8T		25	25	16	400	2011-	18400	350	300	25kV50Hz			<17	428	3358	118	897	977+38	CTCS 2, 3	
129	China		CR	CSR,Alstom	CRH380D	4M4T		85	85	16	1360	2012-	20000	350	300	25kV50Hz	934	19.2	17	428.1	3358	52+126	835	1013	CTCS 2, 3	VIP class: 52 seats The fleet was originally intended to be configured as 20 eight-car and 60 16-car trains, but this was subsequently changed to standardise the fleet on eight-car sets.
130	China		MTR	CRRC Qingdao Sifang	CRH380A(MTR)	6M2T		9	9	8	72	2018-	9600	350	300	25kV50Hz	408		<15	203	3380	68	511	579	CTCS3	for Guangzhou, Shenzhen and Hong Kong link
131	China		CR	CRRC-Sifang,CRRC-NanjingPuzhen	CR300AF	4M4T		67	67	8	536	2020	5460	300	250	25kV50Hz	417	13.1	13.1	208.95	3360	48	565	613	CTCS 2.3	
132	China		CR	CRRC-Tangshan	CR300BF	5M4T		70	70	9	630	2020	5460	300	250	25kV50Hz	417	13.1	13.1	208.95	3360	48	565	613	CTCS 2.3	
133	China		CR	CRRC-Sigang, CRRC-Changchun, CRRC-Tangshan	CR400AF	4M4T		181	181	8	1448	2017-	9750	350	350	25kV50Hz			17	209	3360	10+28	518	556	CTCS3	Business class: 10 seats First class: 28 seats
134	China		CR	CRRC-Sigang, CRRC-Changchun, CRRC-Tangshan	CR400AF-A	8M8T		77	77	16	1232	2018-	19500	350	350	25kV50Hz			17	414.15	3360	148	1045	1193	CTCS3	
135	China		CR	CRRC Qingdao Sifang	CR400AF-B	8M9T		13	13	17	221	2019-	19500	350	350	25kV50Hz			17	439.8	3360	148	1135	1283	CTCS3	
136	China		CR	CRRC Qingdao Sifang	CR400AF-BZ	8M9T		2	2	17	34	2021-	19500	350	350	25kV50Hz			17	439.85	3360	172	1113	1285	CTCS3	
137	China		CR	CRRC Qingdao Sifang	CR400AF-G	4M4T		3	3	8	24	2021-	9750	350	350	25kV50Hz			17	208.95	3360	33	543	576	CTCS3	
138	China		CR	CRRC Qingdao Sifang	CR400AF-Z	4M4T		3	3	8	24	2021-	9750	350	350	25kV50Hz			17	209.06	3360	36	546	582	CTCS3	
139	China		CR	CRRC-Sigang, CRRC-Changchun, CRRC-Tangshan	CR400BF	4M4T		145	145	8	1160	2017-	9750	400	350	25kV50Hz			17	209	3360	10+28	518	556	CTCS3	Business class: 10 seats First class: 28 seats
140	China		CR	CNR-Changchun	CR400BF-A	8M8T		74	74	16	1184	2018-	20280	400	350	25kV50Hz			17	414.26	3360	148	1045	1193	CTCS3	
141	China		CR	CNR-Changchun	CR400BF-B	8M9T		14	14	17	238	2019-	20280	350	350	25kV50Hz			17	439.91	3360	148	1135	1283	CTCS3	
142	China		CR	CNR-Changchun	CR400BF-BZ	8M9T		2	2	17	34	2021-	20280	350	350	25kV50Hz			17	442.16	3360	172	1113	1285	CTCS3	

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143	China		CR	CNR-Changchun	CR400BF-C	4M4T		3	3	8	24	2021-	10140	350	350	25kV50Hz			17	211.31	3360	22	362	384	CTCS3	
144	China		CR	CNR-Changchun	CR400BF-G	4M4T		74	74	8	592	2022-	10140	350	350	25kV50Hz			17	209.06	3360	38	538	576	CTCS3	
