

## V10-3728 X-REF 06F 109 257 C

### STEUERVENTIL, NOCKENWELLENVERSTELLUNG

11314

#### TEST-CONDITIONS

Batch quantity 3  
 Oil temp  $40 \pm 5 \text{ }^{\circ}\text{C}$   
 Oil pressure  $300 \pm 50 \text{ Kpa}$   
 Frequency 250 Hz  
 Test voltage 12 V

#### SPECIFICATION

42.5 - 52.5 % going up 37.5 - 47.5 % going down  
 Low flow rate: 2480 - 2600 ml/min



#### FREQUENCY VS. OIL FLOW VOLUME

| Duty Cycle %<br>(x10) | 06F 109 257 C<br>OE part<br>(ml/min) | V10-3728<br>Sample 1<br>(ml/min) | V10-3728<br>Sample 2<br>(ml/min) | V10-3728<br>Sample 3<br>(ml/min) |
|-----------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 101                   | 4677                                 | 4896                             | 4879                             | 4806                             |
| 106                   | 4655                                 | 4857                             | 4890                             | 4791                             |
| 111                   | 4664                                 | 4918                             | 4919                             | 4794                             |
| 116                   | 4719                                 | 4894                             | 4888                             | 4824                             |
| 121                   | 4691                                 | 4878                             | 4890                             | 4785                             |
| 126                   | 4706                                 | 4882                             | 4922                             | 4759                             |
| 131                   | 4680                                 | 4887                             | 4889                             | 4746                             |
| 136                   | 4672                                 | 4902                             | 4891                             | 4758                             |
| 141                   | 4692                                 | 4893                             | 4918                             | 4806                             |
| 146                   | 4693                                 | 4860                             | 4886                             | 4769                             |
| 151                   | 4702                                 | 4866                             | 4888                             | 4797                             |
| 156                   | 4725                                 | 4842                             | 4911                             | 4821                             |
| 161                   | 4665                                 | 4856                             | 4973                             | 4797                             |
| 166                   | 4666                                 | 4855                             | 4970                             | 4758                             |
| 171                   | 4679                                 | 4838                             | 4898                             | 4741                             |
| 176                   | 4699                                 | 4852                             | 4895                             | 4754                             |
| 181                   | 4725                                 | 4855                             | 4871                             | 4759                             |
| 186                   | 4680                                 | 4846                             | 4888                             | 4759                             |
| 191                   | 4665                                 | 4862                             | 4917                             | 4775                             |

| Duty Cycle %<br>(x10) | 06F 109 257 C<br>OE part<br>(ml/min) | V10-3728<br>Sample 1<br>(ml/min) | V10-3728<br>Sample 2<br>(ml/min) | V10-3728<br>Sample 3<br>(ml/min) |
|-----------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 196                   | 4659                                 | 4865                             | 4887                             | 4821                             |
| 201                   | 4691                                 | 4840                             | 4896                             | 4797                             |
| 206                   | 4727                                 | 4850                             | 4921                             | 4799                             |
| 211                   | 4700                                 | 4855                             | 4883                             | 4771                             |
| 216                   | 4663                                 | 4838                             | 4875                             | 4759                             |
| 221                   | 4655                                 | 4853                             | 4902                             | 4755                             |
| 226                   | 4691                                 | 4858                             | 4873                             | 4733                             |
| 231                   | 4722                                 | 4843                             | 4872                             | 4767                             |
| 236                   | 4697                                 | 4857                             | 4892                             | 4803                             |
| 241                   | 4699                                 | 4858                             | 4867                             | 4778                             |
| 246                   | 4648                                 | 4834                             | 4871                             | 4784                             |
| 251                   | 4661                                 | 4844                             | 4890                             | 4769                             |
| 256                   | 4707                                 | 4848                             | 4861                             | 4738                             |
| 261                   | 4691                                 | 4828                             | 4831                             | 4737                             |
| 266                   | 4697                                 | 4848                             | 4804                             | 4717                             |
| 271                   | 4644                                 | 4840                             | 4816                             | 4747                             |
| 276                   | 4653                                 | 4814                             | 4813                             | 4786                             |
| 281                   | 4669                                 | 4823                             | 4797                             | 4762                             |
| 286                   | 4660                                 | 4863                             | 4806                             | 4763                             |

