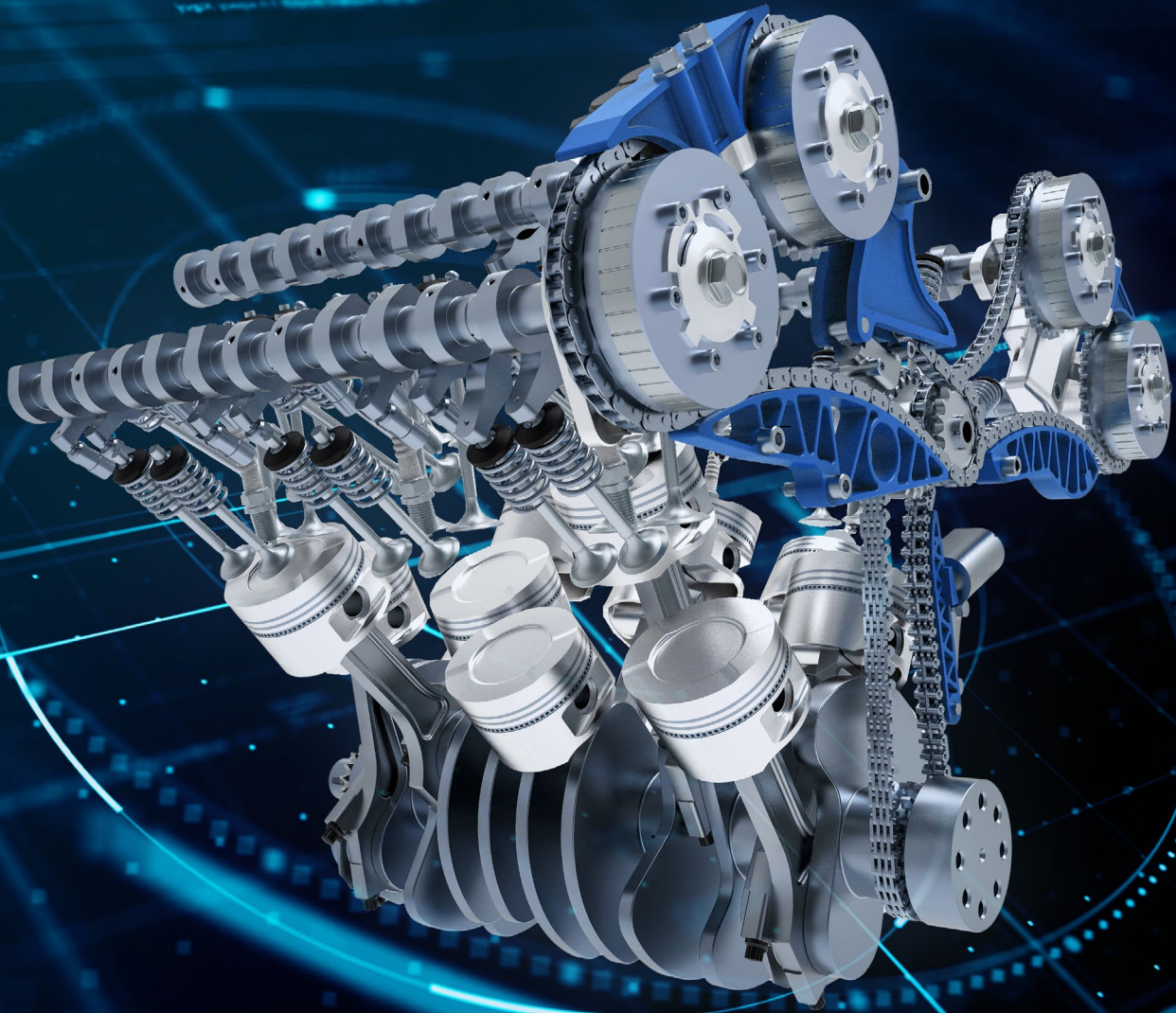




KOLBENSCHMIDT



TIMING CHAIN KITS – PRECISION AND STABILITY, FOR SAFETY AND PERFORMANCE

TAKING RESPONSIBILITY IN A CHANGING WORLD



RHEINMETALL

TIMING CHAIN KITS

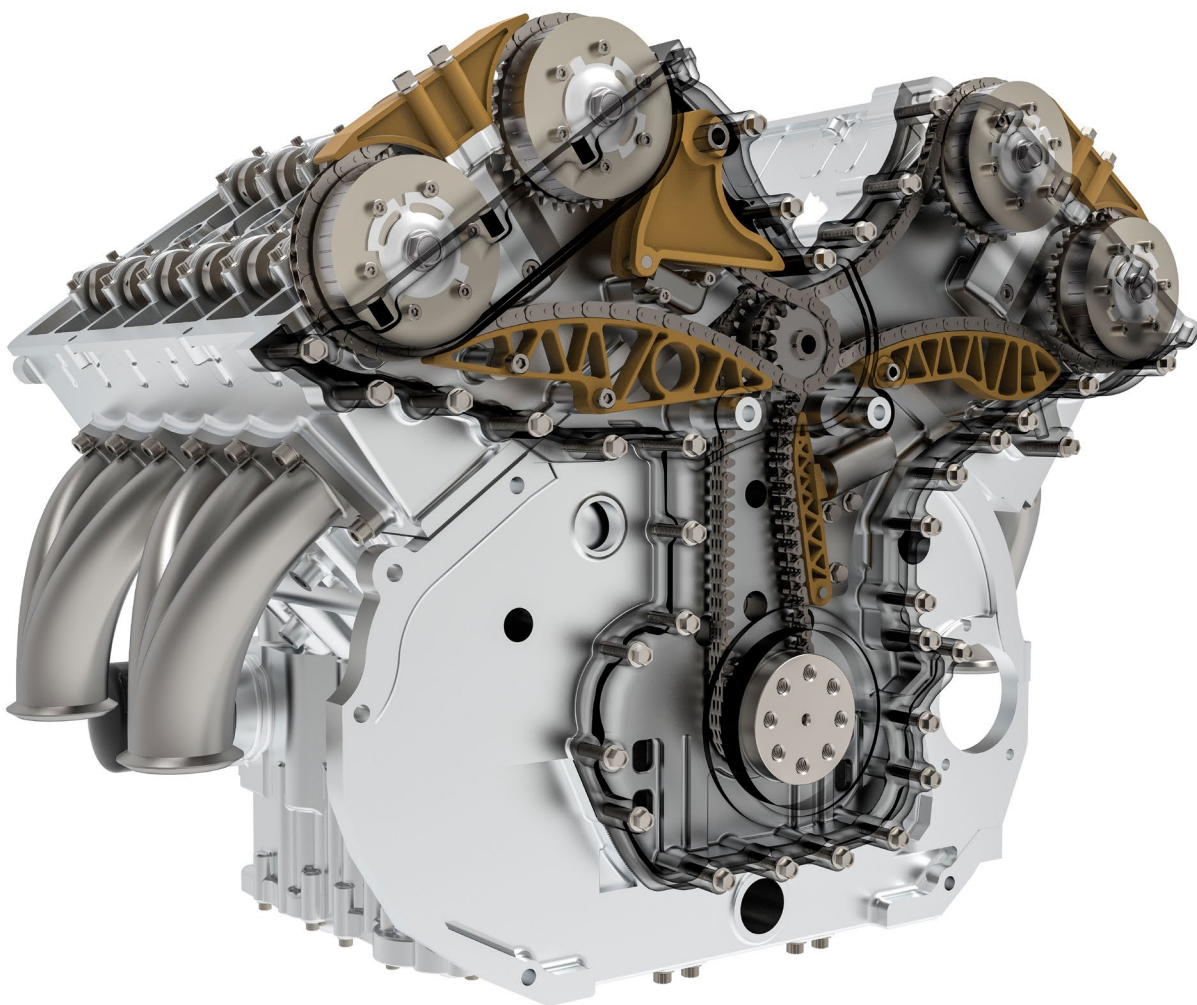
PRECISION AND STABILITY, FOR RELIABILITY AND POWER

In around a third of all passenger car engines, the camshafts are powered by timing chains. Malfunctions to the engine's primary drive normally result in expensive repairs, which is why it is worth opting for quality products.

