

HVU 482 LOW TEMP VISCOMETER	
Part Number	Description
04821-000-01	Automated UBBELOHDE Viscometer HVU 482 for low temperatures, without capillaries 230 V 50 Hz
04821-000-61	Automated UBBELOHDE Viscometer HVU 482 for low temperatures, without capillaries 230 V 60 Hz
625-113	Transformer in housing 100-127/230V/1380VA
625-116	Transformer in housing / 200-208/230V/1380VA
08299-000-00	Circulation cooler recommended for Viscosity determination down to -20°C
08305-000-00	Circulation cooler recommended for Viscosity determinations down to -40°C
301-047	Silicone connection hose 8 x 2 mm with 32 mm Armaflex isolation for connection of cooler to analyzer (2 m)
101-173	Isolation valve, isolates the external chiller when cooling is not necessary and prevents excessive bath heating against the cooler. 24 V, 12 W, ND 6 mm
04825-000-01	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 0,001 range 0,2 to 1,2 mm ² /s
04825-000-02	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 0,003 range 0,6 to 3,0 mm ² /s
04825-000-03	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 0,005 range 1,0 to 5,0 mm ² /s
04825-000-04	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 0,01 range 2,0 to 10,0 mm ² /s
04825-000-05	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 0,03 range 6,0 to 30,0 mm ² /s
04825-000-06	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 0,05 range 10,0 to 50,0 mm ² /s
04825-000-07	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 0,1 range 20,0 to 100,0 mm ² /s
04825-000-08	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 0,3 range 60,0 to 300,0 mm ² /s
04825-000-09	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 0,5 range 100 to 500 mm ² /s
04825-000-10	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 1,0 range 200 to 1000 mm ² /s
04825-000-11	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 3,0 range 600 to 3000 mm ² /s
04825-000-12	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 5,0 range 1000 to 5000 mm ² /s
04825-000-13	Low temp. NIR-Ubbelohde Viscometer capillary for HVU482. Constancy appr. 10,0 range 2000 to 10000 mm ² /s
	Accessories for HVU 481 and HVU 482:
108-332	Adapter set to connect HVU481 NIR and NTC capillaries to the head coupling of HVU482. To use above +20°C, only
04805-000-01	Ubbelohde viscometer c = appr. 0,001 HVU 480/481 with 4th tube, in holder, with engraved constant and colour coding for connection to hoses.

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04805-000-02	Ubbelohde viscometer c = appr. 0,003 HVU 480/481
04805-000-03	Ubbelohde viscometer c = appr. 0,005 HVU 480/481
04805-000-04	Ubbelohde viscometer c = appr. 0,01 HVU 480/481
04805-000-05	Ubbelohde viscometer c = appr. 0,03 HVU 480/481
04805-000-06	Ubbelohde viscometer c = appr. 0,05 HVU 480/481
04805-000-07	Ubbelohde viscometer c = appr. 0,1 HVU 480/481
04805-000-08	Ubbelohde viscometer c = appr. 0,3 HVU 480/481
04805-000-09	Ubbelohde viscometer c = appr. 0,5 HVU 480/481
04805-000-10	Ubbelohde viscometer c = appr. 1,0 HVU 480/481
04805-000-11	Ubbelohde viscometer c = appr. 3,0 HVU 480/481
04805-000-12	Ubbelohde viscometer c = appr. 5,0 / MP 480/481
04805-000-13	Ubbelohde viscometer c = appr. 10,0 HVU 480/481
04806-000-01	NTC Ubbelohde viscometer C = 0.001 for opaque samples HVU 480/481 with 4th tube in holder, with engraved constant and colour coding for connection to hoses.
04806-000-02	NTC Ubbelohde viscometer C = 0.003 for opaque samples HVU 480/481
04806-000-03	NTC Ubbelohde viscometer C = 0.005 for opaque samples HVU 480/481
04806-000-04	NTC Ubbelohde viscometer C = 0.01 for opaque samples HVU 480/481
04806-000-05	NTC Ubbelohde viscometer C = 0.03 for opaque samples HVU 480/481
04806-000-06	NTC Ubbelohde viscometer C = 0.05 for opaque samples HVU 480/481
04806-000-07	NTC Ubbelohde viscometer C = 0.1 for opaque samples HVU 480/481
04806-000-08	NTC Ubbelohde viscometer C = 0.3 for opaque samples HVU 480/481
04806-000-09	NTC Ubbelohde viscometer C = 0.5 for opaque samples HVU 480/481
04806-000-10	NTC Ubbelohde viscometer C = 1.0 for opaque samples HVU 480/481
04806-000-11	NTC Ubbelohde viscometer C = 3,0 for opaque samples HVU 480/481
04806-000-12	NTC Ubbelohde viscometer C = 5.0 for opaque samples / MP 480/481
04806-000-13	NTC Ubbelohde viscometer C = 10.0 for opaque samples HVU 480/481
108-331	Capillary adjustment tool to verify the perpendicular adjustment of the capillary in holder