145	China		CR	CNR-Changchun	CR400BF-GZ	4M4T		6	6	8	48	2021-	10140	350	350	25kV50Hz			17	211.31	3360	34	544	578	CTCS3	
146	China		CR	CNR-Changchun	CR400BF-Z	4M4T		4	4	8	32	2021-	10140	350	350	25kV50Hz			17	211.31	3360	34	544	578	CTCS3	
147	China		CR	CNR-Changchun	CIT001	5M3T	Inspection	1	1	8	8	2007-	5500	250	200	25kV50Hz			<17	211.5	3200	0	0	0	CTCS 2, 3	Based on CRH5A
148	China		CR	CSR-Sifang	CIT400A	7M1T	Inspection	1	1	8	8	2011-		400	300	25kV50Hz				201	3380	0	0	0	CTCS 2, 3	Based on CRH380A
149	China		CR	CNR-Tanshang, CNR-Changchun	CIT400B	6M2T	Inspection	1	1	8	8	2011-		400	300	25kV50Hz						0	0	0	CTCS 2, 3	Based on CRH380B and CRH380C
150	China		THSRC	Hitachi,Kawasaki, Sharyo-Nippon	700T	9M3T		46	46	12	552	2007-	10260	300	300	25kV60Hz	503	17.6	14	304	3380	66	923	989	ATP	
151	Japan		JRW	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon, Sharyo-Tokyu, Kisha Seizo	0	6M		0	0	6	0	1964-2008	4440	220	220	25kV60Hz	970 for original 16-car set (Loaded)	12.2	16	150	3380	0	400	400	ATC	First HS train in the world. Shortened from 16 cars to 6cars for local transportation. Operation finished in 11/2008. 3216 cars were produced.
152	Japan		JRW	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon, Sharyo-Tokyu,	100	6M		0	0	6	0	1985-2012	5520	230	220	25kV60Hz	925 for original 16-car set (Loaded)	11.9	15	152	3380	0	394	394	ATC	Max. speed was 230km/h for V sets.
153	Japan		JRE	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon, Sharyo-Tokyu,	200	10M		0	0	10	0	1982-2013	9200	240	240	25kV50Hz	583	14.6	16.4	250	3380	52	710	762	ATC DS-ATC	It was 12 cars when introduced. A trainset was abandoned after the derailment at Chuetsu Earthquake.
154	Japan		JRC JRW	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon	300	10M6T		0	0	16	0	1992-2012	12000	270	270	25kV60Hz	710 (Loaded)	16.9	12	402.1	3380	200	1123	1323	ATC ATC-NS	
155	Japan		JRE	Kawasaki, Sharyo-Tokyu	400	6M1T		0	0	7	0	1992-2010	5040	240	240	25kV50Hz 20kV50Hz	318	14.7	12.9	149	2947	20	379	399	ATC DS-ATC ATS-P	For through operation b/w Shinkansen line and improved classical line (Yamagata line). All 12 sets were replaced by E2-2000.
156	Japan		JRW	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon	500	16M	T	0	0	16	0	1996-2010	18240 or 17600	300	300	25kV60Hz	688 (Loaded)	26.5	11.7	404	3380	200	1124	1324	ATC ATC-NS	
157	Japan		JRW	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon	500-7000	8M	T	6	6	8	48	2008-	8800	285	285	25kV60Hz				204	3380	0	557	557	ATC ATC-NS	8 sets were renovated from 16-car 500.