| Duty Cycle %<br>(x10) | 06F 109 257 C<br>OE part<br>(ml/min) | V10-3728<br>Sample 1<br>(ml/min) | V10-3728<br>Sample 2<br>(ml/min) | V10-3728<br>Sample 3<br>(ml/min) |
|-----------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 291                   | 4671                                 | 4834                             | 4808                             | 4703                             |
| 296                   | 4651                                 | 4842                             | 4782                             | 4711                             |
| 301                   | 4631                                 | 4863                             | 4814                             | 4728                             |
| 306                   | 4665                                 | 4851                             | 4834                             | 4719                             |
| 311                   | 4656                                 | 4846                             | 4818                             | 4736                             |
| 316                   | 4675                                 | 4870                             | 4816                             | 4758                             |
| 321                   | 4618                                 | 4843                             | 4836                             | 4691                             |
| 326                   | 4662                                 | 4831                             | 4803                             | 4682                             |
| 331                   | 4632                                 | 4845                             | 4763                             | 4679                             |
| 336                   | 4612                                 | 4780                             | 4739                             | 4697                             |
| 341                   | 4589                                 | 4771                             | 4743                             | 4717                             |
| 346                   | 4607                                 | 4735                             | 4755                             | 4643                             |
| 351                   | 4560                                 | 4741                             | 4727                             | 4642                             |
| 356                   | 4571                                 | 4782                             | 4739                             | 4614                             |
| 361                   | 4528                                 | 4747                             | 4752                             | 4612                             |
| 366                   | 4530                                 | 4750                             | 4672                             | 4585                             |
| 371                   | 4479                                 | 4738                             | 4649                             | 4527                             |
| 376                   | 4429                                 | 4657                             | 4629                             | 4456                             |
| 381                   | 4306                                 | 4653                             | 4581                             | 4316                             |

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| Duty Cycle %<br>(x10) | 06F 109 257 C<br>OE part<br>(ml/min) | V10-3728<br>Sample 1<br>(ml/min) | V10-3728<br>Sample 2<br>(ml/min) | V10-3728<br>Sample 3<br>(ml/min) |
|-----------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 386                   | 4173                                 | 4593                             | 4535                             | 4148                             |
| 391                   | 4028                                 | 4540                             | 4494                             | 3783                             |
| 396                   | 3819                                 | 4458                             | 4435                             | 3465                             |
| 401                   | 3535                                 | 4253                             | 4317                             | 3088                             |
| 406                   | 3112                                 | 3902                             | 3936                             | 2905                             |
| 411                   | 2876                                 | 3409                             | 3099                             | 2853                             |
| 416                   | 2725                                 | 3130                             | 2616                             | 2804                             |
| 421                   | 2748                                 | 3004                             | 2513                             | 2709                             |
| 426                   | 2755                                 | 2961                             | 2439                             | 2668                             |
| 431                   | 2753                                 | 2871                             | 2360                             | 2654                             |
| 436                   | 2727                                 | 2851                             | 2251                             | 2671                             |
| 441                   | 2698                                 | 2836                             | 2236                             | 2612                             |
| 446                   | 2646                                 | 2787                             | 2197                             | 2643                             |
| 451                   | 2498                                 | 2733                             | 2141                             | 2647                             |
| 456                   | 2499                                 | 2715                             | 2083                             | 2637                             |
| 461                   | 2480                                 | 2701                             | 2119                             | 2667                             |
| 466                   | 2542                                 | 2755                             | 2096                             | 2630                             |
| 471                   | 2546                                 | 2701                             | 2068                             | 2666                             |
| 476                   | 2481                                 | 2693                             | 2074                             | 2681                             |
| 481                   | 2492                                 | 2683                             | 2111                             | 2647                             |
| 486                   | 2598                                 | 2749                             | 2110                             | 2723                             |
| 491                   | 2611                                 | 2756                             | 2087                             | 2699                             |
| 496                   | 2584                                 | 2754                             | 2173                             | 2801                             |
| 501                   | 2580                                 | 2768                             | 2155                             | 2788                             |
| 506                   | 2588                                 | 2781                             | 2275                             | 2825                             |
| 511                   | 2584                                 | 2826                             | 2350                             | 2937                             |
| 516                   | 3177                                 | 2900                             | 2388                             | 3012                             |
| 521                   | 4134                                 | 2971                             | 2428                             | 3223                             |
| 526                   | 4151                                 | 3021                             | 2459                             | 3594                             |
| 531                   | 4144                                 | 3105                             | 2478                             | 3861                             |
| 536                   | 4143                                 | 3337                             | 2530                             | 4035                             |
| 541                   | 4145                                 | 3818                             | 2577                             | 4346                             |
| 546                   | 4150                                 | 3934                             | 2553                             | 4540                             |