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Part Number	Description
108-247	Slop container for 6 liter waste solvent. Ready to connect the slop sensor and 2 Teflon slop hoses.
638-031	Slop sensor HVM472/HVU48X and 490
110-084	Slop detector/metal cpl. / HVU 48X
04841-000-01	HVU480/481/482 Windows-Software on CD with operating instruction - ENGLISH -
626-072	Connection cable PC to instrument (RS 232), 2,5 m
04711-000-10	PC with Keyboard and Mouse German
04711-000-11	PC with Keyboard and Mouse English
101-137	Printer A4 Without Cable
629-074	22" LCD Monitor
1700-000-001	USB cable
626-029	Printer connection cable (Centronics). This is a special wired cable for certain Herzog instruments, only.
01000-445-01	CRM for viscosity verification and calibration, 500 ml, S3, 2.9 mm ² /s @40°C; 1.2 mm ² /s @ 100°C with certificate, stating density @ 20°C and viscosity @ 20°, 25°, 40°, 50° and 100°C
01000-445-11	CRM for viscosity verification and calibration, 500 ml, D5, 4.0 mm ² /s @40°C; 1.4 mm ² /s @ 100°C
01000-445-02	CRM for viscosity verification and calibration, 500 ml, S6, 5.7 mm ² /s @40°C; 1.8 mm ² /s @ 100°C
01000-445-12	CRM for viscosity verification and calibration, 500 ml, D10, 7.5 mm ² /s @40°C; 2.2 mm ² /s @ 100°C
01000-445-03	CRM for viscosity verification and calibration, 500 ml, S20, 18 mm ² /s @40°C; 3.9 mm ² /s @ 100°C
01000-445-13	CRM for viscosity verification and calibration, 500 ml, N35, 30 mm ² /s @40°C; 5.2 mm ² /s @ 100°C
01000-445-04	CRM for viscosity verification and calibration, 500 ml, S60, 54 mm ² /s @40°C; 7.7 mm ² /s @ 100°C
01000-445-09	CRM for viscosity verification and calibration, 500 ml, N100, 114 mm ² /s @40°C; 13 mm ² /s @ 100°C
01000-445-05	CRM for viscosity verification and calibration, 500 ml, S200, 180 mm ² /s @40°C; 17 mm ² /s @ 100°C
01000-445-15	CRM for viscosity verification and calibration, 500 ml, D500, 225 mm ² /s @40°C; 20 mm ² /s @ 100°C
01000-445-19	CRM for viscosity verification and calibration, 500 ml, N350, 323 mm ² /s @40°C; 26 mm ² /s @ 100°C
01000-445-16	CRM for viscosity verification and calibration, 500 ml, D1000, 420 mm ² /s @40°C; 31 mm ² /s @ 100°C
01000-445-06	CRM for viscosity verification and calibration, 500 ml, S600, 522 mm ² /s @40°C; 36 mm ² /s @ 100°C
01000-445-20	CRM for viscosity verification and calibration, 500 ml, N1000, 1004 mm ² /s @40°C; 59 mm ² /s @ 100°C
01000-445-07	CRM for viscosity verification and calibration, 500 ml, S2000, 1700 mm ² /s @40°C; 84 mm ² /s @ 100°C
01000-445-17	CRM for viscosity verification and calibration, 500 ml, D5000, 1850 mm ² /s @40°C; 88 mm ² /s @ 100°C
01000-445-18	Visco reference oil N4000, approx. 500 ml
01000-445-08	CRM for viscosity verification and calibration, 500 ml, S8000, 6700 mm ² /s @40°C; 236 mm ² /s @ 100°C