158	Japan		JRC JRW	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon	700 700-3000	12M4T		0	0	16	0	1998-	13200	285	285	25kV60Hz	708 (Loaded)	18.6	11.4	404.7	3380	200	1123	1323	ATC ATC-NS	
159	Japan		JRW	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon	700-7000	6M2T		16	16	8	128	2000-	6600	285	285	25kV60Hz	356 (Loaded)	18.5	11.4	204.7	3380	0	571	571	ATC-NS	
160	Japan		JRC JRW	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon	N700,N700A N700A-4000 N700A-5000	14M2T	T	136	149	16	2384	2007-	17080	300	300	25kV60Hz	715 (Loaded)	23.9	11.4	404.7	3360	200	1123	1323	ATC-NS	JRC: N700:45sets, N700A:51sets JRW:N700A-4000:24sets,N700A-5000:16sets JRC was converted from N700 to N700A(N700-2000) and JRW is converting from N700-3000 to N700A(N700-5000). N700-9000 is a trial train-set and also converted to N700A.
161	Japan		JRW JRK	Hitachi,Kawasaki, Kinki-sharyo, Sharyo-Nippon	N700-7000 N700-8000	8M	T	30	30	8	240	2011-	9760	300	300	25kV60Hz				204.7	3360	24	522	546	ATC-NS KS-ATC	JRW(N700-7000) 19 sets, JRK(N700-8000) 11 sets
162	Japan		JRC JRW	Hitachi, Sharyo-Nippon	N700S-0,9000 N700S-3000	14M2T	T	40	40	16	640	2020-	17080	300	300	25kV60Hz				404.7	3360	200	1123	1323	ATC-NS	Photo source: JR Central website. JRW:2sets JRC:38sets
163	Japan		JRK	Hitachi	800	6M		5	5	6	30	2004-	6600	260	260	25kV60Hz	276 (Loaded)	23.9	11.4	154.7	3380	0	392	392	ATC KS-ATC	
164	Japan		JRK	Hitachi	800-1000 800-2000	6M		3	3	6	18	2009-	6600	260	260	25kV60Hz				154.7	3380	0	384	384	ATC KS-ATC	2 sets: 800-1000, track inspection is capable. 1set: 800-2000, catenary, signalling and communication inspection are capable.
165	Japan		JRK	Hitachi	N700S	6M	T	4	4	6	24	2022-	7320	260	260	25kV60Hz				154.7	3360	0	391	391	ATC KS-ATC	
166	Japan		JRE	Hitachi,Kawasaki	E1	6M6T	D	0	0	12	0	1994-2012	9840	240	240	25kV50Hz	693	12.8	17	302	3380	102	1133	1235	ATC DS-ATC	
167	Japan		JRE	Hitachi,Kawasaki, Sharyo-Nippon, Sharyo-Tokyu	E2	8M2T		0	0	10	0	1997-	7200	275	275	25kV50Hz 25kV60Hz	349	18.6	13.0	201.4	3380	51	579	630	ATC DS-ATC	
168	Japan		JRE	Hitachi,Kawasaki, Sharyo-Nippon, Sharyo-Tokyu	E2-1000	8M2T		23	23	10	230	2002-	9600	275	275	25kV50Hz	442	19.6	13.0	251.4	3380	51	763	814	DS-ATC	For Tohoku and Joetsu line.
169	Japan		JRE	Kawasaki, Sharyo-Tokyu	E3	4M2T		3	3	6	18	1997-	4800	275	275	25kV50Hz 20kV50Hz	258	17.2	12.3	128.2	2945	23	315	338	ATC DS-ATC ATS-P	For Tohoku line.
170	Japan		JRE	Kawasaki	E3-700	4M2T		1	1	6	6	2014-	4800	275	275	25kV50Hz 20kV50Hz	258	18.0	12.3	128.2	2945			143	ATC DS-ATC ATS-P	A luxry train for tourist-oriented services,"Toreiyu", on Yamagata-shinkansen line(the regauged section). It was convered from E3 on 2014.
171	Japan		JRE	Kawasaki	E3-700	4M2T		0	0	6	0	2016-	4800	275	275	25kV50Hz 20kV50Hz	258	18.0	12.3	128.2	2945			143	ATC DS-ATC ATS-P	A luxry train for tourist-oriented services,"Genbi-Shinkansen", on Joetsu-shinkansen line. It was convered from E3 on 2015.