PRODUCT RANGE

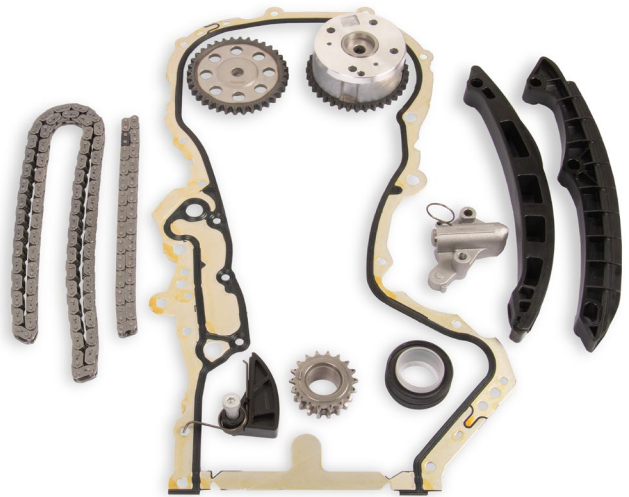
Timing chain kits consisting of:

- Timing chains
- Tensioners, slide and guide rails
- Sprockets
(crankshaft and camshaft sprockets)
- Gaskets
- Crank and camshaft gears
- Camshaft adjusters



TIMING CHAIN KITS

During reconditioning and scheduled servicing of the chain drive, all components affected by wear and the associated gaskets should always be replaced. The kits are put together for specific engines.



TENSIONER BLADES, SLIDING AND GUIDE RAILS

Made of aluminium and plastic. They tension and guide the chains. They usually have special sliding surfaces to reduce noise and friction.



SPROCKETS

Normally made of sintered metal or precision punched metal to save weight. Often have special fittings and grooves for mounting in the correct position.



CHAIN TENSIONERS

Mechanically and hydraulically dampened designs. Their main tasks are: Maintaining the chain tension at all times, compensating for chain wear and the vibrations in the primary drive.

TYPES OF CHAIN



BUSH AND ROLLER CHAINS

Single or multiple rows. Roller chains have an additional roller on each bush to reduce friction.



SPROCKET CHAINS

Individual shackles with teeth pointing inwards for the gear wheels. The chain has no openings on the outside.



We offer a comprehensive product portfolio of timing chain sets for a wide range of engines in OEM quality.