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Part Number	Description
01000-445-10	CRM for viscosity verification and calibration, 500 ml, S30000, 23140 mm ² /s @40°C; 657 mm ² /s @ 100°C
01000-445-51	CRM low temperature oil, kerosin based, -20°C
505-001	Precision mercury-glass thermometer +18+22°C:0.01°C
505-003	Precision mercury-glass thermometer +38+42°C:0.01°C
505-004	Precision mercury-glass thermometer +48+52°C:0.01°C
505-005	Precision mercury-glass thermometer +98+102°C:0.01°C
505-077	Precision mercury-glass thermometer -22-18°C:0.01°C
506-051	Certified mercury-glass thermometer +18+22°C:0,01°C including certificate
506-053	Certified mercury-glass thermometer +38+42°C:0,01°C including certificate.
506-054	Certified mercury-glass thermometer +48+52°C:0,01°C including certificate
506-056	Certified mercury-glass thermometer +98+102°C:0,01°C including certificate
506-077	Certified mercury-glass thermometer -22-18°C:0,01°C including certificate
626-082	Connection cable HTR connection between analyzers, 0,8 m
626-138	Connection cable for HTR instrument to instrument, 2,5 m
	Recommended spare parts for approx. 2 years operation:
04341-000-00	Silicone oil for TVB 445 + HVU 482, 20 kg (appr. 21,5 l)
815-296.	Molecular sieve for air drying tubes, 1 kg
108-286	Drying tube for capillaries (filled with molecular sieve) and connection hose
108-315	Drying tube for bath (filled with molecular sieve) and connection hose
101-153	Solenoid valve 2 way Type 127 NO
101-154	Solenoid valve 2 way, type 127 NO
101-155	Solenoid valve 3 way, Type 127
121-048	O-ring, Kalrez, for valves type 127
101-099	Valve seat for 2 way solenoid valve 101-116 MC452, HVU48x/490
125-051	Vacuum-pump 230V / 50Hz with Teflon diaphragm
125-052	Vacuum-pump 230V / 60Hz with Teflon diaphragm
125-053	Repair kit for 125-051/052 (diaphragm, O-ring, valve plate)
380-058	Air pressure pump 220V/50 Hz. for MC452, HVU480/490
380-059	Air pressure pump 230V/60 Hz.for MC452;HVU480/490
412-222	Kalrez valve seat for valve 412-127 Asco valve
412-004	Filter mat for MP 491 air inlet
412-024	Syringes 20ml, set of 10 pcs.
603-025	Power Supply, 5V, +/-15V
607-053	Relay board HVU 4xx
613-055	Solid-State-Relais 4A/12-275V
621-062	Low voltage halogen bulb 12V/5W for bath illumination. For plug connection
621-063	Low voltage halogen bulb 12V / 5W for bath illumination. For solder connection on instruments sold before mid 2000

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Part Number	Description
628-023	Fuse 6.3 A - MT
638-039	Level Sensor for solvent HVU 481, 482, 490
645-029	Heating cartridge 230 V/260W/MP 470, HVU48x/490
	Other spare parts:
101-116	Solenoid valve 2 way, bath cooling
121-015	O-ring 25x1,5/75 SH Viton/MC 452, MP 480
121-042	O-ring 60 x 2.6 / capillary fixture HVU 48x/490
501-024	Glass cylinder small /MC 452, MP 480
613-060	Solid state relay 1 A
615-006	3.6 Volt battery for clock buffer
617-053	Main switch/green (mains supply) 230V
618-148	Motor 230V, 50/60Hz, 32W, 2400RPM
636-109	Resistance thermometer Pt500/metal bath HVU4xx
636-108	Resistance thermometer Pt100 level sensor and over temperature protection, bath HVU48x/490
627-049	Fan 230V, for air exhaust MP470, HVU48x/490, HDV632