172	Japan		JRE	Hitachi,Kawasaki, Sharyo-Tokyu	E3-1000	5M2T		3	3	7	21	1999- 2014-	6000	275	275	25kV50Hz 20kV50Hz	311	17.9	12.2	148.7	2945	23	379	402	ATC DS-ATC ATS-P	For through operation b/w Shinkansen line and improved classical line (Yamagata Shinkansen line). 1 additional train set was convered from E3 of 2 trainsets on 2014.
173	Japan		JRE	Hitachi,Kawasaki, Sharyo-Tokyu	E3-2000	5M2T		12	12	7	84	2008-	6000	275	275	25kV50Hz 20kV50Hz	307	18.1	12.5	148.7	2945	23	371	394	ATC DS-ATC ATS-P	All sets had replaced Series 400.

order	Country /Region	Photograph	Owner or Operator	Suppliers	Class	**Trainset Formula** M: Motor Car, T: Trailer Car, L: Locomotive, MB: Motor Bogie, TB: Trailer Bogie	**Features** C: Concentrated, A: Articulated, T: Tilting, D: Double Decker	Number of trainsets	Number of presence	Number of cars in a trainset	total number of cars	Year in Service	Power [kW]	Max. Speed [km/h]	Max.Op. Speed [km/h]	Voltage	Weight of the trainset [t]	Power weight ratio [kW/t]	Max.Axle Load [t]	Trainset length [m]	Trainset width [mm]	Seats For 3 classes, 1st and 2nd classes are included in '1st class'			Signaling systems	Observations
174	Japan		JRE	Hitachi,Kawasaki	E4	4M4T	D	0	0	8	0	1997-	6720	240	240	25kV50Hz	428	14.1	16	201.4	3380	54	763	817	DS-ATC	
175	Japan		JRE	Hitachi,Kawasaki	E5	8M2T	T	46	46	10	460	2011-	9600	320	320 (300[-2012])	25kV50Hz	453.5	19.3	13	253	3350	18 55	650	723	DS-ATC	3 classes, For Hokkaido-shinkansen, through operation between JR East and JR Hokkaido
176	Japan		JRH	Hitachi,Kawasaki	H5	8M2T	T	4	4	10	40	2016-	9600	320	320	25kV50Hz	453.5	19.3	13	253	3350	18 55	650	723	DS-ATC	3 classes, For Hokkaido-shinkansen, through operation between JR East and JR Hokkaido
177	Japan		JRE	Hitachi,Kawasaki	E6	5M2T	T	24	24	7	168	2013-	6000	320	320 (300[-2014])	25kV50Hz 20kV50Hz	306.5	18.4		148.7	2945	22	310	332	DS-ATC ATS-P	For through operation b/w Shinkansen line and improved classical line (Akita Shinkasen line)
178	Japan		JRE JRW	Hitachi,Kawasaki, Kinki-sharyo, J-Trec	E7 W7	10M2T		47	30	12	360	2014-	12000	275	260	25kV50Hz 25kV60Hz	540	20.2		302	3380	18 63	831	912	DS-ATC	3 classes, JRE(E7) 19sets, JRW(W7) 11sets For Hokuriku-shinkansen, operating from 2014
179	Japan		JRE	Undisclosed	E8	5M2T	Undisclosed	Undisclosed	0	7	0	(2024-)	Undisclosed	300(130)	300(130)	Undisclosed						26	329	355	Undisclosed	Commercial operation is planned for the Yamagata Shinkansen and Tohoku Shinkansen from spring 2024. To operate at 300 km/h in combination with the E5 series will be expected between Utsunomiya-Fukuoka on the Tohoku Shinkansen. .