Item no.	OE no.*	Manufacturer	Engines
400040400000	2432103000	Hyundai, Kia	G4LA
400110400000	1704087	Citroën, Ford, Peugeot	4HV, 4HU, 4HH, P8FA, QVFA, QWFA, P8FB, PGFA, SRFA, SRFB, SRFC ...
400110400001	1198056	Ford	C9DC, BHDA, BHDB, C9DA, C9DB, RTN, RTP, RTQ, FFDA, F9DA, F9DB ...
400110400002	1119172, 1119857	Ford, Mazda, Morgan, Volvo	CGBA, CGBB, CHBA, CHBB, CJB, CJB, AODA, AODB, CFBA, EYPA, N4JB, QQDB, QQDA, EYPC, Q7DA, CSDA, CSDB, AOWA, AOWA, SYDA ...
400110400003	1704089	Ford, Land Rover	FXFA, H9FB, JXFA, PHFA, PHFC, JXFC, H9FD, DT244
400120400000	038115230D	Audi, Seat, Škoda, VW	ATD, AXR, BKD, BKC, AZV, BMM, BMN, BUY, BLS, CBAA, CBAB, CBBB ...
400120400001	03C109158A	Audi, Seat, Škoda, VW	CAXC, CMSA, CAXA, CNVA, BLG, BMY, BWK, CAVD, CAVB, CAVC, CAVA ...
400120400002	03C109158A, 03C115225	Audi, Seat, Škoda, VW	CAXC, CMSA, CAVG, CTHG, CTJA, CAVE, CAVF, CNUB, CTHE, CTJC, CTJB ...
400120400003	03F109158K	Audi, Seat, Škoda, VW	CBZB, CBZA
400120500001	06A115125	Audi, Seat, Škoda, VW	AHL, AJQ, APX, APF, APG, APP, AQA, ARZ, APY, ALH, AMK, ARK, ANB ...
400120500002	06K109158AD	Audi, Seat, Škoda, VW	AXX, BWA, BYT, BZB, CABD, CABA, CABB, BPY, CAWB, CDNB, CDNC ...
400120500003	03C109158A, 03C115225A	Audi, Seat, Škoda, VW	CAXC, CMSA, CAXA, CNVA, CAVA, CNWB, CTHA, BLG, BMY, BWK, CAVD ...
400120500004	03C109158H	Škoda, VW	CAXA, CAXC, BWK, CAVD, CAVA, CNWA, CKMA, CMSB, CTHA, CTHD ...
400130400001	55562234	Opel, Suzuki, Vauxhall	Z 10 XE, Z 12 XE, Z 10 XEP, Z 14 XEP, Z 12 XEP, Z 14 XEL, A 12 XEL ...
400130400002	55495936, 55573876	Chevrolet, Opel	LVL, B 16 DTH, B 16 DTL, B 16 DTC, B 16 DTE, B 16 DTN, B 16 DTU ...
400130400003	55562234	Opel	Z 14 XEP, Z 14 XEL, A 10 XEP
400130400004	55562234	Opel, Suzuki	Z 10 XE, Z 12 XE, Z 10 XEP, Z 14 XEP, Z 12 XEP, Z 14 XEL, X 10 XE, X 12 XE
400130400005	55562234	Chevrolet, Opel	A 14 XER, LDC, LDD, LUJ, LUV, A 14 NET, A 14 NEL, A 12 XEL, A 12 XER ...
400130500000	55562234	Chevrolet, Opel	A 14 XER, LDC, LDD, LUJ, LUV, A 14 NET, A 14 NEL, A 12 XEL, A 12 XER ...
400190400001	130C10990R	Fiat, Mercedes-Benz, Nissan, Opel, Renault	R9M 408, R9M 413, R9M 452, OM 626.951, OM 622.951, R9M, R9M 415, R9M 450, R9M 402, R9M 404, R9M 409, R9M 414, R9M 453
400190500000	8200343394	Nissan, Opel, Renault, Samsung, Vauxhall	M9R 780, M9R 760, M9R, M9R 782, M9R 630, M9R 786, M9R 692, M9R 784, M9R 788, M9R 740, M9R 700, M9R 724, M9R 800, M9R 802 ...
400190500001	13 OC 123 45R	Dacia, Mercedes-Benz, Nissan, Renault, Smart	H5F 402, H5F 404, H4B 400, H5F 410, H4B 410, H4B 405, H4B 408, H5F 408, H4B 412, H4B 411, M 200.711, HR16DE, HRA2DDT, H4J 700 ...
400190500002	8200397125	Dacia, Nissan, Renault, Suzuki	K9K 790, K9K 792, K9K 796, K9K 892, K9K 894, K9K 898, K9K 612, K9K 858, K9K 856, K9K 884, K9K 830, K9K 846, K9K 666, K9K 658 ...
400210400001	A 000 993 10 78, A 000 993 18 76	Mercedes-Benz	M 271.860, M 271.820, M 271.861
400210400002	A 000 993 35 02	Mercedes-Benz	OM 651.911, OM 651.912, OM 651.924, OM 651.925, OM 651.913 ...
400210400003	A 000 993 82 76	Mercedes-Benz	OM 651.911, OM 651.912, OM 651.916, OM 651.924, OM 651.925 ...
400210400004	A0039976894	Mercedes-Benz	M 112.923, M 113.943, M 113.942, M 113.944, M 112.922, M 112.944 ...
400210400005	A 003 997 75 94	Mercedes-Benz	OM 611A, OM 611LA, OM 611.980, OM 611.962, OM 612.962 ...
400210500002	A000 993 35 02	Mercedes-Benz	OM 651.911, OM 651.912, OM 651.916, OM 651.924, OM 651.925 ...
400210500003	A 000 993 63 76	Freightliner, Mercedes-Benz	OM 642.993, OM 642.940, OM 642.910, OM 642.921, OM 642.920, OM 642.950, OM 642.822, OM 642.930, OM 642.960, OM 642.970 ...
400450400001	11 31 8 570 649, 13 52 8 589 971, 11 41 7 797 896	BMW, Mini	N47 D20 A, N47 D20 B, N47 D20 C, N47 D16 A, N47 D20 D, M47 D20, N47 C20 A, N47 C16 A
400450400002	11 31 8 506 869, 13 52 8 506 969	BMW, Land Rover	M57 D30 TU2 OL, M54N 306 D2, M57 306 D4, M57 306 D5, N57 306 D2, N47 D20 A, N57N 306 D3, N57 306 D3, N57N 306 D2, N57N 306 D5 ...