| Duty Cycle %<br>(x10) | 06F 109 257 C<br>OE part<br>(ml/min) | V10-3728<br>Sample 1<br>(ml/min) | V10-3728<br>Sample 2<br>(ml/min) | V10-3728<br>Sample 3<br>(ml/min) |
|-----------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 551                   | 4581                                 | 4008                             | 2530                             | 4560                             |
| 556                   | 4629                                 | 4390                             | 2502                             | 4591                             |
| 561                   | 4634                                 | 4542                             | 2542                             | 4713                             |
| 566                   | 4613                                 | 4581                             | 2575                             | 4748                             |
| 571                   | 4582                                 | 4677                             | 2551                             | 4701                             |
| 576                   | 4615                                 | 4704                             | 2804                             | 4719                             |
| 581                   | 4645                                 | 4753                             | 4440                             | 4649                             |
| 586                   | 4603                                 | 4774                             | 4599                             | 4667                             |
| 591                   | 4641                                 | 4787                             | 4639                             | 4699                             |
| 596                   | 4664                                 | 4833                             | 4696                             | 4721                             |
| 601                   | 4703                                 | 4869                             | 4694                             | 4756                             |
| 606                   | 4728                                 | 4845                             | 4688                             | 4697                             |
| 611                   | 4686                                 | 4866                             | 4699                             | 4697                             |
| 616                   | 4689                                 | 4910                             | 4698                             | 4716                             |
| 621                   | 4663                                 | 4884                             | 4730                             | 4754                             |
| 626                   | 4678                                 | 4897                             | 4728                             | 4789                             |
| 631                   | 4708                                 | 4930                             | 4736                             | 4770                             |
| 636                   | 4709                                 | 4905                             | 4740                             | 4750                             |
| 641                   | 4695                                 | 4911                             | 4716                             | 4716                             |
| 646                   | 4668                                 | 4925                             | 4721                             | 4732                             |
| 651                   | 4670                                 | 4889                             | 4755                             | 4758                             |
| 656                   | 4712                                 | 4917                             | 4772                             | 4755                             |
| 661                   | 4739                                 | 4947                             | 4763                             | 4770                             |
| 666                   | 4764                                 | 4952                             | 4727                             | 4794                             |
| 671                   | 4730                                 | 4952                             | 4738                             | 4772                             |
| 676                   | 4727                                 | 4965                             | 4754                             | 4738                             |
| 681                   | 4730                                 | 4957                             | 4746                             | 4718                             |
| 686                   | 4699                                 | 4940                             | 4756                             | 4733                             |
| 691                   | 4703                                 | 4930                             | 4773                             | 4781                             |
| 696                   | 4747                                 | 4944                             | 4783                             | 4757                             |
| 701                   | 4752                                 | 4929                             | 4779                             | 4770                             |
| 702                   | 4768                                 | 4944                             | 4724                             | 4726                             |
| 697                   | 4765                                 | 4928                             | 4804                             | 4713                             |

| Duty Cycle %<br>(x10) | 06F 109 257 C<br>OE part<br>(ml/min) | V10-3728<br>Sample 1<br>(ml/min) | V10-3728<br>Sample 2<br>(ml/min) | V10-3728<br>Sample 3<br>(ml/min) |
|-----------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 692                   | 4738                                 | 4908                             | 4898                             | 4754                             |
| 687                   | 4749                                 | 4918                             | 4826                             | 4745                             |
| 682                   | 4764                                 | 4892                             | 4776                             | 4761                             |
| 677                   | 4757                                 | 4900                             | 4807                             | 4786                             |
| 672                   | 4765                                 | 4926                             | 4795                             | 4763                             |
| 667                   | 4782                                 | 4903                             | 4831                             | 4733                             |
| 662                   | 4786                                 | 4914                             | 4826                             | 4719                             |
| 657                   | 4784                                 | 4925                             | 4794                             | 4746                             |
| 652                   | 4740                                 | 4892                             | 4808                             | 4777                             |
| 647                   | 4748                                 | 4910                             | 4772                             | 4765                             |
| 642                   | 4758                                 | 4926                             | 4777                             | 4766                             |
| 637                   | 4733                                 | 4909                             | 4793                             | 4786                             |
| 632                   | 4750                                 | 4925                             | 4765                             | 4726                             |
| 627                   | 4779                                 | 4933                             | 4783                             | 4727                             |
| 622                   | 4772                                 | 4917                             | 4805                             | 4719                             |
| 617                   | 4784                                 | 4920                             | 4820                             | 4752                             |
| 612                   | 4791                                 | 4948                             | 4823                             | 4791                             |
| 607                   | 4750                                 | 4951                             | 4800                             | 4761                             |
| 602                   | 4745                                 | 4948                             | 4792                             | 4766                             |
| 597                   | 4714                                 | 4955                             | 4802                             | 4710                             |
| 592                   | 4721                                 | 4946                             | 4771                             | 4729                             |
| 587                   | 4736                                 | 4938                             | 4772                             | 4741                             |
| 582                   | 4728                                 | 4926                             | 4787                             | 4732                             |
| 577                   | 4747                                 | 4930                             | 4782                             | 4749                             |
| 572                   | 4774                                 | 4923                             | 4789                             | 4772                             |
| 567                   | 4758                                 | 4911                             | 4802                             | 4729                             |
| 562                   | 4712                                 | 4921                             | 4812                             | 4689                             |
| 557                   | 4682                                 | 4920                             | 4805                             | 4659                             |
| 552                   | 4709                                 | 4921                             | 4775                             | 4699                             |
| 547                   | 4708                                 | 4924                             | 4788                             | 4716                             |
| 542                   | 4729                                 | 4880                             | 4789                             | 4681                             |
| 537                   | 4719                                 | 4892                             | 4765                             | 4631                             |
| 532                   | 4606                                 | 4905                             | 4770                             | 4613                             |