180	Japan		JRC JRW	Hitachi, Sharyo-Nippon	923 923-3000	6M1T	Inspection	2	2	7	14	2001- 2005-	6600	270	270	25kV60Hz				179.7	3380	N/A	N/A	N/A	ATC ATC-NS	Based on 700
181	Japan		JRE	Sharyo-Tokyu	E926	5M1T	Inspection	1	1	6	6	2001-	6000	275	275	25kV50Hz 20kV50Hz	275		12.4	128.2	2945	N/A	N/A	N/A	ATC DS-ATC ATS-P	Based on E3
182	Korea		KORAIL	Alstom HyundaiRotem	KTX-I	2L18T (+ 2MB)	C,A	46	46	20	920	2004-	13560	300	300	25kV60Hz	701	17.4	17	388	2904	92	863	955	ATC(TVM), ATS, ATP	
183	Korea		KORAIL	HyundaiRotem	KTX-Sancheon	2L8T	C,A	61	61	10	610	2010-	8800	330	300	25kV60Hz	434	19.0		201	2970	30	345	375	ATC(TVM), ATS, ATP	"Sancheon"
184	Korea		KORAIL	HyundaiRotem	KTX-Honam	2L8T	C,A	22	22	10	220	2015-	8800	330	300	25kV60Hz	434	18.9		201	2970	33	377	410	ATC(TVM), ATS, ATP	"Honam"
185	Korea		SR	HyundaiRotem	SRT-Suseo	2L8T	C,A	10	10	10	100	2016-	8800	330	300	25kV60Hz	434	18.9		201	2970	33	377	410	ATC(TVM), ATS, ATP	"Suseo" SR is on of the High Speed train operation company in South Korea.
186	Korea		KORAIL	HyundaiRotem	KTX-Wongang	2L8T	C,A	15	15	10	150	2017-	8800	330	300	25kV60Hz	434	18.9		201	2970	33	377	410	ATC(TVM), ATS, ATP	"Wongang", For Wonju - Gangneung.
187	Korea		KORAIL	HyundaiRotem	EMU-250	4M2T	C,A	19	19	6	114	2021-		286	260	25kV60Hz	318		15	150.5	3150			381	ATC(TVM), ATS, ATP	5 trainsets for Gyeongjeon, 14 trainsets for Seohae and Center Island and Jungang
188	Korea		KORAIL	HyundaiRotem	EMU-320	6M2T	C,A	2	0	8	16	(2023-)	9120	352	320	25kV60Hz	468 (Loaded)	19.4	15	199.1	3150	46	469	515	ATC/ATP/ATS	
189	Turkey		TCDD Transport	CAF SA	HT65000	4M2T		12	12	6	72	2009-	4800	250	250	25kV50Hz	297	-	17	158.9	2920	55	356	411	ETCS, ATS	8 seats in cafeteria are excluded.
190	Turkey		TCDD Transport	Siemens	VelaroTR	4M4T		18 1	19	8	152	2015-	8000	320	300	25kV50Hz	456	-	17	200.7	2924	45	462	444	ETCS	Siemens Velaro D series. The restaurant car offers eight bistro seats in the bar and 28 seats in the restaurant.
191	Saudi Arabia		Haramain HSR	Talgo, Alstom	Talgo 350	2L13T	C,A	35	35	15	525	2018-	8000	350	300	25kV60Hz	373.9			215	2960 (Loco)/294 2(cars)	100	304	404	ETCS	
192	Egypt	 Sorce) Simens press	NAT	Siemens	Velaro Egypt			41	0	8	0	(2025-)	8800	250	230	25kV50Hz								509		
193	Morocco		ONCF	Alstom	RGV-M	2L8T	C,A,D	12	12	10	120	2018-		320	300	3kV 25kV50Hz				200	2896			533	ETCS	No.1201-1212
194	USA		Amtrak	Alstom	Acela	2L6T	C	20	20	8	160	2000-	9200	241	241	25kV60Hz 12.5kV60Hz 12kV25Hz	566	15.6	23	203	3175	44	260	304	ATP	
195	USA		Amtrak	Alstom	Avelia Liberty	2L9T	C, A, T	28	0	11	0	(2023-)		300	255									386		
	Total (current)							6734	6204		58501															