Item no.	OE no.*	Manufacturer	Engines
400450400003	11318618318	BMW, Citroën, Mini, Peugeot	N13 B16 A, 5FW, 8FS, 5FS, 5FK, 8FP, 8FR, 5FU, 8FN, N12 B16 A, N14 B16 A, N12 B14 A, N14 B16 C, N16 B16 A, N18 B16 A, N18 B16 B ...
400450400004	11318570649, 11417797896, 13528589971	BMW	N47 D20 A, N47 D20 B, N47 D20 C, N47 D16 A, N47 D20 D, M47 D20, B47 D20 A, B47 D20 B
400450400005	11318590950	BMW, Mini	N47 D20 A, N47 D20 B, N47 D20 C, N57 D30 A, N57 D30 B, N47 D16 A ...
400450400006	11318648729, 13528648731	BMW, Mini	B48 A20 B, B48 A20 A, B48 B20 A, B58 B30 A, B48 B20 B, B46 A20 B, B46 B20 B, B58 B30 C, B48 A20 F, B42 S20 A, B48 B20 S, B48 B20 P ...
400450400007	11318648732	BMW	N52 B30 A, N52 B25 A, N53 B25 A, N52 B30 BF, N52 B30 B, N52 B30 AF ...
400450400008	11318648732	BMW, Huasong	N20 B20 A, N26 B20 A, N20 B20 B, N20 B20 D, N20 B20 C
400450500002	11318618318	BMW	N40 B16 A, N45 B16 A, N45 B16 TU2, N45 B16
400450500003	8201012338	BMW	N42 B20, N40 B16 A, N42 B20 A, N46 B20 A, N46 B20 C, N45 B16 A ...
400450500004	11277500502	BMW	N46 B20 C, N45 B16 A, N46 B20 B, N43 B20 A, N43 B16 A, N45 B16 TU2 ...
400450500005	11318618317	BMW	N46 B20 C, N46 B20 B, N43 B20 A, N43 B16 A, N45 B16 TU2, N46 B20 CC ...
400450500006	13529886258	BMW, Mini	N47 D20 A, N47 D20 B, N47 D20 C, N57 D30 A, N47 D16 A, N47 D20 D ...
400450500007	11318570649	Alpina, BMW, Mini	N47 D20 C, N47 D20 D, M47 D20 (204D4), N47 D20 A, N47 D20 B ...
400450500008	13529886258	Alpina, BMW, Mini	N47 D20 C, N47 D20 D, M47 D20 (204D4), N47 D20 A, N47 D20 B ...
400450500009	11318648732	BMW	N20 B20 A, N26 B20 A, N20 B20 B, N20 B16 A, N20 B20 D, N20 B20 C
400540400003	03C 109 158 A, 03C 115 230 C	Audi, Seat, Škoda, VW	BAG, BLP, BLF, CAXC, CMSA, BTS, CNKA, CFNA, AXU, BKG, BLN, CAXA, CLPA, CLRA
400540400004	03F109158G	Audi, Seat, Škoda, VW	CBZB, CBZA
400540400005	03E109229A	Seat, Škoda, VW	AZQ, BXV, BME, BZG, CGPA, CJLB, CEVA, CHTA
400540500003	03C109158A	Seat, Škoda, VW	BXV, BZG, CGPB, CGPA, CGPC, CJLB, CEVA, CHTA
400700400001	55221385	Alfa Romeo, Chevrolet, Citroën, Fiat, Ford, Lancia, Opel, Suzuki	199 A3.000, 199 B1.000, 199 B4.000, 199 B8.000, 955 B2.000, 330 A1.000, LSF, LDV, FHZ, 188 A9.000, 169 A1.000, 199 A2.000, 223 A9.000, 199 A9.000, 199 B2.000, 188 A8.000, 169 A5.000 ...