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| Duty Cycle %<br>(x10) | 06F 109 257 C<br>OE part<br>(ml/min) | V10-3728<br>Sample 1<br>(ml/min) | V10-3728<br>Sample 2<br>(ml/min) | V10-3728<br>Sample 3<br>(ml/min) |
|-----------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 527                   | 4603                                 | 4885                             | 4775                             | 4627                             |
| 522                   | 4621                                 | 4897                             | 4715                             | 4610                             |
| 517                   | 4631                                 | 4874                             | 4516                             | 4572                             |
| 512                   | 4617                                 | 4636                             | 4025                             | 4430                             |
| 507                   | 4589                                 | 3919                             | 3135                             | 4232                             |
| 502                   | 4603                                 | 3087                             | 2853                             | 3803                             |
| 497                   | 3971                                 | 2997                             | 2760                             | 3029                             |
| 492                   | 3455                                 | 2974                             | 2523                             | 2959                             |
| 487                   | 3465                                 | 2995                             | 2422                             | 2946                             |
| 482                   | 3472                                 | 2959                             | 2364                             | 2896                             |
| 477                   | 3453                                 | 2958                             | 2284                             | 2940                             |
| 472                   | 3459                                 | 2970                             | 2220                             | 2942                             |
| 467                   | 3246                                 | 2943                             | 2156                             | 2928                             |
| 462                   | 2561                                 | 2942                             | 2117                             | 2918                             |
| 457                   | 2575                                 | 2987                             | 2134                             | 2918                             |
| 452                   | 2543                                 | 2929                             | 2081                             | 2916                             |
| 447                   | 2513                                 | 2932                             | 2056                             | 2856                             |
| 442                   | 2574                                 | 2983                             | 2103                             | 2629                             |
| 437                   | 2546                                 | 2953                             | 2086                             | 2667                             |
| 432                   | 2509                                 | 2735                             | 2053                             | 2600                             |
| 427                   | 2504                                 | 2778                             | 2030                             | 2641                             |
| 422                   | 2479                                 | 2812                             | 2053                             | 2651                             |
| 417                   | 2551                                 | 2802                             | 2030                             | 2651                             |
| 412                   | 2547                                 | 2763                             | 2045                             | 2691                             |
| 407                   | 2504                                 | 2800                             | 2022                             | 2671                             |
| 402                   | 2660                                 | 2759                             | 2024                             | 2700                             |
| 397                   | 2794                                 | 2744                             | 2008                             | 2774                             |
| 392                   | 2816                                 | 2772                             | 2007                             | 2932                             |
| 387                   | 2836                                 | 2774                             | 2559                             | 3025                             |
| 382                   | 2821                                 | 2792                             | 2618                             | 3091                             |
| 377                   | 2810                                 | 2793                             | 2640                             | 3709                             |
| 372                   | 2819                                 | 2734                             | 2614                             | 3945                             |
| 367                   | 2827                                 | 2723                             | 2610                             | 3989                             |