400700400002	55283520	Alfa Romeo, Citroën, Fiat, Ford, Lancia, Opel, Peugeot, Suzuki	199 A3.000, 199 B1.000, 330 A1.000, FHZ, FHY, 169 A1.000, 199 A2.000, 199 A9.000, 263 A2.000, 199 B4.000, 312 A8.000, 199 A1.000, 225 A2.000, 312 B1.000, 312 B2.000, FD4, 188 A9.000 ...
401460400001	9822827180	Citroën, Ds, Mini, Opel, Peugeot	5FX, 5FT, 5FR, 5FV, 5FM, 5FD, 5FN, 5GZ, 5FM, 5GM, 5GR, 5GC, 5GF, 5FE, 5GQ, 5GB, 5GG, N14 B16 A, N14 B16 C, N18 B16 A, N18 B16 C ...
401460400002	0816J1	Citroën, Ford, Mazda, Mini, Peugeot, Volvo	8HY, DV6B, 9HZ, 9HY, 9HX, 9HT, 9HT, 9HU, 9HX, 9HP, 9HJ, 9HW, 9HS, 9HP, 9HV, HHJA, HHJB, HHDA, HHDB, G8DA, G8DB, HHJD, GPDA, G8DD ...
401460400003	0816F6	Citroën, Ds, Fiat, Ford, Jaguar, Lancia, Land Rover, Mitsubishi, Opel, Peugeot	4HT, 4HN, RHE, 4HL, AHX, AHW, AHV, 4HP, 4HR, RHD, AHR, AHN, AHP, AHS, AHH, AHM, AHK, AHE, EHY, EHZ, 4HK, 4HB, 4HH, EHZ, EHS, EHT, T8MB, XRMA, T7MA, T8MA, T7DB, T8DE, T9CA, T8DA, UFCA, UFCB, D 20 DTH, DW10FDDU370, DW10FDDU340, RHR, RHH, RHF, RHC, RHA, AHX ...
401460500000	0816F6	Citroën, Fiat, Ford, Lancia, Peugeot, Suzuki, Volvo	4HX, RHJ, RHR, 4HW, RHW, RHT, RHM, RHK, RHX, RHH, RHE, RHF, AHX, AHV, RHD, AHY, AHR, AHS, AHE, RHA, RHZ, 4HW, RHR, DW10BTED4, RHG, G6DA, G6DB, G6DD, G6DC, G6DE, G6DF, AZWA, QXWA, QXWB, KLBA ...
401460500001	1235939	Citroën, Fiat, Ford, Jaguar, Land Rover, Lti, Peugeot	4HV, 4HU, 4HH, 4HG, 4HJ, 4HV, F4FA, D2FA, D4FA, D3FA, D2FE, ABFA, D5BA, D6BA, HJBA, HJBB, HJBC, QJBA, QJBB, FMBA, N7BA, SDBA, F3FA, QJBC, QJBD, FXFA, FIFA, H9FB, JXFA, PHFA, H9FA, D2FB, DOFA, P8FA ...
403650400001	11318618317	Citroën, Ds, Mini, Opel, Peugeot	5FX, 5FT, 5FR, 5FV, 5FM, 5FD, 5FN, 5GZ, 5FM, 5GM, 5GR, 5GC, 5GF, 5FE, 5GQ, 5GB, 5GG, N14 B16 A, N14 B16 C, N18 B16 A, N18 B16 C, N14 B16 AB, D 16 XHT, D 16 XHT, A 16 XHL, F 16 XHR, 5FY, 5FE, 5FA, 5GX
407210400001	A1609970494, A2669970094	Smart	M 160.921, M 160 E6AL B05, M 160 E6AL B03, M 160 E6AL B04, M 160.910, M 160.920, M 160.923, M 160.922
407380400000	130C1-8929R	Fiat, Mercedes-Benz, Nissan, Opel, Renault, Vauxhall	R9M 408, R9M 450, R9M 413, R9M 452, OM 626.951, R9M, R9M 402, R9M 404, R9M 409, R9M 453
407380400001	8201012338	Nissan, Opel, Renault	M9T 670, M9T 690, M9T 672, M9T 676, M9T 678, M9T 680, M9T 686, YS23DDTT, M9T 876, M9T 880, M9T 898, M9T 890 ...
407380400002	13028-4M51A	Nissan	QG18DE, QG15DE, QG16DE

* The reference numbers given are for comparison purposes only and must not be used on invoices to the consumer.



Camshaft adjuster

Can rotate the camshaft and thereby adjust the valve opening times to the operating mode of the engine.

Item no.	OE no.*	Manufacturer	Installation position	Engines
50007979	636 304	Opel	Intake side / Exhaust side	A12XEL, A12XER, A14NEL, A14NET ...
50007981	A 271 050 14 47	Mercedes-Benz	Intake cam	M271.910 / 911 / 921 ...
50007982	A 271 050 12 47	Mercedes-Benz	Exhaust side	M271.910 / 911 / 921 ...
50007984	1147A046, A 132 034 03 10	Smart, Mitsubishi	Intake cam	M132.910 / 930
50007985	11 36 7 540 348	BMW	Exhaust side	N43B16 / B20 / B25 / B30
50007986	11 36 7 540 346	BMW	Intake cam	N43B16 / B20 / B25 / B30
50007987	06F 109 088J	VAG	Exhaust side	AWA, AXW, AXX, BGB ...
50007991	11 36 7 583 208	BMW	Exhaust side	N51B30, N52B25, N52B30, N55B30
50007992	11 36 7 583 207	BMW	Intake cam	N51B30, N52B25, N52B30, N55B30
50007993	A272 050 68 47	Mercedes-Benz	Exhaust side (left & right)	M272.911 / 920 / 921 / 922 / 923 ...
50007994	A272 050 52 47	Mercedes-Benz	Intake cam (left)	M272.911 / 920 / 921 / 922 / 923 ...
50007995	A272 050 53 47	Mercedes-Benz	Intake cam (right)	M272.911 / 920 / 921 / 922 / 923 ...
50007996	2017716, LR033733	Ford, Land Rover	Exhaust side	R9CB, R9CD, R9CF, R9DA ...
50007997	2017710, LR095897	Ford, Land Rover	Intake cam	R9CB, R9CD, R9CF, R9DA ...
50007998	04E 109 088AD	VAG	Intake cam	CHPB, CJCA, CPTA, CVNY ...
50056014	04E 109 088AE	VW	Exhaust side	CHPB, CJCA, CPTA, CVNY ...
50056002	06E 109 083G	VAG	Intake cam	AUK, BDW, BKH, BNS ...
50056003	06E 109 084G	VAG	Exhaust side	AUK, BDW, BKH, BNS ...
50056004	06E 109 083Q	VAG	Intake cam	CGWA, CGWB, CGWC, CGXA ...
50056005	06E 109 084N	VAG	Exhaust side	CEUA, CEUC, CLXB, CRDB ...
50007804	03C 109 088E	VAG	Intake cam	BLF, BLG, BLP, BMY ...
50007805	11 36 7 545 862	BMW, Citroën, Peugeot	Intake cam	N13B16A, 5FS, 5FU, EP6 ...
50007806	11 36 7 536 085	BMW	Exhaust side	N13B16A, 5FS, 5FU, EP6 ...
50007807	03C 109 088G	VAG	Intake cam	CAVA, CAXC, CAVD, CKMA ...
50007808	A 271 050 33 47	Mercedes-Benz	Intake cam	M271.820 / 860 / 861
50007870	A 271 050 34 47	Mercedes-Benz	Exhaust side	M271.820 / 860 / 861
50007912	A 276 050 36 00	Mercedes-Benz	Intake cam (left)	M276.820 / 821 / 822 / 823 ...
50007913	A 276 050 37 00	Mercedes-Benz	Intake cam (right)	M276.820 / 821 / 822 / 823 ...
50007914	A 276 050 38 00	Mercedes-Benz	Exhaust side (left)	M276.820 / 821 / 822 / 823 ...
50007915	A 276 050 39 00	Mercedes-Benz	Exhaust side (right)	M276.820 / 821 / 822 / 823 ...
50007916	A 260 050 06 00	Mercedes-Benz	Exhaust side	M260.920, M264.915, M270.910 ...
50007917	A 260 050 09 00	Mercedes-Benz	Intake cam	M260.920, M264.915, M270.910 ...
50007918	0805.H8	Peugeot	Intake cam	RFH, RFJ, 6FY
50056100	A200 050 10 00, 30253326R	Mercedes-Benz, Renault	Intake cam	M200.711, H5F400 / 404 / 408 ...
50056101	130252372R	Mercedes-Benz, Renault	Intake side / Exhaust side	M281.910 / 920 , H4B408 / 410
50056102	130259835R	Renault	Exhaust side	M200.711, H5F400 / 404 / 408 ...
50056103	06E109083R	VAG	Intake cam	BDX, CALA, CCBA ...
50056104	06E109084P	VAG	Exhaust side	BDX, CALA, CCBA ...
50056105	06E109083P	VAG	Intake cam	CREA / C / D / G / H