| Duty Cycle %<br>(x10) | 06F 109 257 C<br>OE part<br>(ml/min) | V10-3728<br>Sample 1<br>(ml/min) | V10-3728<br>Sample 2<br>(ml/min) | V10-3728<br>Sample 3<br>(ml/min) |
|-----------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 362                   | 2818                                 | 3393                             | 2619                             | 4252                             |
| 357                   | 2827                                 | 4211                             | 2619                             | 4361                             |
| 352                   | 4308                                 | 4395                             | 2591                             | 4389                             |
| 347                   | 4486                                 | 4446                             | 2627                             | 4380                             |
| 342                   | 4483                                 | 4522                             | 2618                             | 4436                             |
| 337                   | 4454                                 | 4590                             | 2600                             | 4502                             |
| 332                   | 4465                                 | 4643                             | 2653                             | 4447                             |
| 327                   | 4510                                 | 4662                             | 2608                             | 4412                             |
| 322                   | 4634                                 | 4680                             | 2641                             | 4428                             |
| 317                   | 4599                                 | 4692                             | 2641                             | 4493                             |
| 312                   | 4609                                 | 4717                             | 2608                             | 4753                             |
| 307                   | 4646                                 | 4755                             | 2668                             | 4725                             |
| 302                   | 4657                                 | 4805                             | 2617                             | 4699                             |
| 297                   | 4647                                 | 4810                             | 3248                             | 4689                             |
| 292                   | 4646                                 | 4833                             | 4651                             | 4722                             |
| 287                   | 4655                                 | 4848                             | 4674                             | 4776                             |
| 282                   | 4697                                 | 4846                             | 4696                             | 4768                             |
| 277                   | 4703                                 | 4861                             | 4679                             | 4735                             |
| 272                   | 4682                                 | 4828                             | 4714                             | 4711                             |
| 267                   | 4646                                 | 4850                             | 4755                             | 4728                             |
| 262                   | 4667                                 | 4865                             | 4775                             | 4755                             |
| 257                   | 4723                                 | 4839                             | 4771                             | 4737                             |
| 252                   | 4732                                 | 4856                             | 4761                             | 4769                             |
| 247                   | 4708                                 | 4863                             | 4777                             | 4799                             |
| 242                   | 4687                                 | 4833                             | 4792                             | 4790                             |
| 237                   | 4694                                 | 4857                             | 4770                             | 4755                             |
| 232                   | 4707                                 | 4869                             | 4785                             | 4738                             |
| 227                   | 4706                                 | 4848                             | 4834                             | 4752                             |
| 222                   | 4724                                 | 4862                             | 4835                             | 4780                             |
| 217                   | 4742                                 | 4880                             | 4829                             | 4763                             |
| 212                   | 4704                                 | 4853                             | 4853                             | 4807                             |
| 207                   | 4698                                 | 4871                             | 4848                             | 4824                             |
| 202                   | 4658                                 | 4884                             | 4867                             | 4805                             |

| Duty Cycle %<br>(x10) | 06F 109 257 C<br>OE part<br>(ml/min) | V10-3728<br>Sample 1<br>(ml/min) | V10-3728<br>Sample 2<br>(ml/min) | V10-3728<br>Sample 3<br>(ml/min) |
|-----------------------|--------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 197                   | 4673                                 | 4866                             | 4859                             | 4812                             |
| 192                   | 4698                                 | 4872                             | 4840                             | 4778                             |
| 187                   | 4673                                 | 4886                             | 4853                             | 4770                             |
| 182                   | 4677                                 | 4858                             | 4825                             | 4773                             |
| 177                   | 4637                                 | 4869                             | 4851                             | 4748                             |
| 172                   | 4663                                 | 4889                             | 4866                             | 4786                             |
| 167                   | 4683                                 | 4856                             | 4832                             | 4817                             |
| 162                   | 4788                                 | 4873                             | 4839                             | 4793                             |
| 157                   | 4778                                 | 4887                             | 4859                             | 4808                             |
| 152                   | 4685                                 | 4855                             | 4837                             | 4836                             |
| 147                   | 4653                                 | 4869                             | 4852                             | 4819                             |
| 142                   | 4669                                 | 4881                             | 4858                             | 4816                             |
| 137                   | 4685                                 | 4854                             | 4829                             | 4763                             |
| 132                   | 4705                                 | 4867                             | 4847                             | 4781                             |
| 127                   | 4654                                 | 4881                             | 4862                             | 4782                             |
| 122                   | 4666                                 | 4853                             | 4830                             | 4762                             |
| 117                   | 4665                                 | 4862                             | 4843                             | 4800                             |
| 112                   | 4687                                 | 4881                             | 4867                             | 4825                             |
| 107                   | 4703                                 | 4848                             | 4848                             | 4810                             |
| 102                   | 4668                                 | 4831                             | 4845                             | 4820                             |
| 97                    | 4655                                 | 4882                             | 4873                             | 4840                             |

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OE SAMPLE 06F 109 257 C



VAICO V10-3728