Item no.	OE no.*	Manufacturer	Installation position	Engines
50056106	A1320340210	Mercedes-Benz	Intake cam	M132.910 / 930
50056107	A1350500047	Mercedes-Benz	Intake cam	M134.910 / 911 , M135.930 / 950
50056108	A2760501447	Mercedes-Benz	Exhaust side (right)	M276.950 / 952 / 954 / 955 ...
50056109	A2760501547	Mercedes-Benz	Intake cam	M276.950 / 952 / 954 / 955 ...
50056110	A2780501347	Mercedes-Benz	Intake cam (left)	M278.920 / 922 / 927 / 928 / 932
50056111	A2780501447	Mercedes-Benz	Exhaust side (right)	M152.980, M157.980 / 981 / 982 ...
50056112	A2780501547	Mercedes-Benz	Intake cam (left)	M157.980 / 981 / 982, M278.920 / 922 ...
50056113	A2780501647	Mercedes-Benz	Intake cam (right)	M157.980 / 981 / 982 / 983 / 984
50056114	A2780504900	Mercedes-Benz	Intake cam (right)	M157.980 / 981 / 982 / 983 / 984
50056115	A2780505000	Mercedes-Benz	Intake cam (left)	M157.980 / 981 / 982 / 983 / 984
50056116	A2780505100	Mercedes-Benz	Exhaust side (right)	M157.980 / 981 / 982 / 983 / 984
50056117	A2780505200	Mercedes-Benz	Exhaust side (left)	M157.980 / 981 / 982 / 983 / 984
50056118	11367600085	BMW	Intake cam	N63B44A
50056119	11367600086	BMW	Exhaust side	N63B44A
50056120	11367598001	BMW	Intake cam	N74B60A, N74B66B, N74B66C
50056121	11367598002	BMW	Exhaust side	N74B60A, N74B66B, N74B66C
50056122	11368629906	BMW	Intake cam	B38A15A, B48A20E ...
50056123	11368629907	BMW	Exhaust side	B38A15A, B48A20E ...
50056147	55598573	Opel	Intake side / Exhaust side	A16XHT, A16SHT, B16SHT ...
50056148	94810505123	Porsche	Intake cam	M46.20, M48.02, M48.52
50056149	94610505177	Porsche	Intake cam	DCHA, DCKA, DGRB ...
50056150	94610505277	Porsche	Exhaust side	DCHA, DCKA, DGRB ...



Mechanical control valves

Needed for the variable camshaft adjustment. They are responsible for directing oil pressure into corresponding channels of the adjuster. This changes the position of the shaft and thus also the timing.

Item no.	OE no.*	Manufacturer	Engines
50007781	06H 109 257A	VAG	BYT, BZB, CABD, CAWB ...
50007784	06L 109 257F	VAG	CJSA, CJSB, CJXB, CJXC ...
50007787	11 36 7 583 820	BMW	N20B16, N20B20
50007789	A272 050 04 78	Mercedes-Benz	M272.911 / 920 / 921 / 922 ...
50007790	A272 050 05 78	Mercedes-Benz	M272.911 / 920 / 921 / 922 ...
50007791	06H 109 257C	VAG	CABA, CABB, CAEA, CAEB ...
50007793	A271 050 01 71	Mercedes-Benz	M271.910 / 911 / 921 / 940 ...
50007794	A276 050 02 78	Mercedes-Benz	M157.980 / 981 / 982 / 983 ...
50007795	A271 050 05 78	Mercedes-Benz	M271.820 / 860 / 861
50007796	55562224	Opel	A12XEL, A12XER, A14XEL ...
50007797	1763041	Ford	M1CB, M1DC, M1JA, M1JC ...
50007879	06L 109 257D	VAG	CJXD, CJXF, CVKB, CVKC, CYMC ...
50056015	05184150AF	Chrysler	ERB

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HEADQUARTERS:

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